RELOCATING EDUCATION FOR SUSTAINABILITY:
FROM THE CAMPUS TO THE COMMUNITY

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by

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For 25 years higher education has been challenged to provide a path toward sustainability. This challenge is both lofty and necessary. During this time, higher education has yet to make noticeable change. I argue that this failure is because the movement is based on an inaccurate conceptualization of sustainability and false assumptions of the capacity of higher education. If we dig into the conception of sustainability itself and determine a more appropriate perspective, we may be able to reset the aims of the movement. If higher education can make this transition, it may need to recognize that it is not quite the dominant educational force it intends to be. Built on the sustainable vision that I propose in this study, HEIs should consider their position in the local ecology and reconsider their role within their greater communities. Communities that also independently strive for sustainability, and specifically eco-centric community partners such as parks, can help create a collaborative team that together with higher education institutions may have a chance at achieving the lofty goals. In addition, I analyze the specific context of Stark County, Ohio, and explore the potential for community-centered education for sustainability.

Keywords (Education for Sustainability, Education for Sustainable Development, Stark County)
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PROLOGUE

GLOBAL WARMING AS A HOT TOPIC

In December 2015 global leaders gathered in Paris at the United Nations Climate Change Conference to discuss the issue of climate change, its anthropocentric origins, and impending dangers should it go unchecked. Following completion and signatures of the climate agreement, Secretary General Ban Ki-Moon declared the debate on climate change “over” and stated that he considers the agreement his greatest achievement (U.N. Chief Tolls Bell for Climate Change Skeptics, September 4, 2016)). This significant commitment to address the issue of climate change is a positive step in the efforts to sustain the planet for future generations. However, it is sad that we are only now able to put aside debate that human activity is responsible for climate change.

Climate change has received the lion’s share of public debate because it has been highly politicized. However, on a number of occasions in our recent human history, we have become aware of the negative impacts we have when we only focus on ourselves. Other environmental issues have been tied to our activities since at least the work of John Muir who sought the protection of wilderness spaces from our consumerist desires. The publication Aldo Leopold’s A Sand County Almanac in 1966 outlined a Land Ethic in effort to mitigate the ecological damage of our behaviors. Additionally, Rachel Carson’s Silent Spring in 1962 warned us of the negative impacts of an environment saturated with industrial chemicals. Then in 1970 Gaylord Nelson prompted the Earth Day movement, which continued the promotion of a healthier relationship with nature. Whether the issue is chemical pollution of the 1960s or climate change of today, these movements all
demonstrate that the tense relationship between human development and our natural world is a constant. Combined with all of these issues are components of sustainability. Sustainability as a modern concept is thought to have officially begun in 1972 in Stockholm with the Conference on the Human Environment (Stockholm, 1972). The work of this conference led to the link of the cumulative negative effects on natural resources and demands of human development. Most significant in the early sustainability work was Our Common Future also known as the Brundtland Report (Our Common Future, 1987), which served as a call to action to address this global concern while at the same time maintaining aims toward development. This document represented a global understanding that the drive for economic development was creating potentially irreversible negative effects on our natural resources.

Higher education responded by accepting a significant role in addressing the concerns laid out in the Bruntland Report (Our Common Future, 1987). In 1990 in Talloires, France, institutional leaders drafted a response committing themselves to transitioning education in ways that would ensure that tomorrow’s leaders would be able to set the course toward sustainable development (Talloires, 1990). This was the first in a series of commitments that can be viewed as the education for sustainable development (ESD) movement, which for 26 years has been celebrating the roles of Higher Education Institutes (HEIs) as leader training centers and their campuses as models of sustainability.

Both in operations and in curricula, sustainability has gained ground as a popular institutional aim yet critics of the movement challenge its validity of its implementation as a transformative measure. Critical perspectives argue that the movement is
responsible for campus and curricular “greening,” but that this is insufficient for reversing the negative ecological trends of our past. Rather these green initiatives, such as carbon footprint reduction and academic programs, are seen as tied to the same values which have led us down the road we are on. Most critiques stress the importance of rebuilding the broken relationship between humans and our natural ecologies. We cannot be separated from these systems, no matter how hard we focus on technological and scientific innovations, which seem to reduce our interdependence.

On the heels of the Paris Climate Summit and the end of the UN Decade of Education for Sustainable Development, it may be necessary to pause to unpack the ESD movement both contextually and conceptually. If we can freely explore alternative ways for the movement to meet its original goals, the positive developments of the movement can be teased out and strengthened by a reorientation of the movement. This dissertation was prompted by the following questions: From where has this educational movement grown? To what end is it aimed? What does sustainability mean and what is its appropriate conceptualization as an educational aim? How best can the aims be realized?

**Humanities Oriented Research**

The key research questions of this dissertation lend themselves to a humanities oriented research approach. Humanities-oriented research in education includes those studies which have a strong interpretive-theoretical emphasis (American Educational Research Association, 2009). As I describe below, sustainability has a strong interpretive focus, and writing on the subject tends to be heavily theoretical. Ontological questions about sustainability are essential to the critical and normative work common in the
humanities. In order to reorient the movement, we must build an understanding of what it means to be collectively sustainable and in what roles higher education should play in the formations of this citizenry.

Typical methods in humanities-oriented research include interpretive, qualitative, and conceptual analyses, as well as critical and normative explorations. Within this dissertation, a combination of each these methods are employed, as they are suited for the research question. While humanities oriented research can include qualitative and even quantitative research, they are not included in this work as the key purpose is to explore very foundational questions. This may provide the groundwork on which to build qualitative and quantitative studies that further our understanding of educational praxis.

**Overview of Dissertation**

Despite some heavily critical leanings, I write this dissertation from the same hopeful perspective as the authors of the Talloires Declaration, who sought to position higher education as a social guide toward a more sustainable future. I believe higher education can and should accept this role. However, I feel critical reflection of the movement thus far suggests that higher education cannot do this alone nor can they meet their goals independently from other movements.

Chapter 1 provides an overview of the education for sustainable development (ESD) movement. I analyze major international declarations as well as smaller commitments that position higher education in the driver seat for society’s transition to a sustainable future. The plans from the Talloires Declaration of 1990 through the recently completed UN Decade of Education for Sustainable development suggest that there are
two roles for higher education. The first is to educate the leaders of tomorrow to be more conscientious of sustainability issues and for the campuses to serve as models of more sustainable living.

The second chapter focuses on how the higher education commitment to ESD manifests itself in the context of the campus and curriculum. Various initiatives, both operational and curricular, are explored and critiqued based on how likely they are to lead a social transformation to sustainable living. Critical perspectives focus primarily whether or not operational activities signal new values or simply more efficiency. Curricular critiques are focused on the freedom of students and faculty to experience alternatives to the dominant conceptions of development.

Chapter 3 digs deeper into the problems of ESD by unpacking conventional definitions of sustainability. This reveals the ubiquitous use of sustainability as an adjective describing objects and systems which when used in education focuses efforts on knowledge and skill building. While knowledge about sustainability and skill development is valuable, I suggest that the educational focus should be on changing students rather what they will one day act on requires education based on sustainability values rather than skills. This becomes evident especially as the problems with sustainability’s association to development is explored and leads to my position that we should not educate for sustainable development; rather we should focus on education for sustainability (EFS)

The fourth chapter expands the context of EFS to the community. The emphasis of this chapter is on the potential for successful EFS when the boundaries between
community and campus are blurred. There is much more to the education of students than what they learn on campus, so I explore how both campus-based and community-based sustainability initiatives can improve through partnerships. This alters the role of HEIs in efforts to become more sustainable shifting them from leaders to partners. Both negative and positive examples of this are explored with the Oberlin Project; a combined effort of the city of Oberlin and Oberlin College is highlighted as a model for this form of EFS.

In the fifth chapter, Stark County, Ohio, is analyzed as an example of a potential location for this expanded EFS concept. The history of EFS initiatives within its six HEIs as well as community-based initiatives is assessed. Successes and failures combine to create a picture of what might be with a reoriented focus for education. Both opportunities and challenges are presented. This sets the stage for considering a uniquely Stark County initiative that would add to the body of knowledge about combined university and community initiatives for sustainability.

In the final chapter I present an analysis of the capacity of Stark Park and their Academy of Collaborative Education (ACE) program led by the Stark County Park District (Stark Parks) as a potential alternative model for campus/community partnerships for sustainability. Emphasized here is the position of the park district as a common ecocentric partner of all the institutions exposing both students and faculty to an alternative to the dominant anthropocentric views of sustainability. Additionally its own educational mission bridges the gap between academia and the community at large. This program’s limitations are also exposed which just adds to the point that there is no single
hub for EFS. Neither the community nor the academy are enough, but combined the potential is higher.
CHAPTER I

FOUNDATIONS OF THE EDUCATION FOR SUSTAINABLE DEVELOPMENT MOVEMENT

Twenty-five years ago a collaboration of international higher education leaders made a case that higher education has a role in addressing the sustainability concerns brought to light by the United Nations World Commission on Environment and Development in the Brundtland Report of 1987. Shortly thereafter, higher education leaders recognized a role in the drive toward a more sustainable future. As a result, a number of international efforts have worked to reenergize a movement of Education for Sustainability (EFS). The United Nations Decade of Education for Sustainable Development ended a year ago, culminating what could be known as the era of Education for Sustainability. During this timeframe, education leaders point to numerous individual points of success: green campus efforts, new sustainability majors, minors, or certificate programs, sustainability conferences, and campus sustainability assessment programs. Despite these efforts, sustainability still fails to have altered the trajectory of higher education in the manner required to transform the future.

In this first chapter I present an analysis of the origins of this movement and a foundational perspective on its driving documents and calls to action. First I explore some of the attempts to charge higher education with education for sustainability. Second, I unpack them in order to reveal common themes associated with how they define the role of higher education and how they interpret sustainability as an educational
aim. Third, I present several examples of how this charge is manifested within the local policy and practice of individual institutions.

**A Crisis Identified**

The Brundtland Report of 1987 brought the issue of unsustainability to the international conversation on development. The official document, Our Common Future, From One Earth to One World, was composed by the World Commission on Environment and Development. The commission cited the middle of the 20th century as a pivotal moment for reframing our perspective on the plight of our environmental future as it was the first time we could see the earth from space and recognize it as a ball dominated by natural patterns. The call for action stems from humanity’s inability to fit its activities within the planetary systems.

The document linked the unsustainability of then current ecological systems with the economic systems of the developed world. The call is for a political will that should secure effective citizen participation in decision-making at the international level (Our Common Future, 1987, para. 28). In the same reference to successes of development efforts, infant mortality decline, human life expectancy increases, and literacy rate increases, the authors provided a caveat that these processes have given rise to trends that the planet and its people cannot tolerate in perpetuity (para. 5). In terms of absolute numbers, there were higher numbers of hungry, illiterate, water insecure individuals than before. Additionally the authors linked the same efforts to disastrous environmental conditions. Citing desertification and global warming, it appeared impossible to separate the economic development issues from the environmental issues. They added that this
will not be easy or straightforward and painful decisions will have to be made (para. 30). This large scale document presents a challenge to nations, institutions, and communities to recognize the crises ahead of the dominant human systems.

In response, the report called for action toward a new sustainable development. This concept is built around a positive perspective of human agency toward a better future where the aims of development can be maintained and the conditions of the environment managed. Evidence of this is found where the commission shared the purpose of the report. It resists predicting the degree of environmental decay, rather presents the hope that people can build a more prosperous, more just, and more secure future where economic growth is based on policies that sustain and expand resources (Our Common Future, 1987). The report stated that this is essential in relieving the great poverty in the developing world.

In summation, the commission presents a solid case for recognizing a value in the conservation of natural resources. Economic development is inextricably connected to the ecological crises of the time. It is possible to read the report and come away with the idea that the commission is calling into criticism the development goals and initiatives of the time. This however is not the case. We must remember that the report is not offering a predictor of future ecological collapse if development is not rethought; rather the purpose is to serve as a warning of ecological crises as a result of the development initiatives. The commission is clear that the intent is to preserve the capacity of the global economy to continue its expansion and that there is an instrumental value to nature for its ability to support an economy. The report goes so far as to suggest that it become
more important to recognize that concern over global economic growth impacting the
global ecology may need to be rearranged in the development discourse. In paragraph 15
the commission (Our Common Future, 1987) wrote, “We have in the past been concerned
about the impacts of economic growth upon the environment. We are now forced to
concern ourselves with the impacts of ecological stress . . . upon our economic
prospects.” This point cannot be understated as it sets up a lingering perspective of
sustainability for years to come. This position that we should not be concerned with
finding alternatives to the development goals, rather alternative strategies for maintaining
them, is concerning. In fact, the resistance to criticism is strong enough to lead the report
to suggest the limitations mentioned are only limitations as far as the human capacity for
creative problem solving and technological advances are limited. In this sense,
sustainability was set up as an anthropocentric and intergenerational maintenance
program for the development goals already in place. Evidence from the document
suggests that the strategies for a sustainable future rely on a continued growth of the
international economy, but focus on reduced consumption of the existing efforts. For
example, the following is written:

Future patterns of agricultural and forestry development, energy use,
industrialization, and human settlements can be made far less material-intensive, and hence both more economically and environmentally efficient. Under these conditions, a new era of growth in the world economy can widen the options available to developing countries. (Our Common Future, 1987, p. 97)
Additionally, the authors stressed the need for cooperation and discourse on the existing models of development.

Such an agenda requires deep commitment by all countries to the satisfactory working of multilateral institutions, such as the multilateral development banks; to the making and observance of international rules in fields such as trade and investment; and to constructive dialogue on the many issues where national interests do not immediately coincide but where negotiation could help to reconcile them. (p. 97)

After bringing to light the ecologically bound challenges of development as it was known at the time and a conceiving sustainability as a way forward, the next step was to identify the medium for change. It is clear in the language used that the report was not to serve as a blueprint, but to suggest a challenge to the development interests to find an alternative way to meet the development goals.

**Responsibility for Change**

Development goals require interest and investment from various perspectives. However, the scope of this work is to explore the response to this report form the higher education community. It took three years for a definitive response to the Brundtland Report from the education community. The University Leaders for a Sustainable Future: Talloires Declaration (the Talloires Declaration) of 1990, recognized as the first official international statement on the role of higher education on the issue of sustainability written by university leaders, represented a noble step in response to the Brundtland Report. Written from the perspective of higher education leaders, it presented a template
for how higher education might respond to the crisis. It served as an acceptance of responsibility. Based on an appropriate assumption that the unsustainable predicament before us then was due in major part to the decisions of the well-educated, and with education as an essential component of development theories, higher education seemed an appropriate target for the challenge. As the report stated:

Universities educate most of the people who develop and manage society's institutions. For this reason, universities bear profound responsibilities to increase the awareness, knowledge, technologies, and tools to create an environmentally sustainable future. (Talloires Declaration, 1990, p. 1)

The Talloires Declaration was written in response to a noticeable dearth of environmental specialists and students with environmental literacy who might become future leaders of sustainability. It set up an educational response to the need for sustainable development. The declaration offered a commitment to 10 responsibilities for those willing to sign on. As of March 11, 2015, 497 University presidents in over 40 countries have committed to its principles (Talloires Declaration, 1990). These principles reflect a broad view of the role of higher education in addressing the issue. Directly, the authors see fit to address campus-based initiatives of creating an institutional culture of sustainability, practicing institutional ecology (recognizing the interrelated systems on campus and among the campus communities), and collaborating across disciplines. More broadly, the presidents present a need for higher education to be active in outreach, service, and collaboration with other stakeholders. Namely there is primary concern for promoting awareness of sustainable development. Recommendations for meeting these
charges include seeking funding for and encouraging interdisciplinary and environmental research, raising awareness by speaking out on environmental concerns among stakeholders, encouraging promising sustainability scholars and creating positions for interdisciplinary leaders, and establishing relationships with other universities as well as primary and secondary education (Talloires Declaration, 1990).

The Talloires Declaration (1990) is looked at as the first example of a university-based approach to addressing unsustainability. Its principles reflect a challenge to the dominant educational values of the time. Though the declaration suggests that institutions have all the expertise necessary to develop the intellectual and conceptual framework for achieving sustainable development, the challenge suggests that institutions are not currently set up in the necessary manner to support the type of scholarship and outreach needed for a sustainable future; namely, that universities are organized around specialized areas of knowledge. The authors specifically cited that earth science is approached as if the world is a collection of separate systems instead of a fully integrated life system. By extension of this organization, quality scholarship is thus associated with specialization rather than the more general interdisciplinary work needed and individual contributions are typically valued over teamwork. This condition led the authors to distinguish themselves as the key personnel, because of their broad reach and power, capable of changing the culture of higher education to one more supportive of the scholarship our unsustainable world requires. It appropriately recognized that universities have a major role in the education, research, policy formation, and information exchange necessary to make these goals possible. Thus, university leaders
must initiate and support mobilization of internal and external resources so that their institutions respond to this urgent challenge.

Combined, the Brundtland Report and the Talloires Declaration set the stage for the Education for Sustainable Development (ESD) movement that has spanned nearly three decades. The Brundtland Report raised real and significant issues with the trajectory of development and appropriately put the focus on its questionable sustainability. Most importantly it made a strong case for its position that economic, social, and ecological systems are interdependent thus, they cannot be considered singly if their sustainability is desired. The position that the ecological limitations can be managed with more effective and efficient efforts to expand economic prosperity, positions higher education as the likely charge for addressing the issue insofar as higher education trains those in charge of developed systems and insofar as intellectual leaders would be the first explore alternative theories and strategies applicable in the future. Subsequently the Talloires Declaration responded and appropriately challenged the existing context of higher education to change by breaking down existing barriers to the interdisciplinary knowledge needed. Primarily the focus was upon the educational traditions that separate the disciplines and separate campuses from one another and their communities.

The impetus for this dissertation can be linked to these two documents. They both serve as optimistic perspectives on the conditions of their day. The development goals themselves are noble. We should be focused on raising the quality of life for the developing world. Each should be commended for elevating the concern over the
environmental crises. The interrelation of the economic and ecologic systems brought to light should cause us to pause and consider what that means for us moving forward and build consensus on the issues involved. Though not an eco-centric report insofar as it clearly states a desire for the preservation of the economic goals, the Brundtland Report elevates the environmental perspective to the level needed for international attention. The Talloires Declaration should give those of us with ecological leanings comfort in the sense that the university leaders confirm responsibility for re-orienting the culture of higher education so that these issues can be explored appropriately. What is less comforting is that there is a desire for a future with transformed modes of operating and transformed education to get us there, but there is a lack of recognition that the aims of development itself may be misdirected and that the idea of universities developing sustainable leaders cannot be separated from acknowledgment that universities have developed the unsustainable leaders who’ve guided us to where we sit today. The task is now to explore how the movement has developed and whether or not these concerns are addressed and the early intentions are seen through.

**Additional Efforts**

Following the Talloires Declaration and leading up through the recent Decade of Education for Sustainable Development (DESD) (2005-2014), a number of efforts from international to local have continued to view higher education as capable of transforming our future for the purpose of achieving development goals and maintaining the ecological integrity of the earth. To determine common themes and the dominant expectations for higher education in this movement to address unsustainability, I analyze the following
declarations and reports on the topic, the Halifax Declaration, Agenda 21: Chapter 36, Yale Campus Earth Summit Blueprint for a Green Campus. The intent of the analysis is to determine how well they interpret the Brundtland Report and the Talloires Declaration and build on those initial ideals. In particular, the intent is to uncover how each presents the concept of sustainability as well as the roles of higher education. The Brundtland Report presents a view of sustainability directly in line with the development goals of the time. The Talloires Declaration suggests that Higher education has the potential to develop future leaders through a re-envisioned higher education culture.

In late 1991, presidents and campus leaders from 33 institutions from 10 countries on five continents met in Halifax, Nova Scotia at Dalhousie University to discuss the role of universities in dealing with the environmental crises brought to light in the Brundtland Report and the Talloires Declaration. As a result they, developed Creating a common future: An action plan for universities (Halifax Declaration). While this appears at first to be redundant, the Halifax meeting called in representatives from business, banking, government, and non-governmental organizations. This step is significant and follows the guidance of both the Brundtland Report and the Talloires Declaration which suggested engaging stakeholders in discourse on how to address the unsustainability of development goals (Lester Pearson Institute for International Development, 1992).

The Halifax Declaration expands the discourse of Education for Sustainability (EFS) by communicating clearly that there is a moral obligation to address unsustainable ways not just for the development leaders as portrayed in the Brundtland Report, and universities as written in the Talloires Declaration, but of the entire generation. This
shifted the focus of EFS from what needs to happen within university structures and within university and community relationships to addressing what role universities have in altering the cultural priorities and guiding the necessary transition. The authors write of this role with an emphasis on the ethical obligation of the current generation to address both the malpractices of resource use and human disparity that underlie environmental unsustainability (Lester Pearson Institute for International Development, 1992).

Additional outcomes of the workshop spell out how this role should be filled. The primary theme of these outcomes is outreach. Outreach here is defined as the use of higher education strengths to effect changes beyond the campus boundaries. In all but one of the key outcomes, the universities are charged with collaborating, communicating, partnering beyond their boundaries to effect change. One selection defines this responsibility well; in reference to altering the current unsustainable practices, the authors charge a responsibility “To cooperate with one another and with all segments of society in the pursuit of practical capacity-building and policy measures” (Lester Pearson Institute for International Development, 1992, p. 2). Specifically significant are the segments of society defined in the outcomes as the general public, government and other universities. In order to meet this very public role, the outcomes suggest that the universities are obligated to train faculty, students and the public at large in environmental literacy and ethics. From other outcomes it can be assumed that environmental ethics refers to the values associated with “revision and reversal of those current practices which contribute to environmental degradation, to South-North Disparities and to intergenerational inequity” (Lester Pearson Institute for International
Development, 1992, p. 2). The reference to ethical education is significant and in fact is not referred to as directly in any of the other declarations or reports.

These broad outcomes presented are expected to come from both traditional modes of knowledge transfer e.g. faculty to student to public at large (similar to the expectations of the Talloires Declaration), as well as, from collaboration across university and community boundaries. This report (Lester Pearson Institute for International Development, 1992) appears to broaden the role the university of beyond institutional leadership toward more cultural leadership. In its aims, one can read that the intellectual capital of the university should be made available for community and cultural development. Through this knowledge sharing, the aims of EFS would ideally be achieved both on campus and beyond. This position on the role of higher education is relevant when we consider that the challenges of and potential solutions to sustainability extend beyond what is taught and learned on university commons.

**Agenda 21: Rio de Janeiro Earth Summit**

In 1992, Agenda 21 created at the Rio De Janeiro Earth Summit set out to continue the discourse on the link between environmental concerns and development efforts (United Nations Conference on Environment & Development, 1992). Agenda 21 reiterates much of what can be read in the Brundtland Report. In particular it reflects the need to focus on both environmental and development concerns congruently in order to meet the ultimate quality of life goals associated with the development efforts. As the report states, this “…will lead to the fulfillment of basic needs, improved living standards for all, better protected and managed ecosystems, and a safer and more
prosperous future” (United Nations Conference on Environment & Development, 1992, ch 1). Moving beyond the extent of the Brundtland Report, the Earth Summit yielded a specific call to action for education. Chapter 36 of the document Education, Training and Public Awareness, states that "education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues."(Kahn, 2010, p.24). With this document we see a continuation of proposed link between education, sustainability and the concept of development. Chapter 36 later makes brief but specific reference to universities and their role in building a sustainable future. Directly pertinent to sustainability in higher education are the following themes; role of education, government influence on forms of education, and government support of educational relationships from (Kahn, 2010).

The expanded role of education in Agenda 21 is not unlike the plan adopted in Halifax (Lester Pearson Institute for International Development, 1992). However, from a government perspective this document confirms an alignment around the idea that education should have an expanded role in efforts to build a sustainable future. Specifically, the government should support the transition of education toward these new aims in two ways. It should drive forward educational policies that support content reflective of what is known about the unsustainable nature of development. The authors suggest that the curriculum at all levels should include both an understanding of development issues and the environment. Doing so alters the measure of development itself. As such, education in developing nations itself is not the only measure of development associated with education, but within the developed world, education
should reflect what is known about the link between development efforts and environmental degradation. The strategies also call for government support of necessary relationships in education i.e. interdisciplinary regional networks, research and teaching, as well as relationships with private entities. These relationships mirror those called for by university leaders noted in the Talloires and Halifax Declarations.

Moving beyond the Brundtland Report, Agenda 21 appropriately recognizes that sustainable development cannot occur unless the population of government leaders and leaders within the international development community is informed and educated about the environmental conditions and their link to global inequities resulting from the developed/developing relationships. If this does not occur, we are destined to for failure in attempts to address both sustainability and development.

Decade of Education for Sustainable Development

Thirteen years following Agenda 21, another international effort was launched specifically targeting the education community. UNESCO’s Decade of Education for Sustainable Development (DESD) 2005-2014 was established as a global effort to integrate sustainable development values into all forms of learning in hopes of changing behaviors that would allow for a more sustainable and just society (UNESCO Decade of Education for Sustainable Development, 2005). The effort is related to other large scale initiatives associated more with development than sustainability such as Dakar Framework for Action Education for All: Meeting our Collective Commitments (EFA) reaffirmed in 2000 and the Millennium Development Goals (MDGs) (MDG Gap Task Force, 2015). Born out of the World Summit on Sustainable Development in 2002, the
UN DESD is a focus on the education needed for developing citizen actors for sustainability. The specific goals of the UN DESD appear derived from Chapter 36 of Agenda 21. They suggest the need for increased networking and collaboration among all stakeholders, increased knowledge of sustainable development among faculty, maintaining progress toward Millennium Development Goals, and a reorientation of education at all levels (UNESCO Decade of Education for Sustainable Development, 2005).

**Blueprint for a Green Campus: The Campus Earth Summit Initiatives for Higher Education**

In 1994, the Yale University Blueprint for a Green Campus: The campus Earth Summit for Higher Education (Blueprint for a Green Campus) set a standard for how to think about greening the campus written by 450 faculty, staff, and student delegates from 22 countries, 6 continents, and all 50 states in America. (Blueprint for a Green Campus, 1995). Blueprint for a Green Campus recommends incorporating environmental learning into all relevant disciplines; making the campus a model of environmental behavior through waste reduction, energy efficiency and sustainable design; instituting environmentally responsible purchasing policies; supporting students seeking environmentally responsible careers. The emphases on campus purchasing power and career preparation recognized the broader influence of HEIs within the community at large.

This effort, more so than others, offered specific action items and formulas for moving forward toward a more sustainable campus. With participants representing the
faculty, staff and students of so many institutions, it also represents the first time a full spectrum of university stakeholders were present to discuss these issues. With the introduction of operational efforts such as energy efficiency, waste reduction, and green design, we see for the first time a direct positioning of higher education as a model for sustainable living and strategies for realizing the goals. The blueprint recognizes that the campuses themselves are components of the environment and have large impacts on the physical landscape. Prior to this report, the reference to campus greening stopped at simply a recognition of community leadership and the potential for being a model of sustainable behavior, though there was no specific strategies put forth to outline this more definitively. At this point, the full spectrum of higher education roles included intellectual leadership for the development of solutions, community leadership in driving cultural change, serving as a model of sustainable behaviors, and education of future leaders in sustainability knowledge.

**Essex Report**

The Essex Report is unique in that it goes beyond Blueprint for a Green Campus and many of the international declarations in its embrace of a more comprehensive vision of sustainability in its social, economic and environmental dimensions. In addition to specifically outlining the types of knowledge necessary for new-graduates, it addresses two areas not mentioned in the other documents/declarations, justice and the educational value of the communities for students.

The report defines a sustainable society as a just society noting that many of the participants felt that sustainability and justice are inseparable. While certain plans may
be explored which are not just and fair, it was their belief that the sustainability would be limited. The Halifax Declaration referenced the south/north inequity, however the Essex Report dwells on it, suggesting students should explore and debate the relationships between environmental justice and sustainability as they apply to socially condoned or legally sanctioned negative environmental consequences; redressing of maldistribution of resources, privileges, and rights of underserved communities; and stakeholder participation (The Essex Report, 1995).

Communities are acknowledged directly in the Essex Report not simply as a space for working with stakeholders, but rather as having a critical role in sustainable development. In it students are encouraged to engage with communities to discover how their principles can contribute to building sustainability. This is the first time communities are acknowledged in such a way that students can learn from and help influence them.

The documents and declarations mentioned above only represent a portion of the large-scale plans for establishing an education for sustainability in higher education, however the analysis supports other interpretive efforts to build connections between education and efforts for sustainable development. Tarah S.A. Wright (2002) explored the emerging themes of several additional documents including the Stockholm Declaration, Tblisi Declaration, the Kyoto Declaration, Swansea Declaration, the Copernicus Charter, and the Thessoloniki Declaration. Of those analyzed by Wright, the most common themes were listed as sustainable physical operations, sustainable
academic research, environmental literacy, ethical and moral responsibility, cooperation amongst stakeholders, outreach and interdisciplinary curriculum.

The Talloires declaration and the UN bookend this first era of EFS in higher education. Between these two documents are a number of other local, national, and international declarations which all point toward hope and promise for the future if only HEIs are able to realize their potential as societal leaders. In summary the documents and declarations for higher education point to two strong themes regarding its role in addressing sustainability. The first is that the institutions are developers of future leaders and that institutions themselves serve as models for sustainable development and thus can influence broader society. Both themes suggest that higher education is above all a leader in the battle for sustainability.

What Should ESD Look Like?

It is time to pull together what ESD actually should look like when HEIs realize their roles in driving cultural change toward sustainability. From this perspective I will sum up the responsibilities as they relate to the two primary roles of higher education within this movement. They are to serve as educators of future leaders in the traditional sense of higher education purpose, and as current leaders of the movement modeling appropriate strategies and participating in the broader movement of sustainable development.

HEIs Creating Leaders

The driving documents and reports suggest one of the primary roles of HEIs is as the training ground for society’s leaders of the future. HEIs are called upon to educate
today’s students for working within systems increasingly charged with a reduction of resource use and a smaller environmental footprint. As higher education has become the common experience for members of society’s key decision makers and players, it makes sense to think that any necessary new way of thinking for the future may be cultivated within an entire generation. The Essex Report of 1995 went further than any other report to outline what exactly is needed for new graduates to take away from their educational experience. Newly-trained graduates should possess knowledge and experience in the following areas:

Ecoliteracy; this refers to the types of knowledge necessary for understanding the interconnectedness and interdependence of all living things. Additionally this refers to the knowledge which supports comprehension of the natural systems and their governing principles.

Interdisciplinary knowledge: This knowledge refers to that which supports the ability to cross the boundaries of very diverse disciplines. Additionally the skills to better understand connections between science/technology and the natural/cultural environments as they pertain to what is needed to build a plan for sustainability.

Place-based knowledge: This knowledge suggests a deep understanding of a specific place and its capacity for developing a sustainable community. This theme speaks most directly to student experience. What we can draw from the declarations and reports is that students should be learning from curricula which are interdisciplinary in nature and focus on the environmental challenges our planet faces. This requires ecoliteracy i.e. an understanding of environmental systems and our human involvement
with them, as well as environmental values. The purpose for this form of education is to nurture the values and skills necessary for navigating a future where environmental concerns matter. Additionally, these point toward students learning and living on campuses which demonstrate sustainable practices such as green energy buildings, waste reduction programs, carbon reductions. Students in these conditions thus are exposed to real actions and environments which are more ecologically friendly than the status quo. As campuses become greener, so too will their students.

