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Promoting Pro-Environmental Behavior Through Engaging Cultural Diversity in the English as a Second Language Classroom

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Promoting Pro-Environmental Behavior Through Engaging Cultural Diversity in
the English as a Second Language Classroom

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Abstract

Recent scientific environmental data are pushing people throughout the world to recognize and take action on the dire circumstances that the human race and all other species are currently confronting. This paper explores the factors that can influence and potentially empower people to re-examine their place in the natural world, and to orient their behavior in a pro-environmental direction. The premise of this project is that the topic of the human relationship to nature is relevant and particularly well suited for the culturally diverse audience that is found in the English as a Second Language classroom. By using tools like the KAFAR teacher practice and an adaptation of Pat Moran's Five Dimensions of Culture framework, instructors can draw on cultural difference to elicit their students' environmental activism as well as deepen their own and their students' self-awareness and inter-cultural learning.

Keywords: conservation psychology, nature connectedness, ESL, environmental education, culture learning, culture teaching, climate change, environmental justice, culture change

Education Resources Information Center (ERIC) Descriptors

English (Second Language)

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Cultural Difference

Culture Based Curriculum

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This paper examines the basic and yet complex question of what stimulates and elicits pro-environmental behavior in humans. I've started by providing a short introduction, using personal history to show how I arrived at this question, along with some of my challenges in attempting to address the topic. The following section defines pro-environmental behavior and is followed by a survey of the research, primarily from the field of conservation psychology. This review includes primary studies on human connection to nature as well as a reference to studies indicating how emotions can be an influential factor in human behavior; that is, feelings may form the bridge on a person's trajectory, as they move from their own values and knowledge base to actually taking action. In the second part, I present rationale for application, explaining my reasons for believing that an educational setting is an apt context for promoting this environmental activism and how the ESL classroom is, specifically, a place of advantage from which to explore the topic. The third section is about tools for the teacher and for the classroom, and is followed by a section with ideas for future development. Lastly, the final pages of reflection allow me to articulate insights from the process.

Given the enormity of humanity's task at hand, I recognize this paper, in its brevity, to be only a beginning of the journey to explore the intersections of two areas of life that I'm passionate about; humans' relationship with the natural environment along with the facilitation of intercultural communication.

A Personal Journey

When I was nine years old, I received a gift subscription to Ranger Rick, a juvenile nature magazine, and upon reading it, a core part of my identity was suddenly articulated and birthed into light; my passion was ignited by the idea of actively caring for the earth and all its life forms in equal measure. An environmentalist was born, but significantly, I don't remember ever calling myself by that name.

My first plan of action was to organize a small demonstration, having attended several anti-war protests and "knowing all about it." We were a party of three—my two younger brothers, ever corralled by their bossy older sibling, and I. Our homemade signs mimicking the magazine's slogan, "Give a hoot, don't pollute," were held high as we marched up and down our suburban street bursting with feelings of pride, defiance, and passion that I remember clearly to this day. I also remember frustration; no one really noticed us, and I realized that this show of activism likely would not be viewed as important in the adult world. That quick analysis proved to be highly relevant.

I continued to be interested in so-called "environmental issues" for the rest of my childhood, including a memorably anxious pre-adolescent period. In a moment of dark awakening, I realized that humans, besides degrading the skies, sea, and land, had the capability to destroy all of civilization. My worldview changed, and looking back, I intuit that my inability to fully integrate the horror and outrage I felt at the time was the beginning of my "normalizing" the abnormal. In other words, I wondered how adults I knew and respected went about living each day, either happy, sad, or worrying about rather small (it appeared to me) concerns, as though everything was normal and settled. *Why didn't they do something?* It really is this question that has stayed with me. Though I

was young, fairly privileged, and without adult responsibilities, I wasn't unobservant; there was an elephant in the room--even if I was afraid to mention it.

The 1970's and 80's brought the environment into the news more often with the advent of organic farming, the effects of pesticides, and the *oil crisis*. Mostly, these topics were presented in terms of how they affected the U.S. economy or Americans' health, though considerable legislation was passed protecting the quality of air, water, and wildlife, e.g. The Endangered Species Act in 1973, demonstrating perhaps some value placed on the non-human world and natural elements. During this era, my family exhibited their environmental values by participating to some degree in an "alternative lifestyle" via recycling, investing in a solar powered heater, choosing a low-meat diet, and buying organic when we could afford it. Still, it wasn't until my early adult years that I started to experience deeper, and more personal feelings, of connection to nature.

The sensation, in wild places, of being tiny and unimportant but simultaneously a part of the vast magnificence I witnessed, engendered feelings of deep peace, steady rhythms, and contentment. I accepted that feeling of connectedness gratefully, and with trust. As I developed this empathy with the nourishing ecosystems around me I began to find a source of guidance--if only through the reflection of my own inner voice--when I sought it.

As a young adult, I still didn't identify as an environmentalist, and I continued leading a double life concerning my values. I always made environmentally friendly lifestyle choices, but simultaneously convinced myself to "fall asleep," in accord with the status quo, hoping that the damage humans were wreaking was repairable. The issue confused and upset me but I buried myself in my own small existence.

In relation to this Independent Professional Project (IPP) topic of inspiring and engaging pro-environmental behavior, the dichotomy I was living with is apropos because it portrays the split, or separation, of *thinking* and *feeling*: a split that can be found throughout Westernized cultures and in the Western canon. Consequently, this compartmentalization is partially responsible for the fact that it's taken me, a person who has always cared passionately about the natural environment, until midlife to finally confront my own lack of environmental activism. Attending to cultural norms and society's values as well as my own truths, I too was split, and splits lead to inaction. Also germane to the conceptualization of this IPP are the recent, rapidly escalating changes, both cultural and environmental, that are harshly exposing how that separation of intellect and emotion has affected humanity, and its husbandry of the planetary environment itself. Thus, it is this divide that sits at the crux of why I believe that purposeful teaching and collaborative learning of pro-environmental behavior is urgently needed for our language students, and humans everywhere, before more time comes to pass. Daniel Wahl (2016), in his book *Designing Regenerative Cultures* offers this vision: If humans imitate ecological models, they will adopt a systems approach in order to improve the health of all communities on earth. In fact, it is the relationship between the individually unique members of an ecosystem along with backup support and response signals working in concert, which creates balance, and ascertains the overall resiliency of the entire ecosystem (2016, pp. 191-192).

As for my own trajectory, parenthood became a way to express my values by instilling my love for and awe of the natural world in my kids. In following my own parents' example, I tried to show our daughters that I cared fiercely while not eliciting

difficult discussions that might make them feel afraid or sad. In point of fact, I didn't have the substantive answers I thought necessary for young children, and fear, again stopped me from exploring the full picture on my own. We, and our friends, participated in simple, modest lifestyles but still were quite advantaged by global standards; it now seems like the simplicity to which we aspired was not nearly enough. Contributing to the regeneration of the ecosystems that sustained us only occurred when we made extra efforts, beyond the norms of our *constructed lives*. This need to compromise our values happened simply by complying with the infrastructure systems that were passed down to us.

Years later, upon leaving my first career and with our children fledged, I started to consciously engage the feeling of disconnect that I was living with. I knew it was the next place, internally, that I had to face. As might be expected, and in tune with my sublimated fears, environmental problems had finally started entering the mainstream national and international media as significant on many interrelated levels. People, governments, and businesses used the word *sustainability* and talked about action, particularly in relation to climate change. I was at once surprised, curious, anxious, and elated.

In addition to examining my "disconnect," this paper attempts to address an area of personal--as well as professional--growth that has come to light during this SIT Master of Arts program in Teaching English to Speakers of Other Languages (TESOL) program. While I've always been interested in other cultures, and culture as a concept, I discovered through exploring my own history as a "cultural being" during our Intercultural Communication for Language Teachers (ICLT) class that I still lacked basic tools needed for the deeper intercultural engagement that I was seeking. I've long wanted to develop

skills to support and participate in conversations where people don't dismiss, misunderstand, or give up--but instead can "hear each other." As a person who often reacts emotionally, I struggle to maintain awareness and equanimity in potentially fraught situations. In fact, this situation signals to me that therein lay the seeds of transformation. I imagined I couldn't be the only language teacher trying to gain mastery of this skill.

Interestingly, the timing of this IPP seemed right, not only personally, but also due to *globalization* and heightened environmental global awareness of the current events of this Anthropocene era. The query about intercultural communication is relevant in relation to the more recent research into pro-environmental behavior. Ultimately, all cultures share the problems the human species faces on this contained land, water, and air mass called Earth; and that calls for large-scale cooperation and collaboration. How to confront these challenges if we cannot hear each other across the divides between cultures, peoples, nations, and ideas? From this question an interdisciplinary thesis was conceived.