**HEIs as leaders**

In addition to developing future leaders, HEIs are also viewed as potential models for sustainability. Through adjustment of their operations, the campuses themselves and collectively the industry as a whole can help demonstrate a how a new sustainability ethic can be realized. The intellectual power of higher education is called up to assist the world in finding sustainable ways to maintain development goals designed to address inequalities between the developed and developing countries. In order for this to happen, universities are expected to build relationships with one another, communities, and with the all levels of government for the development of supportive policies. In this role the focus is to model sustainable initiatives, study sustainability from an academic perspective, and share knowledge with other stakeholders.

**In Review**

As mentioned earlier, the motivation for this dissertation is born of the hope of a transformed future within the Brundtland Report and the Talloires Declaration. These both recognize that there is something unsustainable about what we have today. Despite
criticism of how they hope to promote change, to know that there is widespread recognition of the negative impact on the environment caused by long term emphasis on economic development is very motivational. That the education community accepted responsibility for helping to address the issues and thus would necessarily expand its role and transform its structures and systems to support the sustainable developments appropriately is a very positive sign. As this analysis has shown, there is fairly strong consistency in what is expected of higher education both from the external charges such as Agenda 21 as well as from literally all levels of higher education representatives as seen in the Blueprint for a Green Campus. Twenty nine years have passed since the initial work of those who developed the Brundtland Report and it would be inappropriate to suggest that all that was proposed has been successfully completed. The fact that there are such repetitive aims in declarations which span three decades suggests if nothing else that these are massive claims and must be revisited. It also forces us to explore the movement as presented from a critical perspective in an effort to uncover foundational challenges within this movement that might preclude its success.

**Foundation of Critique**

After 29 years of international, national, and local efforts to educate for a sustainable future, numerous successful educational efforts can be celebrated from green buildings to sustainability degrees, but there is general consensus amongst critical education scholars and environmentalists alike that the movement has yet to realize its transformative aims. Most criticisms focus on how universities choose to implement ESD and outline the barriers to reorienting higher education as called for. I will explore
their perspectives in the following chapter. At this stage, I simply want to expose a few underrepresented flaws in the origin of the movement.

**ESD as a Function of Development**

The impetus for this educational movement is based within the literature on global development issues. The Brundtland Report, Agenda 21, and the DESD are powerful statements linking environmental concerns with the efforts to reduce poverty, increase education, and overall address the global inequities between the developed and the developing. This link is essential to acknowledge, but if the environmental concerns only serve as a limitation to the predetermined goals and strategies, education is positioned only to find more efficient ways to meet existing goals.

In order to qualify as a form of development which can and should be sustainable is to acknowledge that dominant forms are unfortunately unsustainable. However, this alignment of sustainability and development presents a paradox. In these and other documents which link these two terms, there is a common assumption that the foundational idea of development is not called into question despite the connection between values of the developed nations and unsustainability. In December of 2015, leaders from 150 countries are gathering in Paris for the 2015 Climate Summit. During the summit, the development paradox is front and center as much of the discussion is focused on how wealthy countries can support the poorer as they acknowledge that the efforts to “develop” are in conflict with climate goals (Shapiro & Greenfield-Boyce, 2015). This suggests that not only must we find ways to protect the earth as development continues, but maybe we should reconsider what it means to be developed.
Would North America and Europe consider redefining what it means to be developed, and thus necessarily undevelop as a means to redistribute both economic and ecological wealth? Likely not. In spite of acknowledged complicity in the problem, these call for rethinking only appears to explore alternative ways to meet the same ultimate goals.

In essence higher education may use this paradox as a model for how it develops and implements a plan for ESD. The call for an alternative pedagogy capable of the socio-cultural transformation needed is an attractive, but lofty goal. In the journal *Sustainability* Paul Sylvestre, Rebecca McNeil, and Tarah Wright (2013) used critical discourse analysis of 10 declarations to expose several important themes from the discourse which may have signaled a limited potential for transformative change from the earliest years of this movement. They began the review with the Talloires Declaration, and progressed chronologically through the Halifax Declaration, the Kyoto Declaration, the ACU Swansea Declaration, the CRE Copernicus Charter, the Thessaloniki Declaration, the Luneburg Declaration, The Graz Declaration, The Bonn Declaration, and the Turin Declaration.

Sylvestre et al. (2013) uncovered a few conflicting key themes that must be acknowledged as potential handicaps for the movement. There is a ubiquitous assumption that the university bears a responsibility to develop novel ways of being sustainable. The Talloires declaration, for example, states:

*Universities have a major role in the education, research, policy formation and information exchange necessary to make these goals possible. Thus, university leaders must initiate and support mobilization of internal and external resources*
so that their institutions respond to this urgent change (Sylvestre et al., 2013, p. 1361-1362).

Unfortunately, the researchers also found that the declarations assume no culpability in the proliferation of the values, systems, and structures that promotes unsustainability. There is significant tension in this position as the problem solver with no culpability for the problem. There are conflicting messages sent to the audience who read that the institutions are important because they educate future leaders, but make no mention of the past students who are thus responsible for the problems. We are left to infer that their structure and methods are not in need of critical reflection. This all leaves the impression that the problems are outside of the campus and it is up to the institutions to produce a new leadership to guide the “others”. The declarations are quick to speak of the power of HEIs to influence and guide our future leaders. However, ownership of those leaders who have led and continue to lead into an unsustainable future is not nearly as obvious. Moreover, without ownership of the problem, the need to fix unsustainable conditions resulting from the students of the past may be used to justify a greater importance of higher education rather than an internal critical review.

Without culpability, efforts such as green design, environmentally friendly purchasing, curricular changes, and campus recycling efforts remain limited in scope by a maintenance of institutional culture and the maintenance of or improvement on current student experience. If driven by external powers of governments and the greater development community, ESD is positioned to be something universities do rather than be what universities are. Without the necessary critical reflection, the institutions might
potentially view ESD as an add-on rather than a core commitment. Thus, the sustainable change may be localized on the campus and students are left to explore their own ways of making use of these experiences and knowledge as they enter the extra-campus world.

**HEIs and “Others”**

The lack of culpability also sets up a disconnected relationship between the campus and community. Other than a brief mention in the Essex Report, the declarations fail to demonstrate that those outside of the HE community have much or anything to offer the movement. As was noticed in the Halifax Declaration, the “public at large” is to serve as recipient of the “knowledge power” inherent in HE. The landscape as it applies to sustainability is thus set up dichotomously as; HEIs and the others (Lester Pearson Institute for International Development, 1992). If denying (or at a minimum ignoring) responsibility for unsustainability, HE infers the blame lies with the “others”. Does this suggest that the HEIs have a monopoly on the knowledge needed for a sustainable future? I argue yes and later will point to an alternative structure that democratizes sustainable knowledge.

The language used to describe HEIs and sustainable future includes the phrase “preparing leaders”. The assumption can be that students of the privileged classes currently in the majority of those attending HEIs will inherit the positions they prepare for and change the landscape of their respective fields to something more sustainable than the one they are entering. There appears to be a convenient disregard for the environment new graduates face when they enter the workforce. Overburdened with student loan debt and working in entry level positions, recent graduates are hardly in the position to effect
change. If the systems in which they work are unsustainable, they are likely to become socialized well before they are capable of “leading” others toward a new direction. This predicament underscores the importance of higher education working with stakeholders so that the workplaces and communities where students will develop leadership skills and ultimately become leaders are prepared for the student of ESD.

We should also be asking; where is the place for community leaders and models of sustainability who’ve never participated in higher education or those who have and found non-traditional avenues toward a more sustainable way of being? Actors in the “real world” certainly must have something to offer students on campus. Unfortunately if the dichotomy is maintained and students experience EFS which is merely campus based, they have no opportunity to learn from these non-HEI models. For example, students exploring sustainability and agriculture would have much to learn from an urban farmer. If the theoretical and case based in-class studies could be combined with current localized efforts in action, students would certainly benefit. I will return to this later in the work when I challenge the monopoly of ESD currently held by the HEIs.

The potential for real and meaningful change within calls for new curriculum and educational efforts seems weaker when viewed through this dichotomous lens. What may be needed here is more aligned with the Essex Report than the others. It appears to suggest more than the others that the community beyond the campus plays a role in building an EFS structure to effect real change. Wherein strategies for student engagement with the communities beyond the campus boundary are given at least some attention; “students should be guided to discover and understand the focus and operations
of the community and institution to which they themselves belong” (The Essex Report, 1995, p. 1).

This dichotomy is perhaps the most underappreciated challenge to the successful achievement of the ESD movement. Collaboration with multiple stakeholders is a core component of virtually all declarations and reports. Barriers to the development of extra-campus relationships such as, a lack of understanding about the multifaceted responsibility for unsustainable systems, would no doubt preclude achievement on the goals of ESD. I will return to this as it applies within the next two chapters.

In the following chapter I will address two key issues from this exploration. First I will critique sustainability efforts to date as they are associated with the context of HEIs. These initiatives point to educational value beyond the boundaries of the campus. Yet the emphasis appears to promote internal change. This recognizes the individual institutions as members of a community, but may limit the impacts by focusing change within the bounded campus. Second, in the large scale statements a link can be made to critical pedagogy which might identify the unsustainability values in existing curricula and provide students with alternatives. Yet in the campus based efforts responding to the challenge, there appears to be little critical curricular development. Student exploration of alternatives is often limited to alternative means to maintain the dominant cultural expectations. As such, ESD is ripe for contextual critique. I hope to answer whether HEI contexts are flexible enough to meet the expectations of the large scale initiatives.
Critical Perspectives

A critical analysis of the ESD movement could progress in several ways. One can choose to review the origins and explore the ways in which its ideals have or have not been realized in accordance with their original targets. This would likely lead to more of what has already been done thus far. At best the result would be a revision of the original works seen from a different angle or different perspective from within the existing higher education and development paradigms. There is some value in maintaining a clear understanding of the original aims of the movement. As I’ve mentioned above, the viewpoints shared in these large scale calls for change are filled with hope for what higher education can and should be. Another critical view could seek to destroy the existing paradigms and create an entirely new and possibly revolutionary movement. Scholars such as Richard Kahn (2010), Tina Evans (2012), and Chet Bowers (2001) are representative of this viewpoint. Their perspective is valued primarily because they seek to tackle the fundamental issues inherent in the human and nature relationships. This view, while helpful in digging into the fundamental base of the problem, often does not support feasible solutions. I choose however, to follow a different path which is aimed at the hopeful who are acting in within the existing paradigms and seeking to initiate change. This path should lead us toward a better understanding of how we may be able to educate for a sustainable future. By being honest about the significant systemic challenges and the necessary criticisms, hopeful about revisited and revised perspectives, and ultimately realistic about the path forward. This position is based largely on the writing and more importantly the work of David Orr. In 1992 Orr wrote *Ecological*
Literacy; Education and the Transition to a Postmodern World. This work appropriately stated that the perils we face are the product of actions of those educated in higher education institutions suggesting that if HEIs are responsible for transforming the future, they might need to be the subject of transformation themselves. Instead of only considering the positive perspective of what HEIs can be expected to do. Orr’s position carries further the abovementioned paradox of higher education’s complicity in (un)sustainability but lack of culpability by not simply calling for change or outlining large scale needs from higher education, but by actually resetting the priorities of sustainability education, presenting strategies for realistically transforming education, and working to alter the direction of higher education in real ways as a campus and community leader. Orr has lead Oberlin College from its noble roots as a socially progressive institution into a position of international leadership in the realm of sustainability education. Though a number of critical perspectives will undergird the arguments herein, it is with the critical, hopeful, and realistic spirit of Orr that I seek to expose the problems of ESD and provide an alternative way to view the movement and ultimately move higher education and subsequently society toward a more sustainable future.
CHAPTER II
CAMPUSES AS CONTEXTS

Authors of the declarations and reports represented in chapter one have called for Higher Education Institutions (HEIs) to challenge the unsustainable future we currently face. HEIs may not be the only sources for sustainability education, but given their contributions to the unsustainability of the past and present, it is certainly a noble goal. In response to growing attention and the push for higher education to address it, sustainability has become a more common component of university policies, especially at the administrative level. In its most common conceptualization sustainability represents a balance of three interconnected value systems; economical, societal, and ecological. Economical refers to those values which seek to build capital above all else. In a higher education setting these would not only be institutional financial vitality, but also the proliferation of student expectations that a good life is directly tied to high paying careers. The societal values are those which support our social needs of health and wellness, access to housing, jobs, and even recreation. Campuses who support quality of life for students and their communities represent these values. Finally ecological refers to an understanding that we are fundamentally connected to the earth and its other inhabitants. Ecological values are demonstrated when decisions are made to boost the health of the planet. Institutions can promote recycling, green building policies, preservations of open spaces, divestments of institutional portfolios from fossil fuel corporations, and through numerous curricular initiatives that teach students about their connections. Above, I highlight that the declarations and reports support the Brundtland
Report’s thesis that we need to be concerned about the ecological impacts of drive for development. As a result, sustainability derived from this perspective suggests an imbalance of the systems wherein the economy holds highest priority and ecology the third. We should thus be able to see an elevated role of ecology and critical reflection of the existing ways of being and teaching.

The movement was originally stimulated by the large scale efforts covered earlier such as the Talloires Declaration of 1990 which outlined an action plan for incorporating sustainability and environmental literacy into teaching, research, operations and outreach practices of the university (Moore, 2005). More recently professional associations have formed with the explicit purpose of making the transition toward a more sustainable future easier for institutions and individuals. Examples include the University Leaders for a Sustainable Future (ULSF) (About ULSF, 2008), the Australian Council of Environmental Deans and Directors (CEDD) (Australian Council of Environmental Deans and Directors, 2009), the Higher Education Associations Sustainability Consortium (HEASC) (HEASC Home, n.d.), and the Association for the Advancement of Sustainability in Higher Education (AASHE) (About, 2016). AAHSE for example describes its purpose as helping institutions, and their partners to build a more sustainable future. They do this through research, resources, professional development and the provision of a template for demonstrating sustainability (About, 2016). Additionally, specialized conferences now draw representatives from hundreds of colleges across the nation and the globe (Sherman, 2008). For example, the AASHE annual conference which in 2014 attracted more than 2,100 attendees was designed to help “empower you
and the rest of the higher education community to be a foundation for a thriving, equitable and ecologically healthy world.” (Association for the Advancement of Sustainability in Higher Education, 2015). Despite the large scale calls to action and the professional organizations and conferences, the form and depth of EFS lacks consistency. Operational efforts such as green building projects, informational efforts in the curriculum, as well as comprehensive institutional planning all play some role in campus sustainability, but these efforts have yet to result in the social transformation called for 25 years ago in the Talloires Declaration and the subsequent others explored in the first chapter. As implemented, the efforts seem to be more firmly associated with an emphasis on symbolic measures which serve the interests of the institutions themselves rather than creating broader societal transformation.

The perspective driving the declarations and reports cited in chapter one suggests that HEIs hold significant potential for driving social change. However, lack of ownership of their role in the current unsustainable conditions and lack of critical reflection necessary for change presents a challenge to realizing the original goals. With no critical reflection, HEIs are likely to maintain existing aims, values and structures. Thus, their sustainability efforts don’t often challenge the status quo. Rather, they address sustainability by initiating campus changes related to efficiency while at the same time preserving the existing value systems. Additionally, the efforts are spatially limited to the campus and to the students directly engaged in the process. These problems lead to continued criticisms of the limited impact of these initiatives on the culture. Based on
observations of sustainability in higher education settings, many are left wondering what is being sustained by these initiatives.

In this chapter I will unpack the general criticism that the context of HEIs preclude their ability to meet the expectations of the ESD movement. This will be done by analyzing key critiques of institutional developments both operational and curricular. Adding to the critiques of HE roles in society and institutional aims from chapter one, I intend to explore contemporary examples that display these concerns. Then, I will turn from critical to normative considerations by presenting examples that model more holistic views of education in line with models of sustainability. I will also explore the potential within external partnerships for helping institutions meet transformational goals.

**Operational and Curricular Efforts**

ESD in higher education can be reviewed from the two perspectives controlled by the institutions themselves. The first, operational, serves as the mode of expressing the institution as sustainability model. In this position the institutions may establish campus operations that demonstrate a reorganized values foundation where the three values systems are at least balanced. As a model, the campus should be able to influence the students and community at large by establishing social norms and expectations for students and demonstrating best practices for the community. Within the curricular developments, we can explore the ways in which the institutions support sustainable leader development so that graduates are appropriately prepared for their futures.
Operational Efforts

In this section I will share some of the many examples of how higher education institutions focus their efforts on addressing campus strain on resources. Though an important aspect of sustainability, these efforts are often hidden from the student body and many of the faculty and thus serve as shallow forms of sustainability behavior rather than legitimate learning opportunities where students engage in the process of problem assessment, goal setting, and strategy design. They also are acted on with intent to continue popular quality of life values and may be driven by more of a focus on financial incentives rather than sustainability.

The first step for many institutions is to address sustainability within their operations systems. Sustainability is often added to the responsibility of environmental services, maintenance, and campus planning. Sustainable construction practices have become more common on campuses. AASHE reports that submissions for posting in their bulletin have increased significantly: A recent review of submissions to their bulletin indicates that 60 green campus buildings were reported on in 2006. The number doubled in 2008, and in 2009, an additional 165 green buildings were reported (Wagner, 2010). This demonstrates a growth in concern and action towards more efficient campuses. These efforts are to be commended, but may be more of a symbolic gesture to sustainability. As I will present later in the chapter, it’s not so much what the building is, but what happens within the green building.

According to a sustainability blog on Emory University’s website, The United States Green Building Coalition (USGBC) reported an increase from 42 LEED projects
(certified or registered) on higher education campuses in 2001 to 3,866 such projects as of July 15, 2010. More importantly in terms of serving as a model for other industries, Jaime Van Mourik USGBC's higher education sector manager (as cited in Whitmire, 2010) says, "Higher education is leading in green building” Van Mouik shares that the sector had more square footage planned for LEED certification than any other (Whitmire, 2010). Practices that encourage the use of day-lighting, more efficient lighting fixtures, energy efficient roofs, energy efficient equipment, less dependence on harmful materials, use of more local materials, reduced volatile organic compounds (VOCs), and many other practices are now commonplace (Hodges & Elvey, 2005). These efforts are fine examples of institutions demonstrating a concern for their carbon footprint. They represent recognition of the unsustainability of certain campus practices and a desire to expose students and the community the green planning is worth committing to.

Additionally, when a university actively reduces its carbon footprint, students learn from the hidden curriculum to incorporate more eco-friendly planning into their lives (Sherman, 2008). Cautious optimism, evaluation, and critical reflections should support these efforts to ensure maximum engagement of the student body with such campus changes.

Unfortunately, these projects have the potential to be based on a return on investment perspective because they do not necessarily alter the dominant campus perspectives of sustainability i.e. one focused on maintenance of current and improved standards through more efficient means. The same Emory University blog highlighting the number of new LEED projects referenced a report by Yuldelson Associates (2010)
suggesting that the primary incentive for universities is to reduce operating costs. The report cited an average 30-50% reduction in energy use for institutions. "Reductions in environmental impacts also produce corresponding operational cost savings, providing a significant incentive for building green on the campus.” Hodges and Elvey (2005) predicted the results above when they suggest the impact of sustainability on most campuses comes from their energy management practices. Energy management is first and foremost on the minds of directors of facilities. It is in these day-to-day operations of buildings that we can reduce utility consumption and waste and can return significant savings to our institutions.

Not only does a reduction in costs provide incentive for universities, they may be motivated to consider sustainability as a mode of student recruitment. In 2008, the Princeton Review’s College Hopes and Worries Survey (as cited in Dautremont, 2009) suggested nearly two thirds of students would like to know about the sustainability ratings of universities they were considering. 23 percent of those students stated that information would be impactful in their university decision.

These efforts are to be commended. However the commendation comes with a reservation. The efforts reduce the carbon footprints and serve as models of influence for the other industries are not enough. They provide more efficient means to proliferate common educational and campus values which are those associated with dominant conceptions of development and are driven by economic goals. These discussions are certainly valuable and have led to some fantastic facilities exhibiting the newest and best practices for reducing carbon footprints, but we need to ask how these legitimately hope
to make change. Robert Jickling (1992) might ask deeper questions about the reach of these operational strategies; What are students learning in the “green” classrooms? Are they being challenged to consider alternatives ways of being? Are they provided spaces for critical discourse on issues plaguing our environment? Or are they reinforcing the dominant values of unsustainable society. Unfortunately, they may lack the potential for developing alternative views and critical perspectives on our collective values which have led to the need for sustainability education in the first place. This form of “greening” the campus has been criticized (Kahn, 2010) as being faddish and lacking in critical perspective needed. Efforts to green the campus without challenging the systems which have led to unsustainability will have minimal impact. If, when space is running low, campuses first look at building/buying more, and base what is built and bought on the highly consumptive socially determined needs of today, it may make no difference how low carbon the projects are. They would fail to challenge the commonly held values associated with our wants. An alternative would be to consider first whether more is necessary. If so, could a potentially more costly renovation of existing space suffice? To renovate may cost more, but will likely result in less purchased material, and certainly less material in landfills. As such, campus greening efforts may serve only as a bandage on a potentially terminal wound as Orr (2004) suggests. As bandages, they may slow the bleeding, but not heal the wounds. He cites the example of biodegradable plastics as additional evidence of this form of greening. By creating a product people can feel better about disposing, plastics companies have found a way to feed our ever growing appetite for plastic. The technological advance simply masks the need for real discourse on our
needs and wants which may lead to a reduction in our desire for environmentally detrimental products.

University efficiency and the transition to more environmentally conscious operations are an essential part of the greater educational transition called for in the university-based ESD declarations such as the Talloires Declaration, the Halifax Declaration, and the Blueprint for a Green Campus. By way of the campus as a community model and the community stakeholder, these efforts also are steps toward the roles expected for higher education within the other initiatives such as Agenda 21 and the Decade of Education for Sustainable Development. However, green buildings and waste reductions are not in and of themselves sufficient in the effort to alter culture. The reason for this position is two-fold. Robert Jickling brings up the first point with his question above; that is, the real value of the green building and other operational efforts is not simply in the greening of the campus, but in how the greening informs education and impacts student experience on campus (Jickling, 1992). The second reason for the cautious optimism of campus greening is associated with the fact that these efforts can all be grounded in an economic perspective, and thus do not require a reorientation of institutional value toward an ecological perspective.

Digging in to the operational critiques risks the development of a sense of fatalism that would suggest that no effort is good enough so why should we even bother. The reality is that green building and greening of the campus through efforts such as recycling can serve as a part of ESD as conceived by the movement’s authors. What is needed is a reorientation of the values that drive such decisions. Campus greening
decisions become part of sustainability discourse when they are grounded by the ecological perspective and thus are not measured by a financial return on investment, rather by a larger and often hidden scale of ecological return. Additionally when the educational value of a decision makes it worthwhile, we can recognize a transition toward a more meaningful ESD.

**Curricular Efforts**

Orr (1992) stresses the connection between the operational and curricular efforts in his *Ecological Literacy: Education and the transition to a postmodern world*. In addition to setting campus policies on food energy, water, materials, architectural design and landscaping, the actions should reinvigorate the curriculum and set the foundation for the liberal arts to lead the pathway forward. The key is to build research projects, courses, seminars, and to establish interdisciplinary programs where sustainability issues can be taught, debated, and actions can be enacted. If done well and holistically, Orr sees the potential of institutions to reach the assigned role as legitimate leaders of a sustainability movement through roles in community leadership, impacting future leaders (students), and current leaders (alumni).

Attempts to incorporate sustainability into the curriculum are numerous and varied. Some institutions offer certificates, while others offer minors or majors in sustainability. Though intended to be and promoted as interdisciplinary, based on the interdependence of its three systems (environment, society, and economy), these programs are often housed within single programs; the natural sciences, schools of business, or even technology. In fact, they may offer little in the way of interdisciplinary
studies. This is especially problematic due to the highly interpretive nature of sustainability (to be further explored in the following chapter). This disciplinary perspective can thus greatly impact the manner in which EFS is structured. Sustainability within a biology program is likely to exhibit different core values than sustainability within a technology or engineering program. If these varied interpretations were combined into a holistic sustainability student experience, the results might be different. However, the specific disciplinary interpretations sometimes/ might reduce the capacity of institutions to effect change. Deep critiques of the disciplinary nature of academic institutions suggest that the disciplinary structure of higher education offers insufficient experience for navigating the changing world around their students especially as it relates to issues as complex as sustainability. Critics argue that the environmental, social, and economic challenges that proliferate unsustainability are too complex and interdisciplinary for single perspective solutions and thus suggest a more systems-based approach to education (Orr 1992, 2004, Bowers 2001). Orr (2014) rightly suggests that the structure of departments is organized for intellectual convenience rather than based on the ways we sense the world. If they were, he posits, we would have departments of sky, landscape, water, and wind among others. This may be a little far-fetched, but there is certainly truth in that we experience our world in very interdisciplinary ways.

Sustainability isn’t the only subject to generate this concern. Orr (1992) and Kahn (2010) describe concerns over the isolation of theoretically transdisciplinary subjects such as ecology and environmental studies. Programs such as ecology and environmental studies are possibly the closest existing learning programs to what a
sustainability program would be. As transdisciplinary programs, they don’t fit into existing disciplinary structures. Ecology and environmental studies may not require entire restructuring to sufficiently represent their complexity, however at a minimum they require the type of silo breaking interdisciplinary relationships called for in the ESD movement’s founding documents. For example, Orr worries that “[e]cology has been isolated within biology departments as though it has nothing to do with the social sciences, the humanities, or the professions. The result is pervasive anthropocentrism that magnifies the role of human and their ideas, art, institutions, and technology relative to soil, water, climate, wildlife, resources, geography, energy, disease, and ecosystem stability.” (Orr, 1992, pp. 134, 135). Without sufficient engagement with the social sciences and the humanities, students may miss out on the complexity of our relationship to natural systems. Orr bases much of his criticism of education on the proliferation of a human disconnect from our natural origins. He often points to the importance of ecological literacy, which requires an ability to understand the interrelated human and natural systems.

**Beyond the disciplines.** Extending inward from the same isolation criticism, Kahn (2010) worries that sustainability is now organized on campus in ways that align with the scientistic emphasis on technicism, instrumentalism, positivism and naïve empiricism. His critical eco-pedagogy perspective calls for a complete reorganization of educational values. His hope goes beyond restructuring the disciplines, toward a rebuilding the entire system itself on a foundation of critique of existing unsustainable values. Critical eco-pedagogy posits that students and faculty must engage in active
criticism of the existing political and economic structures responsible for current social and ecological crises, which would in turn lead to a reconceptualizing of sustainable development. Kahn contends that the participatory and metacognitive experiences needed for such are precluded by both the structure and epistemological orientation of higher education. This position is supported by Jickling (cited in Kahn 2010) who criticizes the preponderance of instrumentalist and deterministic education for sustainable development. At issue here is that the goals are predetermined by the predominant voices of advanced capitalized nations. Kahn seeks to organize education for sustainability from a different perspective grounded in critical social theory and emancipatory theories. For example, Edgar Gonzalez-Guadiano (cited in Kahn, 2010) has sought to displace the hegemonic ideas of national security in favor of a problem solving pedagogy that seeks knowledge of how the environmental factors contribute to disease, famine, unemployment, crime, social conflict, political repression, and other forms of sexual, ethnic, or religious violence that undermine security. This means it is not nearly enough to raise the awareness of environmental concerns, but rather we should be raising a critical awareness of those problems as they are derived from a market based economy. It moves past the anthropocentric nature of social justice approaches to environmental issues by incorporating ‘‘ecological ideals of the intrinsic value of all species, the need to care for and live in harmony with the planet, as well as the emancipatory potential contained in human aesthetic experiences of nature’’ (p. 19). Cited in Kahn (2010) Angela Antunes and Moacir Gadotti in 2005 wrote
Eco-pedagogy is not just another pedagogy…it not only has meaning as an alternative global project concerned with nature preservation (natural ecology), and the impact made by human societies on the natural environment (social ecology), but also as a new model for sustainable civilization from the ecological point of view (integral ecology) which implies making changes on the economic, social, and cultural structures. Therefore, it is connected to a utopian project—one to change current human, social, and environmental relationships. Therein lies the deep meaning of eco-pedagogy… (p. 19)

**Curricular examples.** A review of examples and the relevant literature reveals that the emphasis of existing research on sustainability in curricula tends to be within the natural sciences, technical fields, or business schools (Vaughter et al, 2013). One example is the sustainability certificate program offered through the University of New Hampshire, School of Business. This three day program asks its graduates to design a sustainability initiative for a business within 6 months of completing the program (Business NH, 2011). Basing it within the school of business doesn’t preclude meaningful interdisciplinary learning, however it might suggest there is a higher emphasis on the economic issues than might otherwise be appropriate. This program is offered through a statewide non-profit the Corporate Sustainability Leadership which seeks to support businesses interested in the “triple bottom line” i.e. positive impacts for the economy, society and ecology. The Institute features business practitioners as instructors, and live case studies of triple-bottom line corporations such as a plastics recycling firm and a national organic food production corporation. The program is
focused on business interests, but does appear to rely on the relatively stout sustainability initiatives of the university to look deeply into supply chains for ecological impact assessments, collaborative partnerships for bigger sustainability impacts, social impacts of the business, and the way in which leadership styles support or inhibit the type of thinking needed for sustainability planning. All of these are positive components of a business program. Unfortunately the program focuses on how to add sustainability to existing business interests. One of the sessions goes so far as to make a business case for sustainability i.e. sustainability is financially viable. In this session, participants learn how to develop a story rooted in their corporate values and how to connect return on investment and sustainability. Businesses are necessarily economic at their root, thus much more critical self-inquiry may not be realistic. However, my concern would be that given the emphasis on the economic bottom line, the long-term attention to the other two pillars of sustainability, the social and ecological, would be limited especially in times of economic crisis.

Cornell University offers another example by offering a major in Environmental Science and Sustainability (ESS). It is housed within the College of Agriculture and Biological Sciences, but it offers a broad range of courses with an interdisciplinary bent and an environmental focus such as Society and Natural Resources. Included in the course of study is a section called environmental humanities. Courses in this section include; Contemporary Controversies in the Global Economy, Social Entrepreneurs, Innovators, and Problem Solvers, Devolution, Privatization and the New Public Management, Toward a Sustainable Global Food System: Food Policy for Developing
Countries, Culture, Politics and Environment in the Circumpolar North, Agriculture, Food, Sustainability and Social Justice, Resource Economics, Ways of Knowing: Indigenous and Local Ecological Knowledge, Health and Survival Inequalities and many more (Environmental and Sustainability Sciences Major, 2014). Taken together, the courses suggest a truly interdisciplinary experience. Unfortunately, though it appears to be interdisciplinary, students are required only to take one course from that list of courses as a junior or senior. The remainder of the course of study for the program is dominated by traditional science curriculum. There is great potential in the list above. Where Richard Kahn (2010) calls for a recognition of traditional ecological knowledge (TEK) as essential to a sustainable future, the ESS program at Cornell only sees it as one of many choices for their students. Kahn refers to this style of EFS as sustainability as environmental science. At issue here is that dominant science curricula helps us understand existing conditions, but lacks the capacity build relationships between human and natural systems necessary for the critical reflection we need. Since the era of Descartes, our investigation of the natural world has been done from an outside and objective perspective. If we distance ourselves from the subject of ecology, we work against what E.O. Wilson (1992) termed biophilia or the connections humans subconsciously seek with the rest of life. Science as dominantly conceived leaves little room for the subject of love inherent within biophilia that Stephen Jay Gould felt is essential in successful conservation: “We cannot win the battle to save species and environments without forging an emotional bond between ourselves and nature as well for we will not fight to save what we do not love” (Orr 2004, p. 43). Orr calls for a
resurgence of virtue, learned from experiences as members of a moral ecology that can look beyond the objectivity and relativity of science toward a right way of doing things for all concerned, human and non-human. In other words, he advocates a shift from the economic framework to an ecological one.

My own university is representative of the more narrow approaches critiqued above. Kent State University, at this time, offers a sustainability minor within the College of Applied Engineering and Technology (Sustainability Minor, 2016). It consists of basic courses representing the three pillars of sustainability and an integrated series of upper-division courses related to applications of the basic principle. Required courses are limited to *Introduction to Sustainability* and *Cooperative Education-Professional Development*. Elective options vary, but the three values systems are represented in the options. Unfortunately, as independent options for students there is nothing to tie the learning together. I have concern over the messages taken away from this. A student can graduate with a sustainability minor after taking the following list of courses; *Introduction to Sustainability, Cooperative Education, Intro to Micro Economics, Introduction to Entrepreneurship, Supply Chain Management, A Business Case for Sustainability, and Cities and Urbanization*. If the effort is to educate for “sustainable” business plans, I might consider this a success. However, if the attempt is to educate for a sustainable future and that sustainable future necessitates at a minimum a balance of the three values systems, as is called for in the driving declarations and reports this doesn’t appear to match up. In fact, the existing discipline silos and associated drives toward specialization act in resistance to the type of connective education needed to address the
environmental crises and their subsequent socio/economic crises. This is recognized in the higher education-based documents (Talloires Declaration, 1990; Lester Pearson Institute for International Development, 1992; and Essex Report, 1995), but does not appear to be realized in this effort at Kent State University. We are missing the guidance of Orr (1992) who calls for an integration of disciplines and perspectives in line with the documents above. David Greenwood (2010) argues that to include sustainability into a course or even to add a single course into a program is not likely sufficient enough to “green” student experiences. Within some disciplines such as teacher prep programs, the student experience is essentially a prescription and any deviation from the script is not welcomed. Thus these efforts fail to support student engagement with the complexity of sustainability issues, let alone offer access to alternative ways of being. Within the program at Kent State, students must deliberately select coursework, which may limit their exposure and perspective.

The curricular attempt at KSU is appreciated; however, students are expected to uncover sustainability on their own as the courses themselves seem to lack any deliberate design which would necessarily reorient student perspective enough to expose (un)sustainabilities. Interestingly, even the Introduction to Sustainability course is located in the technology department. According to the university catalog’s course description, the course “introduces the students to the concepts of sustainability and its three pillars, namely, economic growth, environmental protection, and social equality” (Sustainability, 2015). Students taking the course will understand the language and concepts of sustainability and will acquire the knowledge to further study sustainability.
A review of the syllabus (TECH 27210, 2014) shows weeks nine to fifteen focus on solutions to unsustainability referencing efficient technologies, sustainable economy, metrics and infrastructure. Only in week 15 is ethics referenced. As such, sustainability is framed as technological innovation as opposed to cultural or behavioral change. This aligns with the Kahn (2010) critique suggesting sustainability is aligned with dominant scientistic, technicist educational values. In their overview of Canadian ESD, Svanstrom et al. found an increasing number of institutions were offering course work integrating sustainability concepts into environmental assessment (EA) training, but that most of the courses were cursory in nature, providing little room for thinking critically about environmental problems (2012). Within the last several years numerous programs, courses, schools and even colleges have opened to begin tackling the inevitable and complex challenges of sustainability. It is essential to explore the structure (the curriculum and pedagogy) and more importantly their missions and underlying philosophies (language of goals and objectives) of many of these most recognized programs, such as Arizona State University’s School of Sustainability, which is geared toward educating students in a separate transdisciplinary program. Arizona State has maybe the most prominent program addressing sustainability, and yet it too could be criticized for not meeting the expectations of the primary intent of the EFS movement. While it has created an entire school to address sustainability, that leaves the remainder of the university potentially/ seemingly devoid of responsibility for developing programs of study that help students think of a new and more sustainable future. Other more recent programs such as the Environment, Sustainability and Society major, launched in 2009 at
Dalhousie University, in Nova Scotia, also demonstrate a limited reach. This program is only offered as part of a double major. “That means it’s married to disciplinary study,” says Steven Mannell, director of Dalhousie’s new College of Sustainability (Redden, 2009). Marriage with disciplinary study suggests that this choice would provide an extension outside of another discipline that on first look may be positive. The issue here is that students must select an additional major in order to explore sustainability. This fails to reach the level of reorganization originally intended, which suggests that institutions should be infusing sustainability within their curriculum rather than offering it as an additional program. The American Association of Sustainability in Higher Education (AASHE) lists on their website 425 baccalaureate programs offering sustainability based learning in the United States and Canada (Campus Sustainability Hub, 2016). 425 programs is a great start, but with their limited impact and 5,300 HEIs in the US alone, the number seems insufficient (Selingo, 2015).

Institutions which take direction from these large scale declarations for an education that transforms the future should be implementing education for sustainability grounded in values and experiences that transcend the campus-based student experience which appears to dominate the discourse of the declarations on the subject. Mary Pigozzi’s (2010) review of Education for Sustainable Development (ESD) summarizes the contextual problems and offers five comprehensive challenges faced by the ESD movement. Her response is specifically related to the UNESCO DESD, but applies broadly to the other driving efforts.
The first challenge is that the education landscape is complex. Within the development context alone, education is an integral component of multiple factors associated with quality of life improvements. Seen as a means to address economic and social inequity in addition to ecological justice, there is a chance that ESD will be lost among other educational movements. Pigozzi (2010) calls for an understanding of these other efforts by those in the ESD movement so as to identify appropriate ways to partner for furthering and broadening the relevance of ESD.

In a related concern, Pigozzi’s second challenge is that there will be a need to recreate the movement after so much time has passed. Her concern is based on the difficulty of changing values as appears necessary. She suggests a need for popular support of the movement. In order for this to happen, first it must be seen as valuable by the stakeholders influencing the values of government and higher education. Building relevance with such stakeholders not only positions it favorably among the other education movements, but also advances it within popular discourse.

Third, sustainability often refers to a balance of economical, societal, and ecological values. Maintaining such a balance, let alone a reorganization where ecology is given higher preference becomes increasingly challenging with economic crises which both locally and internationally reinforce the existing focus on economic growth. The origins of the movement are associated with economic progress, both as a cause of unsustainability and its presence as a continued measurement of development. This relationship is precarious at best. If popular relevance of the movement and understanding of the relationship between these pillars is not built, threats (or crises as
Pigozzi writes) may result in return to default value orientation of economy first, society second, and lastly ecology.

Fourth is a concern that implementation of this educational movement is a challenge based on the institutional context even if philosophical and policy battles are won. The changes called for in the movement such as; rearrangement of disciplinary relationships, deeper engagement with stakeholders, and new funding and focus on sustainability research, among others are counter cultural for higher education which has emphasized increased specialization and stakeholder influence from an economic perspective.

Finally, the movement needs coherence and consistency. Pigozzi worries that multiple interpretations of what ESD should mean, may weaken any momentum needed. By the nature of ESD it will necessarily exist in multiple place-based interpretations, however if the underlying focus principles are not consistent, it could weaken the collective focus needed for cultural change. Thus, there is a need for continued discourse and interaction among institutions and the additional stakeholders whereby ESD can be further articulated so that one institution’s efforts are supported by the work of others within the higher education community and within the geographical communities of the institutions as well.

The Problem

Despite national and institutional leaders’ recognition of the role of universities and HEIs to transform cultures for the development of a sustainable future, universities have largely approached the issue with an internal perspective. More often than they
should, the institutions present themselves as informative leaders and models of more sustainable behaviors for their students, faculty and other institutions. This seems well enough as information about the limited resources of our planet are presented and acted upon by the universities. However, it is done in a way which emphasizes a focus on campus efficiency as opposed to inclusion of broader social transformation goals of the movements’ origins. These actions are evidence of the HE/community dichotomy introduced in chapter one and the imbalance of sustainability perspectives that will be the focus of the next chapter. Additionally, the information both directly and indirectly presented to students through pedagogy and campus experience is that sustainable development can be met with a reduction in the carbon footprint, recycling, and direct educational efforts aimed at informing students of sustainability. If the aim is to maintain the dominant development aims, this may be enough. However, If there is little in the way of questioning/critiquing our dominant ways of being, we may not be able to address the unstated issue in the declarations and reports which is that the drive toward development is itself a problem, and that higher education is in part responsible for the problem.

Unfortunately, instead of education for sustainable development, the result may simply be education about sustainable development. Students leaving these programs with certificates, minors, or majors may very well be able to point out the reasons we need change and clearly articulate the complex interrelations of the key human and natural systems all of which would demonstrate knowledge about sustainable development. However, without spaces for critical review of existing models of
development and opportunity to explore alternatives, they may be far removed from a place of learning and living for a sustainable future. Knowledge gained and conservation efforts enacted may delay the inevitable, but the foundational values can still ultimately be unsustainable. Recycling for example is an important practice, however, the root need for recycling is that we have a consumption-based and throw away culture. Basic recycling education and access addresses the throw-away characteristic of our culture but does not call into question the consumption which creates the waste in the first place. Efforts to reduce the carbon footprint may only serve to identify means to maintain existing luxuries without critically reflecting on what we really need to achieve a quality education. If these do not pour out beyond the campus and into the community the greater impacts of the institutions and their students may never be fully realized. Thus, instead of demonstrating the transformative capacity of HEIs, the literature presents two key ways in which education informs students about sustainability, but doesn’t by and large support critical education spaces for transformative sustainability education.

In Summary

Institutions seem to be doing well at introducing the topic of sustainability on campus from campus administration down to the students. Administrators are ensuring that new facilities are built with efficient technologies, students are participating in recycling and waste reduction initiatives, and new programs and degrees are being created around the topic for students to explore. Unfortunately, these efforts are falling short of building a transformative education and we are learning that education about sustainable development is different than education for sustainable development. In
order for sustainable development to be realized, values of higher education must shift based on a critical review of the existing systems and structures. What we may be seeing is the result of the failure to acknowledge culpability introduced in the first chapter. It’s not that higher education cannot meet the high standards set for it over the course of the last decades, but adding a few courses or becoming more efficient is far short of the calls for higher education action which suggested new strategies for research, funding, interdisciplinary studies, and stakeholder engagement. Operational efforts are limited if they are based on an economic return on investment. They will also fall short if they only provide opportunity for passive education. The green campus should be used to provide coursework which explores and challenges the unsustainable values students are most familiar with. Additionally, stakeholders beyond the campus are referenced in the movement’s driving documents, yet the efforts explored here only fit within the existing campus structures.

**Exemplary Program Needs**

A review of this chapter gives the impression that what should be done can never be. Critics of the EFS movement appear to be able to find cracks in nearly all university facades whether it be a carbon neutral building or even an entire degree program dedicated to sustainability. This is true. However, there are exemplary programs which deserve attention as being demonstrative of the institution-wide approach to aligning aims with those lofty charges within the declarations. The key theme linking the criticisms above is the reorientation of values and restructuring of the campus systems. Additionally it appears that the campuses have not yet realized the call to unite with
additional stakeholders in sustainability initiatives. It’s possible that these two may be linked and that left to their own devices institutions may continue on their current trajectories. Whereas an increase in connection with external stakeholders may be able to stimulate the necessary change by exposing alternative perspectives currently hidden. Ultimately the efforts might serve to humble the institution and build healthy relationships with the community. This can be done operationally with decisions that support green communities rather than green buildings and pervasive interdisciplinary experiences linking students to their place in the community rather than programs that serve only to mark placement of students within their training. I will cover this further in chapters four, five, and six.

In an effort to stay focused around the transformative goals for both students and the educational system which stimulated this educational movement, it’s important to identify an appropriate model to serve as a reference point. I choose to point to a guide which has since 1992 focused on transforming education for the future. Twenty-four years ago, David Orr shared a vision for implementing sustainability through education in *EcoLiteracy: Education and the transition to a postmodern world*. In this work he stresses the need for developing competence in thinking about natural systems which link the human and non-human world. This connective education that creates inclusive multi-generational communities, personal wholeness, necessarily calls for restructuring of the learning environment as mentioned above, to overcome the centripetal effects of academic specialization and the split between intellect and experience.
Disassociating sustainability from the natural sciences and technical innovation will be difficult. Some leaders though are making a case for sustainability in a broader context. Neil Weissman (2012) cited former Cornell University President Frank Rhodes proposing sustainability as a new foundation for liberal arts in fact, he labeled sustainability "the ultimate liberal art." In this case for liberal arts and sustainability he also refers to a report from a 2007 conference at Yale which suggested that our situation requires the knowledge and wisdom of psychologists, philosophers, poets, preachers, historians, and humanists. A prime example of how the issue of sustainability is aligned with a liberal arts education references one of the most challenging I’ve brought up in this work; If development as we know it is based on a western view of quality of life which to this point is unsustainable, what should we base it on? This question cannot be tackled within disciplinary silos of a program focused on specialization and vocational education. Robert and Edward Skidelsky (2012) asked a similar question, "What is the good life? And what is it not? And what changes in our moral and economic systems are needed to realize it” (p. 13)?

Orr (2004) also finds value in the liberal arts for addressing sustainability. He calls for liberal arts to respond to the challenges faced by ESD. Beyond providing the space for interdisciplinary study necessary to deal with the complexity of the subject, the liberal arts support the ability to communicate in plain terms and resist the specialized jargon dominating the disciplines today. The ability to communicate broadly and plainly supports the achievement of the societal goals of the early declarations. Students and faculty must be able to communicate with and learn from stakeholders beyond the
campus boundaries. Additionally Orr suggests that this communication and understanding supports the need for communication that provides a sober view of the world without inducing despair. The need is to speak about and act for the challenges of our time so as to build hope and initiate action. If we are unable to build bridges between the disciplines, and between the campus and community, the issues of sustainability will likely continue to be parsed out within the existing structures and treated as independent problems.

Teaching students greener methods of living, building and learning is not inherently bad. They should be considered as part of a transformative vision. After all, the only reason we are exploring sustainability in education is due to pace of damage caused by our unsustainable behaviors. Though it may postpone the inevitable, it is not sufficient for fully addressing the unsustainable nature of our systems. What’s needed is a type of critical pedagogy that supports student questioning of the status quo and considering of alternative relationships between one another and the environment. In order to meet those higher expectations the effort must include space for critical discourse and creative problem solving based on a platform of environmental health.

**Professional Challenges**

Learning takes place on multiple levels. What is expressly stated, what is omitted, the physical learning environment, overall campus environment, and administration and organization structures are significant pedagogical influences (Cortese, 2003). Sustainability pedagogy in higher education thus requires instructors, students, and academic administrators to consider the content, context, and constituencies
involved. One reason for the lack of research on sustainability uptake beyond the sciences and technical fields may be the lack of professional development training in higher education institutions designed to facilitate faculty integrating sustainability concepts into their curricula (Vaughter et al., 2011). A 2008 examination of 38 Australian universities revealed only a single institution offered its faculty training opportunities on incorporating sustainability into their curricula (Svanstrom et al.). One goal within Trek 2010 (Sherman, 2008) at the University of British Columbia states that faculty should facilitate the augmentation of existing courses…to ensure that all students develop a greater awareness of the responsibilities as global citizens. Where might faculty and university leadership learn ways to stimulate teaching and learning for sustainability? Sherman (2008) points out that even in sustainability circles of higher education, support for teaching and learning are devoid. He reported a mere 13% of presentations offered at five different sustainability conferences from 2003-2007 were devoted to teaching and learning. Existing mechanisms for assessing university sustainability provide even less support. Only 5% of indicators in five different assessment instruments were focused on teaching and learning.

One reason for the disparity between operational indicators and curricular indicators is challenge of assessing affective goals. These are harder to quantify than operational goals such as reduce steam plant emissions by 80% (Svanstrom et al., 2012). However, it is not impossible. Kerry Shepard (2010) suggests in a review of studies that a number have been completed successfully and represent multiple modes of assessment. Some studies used self-reporting attitude surveys for monitoring changes in student
worldviews (Anderson et al., 2007; Ballantyne & Packer, 2009) while others demonstrated the value of whole cohort evaluation (Bloom, Hastings & Madaus, 1971; Shephard, 2009). The preponderance of operational indicators also speaks to the dominance of quantitative data in education policy development. There appears to be sufficient reference to support increased research on the behavioral and attitude changes among students as a result of ESD. If research on the affective results of teaching for sustainability received the attention promised in documents such as the Talloires Declaration, there would likely be more interest and investment in teacher development.

David Greenwood (2010) has found a way to work toward sustainability within the existing frameworks. He is driving policy change from his own classroom and department. Thankfully for Greenwood, he teaches in the social foundations of education and has been able to alter the lens of his courses to focus the view on sustainability. Two significant changes were to alter the name of one course from “Social Foundations of Education” to “Cultural and Community Contexts in Education,” which has allowed him to create a better conceptual fit with sustainability than previous approaches that focused on a survey of the key themes (2010). Secondly, Greenwood was able to suggest sustainability as a key component of the college of education framework. By virtue of his invitation by the dean, he was able to suggest sustainability and was pleasantly surprised by the unanimous support.

Interestingly, all of Greenwood’s efforts to infuse a philosophy of sustainability were essentially grass roots efforts that may never have happened had he not had the initiative, status and position within a supportive program. Greenwood’s examples point
to the potential existing within individuals who are confident and feel compelled to make change. This is somewhat concerning though since very few faculty members have deep academic or practical experience with the complex interdisciplinary work of sustainability. Timmerman and Metcalf (2009) echoed by Greenwood (2010) and (Vaughter, et al., 2011) all suggest that universities are to support teacher development for sustainability, yet so few are educated in how to do so. Weissman reminds us that the combination of disciplinary silos and tenure practices make it very difficult for educators to work at the grassroots level (2010). Grassroots in this context refers to both independent initiatives outside of the dominant structures and the community-based initiatives for sustainability. These existing structures have reduced the value of engagement with the community and in the name of professional development pulled faculty inward deeper into their specialties rather than outward where their specialties could find direct meaning. If as is suggested above, institutions build bridges with their communities and additional stakeholders in sustainability. This issue could be resolved by identifying the ways in which faculty can develop through community engagement.

**Holistic Pedagogy**

It's not easy to walk the talk, but it can be done. Sustainability policies can be driven as both top down and bottom up approaches. Some institutions have made significant progress on both large and small scales. The Colloquium at Florida Gulf Coast University provides an example of a top down approach in which the administration chose to align university values with values more closely tied to sustainability as it was conceived by the authors of the movement. One of their
university-wide outcomes is that all students will develop ‘an ecological perspective.’ A way to accomplish this perspective was to devise a course, or group of experiences, with an environmental focus that all FGCU students must complete, and in which faculty from all four colleges would be involved (Bevins & Wilkinson, 2009). The resulting product is The Colloquium. It revolves around three themes: sense of place, ecological literacy and sustainability. Students read a variety of authors, including essays on experiential education from John Dewey, ecological literacy and education for sustainability from David Orr, environmental ethics from Aldo Leopold and the Earth Charter. Students participate in field trips designed to provide a deeper understanding of southwest Florida and the connections between culture, society, business and the environment. Unlike other examples mentioned earlier, The Colloquium demonstrates a full scale commitment to help students explore sustainability values. It is part of the general student learning experience, not only available to those seeking it.

This program should serve as an exemplary project of ESD for the following reasons: First, it is arranged upon an ecological foundation. Unlike other examples provided here, this program demonstrates a value on the development of an ecological perspective for all students. Second, students with this perspective will have had their worldview altered in a way that no others do. It sets a foundation for students to better understand what they learn about sustainability. Third, themes transcend the disciplines. There are no single subject areas where sense of place, ecological literacy, and sustainability can be learned. The authors of this program have deliberately complicated the educational process for themselves and thus require at least some restructuring to
make this work such as faculty from multiple schools collaborating around the subject. Fourth, valuing experiential education breaks from the standard that learning happens on campus lead primarily by faculty “experts”. Service learning, even if not, explicitly based on sustainability, suggests that students learn not only by doing, but more importantly from others, and in other spaces. This is significant for the construction of bridges between the campus, the community, and other stakeholders. There must be a balance between the university as community developer of leaders, and the university as one of many potential stakeholders in building a sustainable future. This signals the potential for the mutually beneficial relationship that is necessary for the institutions to serve as community leaders. With an emphasis on developing a connection to place, students are in position to better understand the interdependence of systems integral to any legitimate ESD effort. If we attempt to educate students to understand the impacts of economic development on the social and ecological systems, we should provide a context for seeing and felling these relationships. Connecting to place rather than a theoretical or exotic context makes the learning real and hopefully more “sustainable”. Upon this foundation students are in position to make best use of all of the deep and shallow forms of ESD explored in this chapter. A “green” building with water conservation strategies for example, means much more for a student who has traversed a river route form wetlands to the ocean. The academically defined “consumer-based” society becomes real for a student who serves the community’s needy in a homeless shelter.

In spite of what appears to be a prime example potentially replicable across higher education, it should be noted that FGCU is a very young institution born in 1995 amid
controversy over the potential environmental impacts of its development. This unique local situation combined with the timing (at the beginning of the ESD movement) may have created a perfect scenario. The Colloquium coordinator at the time was a colleague and devotee of David Orr and thus the program took on the look of Orr’s philosophy (Wimberley, 2010). The realization of Orr’s vision though has not gone without criticism. Edward Wimberley, a founding dean at FGCU, writes that the infusion of this philosophy is tantamount to ecological indoctrination of students (2010). In the name of pluralism, he suggests this ecological ideology must be challenged. This program may be the embodiment of the issues facing education and sustainability. Even within what can be considered one of the most ecologically sound institutions, there is resistance to the reorientation called for by the ESD movement’s drivers. Wimberley’s (2010) opinion is significant for the movement because it represents the enormity of the challenge faced by large scale initiatives which seek to build an ecological ideology among students. If “ecological ideology” represents the acceptance that we humans are not alone on this planet an independent from its systems. I see no need for concern. Rather it would appear that this ideology would ground students with the most fundamental understanding of their places in this world. Wimberley uses pluralism in a pseudo-liberal attempt to critique the “indoctrination”. I am of the opinion that pluralism without understanding of connectedness is simply tolerance of minority perspectives. Pluralism through the type of interconnectedness Orr calls for is exactly the type of humbling our dominant perspectives need (2010).
Contextual Discussion

Institutions are doing many good things to demonstrate participation in the movement. Operationally, many campuses continue to expand the standard of ecological efficiency by reducing the use of fossil fuels, increasing recycling efforts, and reducing the impact of material and waste streams. Universities may now be more “green” than they ever have been. For its influence on these improvements, the ESD movement should be applauded. Whether these results represent what was originally conceived in the movement is another issue. Many “green” strategies not only save on resources, but also save institutional finances on utilities. Thus, decisions to begin these strategies can be made without reorienting the values of the institution. In this manner sustainability is feasible only so long as it aligns with economic sustainability. When decisions on sustainability are made that challenge conventional economic and social wisdom, may we begin to see the transitions the declarations originally called for? Additionally, the ways in which these physical and operational changes support new learning and student engagement is at least as important as the changes themselves. The operational and curricular manifestations should support one another such that students and communities are legitimately changed.

From a curricular standpoint, institutions are developing increasing numbers of programs, degrees, and learning opportunities focused on sustainability. It would be a fault here to ignore the potential within these efforts. However, again we see that the development of these efforts and their implementation are happening most often within
existing institutional structures and reflect existing higher education values thus, falling short of the movement’s hopes.

Returning to Pigozzi (2010) whose criticisms are found earlier this chapter we must recognize that much is still to be done. It simply doesn’t seem that meaningful impact can be cited without commitment to critical reflection of the structure of education in the first place. Otherwise the precarious balance of economy with ecology can quickly fall in favor of the economic perspective as default. Whether in her concern of ESD being lost among other educational needs and their initiatives or in the weak mutually beneficial relationship between the economy and ecology balance, ESD must be able to generate popular support. Though we can point to the lack of stakeholder and community relationships in the ESD efforts covered here as a weakness (this will be addressed more directly later), we should also understand that the movement’s lack of coherence and consistency weakens any developing momentum which would otherwise be able to demonstrate for the public what is really needed for a sustainable future. This issue of coherence and consistency I argue is associated with multiple interpretations of the concept sustainability and how education should support those conceptions. Above we’ve identified efforts as far apart as those from University of New Hampshire School of Business (New Certificate Program Offers Lessons in Sustainability, 2011) and the institution-wide work of FCGU (Bevins & Wilkinson, 2009). In the next chapter I will focus on this issue and articulate a more appropriate conceptualization around which higher education can coalesce such that the momentum of the work can legitimately impact students so that they may in turn effect change within society.
CHAPTER III
CONCEPTUAL ANALYSIS OF SUSTAINABILITY

The previous chapter presented an analysis of the contextual challenges of EFS/ESD which lie in its drive to educate for prescriptive “sustainable” actions. At a minimum, there is a need to coalesce around a common conception of what sustainability means for education. However, before we can coalesce we must settle on a conception of sustainability capable of driving us toward sustainability. I’ve identified model perspectives and actions which may help to realize the difficult goals of the ESD movement. I will now offer a critical perspective on the concept of sustainability itself in order to uncover how the movement may have been misdirected from its inception. Unpacking ESD through conceptual analysis will uncover the ultimate root of the problem, which is that the dominant conception of sustainability, when applied as an educational aim, focuses on sustaining existing systems or products by transmitting knowledge about the systems and the skills needed to change the system to something more “sustainable”. The problem is that the movement appears to only sustain ultimately unsustainable systems. This might build an education about sustainability, but fails to move beyond the transmission of knowledge to the transformation of student perspective and subsequently a transformation of society. This chapter will address the following questions: how do we define sustainability, how does that limit the potential of the ESD/EFS movement, and what conceptualization can help educators and institutions move toward a truly sustainable future? I will present a review of some examples of common and dominant definitions and identify the key tenets. Critical perspectives of
these tenets will expose the problems in how these tenets are implemented, which leads to the ineffectiveness of ESD as an educational aim.

I argue here for a reconceptualization of sustainability from a static condition of society, understood as “sustainable development” which infers a sense of permanence, to a dynamic philosophy or guiding vision instead of the mind and heart. The reason for this is that the root cause of unsustainability lies in the human values that determine the design, organization, and order of all man-made objects and socially constructed phenomena. This necessarily reorients ESD from fixing the planet so it works for us to fixing us so we can work within the planetary systems that sustain us. Additionally this also reorients the aim of ESD from addressing the systems on which students will live and work to addressing the problematic perspectives of the students themselves. The blame does not lie on the students, but rather the anthropocentric understanding of our role on the planet. So the issue of ESD is not about teaching students what they should know, but how they should perceive their role within the global ecology. The values reorientation is based largely on interpretations of the critical perspective of eco-centric education such as the EcoJustice principles of the “commons” laid out by Chet Bowers in the late 1990’s. Others, including Richard Kahn (2010) and Linda Evans, (2014), provide links to critical social theory and critical eco-pedagogy which ultimately support the most difficult challenges of naming and disassembling the unsustainabilities within our living systems.
Sustainability Defined

Sustainability as defined by the Environmental Protection Agency (EPA), creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations (Sustainability, n.d.). Three systems or “pillars” as they are often referred to - economy, society, and environment - are an inherent part of any conceptualization of sustainability. Nearly all definitions will reference the interdependence of those systems, and the necessarily intergenerational perspective sustainability assumes. The differences in how sustainability is defined can be significant. Most imply a necessary balance of the three pillars while others place more emphasis on one over the others. Sustainability, to the coordinators of the sustainability certificate at University of New Hampshire School of Business, must emphasize the economic perspective (New Certificate Program Offers Lessons in Sustainability, 2011). This perspective is representative of a sustainability of what existing values. Authors of the early declarations would support a balance among the economic, societal, and ecological pillars. This infers that there need to be a revaluing of the systems such that the ecological is elevated to equal importance as the social and economic. Others, such as Orr, argue that sustainability is necessarily based on an ecological perspective. If not for the ecological limitations of our planet, sustainability would not even be a concern. Additionally, some imply that sustainability is a condition or state of being. That is sustainability is measured when a system or object can maintain itself in perpetuity. Ontologically speaking however, other conceptions present it as the nature of our being,
how we understand ourselves in relation to others and the natural world. The key
distinction here is that some associate sustainability with adjective descriptions of actions
or objects which suggest students ought to learn how to do sustainability (green building
design) whereas sustainability as a vision or philosophy suggests that sustainability is
something students should be.

Sustainability at its most basic level recognizes that resources within systems are
limited. Thus, a level of conservation must be observed. The term is common in a
variety of contexts (business, design, manufacturing, agriculture). The term often refers
to a state of being where resources are managed according to the inputs and outputs of
those systems so as to maintain a balance. In some cases it is used to refer to stable
growth as in a sustainable business or even to sustain a least possible damage status, as in
agriculture, where some level of input may be necessary to create stability. A business,
for example, is sustainable as long as its costs are balanced by its income though in most
cases, business goals would incorporate a stable level of growth. In agriculture, a farm
might be considered sustainable if the localized actions can theoretically be replicated in
perpetuity. For example, a farmer who rotates crops to replenish soil nutrients with one
crop following the extraction by another may consider his or her work as a sustainable
system. This version of sustainable, that is, maintenance of existing conditions, is
precisely how we are teaching students about sustainability. However, ESD as a large
scale educational challenge is based upon something much more far-reaching in both
time and space. It requires extending assessments beyond the current and local impacts, a
notion that we might be able to instill in our future leaders the necessary disposition to
not only maintain the current, but to also alter the future toward a more sustainable system than what we have today. It is an educational approach which must consider the interrelations of all human systems and natural systems. In the former agriculture example, the scope of sustainability must expand beyond the field to the input and output supply chains of all farm-based resources and products. A balance of inputs and outcomes for the sustainability of humanity is much more complex than any single context or system. What is called for ought to resemble a plan to educate for sustainability as defined above by the EPA. Students should be taught how to assess the impacts of their own living systems and behaviors and subsequently act with this understanding in mind.

In the context of this chapter and of education for sustainable development, the term refers to the limits placed on our collective living systems determined by our consumption of natural resources. In chapter two I presented the dominant perspectives of ESD which are aimed outwardly objects and systems. For example sustainable agriculture suggests that a given form of growing plants and animals is sustainable or at least more sustainable than another. These efforts are essential as we do need to improve objects and systems. However, I am not convinced that this is enough for two reasons. First, our earth systems are dynamic and the human action within them is even more so. Thus, how can we determine that something deemed sustainable today will be so in the future? Second, even if theoretically an object or action could be, the necessity of its use or design is inherently based on someone’s perspective that there is a problem. This leaves too much to interpretation wherein one person’s perspective of problem may be
drastically different from another. Without a perceived problem, there would be no need for it. Therefore, sustainability should represent a guiding vision that doesn’t require a “problem”. Education for this should thus be inwardly aimed at the minds and hearts of students so that “sustainable” designs, objects, or systems are driven from a guided vision as opposed to the problem/solution structure of education.

The challenge for education is threefold: to determine which of the varied interpretations of sustainability might legitimately effect change, to assess the role of higher education in relation to the most appropriate interpretation, and to determine the appropriate approach for the institution and its educators. If done, HEIs may be in a much better position to meet the challenging goals of ESD movement.

Definitions of sustainability abound and for this initial review, the EPA provides a reasonable short list for our consumption. (Sustainability Definitions, n.d.):

Sustainability is a new way of thinking about an age-old concern: ensuring that our children and grandchildren inherit a tomorrow that is at least as good as today, preferably better. We want to make sure that the way we live our lives is sustainable, that it can continue and keep improving for a long, long time.