Pro-Environmental Behavior

What do we mean by pro-environmental behavior, or as it is sometimes referred to, pro-social behavior? To define the term, T. Krettenaur (2017) declares: "Pro-environmental behavior is equivalent to pro-social moral action given that it requires overcoming narrowly defined self-interest for the benefit of future generations" (2017, p. 581). He elaborates that it is from looking at traits such as "personal norms, values and responsibility" of adult individuals that the environmental psychology field gleans information on humans' actions (p. 581). As we will see, Krettenaur's conception of "narrowly defined self-interest" (2017, p. 581) as incongruent with pro-environmental

behavior is addressed and attenuated by Schultz (2000), but generally we will accept Krettenaur's (2017) words as a working definition.

It is important to recognize the scope of this IPP exploration in relation to the complexity of such an interdisciplinary topic; the research is plentiful and contains multiple, diverse focal points. The ability to behave in an environmentally friendly way is influenced by many overlapping components within a person's life. As already mentioned, values are a controlling element, but there is also the impact of personal experience, cultural background, economic factors, community and individual identity, the ability to access and to understand scientific information as well as to differentiate propaganda from facts. An additional influence may be an individual's self-perception, and then there is the perception of one's surrounding habitat, which may be subject to nature's delayed feedback loops, thus clouding one's ability to evaluate accurately. Further considerations might be government policies and the infrastructure of an individual's built environment--along with the personal freedoms to effect change that a person possesses. And lastly, the human propensity for adaptation according to one's context and inconsistent emotions, which can alter taking action on values or personal norms, may be another component when thinking about human behavior.

In my own conception of this IPP, the positive environmental behaviors that I am seeking include those both small and large. For example, I label the basic behaviors as generally easily accessible, economical, and not requiring much sacrifice; small impacts on an individual level. In some communities, these behaviors may involve recycling trash or remembering to take a reusable bag to the store; in others, it may mean biking or walking instead of taking a vehicle or buying local produce instead of shipped food; or

abstaining from using commercial fertilizers and pesticides in the garden. These actions, while they don't disrupt infrastructures already in place, when aggregated can be quite helpful to the environment. They may also have the added effect of setting an inspiring example for others' behavior as well as establishing a foundation for augmenting more high-impact, far-reaching behaviors later.

The larger scale behaviors that take more investment of energy, time, or resources might be converting the source of a home or business' heating/cooling to one of renewable energy; using an electric vehicle; starting a community system of composting leftover food; and limiting or discontinuing air travel. In addition to individual actions, I am looking to inspire the student to use their voice on a societal level whether that is simply voting for a pro-environment platform or organizing community forums or planning peaceful actions. All of these actions will vary with the particular context, capability and desire of each person; that which will take much sacrifice in one situation will be simple in another.

Essentially, the crux of the matter is that to behave in a pro-environmental manner means that when able to make a choice, the individual considers the consequences of that choice within a larger relationship. In other words, there is a sense of responsibility to other species, natural elements, and present--as well as future--humans with whom they share the biosphere of this planet.

Selected Theoretical Background

In this section, basic concepts in the relatively new field of conservation psychology along with scientific data are introduced, and then two strands of primary studies that connect broadly to the field are examined. The first set of studies measures

qualities and possible origins of human attachment to nature as well as the types of behaviors that are associated with the relationship between humans and nature. The second set hypothesizes about the role of education, particularly science education, in forming sustainable pro-environmental behaviors. Moreover, in keeping with the goal of producing caring behavior, I will discuss how specific key concepts from the literature relate to this IPP and to one another. There are many important intersections between these sub-topics.

Introduction to the Field of Conservation Psychology

By drawing on diverse sources, Carol Saunders' (2003) article "The Emerging Field of Conservation Psychology" offers a particularly multi-layered introduction to this field, giving the reader insight into the possibilities of both its usefulness and uniqueness.

According to the author (2003), conservation psychology, with its clear objective of preservation, attempts to explore and elucidate the relationship between human and non-human species and elements in our biosphere. In other words, the goal is to not only understand, but apply psychological data in order to powerfully effect change in how humans care for their environment.