*Sustainable Seattle*
We define sustainable environmental stewardship to include those concepts, strategies, tools, practices, and approaches that lead to environmental improvement in a manner that is sustainable over time, considers the long term effects as well as the shorter term, more immediate effects, and that contributes positively, even if indirectly, to the social and economic condition.

*Ed Piñero, Federal Environmental Executive*

A sustainable society is one that lives within the self-perpetuating limits of its environment. That society is not a "no growth" society - it is, rather a society that recognizes the limits of growth and looks for alternative ways of growing.

*James C. Coomer Ph.D.*

If you get right down to it, sustainability is really the study of the interconnectedness of all things.

*Barbara J. Lither, J.D*

Sustainability is capacity to deliver… desires to an individual or group of individuals through time (de Chazal, 2010).

De Chazal

**Core Tenets of Sustainability**

The definitions above all support the statements above regarding three important keys for any definition of sustainability; interdependence of systems, intergenerationality, and the assumption that our current ways of being are unsustainable.
**Interdependent Systems**

Commonly referred to as the three pillars, the environment, society, and economy are key interdependent systems of nearly all references to sustainability though in some cases environment is substituted with ecology. While these two terms are used interchangeably, they are in fact different. When environment is used, it exists as something beyond the human realm. Ecology on the other hand, suggests that there is an interaction among all living things and their habitats. I feel it is important to use the term ecology for its relation to the other pillars and because it incorporates our natural relations rather than excluding them as an “other.” When read as a set of systems, society can be read as the way humans interact with one another, economy can be seen as the negotiations between members of a society.

In most conceptions of sustainability, there is an obligation of balance amongst the three systems; economic, social, and ecological. Lither’s statement above reflects this necessary systems-based approach to understanding sustainability. This systems-based approach is significant because any effort to “be” sustainable in only one or two of the key areas is too narrow. This harkens back to one of the fundamental problems of the higher education context mentioned in chapter two. Early declarations and their proponents stress the need for establishing understanding of the systems’ interrelations.

Going back to the original Brundtland Report, we can read a need to see how the economic system is interdependent with the ecological system. This provides a foundation for the justification of interdisciplinary work covered in the last chapter. Unfortunately as we read in the previous chapter, due to its engrained disciplinary
approach, the modern higher education model does not support systems-based approaches.

Intergenerational Scope

The second key component is that it has an intergenerational perspective. This suggests it is measured over the course of generations rather than moments in time. Sustainability as defined above requires that future generations are in no worse position to meet their needs than the current generation. The temporal factors of sustainability suggest that sustainability cannot be viewed as a condition of the present. Rather, it refers to actions we can at best hope are in the spirit of sustainability grounded in what we predict for the future. The fact that our behaviors today impact the capacity of future generations to flourish infers that sustainability must recognize the impact of our current power over those of the future.

The challenge with the intergenerational perspective lies in the fact that we must question our abilities to conceive the future based on our existing conditions. We can use models to extrapolate the damage caused by pollution or deforestation for example, but the difficulty is in the fact that we would be assessing these projections from our current positions and thus our tendencies are to seek strategies for the perpetual maintenance of current conditions and standards. What happens when the current conditions and standards of living are inherently unsustainable? Our current conditions rely on sufficient unsustainabilities that make it difficult for us to expand our scope beyond ourselves and our immediate descendants.
**Assumed Unsustainability**

A third and possibly more important theme of these definitions is an assumption of current unsustainability. The entire purpose of defining sustainable development is born of this recognition yet it is not foundational to the concept as viewed by most. A problem lies in the fact that at best, it is inferred in several of the above definitions with the use of terms such as “new” and “alternative” suggesting a need for change. Thus, we read in these definitions a call to develop something different from what we have today. According to what I presented in the previous chapter, it appears the choice of HEIs is to develop new and alternative ways to meet our current needs and desires. The inference is good, but unfortunately may not sufficiently present our current ways of being as unsustainable. There is a missed opportunity with each to acknowledge that the current way of being is unsustainable which would foreground the proposals shared by the authors. What is needed is collective work on defining what exactly is unsustainable.

This critical perspective is possibly the most important need for the movement. Without a consistent critical assessment, any individual, group, or in this case institution is free to determine what is or needs to be new or alternative. Some of this became apparent in chapter two. For example, greening the campus can be seen as a “new” ways to design campuses and thus seem to be addressing the unsustainability of current practices. However, if the original critical perspectives are not sufficiently deep and consistent among actors, the movement will continue to view weak sustainability i.e. a green building filled with unsustainable learning as equivalent to strong sustainability such as an interdisciplinary environmental studies program focused on unpacking the
complexities of sustainability (this is not to say that both do not have their place in the movement only that they can be very different and the nuances of their genesis is worthy of exploration before tying them together).

**Lack of Consistent Interpretation**

Despite the common themes within the definitions I present here, educational systems have yet to bring them together with the action items offered in the declarations and large scale transformative goals covered in chapter one to effect large-scale change. Critics challenge that education for sustainability efforts have not been able to demonstrably affect the future despite many years of effort (Kahn, 2010, Manteaw, 2012, Orr, 1992). They question whether we have made significant progress toward a sustainable future or if we have simply found more efficient ways to live according to the same ultimately unsustainable values. The previous chapter covered the limitations of the context of dominant HEIs. In this chapter, I add to that by suggesting it is the interpretations of the common themes of the definitions that preclude educational efforts from meeting their goals. Emphasis is placed on the Pigozzi’s (2010) critique which suggests a need for more coherence and consistency in the movement. Even within the small sample set of definitions provided by the EPA, we can see that different interpretations of the same concept can be enacted which reflects a need for more coherence and consistency in the definitions. Sustainable Seattle suggests that the future should be as good as or better than it is now. For whom is that written? Depending on the reader, as good as or better could result in more problems than solutions. Pinero’s
definition appears as an outlier (though appropriate) suggesting an environment first approach with his definition.

This inconsistency is simply insufficient. If the maintenance of social injustices allowing for some nations to prosper are considered the aim in the same movement which might hope to create a new social order to break down existing barriers to flourishing, we must look at these tenets with a much more critical perspective and consider whether we are working with an appropriate interpretation of sustainability. That is, we live in dynamic systems and thus we are required to interpret the core tenets within our own time and place. However, the current flexibility allows for the concept to be co-opted by some who choose not to challenge and change the direction of humanity, but rather maintain existing trajectories for longer periods of time. The concept of sustainability requires deeper critical exploration and commitment to these basic tenets with consistent implementation strategies. This suggests that what we determine as baselines should be common needs, rather than interpreted desires which could vary drastically by culture and by opportunity.

When we critically consider a seemingly simple proposal such as, “future generations are in no worse position to meet their needs than the current generation”, we can quickly be drawn into very difficult questions such as: How can we base future needs on current needs if the needs of today have become so out of largely unsustainable lifestyles?, can we distinguish between needs and wants?, or at what point can we be considered “sustainable”?
If we are to educate for a sustainable development, that education must address the three issues brought to light here: the interconnectedness of the three systems and the necessary increased influence of the ecological system, the intergenerational dependency of future generations flourishing on our current philosophies and subsequent behaviors, and the critical perspective needed to recognize and address the current unsustainability.

**Challenging Common Conceptions of Sustainability**

While it is possible to draw out three common tenets of sustainability, they are far from satisfactory. In fact there are significant questions about the validity of these tenets. It is not that critics challenge their existence, it’s that there are criticisms of how the interpretation of them can be diverse and misdirected. My goal in this section is to explore the interpretations from a critical then normative perspective in order to determine whether there can be an interpretation which may be able to put us on a path toward the meaningful transformation with which HEIs are tasked.

What is wrong with sustainability education based on the common conception of development is that students are being further drawn into the value systems which have built our unsustainable “developed” existence. This form of education fails to question and critique the problems with how the developed world has become developed, i.e. through the oppression of developing nations and on the assumption that we (humans) are separate from the ecologies we now identify as threatened. As such we are developing problem solvers without presenting sufficient acknowledgment of their own culpability in the problems. Students exposed to this perspective are thus encouraged to explore the ways in which their chosen field can become greener without questioning the ways in
which their fields and the socio-ecological relationships in which we collectively participate have contributed to our unsustainability.

**Inaccuracy of Balance of Interdependent Systems**

Definitions speak of a balance between the economy, society, and ecology. If we assume that there is imbalance now where the economic system takes priority as the ultimate measure of development, the ecological system must somehow be brought to equivalence. At this stage a balance would require elevating ecology to the same level of importance as the other. However, many critics of the ESD movement are concerned that a simple recognition of ecological limits which the original declarations speak of is not enough. Rather, we need to recognize that the entire movement is founded on natural limitations and to simply elevate the value of ecological systems to the height of economy and society is insufficient. Therefore, not only should the balance come from elevating ecology, but also a reduction for the economic and social systems. In fact some would argue that ecology is not only the foundation of the movement, but the foundation of society and economy. As such a balance is insufficient because the ecological system is more important than the social, and economic.

The difficulty in this is that as a result of the values of modernity mentioned above, the human/nature relationship has degraded to an unhealthy separation. Not only are the two separate, but also tiered with humans on top and a subjugated nature below (Evans, 2012). That the human/nature complex is separate is both a false and destructive construct. We are inextricably embedded in ecosystems though we dominate them as we no longer clearly recognize our relationships to nature. Evans reminds us,
We may stay indoors all day, but the oxygen we breathe still comes from the life activities of plants. We may eat in restaurants far removed from the farm, the oceans, and the river, but the food we eat still comes from biological processes dependent upon ecological relationships that we manage, but never fully control. Our intimate bodily relationships with other living organisms and with ecosystems make us entirely dependent on the natural world. (p. 55)

Within the origins of the ESD movement we can read that the more we “develop” and separate from nature, the more nature’s limitations appear to threaten our future. We would be wise to recognize this paradox of development and unsustainability and mend the relationship between people and nature. Thus, just as critical pedagogy seeks to address inequalities among human societies, it can also be used to reconnect people with nature.

Repairing this conceptual rift between humans and nature in Western society is at the heart of achieving ecological sustainability. This differs from (environmental) preservation efforts which while recognizing the negative human impacts on the environment, typically aim to exclude humans from the sensitive and aesthetically pleasing environments. (Evans, 2012 p. 56)

Foundations of Education scholar and prominent eco-justice advocate Chet Bowers (2001) sees the interrelation between the social and ecological systems as so vitally connected that he calls for an educational focus on the ecological systems (of which we are members) as a foundation of social justice work. The basis of his critique is that social justice efforts have yet to meet their goals. Bowers suggests that previous
social justice efforts have largely failed to build a new social order. At issue for him is that despite work to promote social justice, many successful efforts for social parity are grounded in the individualist perspective of Western Idealism which he and others see as partly to blame for current unsustainability. Therefore what is seen as justice is merely a joining of the dominant pathways of cultural development. Bowers seeks to move beyond the dominant views of emancipation which, he argues, seek to bring marginalized groups into dominant systems. He opines that real emancipation would not begin with the dominant perspective, but rather be based on a respect for the cultural values of the marginalized groups. He argues that if the marginalized groups can be appropriately valued for their skills and knowledges that have traditionally led to their self-sustainability, rather than determining how to bring them into the dominant systems, we can view them as models to find newer and more appropriate models of sustainability. This would subsequently deconstruct the systems which perpetuate injustices of the anthropocentric worldview and build eco-centric perspectives. This position recognizes the need to address social justice issues, however he and others in the EcoJustice movement see the ecological injustice as fundamental to the social. Ecological injustice refers to the ways in which we reduce the ability of natural systems (which include us) to flourish out of desire to preserve our own ends.

The existing conceptions of sustainability can be used as evidence of the assumed balance of systems which elevates the role of ecology, but does not challenge the dominantly accepted economic and social emphasis. If we take a critical look at the pillars and Venn diagram conceptions, the problems are relatively easy to see. The pillars
provide a simplified visual that communicates an equal value perspective for the three systems. The idea suggests this balance will support the sustainability of whatever is to be sustained (in most cases “development”). However it fails to communicate an interrelationship among the system. Additionally, the pillars offer no space for considering what might be unsustainable. It is an idealistic perspective that makes a context “sustainable”. This could be considered the foundation of the sustainability taught in many educational settings. That is, when sustainability is viewed only from an idealistic perspective, we can set it up and move on without the previous assessment, critical analysis, and pragmatic planning.

The Venn diagram conception suggests interrelationships, but limits the realm of sustainability to only the region of equal overlap of the systems. With this conception there is room for critical analysis wherein one can consider where a context, action, or system lies on the Venn diagram. There is, however, some question of its validity because the message is that something wholly within the ecological sphere is as unsustainable as something wholly in the economic sphere. This is simply unacceptable because readers see that the only space for sustainability is where all three systems overlap, when it is conceivable that purely natural systems not influenced by society and economy are the epitome of sustainable.

These multiple conceptions and definitions offer institutions freedom to base their sustainability on whichever fits their needs. Some institutions may simply attempt to balance the systems without valuing the importance of the ecology above all, and even ignoring the interrelationships of the three systems. For example, a university which
measures carbon footprint and ecological impact separately from the economic and societal influences of the institution can engage in the trend of “greening” the campus as an example. Institutions may value the reduced operational costs and seek to keep up with the trend. However, without institutions valuing their innovator role within the community it is hard to imagine the actions becoming institutionalized so that they might survive and transcend the next fad. Additionally, the innovation must be rooted in the right interpretation of sustainability. In other words, the innovation must be steeped in a principled philosophy of sustainability and not simply in the institutional pragmatics of sustainability.

A university whose strategic goals are aligned with a more harmonious relationship with the natural world, is one in which a “green” campus is not a fad, but a goal above and beyond its tie to economic well-being, and where the social health of a campus can be seen as extension of a comprehensive ecological perspective. In this setting, the student and faculty engagement with the greater community would expand perspectives in ways that offer a chance for visualizing alternative ways of conducting business, designing infrastructure, communicating, and serving. Only under these conditions, when an ecological perspective takes precedent over financial interest and when social justice aims are built upon ecological justice, are institutional efforts built on an appropriate “imbalance” of systems.

Intergenerational Scope

The second tenet suggests that sustainability is not something that can be measured today. The best we can do is act today with the future in mind. This is a
difficult task. We are warned of the “impending” environmental crisis (I and many others would say “existing”). Thus we build well intentioned action plans to reduce our impact. For example, a university may learn of its carbon footprint and deem it necessary to renovate buildings for more efficiency. While this may reduce carbon impacts according to today’s measurements, it would only delay the inevitable environmental crisis because efficiency is reduction not termination.

Additionally, what is sustainable today is not necessarily sustainable tomorrow given the dynamic world to which we are attempting to apply these actions. Our earth systems, global responsibility for ecological problems, and the diversity of the world’s cultures make it virtually impossible to think of something we can create today that transcends generations. We are faced with another paradox because we must do something today for the generations of tomorrow.

**Social Justice Is Not Enough**

Recognizing that the values associated with social injustice are linked to eco-injustices as well, Bowers (2001) writes that any definition of social justice that doesn’t take into account how human demands on the natural environment are affecting the lives of future generations is fundamentally flawed. This is a link to emancipation theories because with sustainability we are literally exploring what needs to happen so as to free our future generations from ourselves.

From the perspective of Bowers (2001), social justice work may help address inequities for marginalized groups today, but without resolving the ecological crises, we are creating a new marginalized group that we might call “the future generations.” We
would thus be doubling down on un-sustainability values and further marginalizing some vitally important knowledge and skills associated with cultures who have in fact identify non-commodified ways of building sustainability. Bowers urgently insists that the rapidly degraded ecosystems must be addressed as we hope to make the world better for future generations.

Bowers draws out of sustainability discourse the significant responsibility our current generations have to consider in relation to their impact on the needs of future generations. Yet, what we mostly read in institutional efforts are attempts to meet the wants of today with more efficiency. When students are exposed to these initiatives, they are shown tools to address the unsustainability of the systems of our current times, but they themselves are not necessarily changed. Here lies the solution to the paradox above (i.e. that what appears sustainable today may in fact be unsustainable tomorrow): If there is no way to ensure that the sustainability we build into our systems is in fact sustainable, what we can do today is build a capacity for sustainability within the hearts and minds of our students. If students are given the opportunity to fully critique existing unsustainable ways of being and are free to deeply explore and develop alternatives to those, they can theoretically act as sustainable professionals wherever they end up. More importantly, they can “be” more sustainable as citizens of their communities and the planet at large.

If it is the intent of HEIs to impact the planet in perpetuity, they must turn their focus to the unsustainability in the hearts and minds of students. To teach green prescriptions to alleviate the symptoms of unsustainability provides a temporary fix. Whenever institutional efforts seek to simply green the campus in ways that make
existing values, desires, and worldviews more efficient, the institution perpetuates a perspective that deems the building, the business, or the waste stream as unsustainable. This is a temporally limited viewpoint and suggests that solutions are part of a moment in time assessment of the environment. To illustrate this, let’s consider a hypothetical situation wherein geologists discover a previously unknown source of fossil fuels which suggests there is no conceivable end to fossil fuels. Would this mean that green energy is now somewhat less important? If we educate students to only conceive of ways to develop sustainable strategies as professionals, the answer might be yes. If we educate critical thinkers capable of “being” sustainable, the answer is no. These students would see that the fossil fuels represent much more than fuels. They have economic, social, and ecological implications beyond their abilities to heat our homes and fuels our driving.

In summary what we most often see in institutions today is an attempt to address the problems a generation faces. To address the root of the problem, that our values, desires, and worldview are unsustainable, educators can change this generation of students in deep and meaningful ways which frankly may be all we can hope for. To make this change we need to communicate to students that they are a part of the problem and part of the solution. They must learn to own their roles in both by being exposed to critical inquiry on what exactly our needs are and exposed to alternative ways of meeting them.

**Assumed Unsustainability Yet No Critique**

There is an inference that development is unsustainable by the very need for a concept such as sustainable development. The problem with efforts conducted on behalf
of a sustainable development is that there is desire to maintain existing development values rather than to call them into question and consider others more suitable for guiding us into the future.

Development as we know it has relied on and reinforced a set of values that are the antithesis of an ecology first perspective. If western models of development are based on (in order of importance) economy, society, and a in a distant third place, the environment, (now deemed unsustainable), how can they be maintained? It seems impossible to continue these models without a re-valuing of these systems. As I’ve noted above, there is an effort to balance the systems, but not to re-order them. Any hope of sustaining “development” would necessitate a redefinition of the term itself. In December, 2015, leaders from over 200 nations are wrapped up climate discussions in Paris. Reports from the discussions are centered on this issue and have exposed it as a sticking point. Developing nations are rightfully challenging the positions of the developed with questions of how they can achieve the levels of development aimed for without basing their development on the same unsustainable practices used by the now developed nations (Shapiro & Greenfield-Boyce, 2015). It appears from the same reports that the concept of development is not being questioned, but rather, the developed nations will offer financial and technological support in an attempt to address the fall out. In use by higher education to help build a more sustainable future, this model offers virtually no practical use. The three systems exist as static pillars that do not represent the breadth and interconnectedness of ecologic considerations, social perspectives, or economic aims. In our current educational system, this vision of sustainability is the equivalent to a meme
on social media. It looks pretty and conveys a message quickly, but lacks any ability to communicate the complexities of the issue it represents.

**Why is Development Misaligned?**

One of the most conflicting components of development discourse is its assumption that capitalism is a necessary condition of development. The assumption that capitalism defines a developed society puts financial gain above both moral obligations to society as a whole and the environment. From an ecojustice perspective, capitalism is inherently at odds with sustainability values:

- Capitalism’s pressure on people to be more productive and efficient… means they become less autonomous, more dependent on other specialized people and technologies, and ultimately more vulnerable to shocks….meanwhile worsening damage to the local and regional natural environment in many poor countries is fraying ecological networks, and undermining economies and political stability.

(Evans, 2012, p. 78)

This quote underscores the importance of the ecological system which when ignored or threatened demonstrates its importance by “undermining” the social and economic systems. It is from this perspective that we argue the necessary focus on the ecology over the economy and society. For without ecological health, the others are bound to falter. Evans (2012) continues, “Human dependence on the capitalist system increases the odds catastrophic ecologic breakdowns by severing cultural recognition of the links between environmental and social health that typified many place-based indigenous societies” (p. 76).
She brings the green revolution in agriculture to the discourse as an example of the paradox I present here. In the “revolution” agriculture became entrenched in globalization and through chemical and genetic research, increased production and efficiency, but in doing so, it homogenized agriculture according to western capitalist theory of agriculture i.e. bigger is better, and created ecological damage and forced dependency as farmers, entire indigenous societies, and our ecological neighbors were folded into the model. Kahn (2010) adds that as the now dominant farming practices developed at the time have debased soil conditions and led to increased global desertification. Desertification is but one example.

Closer to home, In a recent example of acknowledgement and action to reverse this, farmers across Northwestern Ohio have been working hard to address their role in the toxic algal blooms of the Lake Erie’s western basin. Though not radical, their collective actions point to ownership of their role in the problem. I along with the critics here, would like the response to create spaces for considering alternatives to the dominant perspectives of agriculture (such as polycultures and grass-fed operations).

Unfortunately the profession of industrial agriculture seems to be doubling down on previous values of technological, genetic, and chemical research to make it possible for lower chemical inputs. This is positive, but retains the essential core of industrial agriculture.

While it would be great to see agriculture move in a different direction on its own (maybe toward organic production or more natural production methods), it is unreasonable to expect it. Their financial stability is based on meeting consumer needs.
Though the occupation is obviously still driven by the economy, their actions are a step beyond most others because the actions are not aligned with the profit above all else conception of capitalism. It appears that agriculture’s foundation in ecological principles provides some basis for action toward more sustainability. Others however, including the consumers of farm goods, may not be as clear on their role in the damage to the watershed. The complexity of the watershed pollution issues reinforces the need for collective action that is driven by a philosophy of sustainability. The action on the part of the farmers and any other group of specialists is representative of the aims of current ESD efforts. When called upon, the farmers can act more sustainably in their fields. Likewise, landscapers and designers can lean on trainings and guidance for greener practices. However, a guiding vision of sustainability would not wait on a problem, or a customer request. From the public perspective, a more sustainable public would demand that green ways become the only ways.

With this example, we see the trouble in critiquing the fundamental unsustainability of developed systems. The evidence is clear that “developed” forms of agriculture have economic, social, and ecological problems, yet the underlying industrial capitalist values are not questioned. Agriculturalists who base efforts on alternative values of ecological and social justice in developed areas are seen as working on the fringes of agriculture and serving a niche market. Meanwhile, extant populations of indigenous farmers seeking to continue their cultural heritage are rapidly losing ground (literally) as the forces of industrial agriculture seek to draw them in.
Need for Critical Pedagogy

From an educational perspective, we must consider the barriers of unsustainable cultural entrenchment if we seek to move society forward. In the above example, it’s clear that there are problems with existing ways of being. Yet, the fundamental structure of agriculture resists large scale change. When change happens, it is done within existing paradigms (in this case more technological, chemical, and genetic modifications). Alternatives are even fairly easy to explore with grass-fed livestock operations, poly-culture farms, and organic production increasing. Additionally, for many farming families, alternatives are merely two or three generations behind. If however, those educated in agriculture today see no other option as financially viable, it is likely to not catch on. Deeper critical analysis of government subsidies for large scale agriculture further complicates what can be deemed financially viable.

The critical issue here of the paradox of development and unsustainability suggests that Critical Social Theory (CST) may be of service in the criticism and the development of subsequent normative positions. Where typical CST addresses inequalities among societies and individuals, several critics seek to apply some form of the criticisms upon the broken human nature complex. Evans (2012) relies heavily on CST as she challenges the dominant paradigm of sustainability. She finds it frustrating to hear calls for changes in our way of being through individualized and isolated ways while the way we interact with the earth is treated as an unquestioned reality. Evans sees the ecological imperative of sustainability as a natural progression from CST. CST
repositioned with an Ecological basis provides one basis for understanding the difficulties of the sustainability movement.

Richard Kahn (2010) is one of the most outspoken education critics calling for exposure to critical perspectives on issues of development and nature for all students. He states “There is a pressing need for environmental justice which seeks to counteract the cultural racism inherent in mainstream sustainable development strategies” (p. 14). Here he suggests that not only are development strategies linked to social and ecological injustice, but also that sustainable development strategies are culpable. Evans (2012) supports this position when she writes: “oppression, domination, exploitation and injustice figure prominently in today’s sustainability crisis. These prominent aspects of the unsustainability paradigm provide openings for the use of critical theory as a vehicle for change” (p. 12).

Out of critical social theory of education, Kahn developed critical eco-pedagogy as a means to effect change through education. It suggests that our students must be positioned to critique and break down the existing paradigms, not simply to find ways of being that repackage existing values. This critical perspective is missing in what we see today with preponderance of instrumentalist and deterministic education for sustainable development. Our dominant form of education leaves students exposed to societal goals which are predetermined by the voices of advanced capitalist, consumerist, and consumption-based nations. Returning to the metaphor which opened this chapter, this provides some clarity on why our students are being taught the treatments rather than the skills to diagnose. Kahn argues that ESD should be based on participatory (experiential)
and metacognitive (thinking about sustainability thinking) engagements with students over what sustainable development even means. This would mean that students would need to explore the origins of their current thinking about sustainability and ecology. The exploration would necessarily include critiques about what is dominantly known.

Participatory engagement could either set-up the exploration or wrap-up and reinforce the thinking. An example of this would be to encourage students to think about their relation to animals. Doing so would undoubtedly uncover a leaning toward animals an instrumentally valuable resource for all they provide for us. Metacognitive engagement would continue and lead students to explore other perspectives (maybe the animals’). Followed by habitat improvement projects at a park for example would reinforce the learning. To do so would not only challenge the dominant voices by creating spaces for underrepresented voices, but also to present an environmental voice for the discourse.

Coming from the development community and educational establishment as it has, Kahn (2010) suggests that this perspective of sustainability is not simply a narrow approach, rather it is proliferated as a means to preserve the inequity which is so valued by the dominant societies. He cites Edgar Gonzalez-Guadiano (1995) who seeks to displace the hegemonic ideas of national security in favor of a problem solving pedagogy that seeks knowledge of how the environmental factors that contribute to disease, famine, unemployment, crime, social conflict, political repression, and other forms of sexual, ethnic, or religious violence can be examined as complex social and economic problems deserving everyone’s attention (2010). This means it is not nearly enough to raise the awareness of environmental concerns, rather we should be raising a critical awareness of
the problems associated with a market-based systems and the values which undermine any positive results of such a system.

The effects of the dominant paradigm can even be seen within what many would consider the most ecological field of education. Kahn points to the limited gestures toward critical thought within the North American Association of Environmental Education’s (NAAEE) four essential aspects of environmental literacy, wherein there is an emphasis on maintaining neutrality and teaching so that students understand both sides of environmental arguments. Kahn suggests that lacking specific demand for critical thought on the part of the students relative to their roles in the crisis, and the field’s traditionally bi-partisan approach to conflict resolution means that the potential for ecological change is minimized. If within environmental education, the environmental perspective is only elevated to serve as a balance against economic or social perspectives, it is hard to envision the deep changes required to ever materialize in any other realm of education. Bower (2001) adds to this broader concern by stating educators have reluctance to question the prevailing assumptions and values, leading to only lip-service to the ideals of justice.

Moving Forward

Moving forward will not be easy. Especially given depth to which critical theorists expect the movement and education as a whole to accept these challenges. Before giving up on the challenge let’s look at a few problems with the critical perspectives and then consider a more acceptable interpretation for education.
**Hypercritical is Inspiring, But Troubling**

The critical perspectives of sustainable development I present here are an important addition to the discourse, because they break down the existing problems of the ESD movement all the way to its roots within the values that drive development as a social and educational aim. The firm positions they take against what is ultimately unsustainable is both necessary and noble. However, attempting to make sense of their work as a way to move forward can be difficult. In terms of interpreting their work for a larger audience to build necessary momentum, I find some of the language and style used in their work as potential barriers to educational consumption.

First, there is a common generalization that the values of modernity existing in dominant educational and social structures are inherently wrong. In their work one can find an oversimplification of the problems with development. Evans (2012) for example shares the following:

> CST seeks to challenge the worldview derived from the enlightenment and leading to the values of Modernity: progressivism, objectivism, rationalism, mechanistic worldview, reductionism, scientism, efficiency through standardization, anthropocentrism, instrumental reasoning, separate human and natural systems, compartmentalization, rationalism vs religion, shrinkage of context to human scale. (p. 23)

Readers of Evans may find this a bit troubling because it puts forward a simplified perspective of the modernity/traditional worldviews. There are truths about the unsustainability of certain behaviors and systems learned through objective lenses. For
example, objective study can point out that hunger gaps are not closing despite multi-decade to commitment to the green revolution. As such, our ability to study ourselves and our planet from an objective position provides priceless information for our future planning. There are certainly other ways to explore the truths, but all that is objective is not at fault and all that is subjective is not a savior. Ultimately at issue is that modernity and traditional worldviews are put at odds by this form of critical perspective when elements of each could be helpful.

Second, they tend to work in language and models that create a barrier with existing structures. Models such as indigenous culture origins and traditional ecological knowledge (TEK) (Kahn, 2010) represent incredible ideals upon which to build our new perspective. The challenge is that the ideals are evident, but the pathway toward them is not clear especially since modern indigenous groups are very much engaged with modernity. Student and teachers are steeped in modernity. These terms and their respective models are not easily interpreted, nor are they easily replicated in our contemporary spaces.

When considering significant social and cultural change in the face of dominant worldviews, it can become easy to use combative language. The path forward does not just rely on critical perspective, but often is seen as a call for revolution. There is little potential for less radical entry points. Kahn (2010, p. 27) calls for ecopedagogy to provide openings for radicalization. Peter McLaren is quoted as stating “if we are to be redeemed from our finitude as passive supplicants of history, we must, as students and teachers, adopt more oppositional and politically combative social and cultural practices”
McLaren is essentially calling for a teacher and student revolution against dominant cultural and educational forces.

The difficulty with these positions is that they jump from critical analysis to radical action without exploring how their ideals can grow roots within spaces of modernity and can actually be initiated in contemporary learning environments. I’ve begun to wonder who the intended audience is for some of this work. As such, it is easy to see these perspectives as purely theoretical at times.

My concerns regarding their positions should not be read as disagreement with their ideals. Their points are valid and as educators we must address the challenges that our students and our communities face. However, given the structural challenges mentioned in chapter two it is hard to imagine these combative positions building momentum. I am also aware that injustices (ecological and social) should not be tolerated so action is required. The point I hope to make is that there are points of entry for the action of those who seek hope that these critical perspective can be realized.

**Need Meaningful Interpretation for Education**

In order for movement toward the ideals of those critics above, educators may benefit from the work of others whose work and writing interprets the critical perspectives for a broader audience. Ecopedagogy educators Rebecca Martusewicz, Jeff Edmundson, and John Lupinacci (2011) have created a template from which a mindful educator can begin to build a pedagogy which recognizes the disconnect between humans and nature, the injustice between cultures which develop in from the human/nature separation, and values which undergird both. The text provides practical guidance for
how virtually any educator can implement strategies to combat these problems. They use both theoretical constructs and practical real examples which they themselves can have experienced. In Orr’s writing (2014, 2004, 1992) one can read strong critiques which fit comfortably with the others referenced here. He, like Martusewicz et al. (2011), writes with more hope and more importantly is cited with initiating real and meaningful change within his campus and community which serve as key examples for educators and campus leaders.

In EcoJustice Education: Toward Diverse, Democratic and Sustainable Communities Martusewicz et al. (2011) provide an interpretation for educators which speaks with more hope than the critics above by connecting the principles of EcoJustice pioneered by Bowers to individual educators and modeling ways these principles can be replicated. For example they suggest to teachers that they pay close attention to the language used in their classroom materials and seek out examples of how assumptions about modernity are communicated. Examples include depictions of how western cultures are progressive while indigenous cultures are inferior. In science classes, teachers can point to the hierarchy of classification where some animals are considered higher (mammals and birds) and others lower (mollusks, and insects). This discourse assumes that species with the most recent evolution are somehow more perfect and those with more sustainable primitive characteristics are less perfect. An example from my own experience in teaching as a park employee is the assumption within our programs on the topic of the Ohio and Erie Canal history that the canal rescued the poor farmers of the region by bringing providing larger markets for their goods. We don’t even question the
quality of life for those living in pre-canal Ohio. We don’t consider who the real beneficiaries of the canal were or their commodification of the commons on which early Ohioans relied. Nor do we discuss the relative sustainability of the indigenous cultures who no doubt influenced the early Ohioans.

    Where other critics fail to provide examples of alternatives, commons preservation/revitalization, and indigenous perspectives, Martusewicz et al. (2011) share stories of how this EcoJustice perspective is in effect in our modern cultures. They share stories from the Transition Initiative from the town of Totnes, UK. This movement is based on the concept that communities will be considering how to operate beyond the age of fossil fuels. The foundation of the idea is that communities had historically and still have what is needed to survive. However, dependency created through globalization has clouded our perspective of self-sufficiency. This movement calls for a re-skilling of people and highlights examples such as food preservation courses, building skills, and urban agriculture among others. In similar fashion they point to alternative economies such as bartering and time banks which allow individuals to get what they need by exchanging skills rather than money.

    EcoJustice Education makes the necessary educator transition a personal one with stories and examples from their own experiences. Each co-author offers personal stories which demonstrate that there are remnant of the commons within our own lives and lived experiences. Martusewicz shares a story of her childhood experiences with place. She points to her family’s and friends’ “intimate relationships with and knowledge of the land, the streams, the wildlife, the domesticated animals at the farm and in our home, the
food practices, the sharing of stories around the table in my grandfather’s huge quiet presence” (p. 277) as her commons. Lupinacci references his childhood experience with family meal planning, cooking, and eating as part of a large Italian family in Detroit. This experience has imprinted him with a close connection to family shared experiences, storytelling, and meal sharing which in some cases took days of preparation. This form of family engagement is in contrast to the hyperactive lifestyles of many American families which focus more individual member interests and desires. These personal stories offer a relevant connection to the life histories of educators who can thus begin to think of their own connection to commons experience. To do so helps those who may feel alienated by the critical perspectives of modernity to find a link to the alternative values called for.

I find the strongest grounding for a normative educational plan to build sustainability is in the work of Orr. No less a visionary, than some of the others cited through this chapter, Orr finds the ability to move forward within existing communities and uses institutional systems as the power to drive change. More detailed analysis of Orr’s work will follow in chapter 4, but the foundation of his efforts lie in his commitment to action. He positions the institutions within the at large community efforts Interprets for the greater community. Orr (1992) looks beyond what the campus provides to the community at large. He cites John Dewey, who, in 1897 proposed we broaden the focus of education and make a curriculum out of the school’s relations with the larger community and all of its internal functions. He goes further by referencing Lewis Mumford who suggested this form of education (in his words the regional survey) would
serve as the foundation of a curriculum in which connect students directly to his region and community.

In terms of this expansion of the educational reach of the institution, he specifically cites the study of resource flows of the institution to the community beyond as a fundamental role for higher education. This differs from the resource efficiency mentioned in chapter two because it focuses on more than the impacts on the campus. Rather it seeks to understand the impact the campus activities have on the community and beyond. The purpose is to find out how much of what comes from where and to determine the human and ecological consequences. Orr (1992) positions this type of study as an extraordinary educational opportunity:

The study of resource flows transcends disciplinary boundaries; it connects the foreground of experience with the background of larger issues and more distant places; and it joins empirical research on existing behavior and its consequences with the study of other and more desirable possibilities. (p. 105)

This maximizes the impact of the institution on general sustainability by positioning education in the correct role. No other community entity is likely to have the capacity for this level of complex study. As a real example Orr (1992) points to the Meadowcreek Project in which food systems were assessed at Hendrix College in Conway, Arkansas and Oberlin College in Oberlin, Ohio. This study pointed to the unsustainability of the national food brokering networks. As a result, the instate food purchasing doubled in the following year at Hendrix College. Both studies resulted in more collaboration between the campus and community than any marketing strategy could. Overall Orr feels
institutions have visibility, respect, and buying power to lead a transition toward a sustainable future. This example demonstrates the potential within motivated students to make change which in turn impacts future students as well.

More so than with others Orr shares specific examples of how to engage multiple disciplines in the sustainability discourse. He provides guidance on how multiple disciplines can cross pollinate with ecology. In history, for example, he suggests inquiry into the history of resource management, technological changes, and changes in energy systems. In economics, he suggests inquiry into steady-state economics, alternative pricing systems, and alternatives to capitalism and communism. Architecture is another area where students and faculty have an opportunity for meaningful exploration. Orr (1992) encourages designs with nature and using vernacular material. Where others stress the interdisciplinary nature of sustainability Orr, goes a step further by explaining where cracks exist in the existing silo structures for educators to explore sustainability.

The collective work of these two ecological educators presents what is possible within existing contexts and sends of message of hope to those working in situations where the option of revolution is not feasible. Without efforts like theirs, the criticisms may continue to garner support among academicians and critical theorists without making the necessary shift to those in broader education circles.

**Education Praxis**

If we aim our educational efforts in the direction set by the critics of our existing culture and its misdirected focus, we need a transition from education about the sustainability of our extant economic and social systems, to education for sustainability
(EFS) in the hearts and minds of students who will someday work. To effect change in the values of our students is to guide them in perpetuity rather than as part of isolated projects and actions. EFS would build new learning and living experiences that are focused on transforming the individual, rather than the indirect actions and ideas of those individuals. Through this new conception of sustainability, we may finally reach an achievement of the movement’s original goals.

Previous conceptions sought to treat the unsustainable symptoms of our systems and creations with prescriptive measures not unlike a doctor may treat the symptoms of a chronic illness. What we have now is a conception which is more aligned with the concept of wellness, whereby the actors are guided to prevent the ills from setting in the first in addition to providing remedies for what exists. Given the current unsustainability we face (buildings are inefficient, our food system is corrupt, and even our greening efforts are co-opted by neo-liberals), there is ample need for prescriptions that may help us today, but we are naïve to believe that those efforts would be enough. What we’ve created here is a call to educate differently such that our students and those they interact with are supported to see the world differently.

**A Vision of EFS**

A values-based EFS would demonstrate at least three key takeaways from this chapter. The education must first provide freedom to practice critique. If we are unsustainable today, students must be offered opportunity to understand the foundations of the problem. Second student must be exposed to an ecological perspective. As stated earlier, the existence of sustainability discourse is reliant on the fact that our ecologies are
threatened by continued “progress” toward development. Finally students should engage in place making which not only helps situate large scale learning into reality, but also provides a realistic space for action.

**Ecological values.** Students must be exposed to ecological perspectives of human existence. First there is a need to share the importance of natural resources and ecological health in our day to day lives. If students can be reminded through lessons and experiences that we are still linked ecological systems, they will be learning the foundation of all sustainability. As such, humans are no longer considered controllers of our earthly existence, but rather part of a menagerie of natural relationships.

Legitimate ecological knowledge is vital, but not from a science perspective. Ecological knowledge sets the basis of acceptance that our existence is based on interdependence. Interdependence is the essential value to take away. It battles the idea that we are in control of ourselves, and is reminder that we rely on others (both human and non-human). With this foundation, understanding the problems of unsustainability does not begin with what is unsustainable for us as individuals or as humans.

**Critical values.** Students learning to question the existing paradigms are preparing to be leaders of a sustainability movement. If the general assumption is that we are not sustainable, it is essential for students to explore the reasons why. Educators must be able to create intellectual spaces in classrooms which support open critique of dominant behaviors and their foundational perspectives. It may not be easy for students to step away from their own perspectives, but it is necessary for accurately assigning blame and responsibility for unsustainable conditions. If the ecological knowledge is set,
the critical practice will be more effective because it doesn’t focus on only one perspective. Knowing that strongly held positions are ecologically wrong is imperative, even though difficult.

The critical work should not only focus on what is wrong, but should also allow students to consider alternatives which include existing actions. This suggests that the hypercritical perspective may go too far and leave students in a space of inaction. Rather educators should focus their efforts on teasing the good out of our dominant behaviors and link it with alternatives so as to create something that can be feasibly done.

**Place-based values.** Finally, an envisioned EFS ought to embody a place-based perspective. As I covered earlier, sustainability action is interpretive and as such it differs from one place to another. Students should be exposed to the unique characteristics of their place. EFS in rural Montana will look different than EFS in urban Florida. The challenge is to first ensure that the other two educational priorities are met (ecological perspective and critical practice). Sense of place becomes two things for students. An educational space where learning is reinforced and maybe more importantly a space where sustainability actions are practices and thus reinforced. Students who really understand their place are capable of place making in others as well. The difficulty is understanding that it is not their place matters but rather that place-making matters. As such, their place holds as much value as others.
CHAPTER IV

COMMUNITY-BASED EDUCATION FOR SUSTAINABILITY

Following the contextual and conceptual analyses of chapters two and three it is necessary to repackage education for sustainability (EFS) into something which may stand a chance of achieving the lofty goals set and reset by so many efforts. While I began this effort in the last chapter by outlining the appropriate conceptualization upon which a sustainability values-based education plan can be developed, I will take education even further by exploring the potential of an EFS which not only challenges the existing structures and values of the institution, but the role of HEIs in EFS overall. First, I will explain how relocating the context of EFS from the campus to the community can support both key institutional goals of developing sustainability leaders and serving as models within the community. Specifically, existing examples of campus/community partnerships will be analyzed to identify the strengths of the types of partnerships which might be leveraged for sustainability. Next, I will present the ways in which these partnerships alter the role of universities. Finally, I will look to examples of EFS which break the barriers between the campus and community. The primary example described will be the Oberlin Project which is a collaborative project between Oberlin College and the City of Oberlin. The details of the project will uncover place-based and critical pedagogies necessary for transformative EFS such as service learning and interdisciplinary teaching. Prior to now, the critical voices on EFS and its limited impact have spoken out from within the HEIs themselves and call for change there. Building on
their work, this dissertation will begin to take a new turn and consider EFS in higher education from a community perspective.

**An External Perspective for Transformative Education**

The declarations mentioned at the beginning of this work have put significant responsibility on higher education institutions to transform the future. This charge is based on the perspective that HEIs prepare the world’s leaders for their roles. Yet despite trending increases in discourse on sustainability in education, resulting primarily in institutional greening and education about sustainability, the wholesale transformation of our society is far from realized. As described earlier, the context of higher education institutions appears to resist the potential for meaningful education for sustainability. As broad as the goals and strategies may be, higher education may simply lack the solid foundation of values associated with sustainability, and is thus more aligned with skills and economic development.

The university perspectives are necessarily associated with the values of a privileged society, i.e. those with the capacity to participate in higher education and the institutions and industries that drive the need for a functionalist education system. Kerry Shepard suggests the existing social reproduction is a barrier to the change (2010). Thus, the critical issue at hand is that the institutions driving EFS must have the capacity for expressing sustainability values and be open to reflection and critique. Without these, the institutions are destined to follow the growth and development model associated with industrial capitalism and unfortunately influence millions of college students with a limited view of sustainability as they go. Shepard’s suggestion of social reproduction
supports earlier claims that the interpretive nature of sustainability is problematic and allows it to be used to re-package dominant values in greener packaging. For many it means sustaining existing conditions at the same time as others assume necessary change. Thus, an institution as a product of unsustainable systems may never realize transformational goals. Unless they either divest themselves of the unsustainable influences, or they focus on their influence on the systems and the future of those they serve. Barriers to EFS, from disciplinary silos precluding the interdisciplinary knowledge essential for navigating our society toward sustainability, to the academic unfreedoms which narrowly define what constitutes academic rigor, stand in the way of EFS moving beyond operational efficiency to more meaningful cultural change.

It may be time to reconsider the fundamental assumption that it is the responsibility of universities to drive sustainable development. As universities teach students, they are inherently preparing them to go out into the world and become leaders. What may be needed for these students is to have the “world” brought in to them. An institution engaged in its community may be in better position to impart sustainability values in its student body. Institutions viewing themselves as members of communities in a holistic manner, beyond simply leadership incubators, have the potential to influence students as they progress through their education.

Cortese (2003) blends the EFS of the recent past with this idea. He states if done right, an institution would operate as a fully functional community that models social and ecological sustainability. This effort may appropriately expand on the reach of the dominant efforts by creating learning experiences which mirror the real world by
blending the various living systems we rely on rather than simply focusing on creating sustainable independent systems. It would be a blend of teaching, research, operations, and relations with the local communities. While framed better than other efforts, this is still limiting. This microcosm model is a good start, but fails to acknowledge the very real systems within which the institutions exist. To serve only as models is to ignore the interdependency of institutions and their communities. The economic and social interactions between campuses and their communities are significant. Campuses provide student and visiting consumers for the local economy as well as attract well educated academic professionals to reside nearby. Later I will explain this in more detail as I analyze key themes within a few towns and gowns movement locations. Unfortunately, the ecological footprint of the campus and its students' behaviors are not afforded the same attention. Even within campus-based initiatives to reduce the carbon footprint, there appears to be little connection between what is done on the campus and learning how it impacts the local community. Ecological relationships should be afforded the same attention as the economic and social relationships. They would provide ample learning opportunities in line with sustainability. What may be needed is for the campus to be considered part of a community sustainability effort as opposed to a training ground for sustainable leaders.

**Giving Up the Power**

While it is true that much of the devastation of our natural resources has come at the hands of educated individuals (Orr, 2004), efforts to educate individuals over the past 24 years have yet to yield a transformed culture. Beginning with Orr’s (1992)
presentation of a guide to transitioning the system which reorganizes the learning priorities of a university and the relationship between the institutions and their communities, critics have sought to move the system forward in a number of ways. Orr (2004) suggests that for sustainability:

- We need to raise a generation of leaders, some of whom are presently unemployed, underutilized, undereducated, and drifting.
- We need their energy, their smarts, and their hearts hitched to a future that they help to dream and build.
- We need citizens who know how the world works as a physical system and who understand how, when, and where to intervene in complex systems to cause the right kinds of change at the right time.
- We need peacekeepers, dreamers, doers, and wise elders.
- We need people who make charity and civility the norm.
- We need more parks, farmers’ markets, bike trails, baseball, book groups, poetry readings, good coffee, conviviality, practical competence, and communities where the word neighbor is a verb, not a noun. (p. 19)

What Orr is telling us is that our dominant neoliberal educational aims are misdirected. These needs cannot be met with current focuses on individualized economic success. Rather he calls us to rethink our aims and structures toward interdisciplinary studies and systems based education. Additionally, he calls for us to think beyond the campus and its residents toward the community at large. As he writes, leaders he is not only thinking of those who are elected officials or the industry leaders, but those who are currently outside
of the “system”. In this perspective, higher education has a role, but it is not limited to reaching those within the classrooms and dorms who according to the early documents are tomorrow’s leaders, but reaching the community citizens who have potential for leadership today. What Orr calls for cannot be derived from higher education driven by disciplinary silos and narrow focus of academic success. It requires us to ensure the community and campus are integrated.

Though most of the efforts have not been as drastic as Orr (2004) proposes, Cortese (2003) followed in a similar direction and reached beyond the institutionally grounded perspective of EFS and emphasized working to improve local and regional communities so they are “healthier, more socially vibrant and sustainable, economically secure, and environmentally sustainable” (Cortese 2003, p. 18). These are noble thoughts from both Orr and Cortese. They suggest that the role of the institution is greater than what we often see. For them, EFS is more than teaching about sustainability to students whom we assume will become the leaders of future societies. We can read Cortese to say that the effects of HEIs are greater than the students alone. This may give HEIs a power complex, but there is more in these assessments. Given the decades of work from HEIs and still questionable cultural and social change, they suggest that HEIs may not be enough and that it is in the collective community engagement that change could happen. This transitions the HEI role from leader to participant in larger sustainability initiatives. Earlier critics cited here challenge the structure of higher education as inappropriate for transformative change. Given the existing alignment of HEIs with “unsustainability” values as discussed earlier, the full transformative power may not be reached. If HEIs
expand their focus beyond the student level, larger impacts may be possible. Part of this transition is a recognition that the community impacts students in profound ways and must be included in a holistic education for sustainability. Institutions may then release sole responsibility for education to a broader group of stakeholders. As part of the solution, rather than the lead, institutions might be able to reflect on their own biases and be exposed to the hidden perspectives of the environment and socially oppressed both of which are currently silenced but need visibility if we are to build a sustainable future.

If left in the hands of higher education, EFS might always be subject to values which have unfortunately led to education for unsustainability. Progression may only lead to a weak conception of sustainability which maintains existing dominant value structures and places continued emphasis on efficiency born of light green or anthropocentric ethics as the result. This is hardly the answer for our long-term concerns. As such, sustainability is merely co-opted by neoliberals (LeGrange, 2011).

Even if value change occurs among students, the institutional impacts are only part of what educates them. Orr (2004) (as cited in Cortese, 2003) warns:

However well intentioned, formal education cannot compete with the larger educational effects of highways, shopping malls, supermarkets, urban sprawl, factory farms, agribusiness, huge utilities, multinational corporations, television and non-stop advertising that teaches dominance, speed, accumulation and self-indulgent individualism. (p.18)

Orr presents to us here a need for the community at large to be considered as the classroom where EFS will or will not flourish. Cortese acknowledges that even if his
views are realized, students may struggle with the competition of what is learned on campus and what is learned beyond its borders. Thus, we should be calling for HEIs to understand that they do not hold all of the educational nor influential power toward a sustainable future because of their inherent biases toward unsustainability values, the limits of their impact on the minds of students, and that they reach only a select group of individuals. Rather than maintaining the perspective that it is they who educate the leaders of the future, they ought to understand their role in the education of their students and their influences on the communities where students learn if they hope to maximize the potential learning for their students. With this acknowledgement, EFS becomes even more complicated. Bringing the community into the picture does not necessarily improve the likelihood of sustainability. In fact, referring to the above mentioned Orr quote, the culture of many communities may counteract even the limited impacts of what HEIs are doing now. Additionally, there is a bigger inference of this position; that it is the community that matters most. The community (both where students study and where they will one day live) influences students in profound ways, and this will determine whether any well designed educational plans are supported or contradicted.

It is important to consider how this position can humble the university role to be part of the solution as opposed to its driver. As we see above, LeGrange (2011) presented a metaphor for understanding how this transition of EFS may be possible. He argued for a rhizomatic view of sustainability rather an arborescent view. The rhizomatic view of sustainability decentralizes the responsibility and breaks the dualistic view of sustainability and unsustainability. This connects ideas, tools, and skills of participants to
produce new knowledge and new spaces. He rightly suggests that the ambiguity and complexity of sustainability is a function of its interpretive qualities (addressed in the previous chapter). He suggests those qualities offer potential for education in local spaces/real communities where the HEI can take on important place-based roles. Orr earlier mentioned that what students learn on campus is no competition for what they experience beyond the syllabus in the world around them. What may be needed are more blurred lines between the campus and the community. As the role of HEIs in this perspective shifts from leader to part of the solution, it supports an alternative view from the original declarations which suggest that transformation radiates out from the campus. Instead it rightly places value on the “others” within communities who may have interest in and capacity for change. These others are not only potential untapped educators, but also potential learners. The transformative leadership of HEIs can be more fully realized when the direct influence of the institutional efforts is experienced by more than just its student body. There is also an important reverse influence provided by the community. If the relationship is opened and HEIs humble themselves with their position in the sustainability movement, there is potential for the contextual challenges mentioned in chapter two to be mitigated. With the right partners, students can learn in the interdisciplinary community. Even if the entire framework of the academic disciplines does not change as some might want, students can be given experience working with and learning from others in the community who necessarily operate across disciplinary boundaries.
If we build on the thesis of the previous chapter which suggests sustainability is a philosophy which challenges the dominant values of our culture and seeks alternatives, universities should then seek out the kindred spirits of those community members and agencies working to do the same. Environmental organizations, parks, social service agencies, volunteer corps, and numerous foundations operate within communities to address systems and policies which threaten sustainability and add voice to the underserved, both human and non-human. With these community members as partners, campuses may move beyond the creation of theoretically “sustainable” campus communities toward real learning communities which will ultimately educate students and the community at large.

Social exchange theory provides a useful theoretical perspective in that it has been used to explain how groups and organizations come together to solve a problem (Gitlin, Lyons, & Kolodner, 1994). Blau (1964) described two prominent conditions that need to be met for social exchange to occur. First, the exchange must be oriented toward ends that can only be achieved through interactions with other individuals or groups, and second, the exchange must seek to adapt means to further achieve these ends. This theory is a suitable addition to ESD discourse as a sustainable future seems to fit both of the abovementioned conditions for community problem solving. This may also adjust the role that the university assumes for the community and make valuable the operational and educational efforts already initiated on many campuses.

Systems of community engagement already exist in the form of service learning, and internships, both of which can have significant influence on students if done with
purpose. Around the concept of sustainability, this is increasingly important as students are not only expected to experience the community and work life, but to reflect and ultimately change their perspectives.

**Service Learning as an Entry Point**

Service learning is a prominent higher education trend which can provide a context on which to build a collective EFS program. Colleen A. Cooke and M. Elizabeth Kemeny (2014) define service learning as an instructional method that couples service outside of the typical learning environment with academic study and it is largely viewed as best practice in education (Bernadowski, Perry & Del Greco, 2013). Service learning provides a space for students to explore how their learning, conventional or progressive, fits within the real world community contexts. McDonald and Dominguez (2015) claim while in service-learning experiences “students are actively participating in the process of understanding, integrating, and applying knowledge” (p. 52). As they work to improve their communities, they are able to use the subject area they are studying.

Service learning, as its name implies, is much more than service. The learning that occurs within the experiences in not simply symbolic. It is real and meaningful within the specific programs students are studying. The national service learning clearinghouse indicates that effective service learning results in improved grades and improved attendance. Additionally, beyond the scope of the complementary coursework, students have been shown to develop pro-social beliefs, and behaviors both of which serve a sustainability perspective (Cooke & Kemeny, 2014). In summary, service learning has been shown to have a positive effect on the understanding of social issues
personal insight, and cognitive development which is good for both the student and the community. It seems as if service learning coupled with some of the more dominant forms of EFS described in chapter two, could serve to help students develop the values called for in chapter three.

While this model of learning shows promise, not all service learning is the same. Some forms may serve EFS better than others. Randy Stoecker (2014) provides a comprehensive exploration of the various forms of service learning. As we continue to seek the best way forward, it is important to settle in on these models and determine the most appropriate for EFS to meet its goals.

- The direct service model positions the institution (through faculty) as a service provider to a community partner. The faculty then engage students in the service provision. He cites urban planning students supporting community projects, and students teaching obesity prevention programs.

- In the partner as client model, the institution (its faculty and students) are supporting the goals of the partner through indirect service. He classifies two examples as this model. One positions students in a supportive role so the partner (healthcare) was able to better reach an underserved population. In another, students worked on developing marketing materials for a partner.

- Brokered service learning works through the use of a broker between the institutions and community partners. Stoecker refers to the role of a land grant university extension service at times serving a broker role for the community partner in finding service from the university. I include this here because a
number of institutions employ service learning coordinators who act as liaisons between the institutions and their communities. In this capacity, the coordinator builds the relationship and finds appropriate faculty and student support.

- Stoeker explores a community development model in which the institution commits to a long term relationship which seeks to address some complex issue such as poverty. In this case, the community leaders would seek out support and resources from the institution. The institutional role would be to consider the complexity as an academic challenge and allow students to develop projects with the community and participate in the implementation. The long term approach requires reflection and adjustments which could potentially engage additional or alternative institutional resources.

These forms of service learning all suggest connections which can serve to break down the barriers between the campus and the community. However only the community development model appears to support the two-way learning I feel is essential. This relationship as described above serves as a reciprocal learning opportunity that creates meaningful student and community relations rather than simply a service to the community. Within this model, the HEI is valued for its academic capacity and the community serves as learning environment where the theoretical becomes real. From a sustainability context, the universities are free to hold to their strengths of exploring the complexities and the community partners can ground focus the scope of the exploration within the boundaries of the community impacts. The key to service learning as an entry point is to accentuate the learning that comes back to the students and faculty from
outside the campus. I am suggesting that sustainability requires values and experiences which are not necessarily aligned with the dominant contexts of higher education. Thus, the efforts to reach out into the community must be complemented by a welcoming of the knowledge, experience, and values from the outside in. There is substantial potential for each of the above examples to reiterate the position that HEIs are the drivers of the movement and partners are best served when they align with the institutions. There must be some management of these relationships to ensure that the power is equalized and the both the HEI and the community feel that their perspectives, skills, and values are part of the way forward.

Both the rhizomatic metaphor and the social exchange theory shared earlier emphasize decentralized decision-making. To see one’s campus as a component of the community at large alters the aim of the campus from one of educating future leaders to one of playing a meaningful role in the sustainable future of a whole community. It may confirm a transition from educating about sustainability into one of educating for sustainability. This changes the efforts from ones that seem to assess sustainability of the campus for students to explore as a microcosm of a community to one which reflects on the impact of the campus as a member of the community.

**Community Sustainability**

The previous section makes an assumption that the communities within which HEIs exist make multifaceted attempts to become more sustainable. Many do, however, it would be naïve to assume all communities looking to move toward a more sustainable future will be able to avoid the pitfalls of a focus on the economy and a maintenance of
existing values. In fact, some sustainability plans and efforts are not necessarily more holistic or advanced than those of individual universities criticized in chapter two. In order to gain relevant understanding of these plans and efforts as they will relate to the remainder this work, I will explore the features of several Midwestern community sustainability documents; e.g. Sustainable Cleveland 2019’s action guide sub-titled Building an Engine to Empower a Green City on a Blue Lake (Sustainable Cleveland, 2019: resource action guide, 2009). While each of the reviewed plans may not reflect the new vision of sustainability I’ve promoted, they will reveal key themes, strengths, and weaknesses within which openings for HEI engagement may be explored.

Below, I will analyze several examples of community sustainability plans in an effort to identify the philosophical foundation of their sustainability plans. I anticipate much of the same key themes found in individual HEI plans. Based on the dominant though incorrect conceptualizations of sustainability and coupled with inconsistency in leadership, the true long-term impacts of these plans could be questionable at best. Additionally, the role of education in them if addressed at all will be varied. It will be important as I review these plans to highlight the roles identified or at least where entrance points for university engagement should exist. In some cases, the university(ies) within a community will be welcome partners with roles outlined. In others, it will be necessary for the institutions to assert their position as relevant partners and offer a plan to lead education within that plan.
As I review the document the point will be to employ the same critical lens brought to the “sustainable” campus and education plans earlier. The executive summary begins with the often referenced fire on the Cuyahoga River in 1969. The expected reflection on this moment as part of its 50-year anniversary in 2019. It is exceedingly positive its first sentences suggesting Cleveland has the opportunity to “surprise, amaze, and inspire the world with its transformation to a bright green city on a blue lake” (Sustainable Cleveland 2019: resource action guide, 2009; p.vii). Even the form of sustainability referenced is aligned with what I have proposed here “Sustainability is a process and a way of thinking that helps us make better decisions about how to meet our needs. It helps us consider the long-term implications of our actions. It helps us appreciate the interdependence of a strong economy, a healthy environment, and vibrant society. It helps us develop a more resilient society that can adapt to a dynamic, changing world” (p.viii).

My concern grows as I read. Immediately following the definition, the purpose of the entire document is revealed and suggests the ultimate aim is a sustainable economy. If we resist criticism to dig a little deeper, the hope may be that the “sustainable” economy referenced is one built on critical reflection of that which has proved so challenging for “rust belt” communities across the Midwest. The initiative is built to be a hub of information about the activities that are accelerating Cleveland’s economic transformation. The use of the promising term transformation is repeated.
Key values represented can be summarized as follows;

- Dynamic and cumulative: the structure of plan relies on one focus for each year between 2011 and 2019 with an intent of cumulative benefits of on focus area from the progress of the previous. The stewardship council is given the opportunity to review the order of the focus areas every three years and given flexibility to adjust the order as necessary. The flexibility coupled with the cumulative nature suggests a desire to

- Urgency for action, positivity, and kindness: this is seen in the effort’s references to the importance of action and celebration. The plan accounts for recognition of important achievements and celebrations.

- Inclusive, accessible, and welcoming: diversity and inclusion are mentioned as important components of the plan.

- Encourages persistence, determination, courage, and boldness: this is born of the need for resiliency through the changes in the economic environment.

- Promotes creativity, innovation, and execution: entrepreneurs, transition to sustainable methods

From the list above, the values seem to be in line with a reconceptualized sustainability, however, a full review of the action guide is more conflicting. Initially, it appears to align itself with the transformative nature of sustainability outlined here for EFS. The document is littered with words like transformation and new. Additionally, the document presents quotes and pictures that suggest real change and a new and environmental perspective for the city in the border of the document. However, the
pictures and quotes appear disconnected from the body of the work which suggests little for the environment. One picture within the local foods section shows a barefoot gardener using a flat shovel on unbroken ground (not realistic), while the section within which it sits fails to reference food security. One quote however does align well with the message. Lee Scott, chief executive of Wal-Mart is quoted saying "there is one simple rule about the environment. If there is waste or pollution, someone along the lines pays for it.” (p. xiv). Whether Wal-Mart is or is not in the position to offer advice on sustainability is for another argument. However, given that the aim of the document is to develop a future based on sustainable initiatives, it is quite telling that a quote about the environment in this document is from the chief executive of a company focused on consumerism and capitalism.

The leaders of the movement continue their nod to the environment while maintaining a focus on the economy in the introduction to the local food section. In this the authors write “a focus on local food is not only essential for a sustainable economy due to its environmental benefits, but it is an important economic driver” (p. xx). Here they expose their intended audience as economic stakeholders. It serves almost as a warning to them that local food is not only about the environment, but as a component of sustainable economic development. It is also clear in the absence of social benefits of local foods movements that the intent of this work is primarily economic.

Even when the opportunity is obvious, within the renewable resources and advanced energy section, there are no criticisms of the fossil fuel industry aside from the costs associated. The alternative energy forms mentioned are not justified on any
environmental basis or even a social basis, for example, environmental justice. Rather they serve as evidence of alternative ways to expand the traditional economic culture of the region to something more sustainable. Nowhere in the document is the natural environment seen as having intrinsic value. Where nature conservation is identified as a key area, the solution is based in economic and social benefits (p. xiii).

The real concern about the document is that as it explores the importance of collaboration through envisioning systems thinking, there is literally no mention of education neither as a relevant industry nor as a target of change. This is in spite of seven universities within 20 miles of Cleveland. Given the towns and gowns approach to the university circle community, there appears to be a common limitation of the role HEIs are expected to play. The limitation is that they are seen as economic drivers rather than sources of knowledge, research, and service. Though earlier I expressed the value of service learning, it would require the communities to see the students and faculty as more than bodies for service.