Saunders (2003) situates this interdisciplinary field as being born out of a perceived need to positively support the human-nature relationship in the face of extensive environmental degradation. Given the 2003 publication date, along with the way the intertwined paths of both natural and human history have unfolded since then, it seems clear that the necessity for this subject area has only increased over time due to the continuation of ecological crises.

With a robust goal of application, conservation psychologists work in close collaboration with researchers and experts from various sectors of science, policy, law, business, social enterprise, education, and NGOs. In fact, Saunders (2003) stipulates that reciprocity is a hallmark of the field via working professionals suggesting necessary topics for further research and researchers relaying data back to practitioners on the ground, thereby increasing the data's efficacy. It is this focus on application of data with the goal of increasing activism that makes research from conservation psychology particularly valuable for this IPP.

Fundamental Concepts: Conservation Psychology and the Environmental Data

In the article, "Can Psychology Help Save the World?" conservation psychologist S. Clayton (2009) specifically homes in on components that influence behavior. She argues that because humans often respond and act variably, depending on situational and other unconscious factors, motives for behavior are better understood through examining people's perceptions as well as the larger groups in which they seek identity. Their allegiances to certain communities and locales are also pertinent.

In reference to this first point, Clayton (2009) points out how the act of *noticing* makes conscious that which was not conscious. In other words, noticing provides a counterbalance to typical and more automatic human behaviors. For example, if people do not consciously observe the progressive damage occurring in an environment, it will be harder to engage them to behave in pro-environmental ways. To illustrate this phenomenon, Clayton (2009) refers to Peter Kahn's (1999) term, "environmental generational amnesia," (as cited in Clayton, 2009, p. 14) where he articulates the danger that future individuals face where they may not have the advantage of being able to

compare present or future ecological degradation to more pristine landscapes of times past.

In addition, Clayton (2009) recommends raising public awareness of the reciprocal nature of humanity's effect on the natural world. She reminds her audience that humans not only affect the natural world but there are also effects that the natural world has on human health, both physical and mental. Consequently, Clayton (2009) affirms that "Promoting human welfare while ignoring threats to the natural environment may be like putting on a raincoat as one's ship goes down in a storm" (p. 15). Although recent decades have brought an increase in public knowledge of the deleterious effects of environmental contaminants on humans, Clayton stipulates this reciprocity must be embedded in societal decisions and policy, putting knowledge into practice.

Adding to these ideas about behavior change, Saunders (2003) recommends that effort on two levels—societal and individual—should be undertaken simultaneously if conservation psychology is to help reinforce the link between humans and the natural world by encouraging humans to behave in a more pro-environmental way. Regarding the individual level, Saunders' article (2003) makes clear that the more people have experiences in nature, the more they strengthen that bond. According to Saunders (2003), the exposure evokes a sense of self within a setting, and that embodied identity or role leads to increased feelings of responsibility and care. In fact, this point is well taken. When considering the felt experience of an identity or role in our lives, the word *interdependent* immediately comes to mind. An individual feels part of something and at the same time, that entity extends itself to that person as well.

In terms of Saunders' (2003) observations regarding change in society and public policy, she brings to light an interesting notion about language, echoed by some of the literature that documents the impact of ecological loss on people who already experience this bond with nature. In her vision, Saunders (2003) believes that language will be an avenue for improving the human-nature relationship if we can uncover more varied, accurate, and powerful ways to describe our positive feelings about nature; words especially to show how we experience a sense of place. Likewise by becoming more acquainted with the natural environment, we may originate heretofore-missing language. Saunders (2003) confirms the importance of this reciprocal situation by observing the need to "[Understand] our relationship to the natural world well enough so that we have a language to celebrate and defend that relationship...." (p. 143). In this way, new terminology, expressions, and usage will hopefully lead to more robust and nuanced discourse in society and propel those values to the front and center so they can be acted on.

Furthermore, Saunders (2003) proposes that language should communicate novel and positive ecological scenarios to succeed the present and former paradigms that have contributed to humanity's current condition of disconnectedness along with its resulting detrimental repercussions. Having descriptive language in order to articulate feelings also decreases isolation and promotes community as humans empathize with one another (Saunders, 2003). Again, we see the significance of the notion of connectedness, though in this case it is in relation to fortifying the bond between human beings, not humans and nature.

Referencing the damage caused by humans, a number of major environmental reports, cited on the Yale Climate Connections website, were released in 2018 delineating the multiple perils humans are creating for both themselves and the larger ecosystem on which they depend. These studies, reported by M. Svoboda (2019), included the *Intergovernmental Panel on Climate Change (IPCC) Special Working Groups Report* (2018); the *Emissions Gap Reports 2018* by United Nations Environment Program (UNEP) Project Steering Committee (2018); and *The Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaption on the United States* by D.R. Reidmiller et al. of the U.S. Global Change Research Program (2018) (Svoboda, 2019). Ripple, Wolf, Newsome, Galetti, Alamgir, Crist, Mahmoud and Laurance (2017) outline both the data regarding environmental challenges as well as areas in which progress has been made. In their “World Scientists’ Warning to Humanity: A Second Notice,” this group of scientists indicate points of progress, like the ban on chemicals that harm the ozone layer and upward trends in renewable energy implementation, as evidence of what is possible. Similar to Saunders (2003), Ripple et al. (2017) strongly recommend a combination of approaches, stating that by “Working together while respecting the diversity of people and opinions and the need for social justice around the world, we can make great progress for the sake of humanity and the planet on which we depend” (p. 1028).

This stance of Ripple et al. (2017) to influence the public by creating hope through showing what has been achieved while simultaneously confirming the necessity of urgency is notable, and will be referenced later in the discussion portion of this section of the IPP. Also noteworthy is the wide range in Ripple et al.’s (2017) list of thirteen

areas in which the human species should concentrate their efforts; the list includes everything from limiting population growth, to decreasing food waste, to ensuring the expansion of substantive outdoor education and experience for both children and adults (2017). This demonstrates how interconnected, multi-layered and divergent in scope both the areas of concern and the approaches are.

In a New York Times article called “Is Environmentalism Just for Rich People?” sociologist R. Gross (2018) also investigates general principles regarding environmental behavior, particularly in relation to socioeconomic status. Gross (2018) initially cites research from the late 1990’s suggesting that in the past, environmentalism may have occupied a stronger position of influence within economically powerful nations, and their affluent citizens. However, Gross (2018) introduces more recent statistics which show something different; as problems mount into crises, a more accurate indicator of environmental concern may simply be how much those environmental challenges infiltrate the daily life of individuals. In citing research from Dunlap and York, Gross (2018) reports, “the publics of poorer countries facing imminent resource loss from environmental destruction often hold the strongest pro-environmental attitudes” (para. 8). Although these same researchers claim that it is difficult to predict how and whether diverse societies will back agendas that defend the environment (2018, para. 10), it seems that even in America, polls which just two decades ago showed a substantial portion of the public who did not believe that climate change was due to human impact now indicate a change in public attitude. With more unusual weather events on the rise, it appears that Americans can finally see the effect of the climate data that before was intangible.

Similar to Saunders (2003), Gross (2018) also thinks that language is significant in changing behavior, but in a different way. In the aforementioned news article, Gross (2018) argues that the environmental movement still needs to improve how and what they communicate to the public. By ensuring that the message does not position environmental sustainability in opposition to economic gain, and that information empowers people to make choices--especially in societies where citizens are used to greater control—new behaviors can gain traction. Additionally, Gross (2018), like Ripple et al. (2017), notes that by encouraging diverse groups of people to join together in their shared investment and care for the natural environment, the greater the likelihood that humans will be able to make the turnarounds needed.

Synthesis of fundamental concepts.

These four articles concur that action is urgently needed to promote stronger environmental awareness, and in fact, needs to be accomplished both on societal levels as well as individual levels. For the first point, Clayton (2009) insists that perception influences the individual's behavior, and that what we notice, or do not notice, makes a difference. She also states that people tend to notice that which is unique or remarkable as well as what is commonly accepted as particularly beautiful (Clayton, 2009).

Interestingly, Clayton's (2009) idea intersects with a similar theory in the field of language learning. Richard Schmidt (1990), a linguistics professor at the University of Hawaii, developed the *noticing hypothesis* in 1990 (as cited in Schmidt, 2010) which proposed that learners will better retain the linguistic information to which they are exposed if linguistic features are brought into direct perception by making them stand out in some manner; this concept may also be helpful in understanding behavior. From both

Clayton's (2009) and Schmidt's (1990) work, we can surmise that humans are not likely to take action on what they do not consciously observe. This notion of *noticing* as a way to change behavior may be an appropriate focus for a second language curriculum; that is, the overlap could be useful for teachers as they consider how to aid students' noticing in the language classroom as well support students' capacity to distinguish, observe and appreciate the natural world.