**Criticism**

Unfortunately, if we consider Sustainable Cleveland 2019 a typical attempt to transform a community into something that represents the philosophy of sustainability, we may be sadly disappointed. The entire document resists a call for critique of systems as they currently exist. Additionally, it fails to demonstrate a deep understanding of the community perspectives which are most threatened by the current unsustainable conditions. Like many university plans for sustainability which ignore the community perspectives surrounding them, this document appears to do the reverse. Similar to
critiques of EFS efforts on campus, we can consider it unlikely that leaders of an existing system would be apt to consider founding strategies on critical perspectives of their own community constructs. At this point I should, as many have already, disregard these plans for their lack of potential, but ever an optimist, I prefer to recognize the capacity of a community to drive change when lead by the appropriate partnerships. Just as it would be easy to ignore the original declarations of the EFS movement for their lofty goals and disconnect from the place-based initiatives needed to successfully achieve their aims, it is easy to suggest nothing short of a revolution can make a difference in communities so ingrained in unsustainable culture. However, if we consider the potential of community plans which can, rather should include and celebrate education and openness to critical reflection, it just may be possible for communities to meet their goals and support those of the HEIs as well. Earlier I presented the reality that community partnerships can ground the creative, academic, and theoretical discussions of sustainability in real spaces. Communities partnering with HEIs gain the creative, critical, and theoretical power to infuse the new ideas and energy needed for real transformation.

A primary problem for these community plans is that they hold the same perspectives as many HEIs. That is, they see sustainability as a strategy for maintaining existing structures, systems, and values rather than an opportunity to critically review their place within the existing unsustainabilities. In this sense it appears that sustainability can be considered the new trend that communities must turn to if their hope is to thrive into the future. What we need in this situation is something much deeper
which supports the development of a critical perspective and an environment which supports the necessary change called for by the critical perspective.

**Lack of Collaboration**

Just as we saw a lack of community partnership within many HEI plans, we can see also that HEIs can be ignored within community plans. While community plans tend to have more diverse representation, that the institutions capable of exploring, testing, analyzing, and reviewing community unsustainability are absent. This mutually exclusive relationship allows for both sides to work independently toward a relatively common goal. It however is this exclusion which helps to secure a limited scope of understanding and action toward sustainability. To open one’s perspective up threatens the stability of the community/HEI leadership and necessarily reduces the control. This democratizing of control is precisely what is needed. Universities can offer much to a sincere community and more importantly for the scope of this work is the community is already influencing students’ learning and a partnership only recognizes this and leverages it for the benefit of all.

The alternative perspectives required for the sustainability I call for can be developed only when students are exposed to them through meaningful educational experiences. These alternatives are held by “others” within the communities who exist in the periphery most often not by choice. They are in many cases those both human and non-human, who have been negatively affected by the existing unsustainability values. As mentioned above, they often come into higher education as the subjects of service learning opportunities. They demonstrate ways of being more aligned with social and
Eco Justice. As such, these “others” ought to be given the opportunity through
community/campus engagement to teach students and influence them more so than by
simply providing experiences for students to add to a resume. The “others” within the
community can be found within the following groups, but are not limited to them; social
service providers, animal advocates, local food system advocates, environmental groups.

**Hopeful Examples**

It can be hard to imagine how all of this can be realized given the enormous
challenges it faces. However, there is hope in the examples of visionary community
leaders. As I did above, I’ll turn to the city of Oberlin and explore how the community is
set up to support the initiatives of the campus covered above.

**Oberlin**

In contrast to Cleveland, the city of Oberlin less than 40 miles away, not only
plans for sustainability differently, it is infused with the progressive influence of Oberlin
College. The Oberlin Climate Action Plan is based almost entirely on addressing issues
that impact climate change. Its primary goal is to reduce the city of Oberlin’s greenhouse
gas emissions to below zero through the economically viable innovations (Oberlin
Climate Action Plan, 2013). The situation is certainly unique for Oberlin. As a small
city, 8,286 residents as of 2010, it may have more flexibility in its actions. Oberlin
College is the city’s largest employer and a significant influence on all three systems of
sustainability. The college is known for being progressive since its inception. It was the
first college to open to women and African-Americans as full students (Early History,
n.d.). Despite its link to the greater Cleveland area and the rust belt as a whole, the
approach taken by the community is much different. It seeks to build a future different from the past in the sense that there is not a commitment to maintaining existing systems. For example, renewable energy holds higher priority than energy efficiency. Within the explanation of renewable energy, the benefits begin with environmental improvement rather than economic development.

Education and awareness take center stage with this action plan. Together in 2010, the college and the city signed an agreement with the Clinton Foundation and the United States Green Building council to participate in the Climate Positive Development Program. The partnered signing points to recognition of the interdependence between them (Oberlin Climate Action Plan, 2013). The EFS goals cannot happen with the community and the community development plans cannot move forward without both the formal educational efforts on the campus, but also the collective informal education that ensures lasting change. On page 35 readers find the following; “the educational challenge is to employ those aspects of human behavior that enable persons and groups to embrace new norms of behavior consistent with the principles of ecosystems that undergird full spectrum sustainability”. The target audience of the action plan extends beyond community and industry leaders and focuses on the community. One of the primary examples of this action plan is the bioregional dashboard develop and implemented through the Oberlin project. This project allows residents to view an interactive display of the community which helps to communicate the impacts on the energy system of various behaviors.
Oberlin’s place within the rural outskirts of the greater Cleveland region would normally mean it is subject to negative impacts of Cleveland’s environmental, social and economic challenges of recent decades. To a certain degree this is true. However, I would suggest that the presence of the college and in particular its progressive bent and influence on the community is the likely reason why it is taking a positive and alternative direction for its sustainable future. The relationship takes advantage of the strengths of both local government and higher education to put forward a plan where not only students are learning, but the community at large.

**External Perspective on University Roles**

During the same timeframe of the growth of EFS, there has been a documented movement toward more engaged collaboration between higher education institutions and organizations (Barcelona & Bocarra, 2004). Beginning in the 1990’s, universities noted a growth in the number of internships, practicums, and service learning opportunities in the curricula (Restine, 96). Kirschebaum and Reagan (2001) suggest that effective collaboration can provide three types of benefits for higher education institutions. First, it satisfies an altruistic desire for university personnel and students to contribute positively to the surrounding community. This points to the desire and call for institutions to engage in moral development of the communities around them to which I referred earlier. Second, collaboration can provide meaningful “real life” field experiences for students. This supports what has already been identified in reference to service learning. Students engaged in learning about sustainability can transition to learning for sustainability as the theory is converted to practice. Finally, collaboration
can provide interesting research opportunities for faculty. The university campus as such should serve as a space for exploring the theoretical strategies of a sustainable future. Thus, from a community’s perspective, an engaged university can offer a vast and diverse array of resources (Carr, 1999). Weinberg (1999) traced three roots of this resurgence of engaged universities.

- Universities need to return to role of moral development
- Growing realization of operating universities within struggling communities
- Growth and popularity of service-learning courses

First is the idea that universities needed to return to their traditional roles as institutions of moral and educational development. This position suggests that universities are, or at least were as of 1999, in the position to influence the morality of their students and the greater community. If institutions return to this role, the leaders produced would hopefully have the necessary experience to drive change. Though it doesn’t yet appear that this has happened in regards to sustainability, it suggests a potential partnership with community partners that represent the values needed for a more sustainable future and again points to the presumption from the outside that universities are in the position to effect values changes. In many cases the values of the community and the institutions may be drastically different. The challenge to this position is that the universities must be open to influence from the community partners and resist the urge to create one way influence. But only where these partners espouse what one might call “community values” or better, sustainability values, that is, it is not the university or the
community per se that can bring about change. Values that are compatible with and indeed undergird sustainability are essential.

Building on the previous position is the growing realization of the financial ramifications of operating universities within struggling communities. “Struggling” communities are likely experiencing more threats related to unsustainability than other communities and are not in the position to double down on the neoliberal agendas that are likely the cause. Maximizing the environmental, social, and economic effects of an institution could have significant impact on the community direction and future. Engagement with these communities and specifically with their agencies representing alternative perspectives is one way to create a win-win for the community and campus.

Third is the growth and popularity of service-learning based courses within academic institutions. Service learning has potential to give students experiences which challenge their perspectives from home or from the campus. Proper use of the momentum behind this movement could put students into great positions where they may not only learn more about issues related to sustainability, but to legitimately influence their values and perspectives. The ramifications of successful collaboration include creating win-win situations for both partners (Barcelona & Boccarra, 2004). DeMulder and Eby (1999) also argued that a more engaged university helps to create a more dynamic learning community for students. Dynamic learning spaces might be the solution for preparing students to lead a dynamic world.

University roles can switch from training future leaders for the community to actively engaging the community in public sustainability discourse. This first requires
recognition of the impact a university has on the community regarding sustainability. Universities are well known for influence on local economy, and significance of social influences. However, research gaps exist for critically comparing how HEIs’ sustainability operations policies link to the larger community (Vaughter et al., 2011). To assess campus impact on environmental health adds another layer to community thoughts of HEIs. Additionally, a sustainability lens requires institutions to explore their influences from a critical perspective. For example, Carr (1999) pointed out that universities can be powerful agents of change in a community because of their geographic location, enormous resources (often ranking as the largest non-governmental employer in many cities) and the benefits of altruism (in that doing best for all may be the best way for universities to do well).

**Formal Community/University Partnerships**

It is apparent by now, institutions, in and of themselves will continue to be limited in effecting change through dominant forms of EFS. Likewise, community efforts without education might be limited. The criticisms to this point have largely been expressed from the perspective of an institution, faculty member, or student looking out and into the community. To realize the potential suggested by Barcelona and Bocarro (2004) and Weinberg (1999) we should also consider the community perspective on this relationship. Recently, a new movement called Towns and Gowns seeks to highlight the benefits of building relationships between HEIs and the communities in which they sit. Two Northeast Ohio examples will be reviewed in order to reveal the key themes of their relationships and the resulting benefits to the community. The University Circle (in East
Cleveland) with Case Western Reserve University (CWRU), and the city of Oberlin with Oberlin College demonstrate two different models of collaboration.

In the case of the University Circle/CWRU, the relationships are built primarily upon community improvement for the benefit of the local economy and student and community member lifestyles. I bring it to this discourse in order to uncover the strengths and to propose ways in which it could focus on EFS and begin to realize some transformative results. Some examples of the strengths are combined graduate student and community housing, grocery stores in food deserts serving both students and community members. I will draw from these positive developments to suggest ways in which students might be able to explore sustainability through these same relationships.

**Case Western Reserve University and University Circle**

By its name, the community of University Circle recognizes the impact of Case Western Reserve University (CWRU). It is a concentrated collection of resources. It includes not only CWRU, but additionally the Cleveland Institute of Art, Cleveland School of Art and Design, and the Cleveland Institute of Music. Arts and Culture abound with the following: Cleveland Museum of Art and the Cleveland Natural History Museum. Healthcare in the community is on a world-class level with University Hospital and the Cleveland Clinic.

Redevelopment in the community seeks to maximize these resources so that each is improved and that the community as a whole can build a plan for prosperity. Like many other plans, the focus is initially on economic development. Within the plan is a proposed three billion dollars in capital construction supporting 3,000 direct
construction jobs, and 82,611 indirect jobs. In total the expected economic output is proposed at fourteen billion dollars (Town to Gown: An anchor district without borders, 2015).

The planners recognize that this improvement district is surrounded by impoverished neighborhoods and that development must improve conditions for all. Socially, the plan is to address housing needs by building blended housing which means housing that housing at multiple socio-economic levels. In addition a number of other social improvements are slated including: Education expansion, bike share and zip cars, wealth building through a solar growers’ co-op and co-op laundry, as well as increased community events (Town to Gown: An anchor district without borders, 2015).

This project demonstrates a development plan for the community that recognizes the value of higher education among the many influences on the community. There is a lot of potential within this plan both economically and socially. Not only is there economic growth potential in the conventional sense, the acknowledgment that the district is surrounded by poverty is meaningful. Within the plan we can see legitimate actions that seek to create an alternative set of services for the community. Specifically, where we see wealth building, the projects are built on co-op structure which supports individual partner autonomy more than a conventional business plan whereby employees serve as commodities. The opportunities also reflect an understanding of what is needed by the community. Co-ops providing food and laundry services support the growing community with very local options. With diverse housing opportunities, this neighborhood is seeking more than just a simple gentrification, but rather a respect for
the diverse community and plans to serve it. Finally, events for social integration and the provision of spaces and opportunities for community voices helps to ensure that the diverse perspectives are valued and engaged.

Regarding sustainability, this plan does more than many even without the use of the word. If we can return to the previous chapter and the complex nature of the concept we note its link to justice (economic, social, and ecological). The university circle development clearly supports both the economic and social justice issues. It is however weak on how the relations between the university and its namesake neighborhood could lead to a more sustainable future. The university in question happens to be world renowned research institution which could conceivably serve as more than a community of faculty and students. The project supports the creation of a healthy community space for students and faculty within which to live, work, learn, and play. However, it is not clear how the institution is engaged at a deeper level. During a presentation on the plan, it was hard to decipher the role the university was playing in the plan. It appeared as if it was simply one of the multiple assets in the community upon which the plan relied for sustained growth and development (Town to Gown: An anchor district without borders, 2015). My preference would be to see how students and faculty are directly involved in the positive development.

We cannot expect a single institution minus its community or a single community without its institutions to address sustainability sufficiently. As communities and their members explore the concept of sustainability it is essential for them to do two things,
recognize the potential support found on university campuses and to engage these partners in their efforts.

In this manner, the full values of higher education can be realized. As members of a real community rather than barricaded “models”, campuses can be subject to critical review as others are. Their students might also see the transformative potential as they begin to recognize and name unsustainabilities and injustices that challenge future generations’ potential. Central to any conception of sustainability is interdependence. Within this community-based perspective of EFS we have the opportunity to recognize the potential for a vision grounded in interdependence. Ecologically we should discuss shared and limited resources, socially we should explore inequalities and misunderstandings leading to discrepancies in the distribution of said resources locally and uncover the hidden networks globally, and economically we should be discussing how to leverage the collective intellect to build a sustainable economy. Instead, the values in play position the campuses against one another for resources (natural and educational), send students abroad to see first-hand people in need while their neighbors are hungry, and market the HEI strengths of the community to attract the same industrial enterprises which have left our community with a solid layer of rust.

**The Oberlin Project**

At this stage I find it necessary to explore in detail at least one model which shows both a university reaching out to a community and a community with open arms to support EFS. For this effort I’ve chosen The Oberlin Project which is a collaborative effort between the city of Oberlin and Oberlin College. In this project both parties
recognize the interdependence they have with one another and choose to maximize the impact of the relationship for the benefit of students, community, the region, and beyond. Deeper than most EFS programs either of the university or community, this demonstrates a recognition of sustainability as a philosophy or guide and base it on the principles of ecoliteracy and an eco-centric definition of sustainability. Goals of the program include, but are not limited to, becoming a climate positive community, creating a vibrant locally based economy, and integrating sustainability into all levels of education in Lorain County (Braziunas, n.d.) Oberlin is in a unique position of being incorporated at the same time as the college with expressed goals of being inclusive and valuing social justice. Oberlin College was the first co-educational institution to enroll African-American students (Early History, n.d.). This project also happens to be the brain child of David Orr who teaches within the environmental studies program at the college. I’ve referenced Orr heavily thus far as a critic, visionary, and activist for change in higher education so that it may serve our ecologies as much or more than our economies and societies. This project appears to be his Magnum Opus. Because of the explicit goals associated with sustainability and long term relationship between the community and campus, this model is worth exploring in detail to determine the characteristics which could be replicated in other communities.

The primary intent of the Oberlin Project is to serve as a catalyst organization between the city and the college where creative critical thinking can find traction and be explored in real spaces (Braziunas, n.d.). The aim is to move toward David Orr’s vision of Full-spectrum which requires that economies, ecosystems, educational systems,
resource systems, and social systems all work together to reinforce the stability and resilience of the whole (Orr, 2014). Begun in 2009, the Oberlin project is a truly collaborative project between the community and the campus. Rather than organization for economic development with social and ecological benefit as the byproducts, Orr (2014) is clear in his definition of the project as a model of full spectrum sustainability. He adds “in plain English, those words mean something like a jailbreak from the conventional silos, boundaries, pigeonholes, disciplines, and bureaucracies by which we have organized governments, economies, education, social movements, and entire worldviews” (p. 9)

Following that description one can easily imagine that the goals are critical and lofty. They include;

- Develop a 13 acre district in the downtown at the U.S. Green Building Council’s (USGBC) Platinum level.
- Create new businesses in energy efficiency and solar deployment, food and agriculture, and the sustainable use of local resources.
- Shift the city and college to renewable energy sources.
- Establish a robust local foods economy.
- Create an educational alliance between the College, the Oberlin schools, a nearby vocational school, and the Lorain Community College focused on education appropriate for the challenges and opportunities of sustainability.
- Broaden and deepen the conversation on sustainability to include all of the humanities, the arts, the sciences, and the social sciences.
Collaborate with other projects and communities across the U.S. that are also developing sustainably by integrating food, agriculture, energy, sustainable economic development, education, public policy, community engagement, health, and transportation. (Orr, 2014, p. 9)

To create lofty challenging goals is nothing special, but the milestones achieved show the goals are more than just symbolic. The project is responsible for the following:

- Renovation of art museum to USBGC Gold level
- Completion of $17 million downtown housing and commercial development at USGBC Gold level
- Renovation of an historic downtown theater
- Selected as one of 18 Clinton Climate positive communities
- Deployment of 3 MW Photovoltaic system
  - A 90%+ carbon-free municipal electric supply
  - Creation of a college plan for climate neutrality by 2025 (Orr, 2014, p. 10)

With this project we find a comprehensive integration of the community and campus where the community serves as a learning lab for students and faculty and where the community and campus demonstrate reciprocal respect. The project reaches beyond the initial commitment to just being climate positive, and recognizes the needs of the community with community based education mentioned earlier such as the community Bioregional Dashboard. In 2012, the project partnered with Michigan-based Creative Change Educational Solutions and developed education for sustainability curricula for Oberlin’s K-12 population. Additionally, the project formed a Community Engagement
team to ensure community input and is considered and engagement is ensured in all efforts. With several years of progress under its belt, the Oberlin Project is now beginning to reach out beyond the local borders to partner with regional entities to expand its message.

In summary, the Oberlin Project embodies all of what I’ve sought through this exploration. It shows that a campus is capable of a broader view of sustainability and capable of the change needed to support it. The concept of sustainability is one which values the critical perspective our current conditions and the need for alternatives. Finally it realizes that higher education is a part of, but not the whole of education for sustainability. Moving forward, the need is to explore the replicability of this initiative within other communities.

Using the Oberlin Project as an exemplary model, and through conducting these analyses, I seek to build a template for exploring the potential within existing or proposed ideas of community/university collaboration which will assist in moving the discourse on EFS from the critical to the normative. The template will serve it full purpose within the final chapters as I explore another community and university collaboration.
CHAPTER V
COMMUNITY-CENTERED EFS IN STARK COUNTY

Building on the foundation provided by the Oberlin project I finish with an exploration of a situated attempt to address the issues I have covered in this work. The Oberlin project provided hope for those aiming toward a more sustainable future. It however is based in a historically progressive community with long-standing healthy relationships between college and the city. While Orr is busy with efforts to expand the reach of this project into the region and beyond, it is important for others to explore these ideas within their spaces and among other institutions in order to broaden our collective understanding of how a meaningful EFS may ultimately be realized.

In this chapter, I will situate this curriculum/community partnership concept within a particular county. I explore the history of this county in the age of EFS, by analyzing both campus and community developments. I will first review the recent history of Stark County’s HEI efforts to address sustainability making the case that the barriers outlined in chapters two and three are present in and limiting the long-term viability of EFS in its traditional forms. Second, I will point to areas of hope with positive gains of the some efforts which when combined with certain community strengths can make a significant difference.

**EFS in a County-Wide Context**

While the Oberlin Project appears to serve as an ideal model, the relationships between HEIs and their communities differ from location to location. In particular few communities and institutions have the origin story of the city of Oberlin and Oberlin
College which were both founded on progressive values in nearly the same year (college in 1833 and city in 1835) (Early History, n.d.). Therefore, if we are to add to the body of knowledge about how to realize the transformative goals outlined in chapter one, we must analyze how other communities and institutions might work together toward sustainability. In this manner we help drive the community–centered EFS movement beyond isolated models and toward a replicable educational concept.

**Why Stark County?**

At present time, sustainability is as appropriate a topic for the HEIs and the communities in Stark County, Ohio as any other. With the development of technologies to reach the prolific Utica Shale oil and natural gas, the state and more specifically the Eastern region moved headlong into a commitment with the oil and gas industry. As a result, communities with long-standing ties to blue collar industry such as Stark County have quickly moved to commit resources to the industry in hopes of restoring the historical economic strength of the early to middle twentieth century. Canton, the county seat has for example, transitioned from a community with a sustainability commission who worked with Massachusetts Institute of Technology (MIT) scholars to publish a sustainability plan in 2007 (Successional Cities, 2007) to one branding itself the Utica Capital of Ohio. All in an effort to market it as a staging area for the forays into shale gas regions of eastern and southeastern regions of the state. Additionally, the past two years have seen momentous investment and commitment to developments associated with the Pro Football Hall of Fame. With leadership from a new director, the hall of fame located in Canton is now moving full steam ahead with a massive land development plan seen by
many as a way to revitalize the community by cashing in on tourism. Whether the oil and
gas developments pollute our air, water, and soil or the tourism developments gentrify the
community, the community ought to be thinking long-term about what Stark County is
like when the oil and gas industry moves on to more prolific spaces and the initial interest
in tourism wanes. Where Oberlin can continue to lean on its historical progressive
values, Stark County seems eager to jump on the most recent trend. As it applies to
sustainability it may be necessary to shed a bit of its historical values associated with
industrial capitalism if it wishes to become sustainable. Even the Oberlin project is
challenged by these issues as it seeks to impact nearby communities of rural Lorain
County and the Blue collar city of Lorain (Flynn & Hayes, 2015).

From an educational perspective Stark County, the potential for EFS is great.
This rust belt community is home to six higher education institutions; three small liberal
arts universities, a state funded community college, a hospital-based college of nursing
and health sciences, and branch of the second largest state university. In a community of
roughly 400,000 citizens the potential impact of a reciprocal relationships among the over
37,000 students (many of whom are local residents), faculty, and the community at large
could be significant. However, the same institutional challenges provided in chapter two
which preclude meaningful sustainability education from taking place in larger
institutions and communities face these smaller independent campuses as well.
Additionally, without significant size and breadth of expertise among faculty, each
institution is limited when independently engaging students in experiences which explore
the concept of sustainability from a holistic perspective as I suggest is needed. With
more institutions competing for students and resources, the potential for deep community engagement is also diffused. This means that these campuses may be more challenged than their counterparts which may be more capable of leaning on a broader university expertise for understanding and dealing with the complex issues of unsustainability.

Each institution has in recent years participated in some form of EFS, however most of the investment and interest has been on the efforts more aligned with the greening of the campus which Kahn (2010) considers faddish and does not alter the future, but rather pushes ahead the inevitable impacts of our crisis to future generations. Drawing on even the most basic definition of sustainability it is counterintuitive to act in the best interest of now while spiting the future generations. Two large scale initiatives and several small scale efforts are presented here and critiqued with the same perspective as those found in chapter two.

**Stark State College**

The college received grant funding in 2009 to hire a sustainability coordinator to promote sustainability across the campus and curriculum from the Herbert W. Hoover Foundation. The largest project to come out of the grant related efforts was the construction of a LEED Gold business and entrepreneurial studies building. It is an incredibly efficient and beautiful building filled with many interpretative panels for passive education of students and faculty regarding its efficiencies. From a curricular standpoint, the former sustainability coordinator conducted annual AASHE sponsored *Sustainability Across the Curriculum* workshops with faculty from many disciplines including english and writing, biological sciences, early childhood education, and even
criminal justice. Additionally, the workshops featured community partners and participant experiences were deliberately conducted off campus. In essence, this initiative was directly in line with addressing the challenges of disciplinary silos on campus. In addition, students were engaged in a number of co-curricular efforts such as Recyclemania and even art projects with discarded items as media.

Despite efforts of a small number of faculty, the impact was minimized as some felt no need to incorporate sustainability into their work following challenges they faced in the classroom. For example, one English professor said she felt pressure from the students to stop using the word environment because they didn’t find it relevant for the subject. Others referenced an inability of students to connect to the messages (Smith, 2013). Subsequently, the courses held within new building and others around campus have failed to transition and thus promote the same messages as those held before the construction and training efforts. Without committed leadership and guidance to break the barriers and establish new cultural norms, this effort may have been doomed from the start. As a grant-funded initiative it had a three year timetable to become infused into the culture of the institution and ironically sustainable. Unfortunately, since the end of the grant period, the position of sustainability coordinator has been removed, the president has changed and the new college leadership has relegated sustainability to a secondary goal for the most recent strategic plan. With flashy new building projects and short-lived efforts, this example appropriately represents all that challenges institutions in making legitimate change.
An additional issue mentioned briefly above is worth more exploration. With change in leadership at SSC came a swift change in priorities and sustainability was a victim. It is vital to the movement to better understand how sustainability transitions from one leadership team to another. If institutions are not capable of internal cultural change, the sustainability values needed are not likely to transcend leadership change. It appears this was the case at SSC and is a threat to institutions elsewhere in the community where four of the six HEIs have had top level changes over the past five years. Reorientation of institutional values at the level I am suggesting will require a long term vision and consistency. Regular administrative turnover is not likely to support that need.

**University of Mount Union**

Another local institution has gone even further than SSC in their efforts to holistically engage in education for sustainability. The University of Mount Union (UMU) has adopted large scale goals for their campus and what appears to be a significant infrastructure ensuring progress toward them. In 2007 then President Richard Giese signed onto the American College and University President's Climate Commitment (ACUPCC) (University of Mount Union Sustainability Plan, 2011).

In 2010, UMU participated in the AASHE STARS program to assess the relative sustainability of the campus related to operational efficiency and sustainable behaviors. This project is focused on creating a quantifiable sustainability rating system for institutions based on carbon footprint, educational measures, and campus lifestyle. As a result of their findings, UMU focused on standard operational initiatives for example
adopting policies such as; all new campus construction will be built to at least the U.S. Green Building Council’s LEED Silver standard or equivalent, an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist and plans to adopt 3 or more associated measures to reduce waste (University of Mount Union Sustainability Plan, 2011).

Within two years of signing this document (for University of Mount Union the due date was May 15, 2010), develop an institutional action plan for becoming climate neutral, which will include: 1. A target date for achieving climate neutrality as soon as possible. 2. Interim targets for goals and actions that will lead to climate neutrality. 3. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experiences for all students. 4. Actions to expand research or other efforts necessary to achieve climate neutrality. 5. Mechanisms for tracking progress on goals and actions.

(p. 5)

Since the initial assessments, UMU determined key goals for 2011-2015 would primarily include metering of utilities and the publication of that data. Additionally, they hoped to promote more sustainable living and working practices on campus for example setting temperature standards for work spaces of 72°F (+/- 2°) year round. Overall, leaders seek to increase awareness of sustainability among faculty and students- through coursework for students and through professional development for faculty. Increase motivation and opportunity for behavioral change through integration into campus social fabric. Using
campus as laboratory for learning about sustainability through monitoring and engagement with planning.

In initial year of these efforts, nine courses were focused on sustainability and 37 were identified as being related to sustainability. During January of 2010, 11 faculty engaged in development of new or revised courses to address sustainability and taught them during the 2010-2011 academic year. For continued momentum institutional leaders planned to use assessment tools for student sustainability literacy, research and create new courses, support faculty who desire to incorporate more sustainability, and use campus improvements as teaching opportunities.

Where SSC failed to continue their progress into a new administration, UMU has succeeded. The work of early adopters has made sustainability something more than a fad. As a result, Dr. W. Richard Merriman the current University of Mount Union president is considering adding the Resiliency Commitment to the original Carbon Commitment. The most recent report to ACUPCC (University of Mount Union Sustainability Report, 2014) on progress highlights the operational efforts as part of the opening of Gallaher Hall which was built with full commitment to energy conservation. A major example is that three high efficiency boilers were installed in Gallaher to fire in stages so all boilers do not run at the same time. All lighting in Gallaher Hall is set-up with motion sensors so that even the efficient lighting of LED bulbs are not wasted. While these examples represent a necessary step, they are often hidden from students’ experiences on campus. UMU however, has worked to ensure that there are very visible alterations to the campus that are felt by all students. Over the course of the last five
years, the campus has closed city streets which once transected the campus. The change has resulted in 40% more green space in those campus areas and promotes biking and walking. To meet increase need, the campus has added more bike racks and a bike fix-it station to the transportation routes.

Operational efforts and physical changes are not enough of course and UMU reinforces that work with curricular and co-curricular initiatives for student learning and behavior change. From an educational perspective, the university scores 20.57 out of a possible 37.00 pts with strengths in the following categories: undergraduate program offered (environmental science) and incentives for course development. (University of Mount Union Sustainability Report, 2014). Of course the existence of and environmental science program does not necessarily ensure EFS, but it is a starting point and can provide a basis for student engagement with environmental issues on their campus and community. This appears to be the case as the highest strength UMU has developed related to their original goals is in campus and community engagement. With scores of 17.00/20.00 and 15.52/21.00 respectively, (University of Mount Union Sustainability Report, 2014). Highlights in this area include student educators, student orientation, student life, and outreach. In 2015, the position of sustainability coordinator at the university was increased to a full-time position with the role focused on oversight of students’ engagement with campus sustainability efforts. In addition to participation in events such as recycle-mania UMU has established a student sustainability team referred to as the Green Raiders whose responsibility is to promote more environmentally healthy
behaviors among their fellow classmates (Green Raiders Meet with President Merriman, 2015).

**Kent State University at Stark**

Other operational efforts can be seen at Kent State University at Stark (KSU Stark). In the summer of 2015 KSU Stark completed their new nursing and sciences building. The facility meets LEED Gold standards and even uses wind power derived on site. It supports the natural sciences and nursing classrooms, offices, and research spaces (Sciences and Nursing Building, n.d.). The design and construction of the building is consistent with their membership in AASHE and their commitment to the ACUPCC. The tangible actions for KSU Stark are to adopt a purchasing policy requiring the purchase of ENERGY STAR appliances and to participate in the waste minimization component of Recyclemania (Sustainability Initiatives at Kent State Stark, n.d.). These actions seem weaker than those proposed by UMU, however these goals and the achievements promoted publicly may simply demonstrate a more traditional view of sustainability. Faculty from KSU Stark have been working collaboratively in the community on issues of water quality and conservation, additionally, the campus is proposing the opening of an interdisciplinary environmental studies program. Even with the release of that program on hold, faculty in the geography department are currently working with physical plant employees to design a community garden and are planning a course on community gardens. This type of commitment to community and food justice is aligned with the broader definition of sustainability I’ve presented here.
While not all institutions are committed to large-scale change, from a traditional perspective, EFS appears to be alive in Stark County. I argue that the efforts are largely operational, informative, and representative of the dominant conceptions. They are however not transformative. Practices that encourage the use of day-lighting, more efficient fixtures, energy efficient roofs and equipment, less dependence on harmful materials, use of more local materials, reduced volatile organic compounds (VOCs), and many other practices are now commonplace (Hodges & Elvey, 2005). These result of these actions is what was described earlier as education about but not for sustainability. These actions score highly on AASHE and LEED assessments, but so much more on campus can fit into a reoriented EFS platform which recognizes critical perspectives, values, and experiences more than efficient ways to continue our current direction.

Even though the measures of sustainability by AASHE and LEED can be critiqued for a number of reasons; their standardization, emphasis on campus greening, their objectivity, they serve as a significant collection of data relevant for helping determining the potential of an institutions capacity to drive transformative change. Most importantly for a practical critic such as me, these data are a starting point for discourse on what sustainability means for the campus and how it impact the community at large. These assessments are of the same language as the institutional decision makers. Wherever possible, these methods of self-assessment and reflection should serve as starting point for deeper criticism of institutional values, and where they aren’t currently in use, they should be promoted as part of an EFS movement so that institutional efforts can begin in a more appropriate direction to instill values-based change.
Operational and curricular change are essential in effecting transformative change, but if the foundational values upon which these changes takes place are not aligned with a vision of sustainability, can there really be transforming? Within each institution there is potential for critical pedagogy toward sustainability, however, the individualist perspectives infused into the aims of the institutions themselves and competitions among them preclude the perspective necessary for each to promote a sustainability which is truly transformative. Rather we settle for graduating students who may be capable of conducting a carbon audit as part of their career somewhere else, but fail to visualize alternative ways of being, or engaging in the issues which surround their campuses

**Opportunities**

It is true that what these institutions claim is education for sustainability does not fit well with the complicated conception of sustainability I’ve presented. In fact it may make it seem unlikely that there could be hope for a meaningful EFS to develop. However, if we look at initiatives of these institutions which are currently outside of the scope of the dominant conception, we may find hope. This hope may be what’s needed to make existing efforts more transformative and where current efforts to educate for sustainability are not currently named, but where sustainability values are present, this new perspective can link them to it might lend support for the maintenance and expansion of existing work that is currently outside of the sustainability discourse.
Mount Union Community Engagement

In addition to the strong commitment to the dominant conception of sustainability, UMU possibly more than any of other county institutions has a strong relationship with its immediate community similar to what is seen in Oberlin. UMU is centrally located in Alliance and is a point of celebration for many in the city which has suffered from some of the same issues impacting other small cities in the rust belt. The decline of property values, industry, and downtown investment has come with an extra challenge of Alliance being isolated form the rest of the county reducing the impact of efforts elsewhere in the county. In 2007 Mayor Toni Middleton began the Green Alliance Task Force. Since 2007 the groups has split into two separate entities. The Green commission which works through city government to stimulate sustainability initiatives and Green Alliance which has become 501c3 non-profit creating larger community networks (Green Alliance Task Force, n.d.). UMU was and still is a leading partner in the efforts of the Green Alliance. Initiatives include; Fuel-less Fridays, Alliance Farmer’s Market, Alliance Community Gardens, sustainability celebrations, and the provision of resources to help the general public understand their impacts on the environment. In addition to the Green Alliance/UMU partnership the campus and city have worked together to ensure that local parks’ trails can develop in the city and through the campus allowing for easy and greener connections among the campus, city and community at large. Additionally, the university has been active in vacating the campus streets so as to promote walking and biking on campus and to reduce car emissions.
Walsh University Service Learning

Walsh University more so than other institutions has increased its emphasis on service learning. Walsh faculty and staff work very hard to find and or create experiences for students to engage with the stark county community.

…providing each student with the educational experiences, resources, and opportunities necessary to foster critical thinking, effective communication, spiritual growth, and personal, professional and cultural development. Walsh University is dedicated to educating its students to become leaders in service to others through a values-based education (Service Learning Opportunities at Walsh, n.d.).

The newest development within service learning at Walsh is the creation of the Blouin Scholars program. This three-year, service-based program fosters service leaders who are voices for the powerless in society. It is a community of residential and commuter freshmen, sophomores and juniors who have a passion for helping others and who care about the world around them. According to the Walsh University website (Br. Francis Blouin Global Scholars Program, n.d.), as a Blouin Scholar, students will live and take classes with a cohort of students who are similarly dedicated to become leaders in service to the global community.

KSU Stark Environmental Studies

KSU is preparing to develop series of interdisciplinary studies programs. The programs are currently at a proposal level (Environmental Studies Program, 2016). Thus, they have yet to be released. However, there are plans to base a proposed environmental
studies program at the Stark Campus. If this program develops, there will be a dedicated curriculum for exploring the multidisciplinary approaches to understanding our ecology and our membership in it. Though it would be a single program within a traditional educational structure, the style of its implementation may open up options for overlap into other programs as well.

**Stark State College Sustainable Agriculture**

In spite of the distancing of SSC from the EFS efforts beginning in 2009, SSC still has potential for some unique developments beginning in 2016. Early college-wide efforts stimulated several faculty enough that there is a smoldering desire to work on EFS even if it happens individually as it did for Greenwood (2003). Several faculty in the natural sciences and another in the English department continue to develop plans and explore options for incorporating environmental awareness into their courses. One option being considered now is to begin a sustainable agriculture certificate which would put students in contact with local urban and rural farmers who are seeking alternatives to the industrial agriculture dominating our food system. If this develops, it would be the first program in the county that directly seeks an alternative to the dominant structures of any system.

**Stark County Community**

I will next turn my focus to the community. In order to complete a contextual analysis of the community, I will review demographic data of the county including population, economy and employment, and land use. The temporal scope will primarily explore from 1987 forward to today, except for where deeper history points to cultural
characteristics still present. This is to align it with the evolution of EFS. I will explore the Canton’s 2007 Roadmap to Sustainability (Successional Cities, 2007) as well as the recently published Canton Comprehensive Plan (Buki & Winston, 2015).

**Community at Large**

Stark County Ohio is the seventh largest county in the state and represents the Canton-Massillon metropolitan area. Population estimates show Stark County as having 375,730 residents with this number remaining relatively stable since 2000 (Quick Facts, 2015). Though stable in total number, the population has shifted with increases in the suburban townships and decreases in the urban centers. Stark County is situated on the outskirts of the more developed metropolitan areas of Akron and Cleveland. Thus, it maintains a blend of urban, suburban, and rural communities. The relative balance of land-use types suggests both a past resiliency and future potential for self-reliance with the right mix of influences. In many ways the community is not unlike other mid-sized communities in the rustbelt region of the US. Its blend of perspectives is so much a cross-section of America that over the course of the 20th century, Stark County’s voting record has closely tracked with the winner of the presidential elections and thus it has become a well-known national bellwether.

While much of the concern about Stark County over recent decades surrounds the economy and the social services it supports, ecological concerns are worth deeper consideration. For example, as the most highly developed county within the Muskingum River drainage area, the management of water quality and stormwater not only impacts the immediate community itself, but most of SE Ohio. Additionally, following a recent
county health rankings conducted by the Robert Wood Johnson Foundation, Stark County had the second worst air quality as measured by fine particulate matter (County Health Rankings, n.d.).

**Sustainability in Stark County**

In an effort to focus on the conditions of a community most directly associated with sustainability the next section will follow a few recent trends in the City of Canton, the geographic and figurative center of the county.

**City of Canton**

Canton is a community with a storied past tied to an era when manufacturing dominated the economic scene and urban living was desirable. Since 1950 the population of the city of Canton has dropped from 117,000 to 73,000. Data shows a decrease in households by 5,000 and an increase in abandoned housing units of 3,200 (Buki & Winston, 2015). In 2007 while faced with the challenge of operating a city on a depleted tax base and seeking a vision of the future, the now defunct Canton Sustainability Collaborative worked with Successional Cities to develop a sustainability plan for the city. At the time, this was a progressive approach for a city like Canton. In Canton’s quarterly newsletter it was hailed as the “first mid-sized city in the country to launch a sustainability project.” (Canton Community Improvement Corporation, 2007). Despite the use of sustainability in the title of the document and the collaborative little can be seen within the effort to suggest it is anything other than a strategic plan build energy and capital conservation. Save for a few nods at alternative energy plans there are no references to alternative ways of thinking or being within the plan. In fact the limit of
creativity can be read in the following quote “invest in broader alternative energy production once energy efficiency efforts have diminishing gains” (Successional Cities, 2007, p. 18). This suggests that a goal of investing in alternative energy production should wait until the payoff of efficiency decreases to some point at which alternatives might be a better option.

The Successional Cities plan has a number of positive goals which should be considered in any plan to move toward sustainability; waste reduction through purchasing changes rather than simply increasing recycling, revising land use policies, increasing alternative transportation options for residents and visitors. Unfortunately these goals were proposed for achievement within the existing structure of community leadership and government rather than first determining the needs and then building the appropriate structure. Additionally, it should be noted that within the document there is virtually no mention of environmental health. If at all, it is linked directly to cost savings. For example, in summarizing the Water Goals, the authors write

Luckily, the city has its own local champions for green infrastructure, networks of designed open spaces and natural areas including wetlands, parks, and forest stands that manage stormwater, reduce flooding, risk, and improve water quality. Green infrastructure often costs less to install, and maintain than traditional stormwater infrastructure, reducing city operating budgets… (Successional Cities, 2007, P. 20)

Worth noting here is that the champions mentioned in the above quote were not present in the list of stakeholders of the document, nor named in the strategies.
This promising effort was released to the public at a luncheon devoted to the document and its future implementation. However, this luncheon occurred one week after the election of a new mayor. That was the last time the document received any significant public regard.

Fast forward five years and millions of oil and gas dollars later, and Canton transitioned from the first mid-sized city with a sustainability plan to the “Utica Capital” (in reference to the oil and gas deposits in the Utica Shale thousands of feet beneath the city).

In 2012 the city trademarked the phrase, “Canton: The Utica Capital”, and its associated logo. David Kaminski, director of energy and public affairs for the Canton Regional Chamber of Commerce, commented on the advantages Canton has over other cities such as its regional airport, availability of railroads and being adjacent to Interstate 77. (Koppang, 2014)

As shale fever rushed through Eastern Ohio, communities all across the region jockeyed for position as business hubs for the industry. Canton went so far as to trademark their new self-determined nickname and create a logo in order to demonstrate the commitment. While the industry has certainly influenced Stark County in minor ways some jobs (significantly less than proposed), business developments, and educational opportunities at SSC, the large scale transitions and regeneration expected as a result of the industry have largely faded. Almost as soon as production began, the drilling interests began shifting south into East Central and Southeast Ohio.
In 2015 the city embarked on a new project to develop a comprehensive plan (Buki & Winston, 2015). This project makes no attempt to claim environmental sustainability as a goal. Rather it is a stark look at what Canton has and does not have and how to best position it for the future. In this frank review, there are hints at more aggressive approaches to change and an openness to alternative perspectives. The authors of this new plan candidly share

The City has already reduced the level of services it provides to a bare minimum. While slight additional efficiencies may yet be found, efficiencies alone are not likely going to be enough to make Canton a more desirable place to live and work. What is partly needed beyond greater efficiency is for the city to actually reduce the amount that it maintains – reduce the linear miles of maintained streets or annually-repaired water and sewer lines; reduce the acreage of parks for which it is responsible; reduce the number of seriously distressed properties that are inefficiently served by utilities, foster increased crime, and burden emergency services. Until such balance is achieved, the city will remain in a weakened state.

The current condition of property (public and private) and the city’s current reputation in the region are such that working piecemeal on these challenges will not work (Buki & Winston, p. 11).

This realistic approach is akin to right sizing initiatives of other cities such as Youngstown. To right size however, cities must think in terms of efficiency of resource distribution. This is of course related to sustainability, but doesn’t necessarily seek alternatives. It does alter the typical narrative of planning documents which seek
continued development and growth. Rather it puts a focus on existing strengths rather than growth. Because of this, the document is arranged around three priorities.

The priority that requires the most immediate attention is the protection of the city’s largest and most important assets. These are Canton’s downtown, the Pro Football Hall of Fame, Aultman Hospital, and Timken Steel. Second, the city’s neighborhoods and residential quality of life are a priority. Today there isn’t a firm floor in the city’s housing market or in the city’s commercial market, either. There’s too much supply, the supply that does exist is not compelling to the market, the competition generally offers better options, and demand is limited. Third, throughout the city, the conditions of property tax delinquency, abandonment, blight, and decayed infrastructure are so severe and prevalent that real progress on protecting the core assets or enhancing residential quality of life will not be possible if unaddressed. (Buki & Winston, 2015, p. 8)

There are several concerns with this quote. First of all, the key assets while important are far from the only ones which need protection. For example, Aultman Hospital is mentioned, however Mercy Medical Center a competitor is not mentioned even though it serves significant numbers of the underserved community. Second, three of the county’s HEIs exist in part or wholly within the city limits. Aultman College of Nursing and Health Sciences and Malone University are in Canton and Stark State College has two locations in Downtown Canton. Finally, it is hard to imagine how the third concern above can be addressed without the infusion of alternative perspectives which are conspicuously absent from the document. Without alternative visions and engagement
with the institutions who have the freedom to explore them (HEIs), hope hangs on the idea the preexisting perspectives and the related strategies can provide something different in the future.

Concerning, from a perspective of sustainable values, is that this latest plan for the city speaks to the current disconnect between the city and the surrounding townships and suburban communities. When the strategies refer to marketability of the city they are focused specifically on the city and see the communities beyond its border as direct competition for resources. It is a common sentiment from both Cantonians and residents of the surrounding communities that their communities are distinct from one another and this sense of competition is strong. The following statement from the comprehensive plan (Buki & Winston, 2015) sums up this sentiment and I argue speaks strongly to the desperate need for a larger scale look at sustainability in Stark County. “Another indispensable ingredient for long term success is self-reliance. For Canton to succeed, not only must resources be focused and the city sized to carrying capacity, the resources used to stabilize and then revitalize Canton must come from within” (p. 11).

**Massillon and Alliance**

The smaller cities of Massillon to Canton’s West and Alliance to its Northeast have seen similar community changes over the past 50 years. Urban exodus has reduced the population of both communities and added strain to public service needs as the maintenance of infrastructure begs for more attention from lower tax revenues. Despite this, there are a few opportunities for collaboration and hope for sustainability. Massillon’s downtown is undergoing a renovation which seeks to create a more friendly
space for pedestrian use and quality of life features. These efforts are supported by the downtown proximity to key East-West and North-South travel corridors. Alliance, is more isolated from the rest of the county than is Massillon and Canton. For this reason it appears to have stronger relationship ties to the surrounding rural townships than its urban cousins. Additionally, its downtown is cut-off from the retail and service based developments more closely aligned with the campus at UMU. Despite the challenges, Alliance does lead the way in its nearly decade long commitment to sustainability from the city government mentioned earlier. Though neither has undergone quite the transformation of Canton, their fate is at least partly tied to Canton’s as the key urban center of the county.

The competitive nature of the varied communities in Stark County and the concerns of the urban centers are a challenge to the development of concept of sustainability for the county as a whole. The insular nature of the community efforts are not unlike those of the campus-based initiatives critiqued in chapter two where the insular view ignores the systemic connections between seemingly different entities. Thus any effort is developed as if there is no meaningful link between the communities. The size of each of the communities of Stark County and the metro area as a whole infers that none of the separate municipalities can exists on its own. Rather the population of the community at large who travel daily between the communities depositing resources, and taking some as well.
What is Next?

Given the condition of the county as a competitive community of municipal systems built around hope of independence despite obvious interdependence, it may be time to think outside of the systems which in part built those current conditions. It makes sense for chamber of commerce for example to explore new business interests, or for the city of Canton to ponder new visions amidst fiscal challenges, however, it may be necessary at this stage to hear from alternative perspectives. All across the county, there are individuals, agencies and organizations whose work represents a call for something different than what has always been done.

What should be done now is to consider alternative ideas perspectives on how to address the community needs and at the same time reorient the direction of the community toward a more sustainable future. The perspective should necessarily be of a scope larger than a single community and include alternatives to the existing cultural values which have dominated both in the past and today in the present. While there is no comprehensive county sustainability plan, there are a growing number of efforts working across boundaries to engage residents working at the grassroots and underground level to effect change across the community. The Stark Community Foundation, a collaboration of foundations charged with focused philanthropy in Stark County responded to an increase in requests for funding of food related projects with a study to explore the issue comprehensively. A standard response to these additional requests might result in increased competition for available funds. The community foundation (possibly because they are based on a collaborative model) chose a different route. After studying the
issues in the county they altered their purpose from addressing hunger to addressing food security. This necessary complication of the issue has created a space for the community to discuss its challenges with the existing systems of food production and distribution as well as solutions that are collaborative in nature.

Both Massillon and Canton Parks and Recreation departments are reconsidering the need for certain park spaces. In response to interests from those working to address food insecurity, both agencies have begun partnering to make their park spaces available for growing food rather than grass. Food production is now taking place on two parks in Massillon and two in Canton with discussions for more. If we connect students with these initiatives, they might be able to learn of them as common perspectives rather than alternatives. We can identify and raise the visibility of such programs as the Stark County Regional Time Bank and Stark Fresh which both serve as models from which students might learn sustainability values.

These efforts are slowly attracting HEI attention in Stark County. In 2014, Walsh University learned of the Stark County food security study and offered to serve a host for the first community meeting. Following the meeting, the university jumped headlong into the project by linking their students with groups that were participating in the study and initiatives which started because of the study. They support service learning opportunities for students such as Walsh University’s Blouin Leaders for Social Justice. These students are immersing themselves in support of Stark Fresh’s efforts to build a culture of urban agriculture through Canton and Massillon. In turn the students return to campus with ideas of transforming their spaces to include gardens and green spaces.
Additionally Walsh University has gone above and beyond a standard service learning model to acquire funding for equipment to complete free soils testing for local gardeners and community garden leaders. They have also offered to seek funding for the development of an open source food security on-line resource and data repository. This transition from meeting host to data and research facilitator shows how HEIs and the community can build innovative projects for promoting sustainability values. The important difference is that these partnerships would exist outside of the scope of dominant conceptions of sustainability education. However, as it has been complicated and broadened, these now are not simply nice experiential learning opportunities, they represent community-centered EFS serving as practical examples of how this form of education can take place.
CHAPTER VI
SITUATING EDUCATION FOR SUSTAINABILITY
WITHIN STARK PARKS

In this final chapter I analyze the structure and practice associated with one Stark County EFS program led not by one of the HEIs, but by the Stark County Park District in partnership with the HEIs of the county. I will present a case that Stark Parks is uniquely positioned to lead this community in EFS because its context more appropriately supports the place-based, critical, and holistic pedagogies necessary, and is based on a values system aligned with the philosophy of sustainability presented in chapter three. The evolution of this partner, its featured program, its current implementations, and future direction will be explored in depth.

Why Stark Parks?

For nearly fifty years, Stark Parks has served as a public agency charged with preserving and conserving natural resources for the benefit of the community and its visitors. Today with more than ninety miles of hiking and biking trails, 8,000 acres of land and water, and resources within 30 of the 32 municipalities of the county, it is firmly a county-wide resource (About Us, n.d.). Additionally, the park district is engaged in a large number of educational initiatives focused on resetting humans within their ecology. This chapter will focus on Stark Parks as a context for EFS and most importantly a legitimate partner for HEI efforts to provide the transformative education expected of them. In order to do this, I will present a values analysis of the park district in an effort to assess its potential as a learning space where students experience a view of sustainability.
as an eco-centric philosophy. Second, I will present the park district as the local education context for EFS with explicit intent to uncover the ways in which it contrasts the contexts of the local HEIs, and can transcend their contextual limitations.

Analysis of the history and development of Stark Parks into an educational leader for the community will focus on the operational and educational efforts throughout the history of Stark Parks. I will examine/explore evolving themes and characteristics of these initiatives, which will demonstrate the role of parks based education within a greater community in relation to the education culture of the time. Specifically, I will explore the ways in which the park district is capable of EcoJustice Education presented earlier as the educational theory most appropriately associated with the transformative EFS expected.

The purpose of this chapter is to explore the efforts of Stark Parks, in particular its ACE program, in order to uncover the ways it is or is not meeting the needs of a CCEFS program that would assist universities in meeting the transformative goals set forth by the original ESD movement.

**Stark Parks History**

In 1967, 18 years after the establishment of the Ohio Department of Natural resources and five years after America’s environmental conscience was awakened by Rachel Carson’s book, *Silent Spring*, which showcased detrimental effects of pesticides, The Stark County Metropolitan Park District was established. On Feb. 17th of that year, Probate Judge Reuben Z. Wise, Jr., through his authority under the Ohio Revised Code 1545, named the first commissioners for Stark County’s new park district: Paul A.
Mitchell, William T. Steffy, and Joseph J. Sommer, who would later serve as Director of the Ohio Dept. of Natural Resources from 1985-91. The District was given responsibility for two parks totaling 31.5 acres: Lock 4 Park and Faircrest Park. It would be another two years before oil and debris in the Cuyahoga River burned, helping awaken a nationwide concern for the environment and three years before the establishment of the federal EPA (Environmental Protection Agency) and celebration of the first Earth Day in 1970 (About Us, n.d.).

After 13 failed levy attempts, in 1988 the voters of Stark County approved a .2 mil property tax levy to organize the Stark County Park District. The district began by assuming management responsibilities of several county owned lands. In its early years, the park district provided a basic level of community engagement in these several parks, but had virtually no county-wide influence. It wasn’t until 1997 with the passage of a .5 mil levy that the district was able to begin the process of long term planning for growth. With 400 acres of land and water and only one mile of hiking and biking trail, the proposed trail and greenway plan published in that year seemed like a lofty and unattainable goal (About Us, n.d.). Following a mission which states “The mission of the Stark County Park District is to acquire, preserve, and develop natural areas for passive recreation, conservation, education, and nature appreciation.” (About Us, n.d.), the park district has grown significantly in physical footprint, educational outreach, and public policy influence.
Building Community Connections

With the construction of trails for hiking and biking throughout the county, the park district is simultaneously providing resources for exercise and building physical links between communities and their resources and connections between different communities themselves. The promotion of these alternative routes is aimed at creating public spaces where people are connected to one another and the environments around them. In addition to community members being linked to businesses, recreation centers and retail centers, efforts are underway, in three cases completed, to link communities to their local schools and universities. There are current (spring 2016) plans to construct trail links to Malone University, the University of Mount Union, Stark State College, and Kent State University at Stark over the next three years (Five Year Plan, 2014). This is all in addition to the existing connection to Walsh University. These trail projects were each initiated by the park district as they recognized the campuses as essential community resources. Each has been incorporated into Stark Parks’ trail and greenway master plan. Once included into the plan, the park district meets with these partners and together they seek opportunities to build these trails as part of other community improvements. To their credit, institutional leaders have welcomed the invite to partner and in once case (KSU Stark) leaders have decided to financially commit to the project. The intentions of these leaders are significant enough that the plans at Malone University, Stark State College, KSU Stark, and the University of Mount Union each have lasted through at least one presidential change. These spaces provide first a physical link and second a programmatic space for students and community members to engage with one
another. For example, students and faculty at Walsh are working on projects to re-inhabit their environmental science field station with native wildflowers and plants. The development of the field station site coincided with the beginning of Walsh’s environmental science degree program. The field station is adjacent to the district’s busiest hiking trail and provides an enhanced environment in this very developed suburban community. By investing in the “natural” area in this space, the lines between private campus property and public park space are being purposefully blurred.

The park district does more than just build connections, it exposes and rebuilds existing natural links between communities and those between people and their environments. Preserving land as natural open space is the most common action that parks can do in terms of promoting an eco-centric perspective. However, to just commit land to nature doesn’t connect people to their environment. The more meaningful operational work comes in the actions that demonstrate how nature can serve as a natural model for living well. Stark Parks works to ensure that where natural problem-solving can supplant technologies or more invasive land developments, they are used. The clearest example is in the use of green infrastructure. In addressing the potential flooding problem of developing land with impermeable surfaces such as asphalt, concrete, homes, and buildings, Stark Parks strategically acquires land in floodplains in order to undevelop it so natural flooding can happen. Water quality is protected not through engineering and more development, but through the preservation of existing wetlands and creation of new ones.
Parks Education

The park district employs staff to work directly on the task of educating the public in and about nature. Themes of educational initiatives include cultural history with an aim to reconnect today’s participants with significant cultural history content, passive recreational programs for engaging the public in direct contact with natural spaces through activities such as birding and hiking, and environmental education with an explicit focus on environmental problems and their solutions. Additionally, the education department oversees a wildlife rehabilitation center which promotes interspecies empathy, and the intrinsic value of nature.

Participants engage in a number of trail hikes, animal education, and cultural history programming throughout the year. In 2015 the education staff reported completion of 523 publically offered programs and 358 requested programs (Stark Parks 2015 Annual Report, 2015). Public program topics vary from interpretive nature walks which focus on introductions to nature, to specific skills based training on how to create more positive spaces for nature around the home. Requested programs are programs which reach specific groups who seek guidance on particular topics. Most often the groups is a school asking for enrichment that supports standards-based classroom activities. In total 27,010 individuals participated in the programs (Stark Parks 2015 Annual Report, 2015).

As a key component of the education department, Stark Parks operates one of only a few wildlife rehabilitation centers in the region. In doing this, it preserves, promotes, and nurtures an interspecies empathy not seen elsewhere.
ago, a park patron stopped by the education center with an injured young squirrel. The park patron assumed the naturalist on hand would be able to assist the animal and release it back into the wild. After literature research and trial and error, the squirrel survived and was in fact released back into the wild. More than twenty years later, the wildlife conservation center directly serves between 1200 and 2000 injured or orphaned wildlife and educates the patrons who rescue them on reasons for the problem and how to prevent similar instances in the future (Stark Parks 2015 Annual Report, 2015). This work is founded on an ethic of care not often present in day to day lives of our anthropocentric existence. Animal ethics often rise from interactions with domesticated animals and pets, whose lives directly serve us as sustenance or companionship. Wild animals provide us with much less direct impacts than our dogs, cats, and livestock. Though, our impact on them is no less important to learn. Students may learn of wild animals as members of natural communities and food chains, but are not often faced with the reality of the negative impacts created by our actions. These impacts are brought to reality when the family cat brings a still breathing chipmunk to our door or when a drive to the store results in a hawk’s broken wing after its roadside hunt come to a crashing end. The center is obviously focused on the treatment of the animals who are brought in for care, but more important is the educational opportunities that are presented when the animals come in and again when their stories are told regardless of positive or negative end. Sustainability is supported in the preservation of a public space for this cross-species empathy and in its management as an educational center for public and school based programming. The stories of the care and of the animals themselves cannot be told
without referencing their relationship to people. In this way, wild animals are brought back into the vision of people and endowed with the intrinsic value they deserve. This has served as such a unique and important component of the park district that a fundraising campaign is now in full swing to build a new wildlife conservation center where the educational impact of this work can be expanded as more collaborative studies can be done on the causes, treatments, and results of care are conducted.

**Collaborative Environmental Education**

As a park district, one would expect Stark parks to conduct general public park offerings of hikes, animal programming, crafts, and workshops. It is even reasonable to expect the park staff to work with schools on classroom based experiences and field trips. While these are definitely the core of programming, the cultural impact of these programs is limited by the number of participants they reach directly. As informal education, the programs are voluntary and thus, many participants already believe in the messages or are at least intrigued by the themes enough to make the commitment to participate. In order to make a more significant impact on the community culture, it’s essential to expand the reach of the eco-centric themes by partnering with other educational institutions.

**Teacher Training and County Partnerships**

Since 1962 the Stark County Educational Services Center (ESC) has established itself as a county collaborative representing the public school districts in Stark County (Our History, 2016). Working with the ESC over the past 10 years, Stark Parks has been able to benefit from the collaborative support such as access to environmental monitoring technology normally reserved for school teachers. The partnership is considered a
win-win because the park district has been able to partner on a number of grants with the ESC related to environmental science and environmental education. Three grants focused on water quality education highlight this joint relationship. The first was aimed at assisting middle school teachers with basic understanding of the global concerns on water quality and access to clean drinking water, for example, where irrigation needs conflict with drinking water or where corporate ownership of water for industry conflicts with farming. It also offered in depth exploration of local water issues that impact human and environmental health such as when fertilizer runoff causes damage to water quality. Finally this project supported teachers’ development of new water-themed teaching units for their classrooms and for distribution within the region. The second served as a site-specific focus group exploring a newly acquired park site for the purpose of sharing educator perspectives on how best to organize students’ group experiences within the park and to develop educational programming to be conducted within the park. The third grant partnership is specifically focused on water quality and the community. 30 teachers from 11 districts in the county are developing place-based lessons based on local watersheds and the data that is being collected about the water quality. While focused more directly on the local spaces, this project is more expansive in the sense that teachers are linked to both natural and social science issues related water and the participating teachers vary more dramatically than previous projects. Math, Science, and Social Studies teachers from middle and high school levels are working on the project. Additionally, these teachers are working across district lines to develop joint projects with districts that share a watershed or stream. The mission of the ESC is supported in
the collaborative project development and the EcoJustice education goal of Stark Parks to introduce education on water as a common resource and watersheds as natural communities is met.

In summary, the educational initiatives of the park district address three key issues necessary in the efforts to educate for sustainability. The first is that the programming is place-based. The focus of nearly all programming is based on the either the park locations themselves or the communities in which they exist. This ensures that the lesson learned are applicable to what participants are more likely to engage with on a daily basis. Ecological stories are those played out in the fields, forests, cities and waterways where people live. Thus, they are immediately part of the story. Second, the participants in education programs and initiatives are faced with real problems rather than theoretical ones. Wherever possible, programs based on these problems are deliberately experiential so that participants learn not only that they are part of the ecology, but also part of the problems and solutions. Finally, as environmental advocates at the core, educators are freed from anthropocentrism to teach from an ecological perspective. The aims of the programs are different from formal education initiatives which seek to promote knowledge alone. An example of this occurs when working with formal education partner. A critical external perspective of school operations is often brought to light during lessons on water quality. Park educators are free to call to task the land management of school leaders and campus developers. While this critical ecological perspective, can be held by school officials without the help of park educators, within this relationship, teachers are guided into the perspective and given language and knowledge
to challenge the existing ways of being. These park educators seek to first promote ecological knowledge, second pro-ecological feelings, and third pro-ecological action.

A primary example of these programming characteristics is in water quality programming. When testing water and learning about the real and potential problems, participants are learning about what is wrong in a particular place. When explored deeper, these problems can be traced back to real locations in the community where participants can often insert themselves into the problem roles. Through learning about park initiatives they can then see alternative ways of existing with nature so as to improve or at least reverse the trends toward increased damage. The eco-centric perspective of the park district supports these programs from a dominant environmental education standard that suggests educators equally present both sides of an ecological problem. When expanded into formal education audiences, this position can be seen as a strength for formal education partners who are often fearful of taken such positions in the traditional classroom. As a result of this work students and teachers have begun to question the land management on their campuses and worked to design alternatives which serve the ecosystem better.

**Exploring an Alternative Model for Stark County**

Even with funding to support and promote EFS as proposed here, the contexts of the institutions themselves proved to be a significant barrier. The community has potential, what is needed now is an alternative which might tap an appropriate community partner who may provide the theoretical space for collaboration and the critical thought as well as the tangible spaces for action necessary for alternative visions.
of our future as well as an alternative values set aligned with a philosophical conception of sustainability. The need for these spaces refers directly to the challenges addressed in chapters two and three. Institutions grounded by economic and social pressures are difficult spaces for faculty and subsequently their students to experience the freedom to consider alternative to the “way it’s always been”. Challenge to the assumed independence of institutions, and likewise by the communities, in favor of interdependence can be supported when a partner who bridges both elevates its visibility and value by engaging in the EFS and community sustainability movements. In response to the prior challenges and based on the analyses in the previous section, I propose that Stark Parks is the appropriate context for establishing an eco-centric sustainability education in Stark County. They have stepped up to serve as the community link between the institutions and as a philosophical exemplar.

How can Stark Parks help address the contextual and conceptual barriers? To share land and space for place based learning is clear, less clear however is the modeling of a philosophy upon which we may view a sustainable future. With a mission based in environmental health, and extending to support social vibrancy, and economic vitality for the community, Stark Parks may be the keystone partner for the institutions that is needed. Different from the prior efforts, which limited the reach of EFS either due to external drivers, or even in the case of UMU as an individual effort, the park lands and operations provide a context which is place-based, infused with multiple perspectives, and inherently ought to reflect an eco-centric vision of sustainability. The parks serve as places for real learning through experiential education and meaningful action which
reinforces the learning. As a public agency, the multiple perspectives i.e. varied public, ecological perspectives, park mission, and partners associated with sustainability such as other land management agencies, are the appropriate perspectives necessary for realizing the goals of the movement. Finally, by way of the eco-centric nature of their mission and vision, a philosophy of sustainability is a natural outcome of their efforts. A park district is certainly not the only example of a suitable community partner. However the efforts of Stark Parks are the first of their kind in the county to engage directly in this discourse. Frankly, even after two years of work, we’re not sure whether this is going to succeed, but the status of our community and planet necessitate action.

**Stark Park’s HEI EFS Work**

The previous section set the groundwork for a physical and programmatic expression of the EFS ideals throughout the work of Stark Parks. As a partner in many of the efforts of the county’s higher education institutions to address sustainability, the park district decided to take the lead after recognizing the challenges mentioned in chapters two and three. Namely, that sustainability was being tied to specific disciplines, limited to operational initiatives on campuses, and didn’t recognize the need for alternative perspectives.

Prior external perspectives of HEI EFS had initiated some progress as mentioned earlier toward the creation of spaces which could critique and ultimately alter the education for sustainability in Stark County. The Herbert W. Hoover Foundation for example provided a grant in 2009 to seek a better understanding of the local human/nature relationship through research and media development. The Nimishillen
Creek Watershed Study (Herbert W. Hoover Foundation Supports Stark County Water Testing Project, 2012) and Kent State University at Stark’s *Environmental Media* course were two of the primary outcomes. Both efforts were marginally successful. The watershed study began as a serious place-based and collaborative project set to explore the holistic health of the watershed through a multi-indicator study. Faculty researchers from three institutions (Malone University, Walsh University, and Kent State University Stark) teamed up with streambed sediment experts to conduct research (Herbert W. Hoover Foundation Supports Stark County Water Testing Project, 2012). The project’s progress was positive until the research team changed when one key analysis member left the area for a new job. Without institutional adoption of the collaborative project, and without a lead agency, the study failed to make the community impact intended. Instead it was quietly wrapped up and remains unpublished. In the same year of the watershed study collaborative project, KSU Stark began a grant funded project with Herbert W. Hoover Foundation to develop an Environmental Media Course (Environmental Media, n.d.). The intent of this project was less about collaboration however it was focused on finding new ways to tell local environmental stories in order to engage non-science majors in environmental projects. The course lasted only two semesters and failed to sustain itself on sufficient enrollment.

Couple these challenged efforts with the sustainability leadership change at Stark State College mentioned in chapter 5 and its subsequent rearrangement of priorities reducing sustainability to an afterthought, and the foundation soon found itself in a position of being unable to externally drive cultural change with the HEIs and the
community. The drive from the foundation served as an impetus for new programs and ideas, but a transformation of the higher education culture toward collaboration has since stalled as a result of contextual barriers for the schools. Beyond the disciplinary silos within individual institutions mentioned earlier, the collaboration across campus lines has been difficult. Unfortunately, this has led to isolation of interested faculty members and their partners. Efforts to engage the academic community in collective critical discourse on sustainability have been challenged by changes in leadership, short-term grants, and the assumed independence of each institution. The collaborative space and community connections of the early efforts in stark county provided an opportunity for critical perspectives either from the community partners to the institutions, institutions to community, or even inter campus critical discourse. With the waning energy, what was left of the momentum was under threat.

**The Academy of Collaborative Education (ACE)**

The basic purpose of the ACE program is to present Stark Parks as context for learning sustainability principles. The aim is to be a partner with whom all institutions can freely collaborate. The symbolic nature of our position should not be ignored. We not only represent a form of commons shared between the campuses, we are literally building connections between them (in the form of trails). The collaboration exists both between individual institutions and the parks as well as among multiple institutions and the parks. Though as the key driver, even work that happens between a single institution and parks becomes part of the public intellectual commons.
At the primary level the program hopes to build and nurture better partnerships with individual institutions. This will focus mostly on internships and service learning projects such as the resource management plan for the riparian area of one of our lakes. Three Students from the University of Mount Union conducted a study of the area and presented a management plan to the board of trustees. The plan not only served as a guide for staff, but educated the local neighborhood about the benefit of this habitat. Local residents who brought initial complaints to Stark Parks made up a vital portion of the audience for the students. The anthropocentric perspectives of the residents were considered within the plan, but the core values of the project were grounded in ecological health. As a result, resident learned that ecologically sound land management can meet the aesthetic desires of man while serving the greater ecology. Students also were challenged to consider the anthropocentric perspective in their plan. Learning was not limited to traditional structures and all involved were exposed to additional and alternate perspectives. Contrasting this project with a theoretical problem or single perspective project and the benefit of this parks and university relationship become evident.

At the secondary level the program seeks to create unique learning experiences in the parks for students. As an example, Stark Parks and KSU Stark are collaborating on a course called watershed studies. The summer 2015 course, *Intro to Watershed Studies*, included the scientific exploration typical of an aquatic ecology course, but as a course held entirely within the context of the park district and with support from park educators allows for exploration of the socio-cultural influences on water quality and access. The watershed comes alive and revealed characteristics that added depth and character to
anonymous graphics in textbooks and online. In the style of EcoJustice education, the course treated the watershed not as a static subject of study, but as a human and non-human community where shared resources are subject to power struggles. From this perspective, water is explored as part of the “Commons” and allow students to explore critical viewpoints on how it is “managed” and by whom. Students are thus exposed to a different way of viewing “community”. Theoretically KSU Stark could offer this program without the help of Stark Parks. However, the location of the course within the parks and the co-teaching with park employees is essential in expanding the students’ understanding of the multiple perspectives involved in watershed management. Students are directly exposed to work done in the parks and community for the health of Sippo Lake. As they work, they are learning that the data collected is for the public good and not only for skill development. A glance outside of the classroom window will reveal multiple and specialized human uses for the water and that doesn’t include the non-human dependents.

Finally, a tertiary goal is to build collaborative programs amongst the institutions. As explored in chapter five, there are a number of HEIs in the county, though none is large enough to represent the full breadth of expertise needed to engage students on sustainability. However, if combined, students from different institutions can learn from one another. Just as likely is professional development through peer collaboration. On one current project, Stark Parks has engaged four institutions in the improvement and monitoring of a wetland. In this case, students and faculty from these institutions are working collaboratively to create a holistic picture of biodiversity at the project site. It is
somewhat out of necessity that this project seeks collaboration. The small size of each institution in Stark County (save for KSU Stark) means that no individual institution has the full breadth of expertise needed. Our program’s perspective recognizes the collective strength of the HEIs in our backyard. Singly, they would be limited in their abilities to monitor and track the holistic changes of the wetland space before and after the intervening improvement strategies. For example, the biology faculty from Malone University specialize in terrestrial animal studies, and citizen science, the faculty at Walsh bring botany expertise, and the KSU Stark faculty member leading the project brings water quality expertise.

**Results: Additional Examples and Reviews**

This section will look at how all levels of the program and the context of the park district has or hasn’t addressed the structural limitations of other campus based initiatives, the place-based and community centered needs, and the need for a reconnected humanity to the ecology. As designed, the program is committed to addressing these three issues and its results demonstrate progress. However, as I will show, the results of this program still are not likely to change society alone, though it does set an appropriate model for additional and complementary efforts.

**Beyond Limitations of Campus-Based Initiatives**

Two strengths of the ACE program as it applies to the limitations of campus EFS are that the educational efforts are interdisciplinary and interinstitutional. When students engage in projects with Stark Parks they are learning how their particular topic is tied to other others to complete work in the field. Biology students studying the biodiversity of
a wetland are also learning how their work is connected to engineering of water controls structures, finances of grants, education programs for the public. Stark Parks recognizes the interdisciplinary nature of their work and as such brings together the work of multiple institutions wherever possible.

**Interdisciplinary**

As a prime example of the interdisciplinary nature of environmental work Stark Parks is engaged we can look at the Media Building Blocks of Environmental Knowledge project. Through the ACE program, Stark Parks secured a $417,000 grant for developing a web-based Ocean Health course. This project is in collaboration with film-makers from the University of Miami Florida and experts in ten ocean health indicators including topics such as artisanal fisheries and coral reef acidification. The documentary film-based course would become available for the ACE partners. This course is aimed for use as an introduction to the complexities of understanding environmental health. With natural sciences, social sciences, and humanities represented in the course content as well as critical perspectives on the ways humans impact the environment, it is closely aligned with the conception of sustainability presented here. The plan is for the course content to be offered as a general education course. This means that students with varied interests will learn how their particular interests are linked to environmental health.

In 2014 students in KSU Stark’s sociology program have worked with Stark Parks to explore the equity in distribution of park resources. Through their project, students were immersed in a complicated public problem. Rather than studying demographics with no context, the Stark Parks was able to provide the expertise from the park
perspective. It is possible for students to study how parks are a part of our public commons and how they serve to connect public with their natural neighbors. However, partnerships can deepen the content knowledge of these difficult interdisciplinary topics.

When Stark Parks and KSU Stark Combined to create the course Introduction to Watershed Studies it was intentionally designed to be interdisciplinary. The course is offered in the Biology program, but the course creators recognized the limitations of a science only perspective in understanding the complexity of the concept of watersheds. The course includes science concepts and skills such as water quality testing, study of the social influences on land use, and even lessons on environmental philosophies. When students in the first offering were asked to share their thoughts on the course, one student stated that he had known what a watershed was, but until the course, he had not thought about humans being a part of them. Theoretically, a watershed course could be designed and offered from an independent perspective of biology, geography, geology, or even sociology, but the partnership with Stark Parks ensures a more holistic study of this complex concept.

Interinstitutional

The fact that Ocean Health Course project exists with Stark Parks is a testament to its position among education institutions. Herbert W. Hoover foundation awarded the grant to Stark Parks because the completed course offering can be distributed among the campuses of the community. It was their belief that if it was linked to an individual HEI, the reach would be limited to their students only.
In 2014, the Stark Parks and the ACE program sought to create collaborative projects which would engage multiple HEIs on common efforts. In one such event, the Ohio Environmental Protection Agency (OEPA) Surface Water Improvement Fund (SWIF) provided grant funding for a collaborative wetland improvement project. The project aimed to restore a wetland at Sippo Lake Park to its more natural capacity and improve the biodiversity at the location through removal of invasive plant species and the planting of native species. This grant required minimal levels of ecological surveying and monitoring. While this level of work could conceivably be completed with park staff alone, planners decided it would be more collectively beneficial to engage faculty and students from KSU Stark, Malone, Walsh, and Stark State to generate comprehensive surveys and generate management/monitoring plans for the site post-intervention.

Because of the relationships built through the ACE program, the improvement project was expanded for more holistic surveying the habitats before during and after the project. This grant included faculty and students from Malone, Walsh, KSU Stark, and Stark State working both independently and collectively. This means in some instances individual institutions conducted work alone that supported the greater project. While other times students and faculty worked across institutions when students from one institutions could support the work of faculty and students of another. For example, Stark State College students without opportunity for learning water quality testing, were included into team from KSU Stark whose role was to monitor the water levels and quality in the wetland. This project exemplified the goals of the collaboration by
building a research team’s strength by combining the skills of faculty from multiple institutions.

Beyond the basic scope of the ACE program, Stark Parks began work on an Ohio Environmental Protection Agency Ohio Environmental Education Fund grant for water quality monitoring at Sippo Lake Park. Two water quality monitors were installed at Sippo Lake and data was collected from November, 2015 through January, 2016. With interest from the ESC, the data and project became part of a collaborative teacher training project. Through these trainings, 30 middle and high school teachers from around the county were guided through experiences to inform the creation of place-based water quality/watershed studies in their respective communities. The partnership between Stark Parks and the ESC ensures that research is made available to as many school districts as possible.

Assessing Alignment With EFS Models

In chapter three I propose a few key values of EFS consistent with the reconceptualization as a philosophy: ecological values, critical values, and place-based values. Below I present the ways in which the ACE program exhibits these values.

Place-Based Education: Continuing to Challenge the Structural Limitations

Stark Parks provides a bridge to the community for faculty and students engaged in partner projects. This bridge brings additional perspectives to the learning environment and provide a real learning environment rather than a theoretical or campus-based context.
Real learning spaces. Regarding the first goal of the ACE program; to increase number and or depth of direct engagements with individual institutions, Stark Parks was able to make progress in the areas of increased service to the ecological community and developing curricular influence with individual partners. Prior to the ACE program, student and faculty engagement was based solely on the desires of the institutions. Faculty determined on their own that the parks could serve as an outdoor classroom and would conduct studies without communication with Stark Parks. Institutions would independently reach out on behalf of their students looking for internships and field experiences. Since the beginning of the ACE program, Stark Parks has reached out into the higher education community to seek help on park programs. UMU was recruited to develop a land management plan for Sippo Lake lakeshore which could not have happened otherwise. Likewise service learning students from Walsh University provided vital information about access to Stark Park resources in urban settings which clearly pointed to a lack of reasonable access for transportation challenged individuals. If one goal of EFS is to reconnect humans and their ecological partners, Stark Parks has fallen short in providing for this in disadvantaged neighborhoods.

One of the most significant developments with an individual HEI partner happened when Stark Parks earned a seat on the Biology department advisory board at SSC. The goal for participation was to support and influence consideration of expanded course offerings for associates degree in Biology related to sustainability and environmental certifications. An increasing number of students expressed interest in environmental themes and Stark Parks was selected to represent this perspective. As a
result, SSC has begun building a series of courses and student experiences that would collectively prepare students for working in ecological careers. While this appears instrumental on paper, the plan from the Stark Parks’ perspective would be to infuse place-based learning into the curriculum. From the park spaces and with park employees, the hope is that an eco-centric perspective could be demonstrated in these spaces. It is essential for students in this field to recognize their impacts on the environment and that the environment is not only something we study and monitor, but is something we are part of. Learned land management skills would be practiced of course, but the real spaces offer an opportunity for students to recognize the bigger picture of how our ecologies are impacted by our systems,

The Introduction to Watershed Studies Course reflects place-based learning in that students are learning about watershed “X” but an actual watershed they will engage with in their daily lives. Textbook versions of watersheds focus on the natural systems impacting water movement, but an experiential exploration of a real watershed requires acknowledgement of the role humans play in the health of a watershed. This is the opportunity for students to step outside of their own perspective and understand their position within this natural community. As students work through the course they are expected to design a plan for improving the watershed which necessarily includes changes to human behaviors. The role of engineering for water quality is not ignored, but the emphasis is on using science to understand the health of water and then social sciences to determine the best path forward. With this course, students receive the diverse content necessary for understanding watersheds and more importantly aims to
reset students’ perspectives on what a community is. A popular point of discussion in the class focuses on what might be different about local governments if our municipalities (local and regional) were based on watershed lines rather than arbitrary boundaries. Students and faculty discuss how using a visible shared resource like water may or may not help residents understand their connection to other communities and each other. The watershed provides a perfect context for understanding how diverse groups of humans and their ecologies are intertwined. This place-based interdisciplinary course with an alternative eco-centric perspective of community represents a prime example of what community-centered EFS can be.

**Multi-directional learning.** One of the fundamental points of a community-centered EFS is that is democratizes sustainability knowledge and recognizes that the HEIs are part of EFS, but not all who can benefit are students and not all who can contribute are faculty. The ACE project examples all point to a legitimate role for Stark Parks’ staff in the educating of students. As mentioned above if not available to fill in the complementary content knowledge, some of these projects might move forward in a monodisciplinary fashion. Likewise, Stark Parks is learning from our HEI partners as they conduct work in the parks spaces. Above, I point out that the lakeshore improvement project would not have happened without partnership with UMU.

Students at Walsh University working with the ACE program were regularly participating in EcoJustice conversations. As these students learned more about the concept they were persuaded to suggest implementation opportunities for the campus to be more ecologically friendly. Their plans were based on ecological mimicry that only
came from time spent in the parks and learning how Stark Parks manages its lands. In return, Stark Parks was exposed to a clear connection between lack of access to parks and social and EcoJustice.

Though the need for place-based education is often communicated by faculty partners, there are limitations to transportation to and from park locations. The exception is a limnology course offered by Walsh University which relies on Sippo Lake as a space for learning since the campus has no body of water. However, evening with this obvious need for a lake and pond study, the course has changed from a fifty/fifty split of time between the campus and the parks, the reality is that there are only three lake experiences scheduled for the park. Aside from the Introduction to Watershed Studies course, none are scheduled to take place full time in the parks.

**Promoting Eco-Centric Perspectives**

Fundamental to meeting the needs of the future as is the intent of the EFS movement is students’ development of eco-centric perspectives. This is necessary so that the lens through which they view unsustainability is founded on principles of ecology over society and economy. If done well, the EFS efforts of Stark Parks and their partners should focus on rebuilding the disconnected relationships between humans and their ecologies. The eco-centric perspectives should thus facilitate students’ critique of existing structures.

**Reconnecting the disconnect.** The development of the Ocean Health Course is one true example of the promotion of Eco-centrism. Aligned philosophically with Aldo Leopold’s land ethic (1949) and Vandana Shiva’s earth democracy (Earth Democracy,
n.d.), the course presents the oceans as living systems with intrinsic value. Like the watershed studies course, this initiative is designed to treat ecologies as something that we are a part of rather than disconnected subjects to be studied with an entirely objective lens.

Walsh University service learning students conducted 225 hours of service for the park exploring ideas of EcoJustice and access to nature spaces for Canton’s underserved populations. Their projects have involved volunteering for creation of wildlife habitat spaces, studying SARTA’s plans to determine how to connect to Stark Parks and the clean-up of Stark Parks Cooks Lagoon Park in the Northeast Canton.

Stark Parks also increased the number of faculty studies within our parks. KSU Stark wetlands research in the parks has expanded to include consideration of what it means to research on public land. This inquiry represents a turn for the scientific inquiry because it considers the identity of the public space as something different than another. This inquiry does not represent an eco-centric perspective, but it does add necessary depth to the study as it applies to the human components of these spaces. A psychology professor from Malone University conducted a park user study of motivations of their park activities and the psychological impacts of their participation. The work is aimed at helping the park district determine the best means for motivating engagement with natural spaces.

**Creates space for alternative perspectives.** One of the challenges of moving beyond the dominant values as addressed in chapter is that campuses are not inclined to change perspectives even for essential issues such as sustainability. In order for students
to consider alternative ways of being, they should be engaged with them while they are
learning. It may be difficult for students immersed in settings reinforcing
unsustainability values to visualize alternatives as feasible. Through engagement with
the parks’ eco-centric perspectives program leaders hope that alternatives are experienced
deeply enough that students are free to not only consider alternatives, but to also see the
flaws in dominant ways of being. This space for criticality is essential in effecting large
scale change.

The service learning students from Walsh were led by the Blouin Leaders for
Social Justice whose primary aims are to work with community partners to address social
inequities. When engaged with Stark Parks, these students were exposed to an ecojustice
perspective which challenged what had been learned in class. As students learned they
began advocacy for access to parks by underserved communities which demonstrated a
critical perspective of social services such as public transportation which had ignored the
benefits of engagement with natural settings. With added confidence in their
understanding of the issues, they began to ask why there were so few natural spaces
available in underserved community. By doing this, the students used their distance from
the park perspective to identify a flaw associated with the Stark Parks’ priorities. Their
work has led to securing funding through a community development grant to reinvest in
the health of the park so that as an ecological space it may help those who frequent it and
the other than human residents as well.
Limitations

Similar to the challenge facing the interdisciplinary efforts, the repair of the human/nature relationship is limited by the fact that most students engage Stark Parks through a disciplinary lens. The effort on behalf of the program leaders is to ensure that the natural science students and faculty recognize the human impacts on the data they are collecting and when working with students and faculty from outside of the natural sciences, the focus is on communicating the importance of ecological health on our human wellbeing. Again we can see that the reach and depth of the program can be determined by the flexibility of the curriculum. Where there is flexibility, e.g. Blouin Leaders for Social Justice, the ability to develop a sense that we are part of something ecological and it is a vitally important relationship to mend.

Additionally, the development of alternative visions and critical perspectives takes time. In the case of the Introduction to Watershed Studies course, students spend the entire course working with park professionals to explore alternatives. The Blouin Leaders also commit significant time working directly with the ACE program. However, a number of other partner projects exist where this is not the case. Faculty research projects for example may need to consider additional variables, but their work and that of student workers do not necessarily dwell on these issues as do the projects in the parks. It will be essential moving forward with this program that these goals are more explicitly discussed with partners so that space in the curriculum can be made for these intentions to develop.
Criticality is possibly the most challenging value to emphasize. The multiple perspectives and alternatives provide some opportunity for criticality, however, the park district is not immune to dominant forces and influences not consistent with sustainability. With the “general public” as its client, stark parks is constantly faced with advocacy from special interest groups. There can at time be resistance to stretch toward the far reaches of an ecocentric perspective especially during election years when the park levy is on the ballot. Fortunately most grant dollars that stimulate projects in the parks are specifically focused on the acquisition, preservation, conservation, and reasonable development of natural spaces. Therefore few are capable of lobbying the leadership away from its mission.

**Discussion**

To determine the potential within this program for transforming community, I must analyze it with the same perspective given to other initiatives throughout this work. As I did in chapters two and three, contextual and conceptual analysis will be applied to the ACE project so that each level of goals and their respective examples may be unpacked to unveil the characteristics which support an appropriate context and concept of EFS.

**Context of EFS in the Parks**

The ACE project offers students and faculty more than just energy efficient campuses and recycling efforts. Based in public parks settings, the scope of EFS is broaden to the entire community. The program breaks down the barriers between the campuses and the community thus make the community at large and in particular parks
and natural areas as living classrooms for students. Students participating in the ACE project are building knowledge and relationships which make real their efforts on campus to recycle and conserve energy and water.

Parks and other community environment-focused agencies recognize the interdisciplinary nature of addressing problems and attempting to promote sustainability. By partnering with a park district, students and faculty are connected to these complicated issues. It manifests itself in the style of projects available for students in this collaborative. Students participating in the watershed studies course for example learn about the chasm between scientific data and the public knowledge. By adjusting the student perspective from the water (typical of a traditional science course) to the watershed, the students are forced to explore the relationships between various human and non-human communities. In order for this to be successful, the course necessarily must blend sciences and the humanities. Faculty are also being brought together across disciplinary lines to conduct research. More importantly, they are also brought together across institution boundaries. By doing so, the program offers a consistent space for faculty to gather with one another and other professionals that is not determined by institutional leadership. Though leadership can change at Stark Parks, the fundamental mission remains the same. For example, one biologist is planning to work with an experimental psychologist for a study on public perspectives on the importance of wetlands.

The ACE program also democratizes research, education, and community decision making. The institutions are now having legitimate influence on the work of
agencies such as the park district. The cottonwood wetland project was organized almost entirely by faculty from the multiple institutions. Rather than relying on the limited staff hours and expertise of the agency itself, Stark Parks engaged the faculty to develop the optimum strategy for success. Service learning students from Walsh University provided a critical inquiry into the demographics of park visitors. This exploration led to engagement with the public transportation authority to discuss increasing the access to parks for people living in underserved communities.

Faculty from several institutions are now sharing educational experiences between their students. KSU Stark and Walsh schedule joint ecology field days in the parks so blended groups of students are working together and learning from the expertise of two different ecology professors. No longer are students limited by the expertise of their own faculty. With partnerships and collaborative projects, biology students at KSU Stark with an interest in Botany may work with and learn from the Botanists at Walsh.

Finally academic work is shared amongst institutions and the public at large. Whenever a faculty member conducts research in park spaces, they do so in partnership with Stark Parks, the data thus becomes part of the public discourse on the environment. As a result, the park district is building a body of ecological knowledge and making it available for continued exploration by others and when appropriately analyzed available to the public. This is different from typical academic research on environmental issues which leaves control of data with those who collect it. When done this way, those who are most directly impacted by the knowledge gained may never have access. The hope of the project is that this relationship between the academic research and public discourse
increases the ecological literacy of the public. This defines the role of Stark Parks as interpreter.

A fundamental challenge of establishing EFS within the traditional university context is that students are unlikely to experience the alternative perspectives necessary developing a critical view of unsustainabilities. Working with and through Stark Parks ensures that faculty and students are learning an ecocentric perspective. Take for example internships with wildlife rehabilitation. There is no strong social or financial argument for investing public dollars in such an endeavor. However, the work provides a rare opportunity to nurture interspecies empathy. Second, as a publicly funded agency Stark Parks must work from the ecocentric perspective to preserve ecosystems for all interests in the county. Students thus are exposed to the needs of underserved communities. Hours of service went into exploring the challenges faced by those living in low socio-economic communities in reaching Stark Parks’ properties. When fully grasped, student services turned toward improving the only Stark Parks location in those neighborhoods. By building emotional and intellectual connections between students and alternative perspectives social and ecological, students are learning less about sustainability as it is typically taught in HEIs, and more about how to think from a sustainability perspective.

**Concept of Sustainability**

Central to the development of a philosophy of sustainability is the reorientation of values as they pertain to the three pillars of sustainability. Above all else, when students engage with the park district they are immersed in an eco-centric environment. The park
district necessarily sees the world first through and ecological perspective. Second, the park perspective is one rooted in the interrelation of all community members around the health and wellbeing of our environment. Finally, the park perspective posits that there is an economic value to the preservation of parks and open natural areas. Alternative to a campus perspective, where a green building project may be surrounded by other than green efforts and filled with traditional curriculum, green projects in a park setting reinforce the mission of the agency and draw the minds of those engaged closer to the heart of what park agencies ought to do.

**Sustaining EFS**

Sustainability of the ACE efforts is grounded on the mission of the agency, however, the ACE project is grant driven and led by one park staff member. Stark Parks must find ways to ensure that the influence of the grant stimulates legitimate cultural buy-in so that when the funding stops and or the driver is no longer in the same role, that the values of the project are sustained. Additionally, the HEIs in turn must make a commitment to partner with the park district. As mentioned in chapter five there has been turnover of institutional leadership in four of the six institutions since the ACE program has begun. Despite the turnover, the potential for sustainability is high as Stark Parks is building physical relationships through the construction of trails which ensures long-term engagement simply from an operational standpoint. It is now vital to elevate the educational relationships to a similar status.

While the number of students engaged is currently small, the advantage of the institution based efforts to educate is that if adopted as campus-wide cultural values, the
number of students impacted would be high. At this stage the ACE program works with students mostly from the natural sciences only. Their engagement with the community ensures that more than the students are impacted, however the ACE program must begin to drive institutional change if more students are to be transformed by their experiences.

**Conclusion**

Sustainability is a complex concept and to educate for a sustainable future requires deep critical review of our collective ways of being and the development of new aims. The full picture cannot be presented nor can the issues be resolved in the scope one dissertation. However, my hope is that through this work, a more appropriate conceptualization of sustainability can be promoted and that HEIs find an alternative way of fulfilling the transformative role they’ve accepted.

Stark Parks’ ACE program offers one option for addressing the challenge faced by higher education as it seeks to meet the needs of the future. There are no doubt others including those presented here. The value of presenting it here is that it shows a unique collaboration which benefits all parties in transitions to more sustainable ways of meeting their missions. Through the collaborative efforts, the park district improves its management, the HEIs discover a better way to meet their commitments to public good, and the communities benefit more meaningfully from engagement with their education partners. Collectively the students, faculty, and general public may experience an education for sustainability.

Worthy of note is that the program continues to develop. The Introduction to Watershed Studies Course has been offered for a second year, the cottonwood wetland
continues to serve as a multi-institution research space, and Stark Parks has made relatively significant investments in their only urban park because of additional attention to underserved communities provided by Walsh University students.

Several meaningful future programs can be tied to the ACE program as well. In addition to the Environmental Studies program soon to be offered at KSU Stark, Malone University is also beginning a project in 2017. Stark Parks is specifically designing spaces at a soon to be open park where professionals, students, and the general public can engage in training about how to manage headwater spaces for water quality and flood mitigation. As planned in 2013, the ACE program has now been accepted into the community discourse of environmental education and will now be directly funded by the park district instead of the Herbert W. Hoover Foundation. As another sign of growth, the foundation has decided to support the start of a non-profit called Oceans Ohio which will be run in partnership with Stark Parks with the intent on expanding the mission of collaboration for environmental education beyond the boundaries of the county all the way to the oceans.

The community context of education provides the necessary space for theoretical work of the institutions to become real. It can also enhance the influence of the operational efforts on campus which at this stage remain mostly individualized as institutional actions only. Additionally, education can become democratized where HEIs are not the bearers of some essential knowledge, but as partners in the development of the right knowledge and where the perspectives of sustainable voices in the community can
be elevated and enhanced through partnership. This ensures that the change is not limited to the campus, but much more.

The collective approach to EFS supports my position that sustainability is not something one learns to implement as part of a career. It is something one learns to implement as a lifeway. As such sustainability is not minimized to being a solution to a problem of today. This approach has led to the limitations of both community and campus efforts. If we can think about how the collaborative EFS I present here influences the minds and the hearts of all partners, the influence is more likely to last beyond the trends of campus greening and community sustainability planning. I can become a cultural standard.

The Talloires Declaration and for that matter all that have come since are founded on great intentions. Higher education must play a role in building a pathway forward for all. It cannot do so without critical reflection on its involvement with the problems. This reflection can underscore the importance of change needed for education itself so that the first step is to change our conception of education instead of jumping to a goal of educating for change. I advocate here for a re-envisioned role of higher education actors which would add to institutions the role of conveners, to the faculty adding facilitator of experience to their role as teachers, and agents of change to the role of students through service to their community in addition to their learner role.

If we can see the current popularity of sustainability in both the public and in academia as an opening in which these ideas can be inserted. As evidenced here, there are a number of positive examples of the form of EFS for which I advocate. These
existing works deserve visibility on the highest level as models for change and also
deserve space for exploration as I have done here to bring together otherwise isolated in
their institutions, communities, disciplines and classrooms. The current momentum of
ESD does not need to end, rather the current efforts though not ideal and certainly not
enough might be considered a starting point for work that is much more meaningful when
deepened and broadened beyond the campus boundaries.

My biggest concern is that the end of the UN Decade of Education for Sustainable
Development and the signing of commitments at the 2015 Paris Climate Summit will end
up as only part a long line of promises which in the end fail to deliver necessary change.
The movement is not merely a trend in (insert discipline here) education. As such it
should be viewed as a continuous movement. The planet is changing around us and it
requires us to respond swiftly and dramatically if we really do believe that future
generation should be able to thrive. From this perspective, I am encouraged that over the
past 25 years, there have been a number of intervening reminders of just how important
this work is. If my work can serve as a legitimate response to the collective movement
and demonstrate one additional way of progressing forward, I consider it a success.

The ideas I present here are specifically designed to challenge the dominant
structures of higher education for change. Similarly, they do not align with common
ways of community governance. They also may not satisfy the deep critical theorists
who would certainly wish for greater activism and deconstruction of existing paradigms.
As such, I risk all of this being understood as work that exists outside of both audiences
and thus leaving it with none. However, my hope is that it speaks to both in a way that
spreads a sense of hope. My personal perspective lies most closely with the critical pedagogists, but after a decade of working within the spaces between the two I seek to fill that space in an effort to build dialogue and action for change.

This all may not prove to be enough to change the ingrained dependency on the modernist values that threaten our sustainability such as; consumerism, individualism, and anthropocentrism. Though, if commitments to the ideas shared here are made so that the work endures through leadership changes, economic downturns, and social changes, it may just may make this vital cultural change a reality.
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