A second important subject is Saunders' (2003) work in attributing a link between identity and responsibility, implying that time spent in nature is of utmost importance; Ripple et al. (2017) also agree that this is one way to move humanity in a positive direction. For language learning, outdoor experiences for students, though challenging to incorporate into a curriculum, can be assigned as extracurricular activities. Significantly, noticing both the internal experience of how being in nature feels along with closely observing the natural environment occurs primarily through direct experience. Nevertheless, there is also value in reading environmental essays and personal narratives of others' experiences in nature.

Finally, these articles all make the argument for the role of improved communication, both person-to-person and in the public arena. In fact, all four articles suggest ways for language and communication to support environmental behavior, from improving the inclusiveness of environmental messaging (Ripple et al., 2017; Gross, 2018) to expanding the prevalence of environmental discourse (Clayton, 2009), and even to "help us to tell different stories" (Saunders, 2003, p. 145). Particularly, Saunders' (2003) call for a better and expanded lexicon to express our feelings about nature and to give credence to that relationship piques interest when considering a language

curriculum. Here, there is an intersection between noticing and language; more nuanced language supports clearer observation of our inner selves as well as of the environment. Indeed, adopting imaginative and more detailed language may be a rich avenue for the language teacher to explore; for example, students could produce novel vocabulary or work with words and concepts in their first languages to originate more accurate and expressive phrases and words in the target language. Furthermore, the manner in which language can affect perception and connection is depicted by words and phrases many indigenous cultures use to describe the characteristic of interrelatedness when talking about the natural world. For instance, many native peoples of North America will use expressions like “mother earth,” “father sky,” or “all my relations” when articulating their nation’s cultural perspective of their position as human beings connected to all other elements in the biosphere.

Primary Studies

Nature connectedness.

As an often cited researcher in conservation psychology, P.W. Schultz’ (2000) study hypothesizes that pro-environmental behavior will be strengthened through an individual’s unique empathy-based experience with nature. He also posits that the empathy on which this reciprocal relationship is based can be controlled or influenced. Schultz (2000) examines two aspects of this in his work. First, he proposes that the degree to which a person finds the environment relevant is determined by the level of priority they place on other species, or on other humans, or on themselves. Secondly, Schultz (2000) shows that despite the fact that divergent values motivate a person’s consideration of the environment, individuals with different motivations may act with

equal effort and determination. Moreover, these values can be altered, at least temporarily, when a person broadens their sense of self into that of another human or non-human individual, thus eliminating boundaries and creating empathy (2000).

In explaining the factors that drive a person's concern for the environment, Schultz (2000) borrows from Stern and Dietz' (1994) value-belief-norm (VBN) theory, which proposes that humans tend toward one of three values: egoistic, social-altruistic, and biospheric (as cited in Schultz, 2000). In other words, these tendencies do not necessarily show how much people care, but rather the motivation that fuels the potential behavior (2000). For example, if my interest in the environment is mostly related to myself and the ways that environmental damage will impact me, I may write my legislator to support an environmentally friendly law to alleviate my anxiety about the impact; meanwhile my friend, who is more concerned with how others are affected, will have concern for her elderly neighbor or her family members in mind when she voices support for that same regulation.

Extending Stern and Dietz' (1994) data, Schultz (2000) re-labels the three terms used in VBN theory, as mentioned above, to *independent*, *interdependent with other humans*, and *interdependent with all living species*, respectively. Through these descriptors, the researcher proposes that for each person the values demonstrate "...the degree to which he or she includes other people and nature within his or her cognitive representations of self" (p. 393).

Schultz' (2000) study first establishes that his culturally diverse participants consistently ascribe similar items to the separate VBN categories, such as assigning a tree to the biospheric classification. He then draws on research about empathy and its

connection to altruism from Batson (1994) and Batson et al. (1995), and posits that empathy will be elicited via a “perspective taking technique” (Schultz, 2000, p. 397) in his participants. Schultz’ (2000) results show a shift in concern from the *independent* and *interdependent with other humans* levels to the biospheric or *interdependent with nature* level. Schultz (2000) then justifies the data from the study, citing Davis et al. (1996) who explains how the “boundaries of self to include the other” are expanded when taking the perspective of another entity (p. 403).

In conclusion, one of the more intriguing and pertinent results to emerge from this data is Schultz’ deduction (2000) that introducing educational activities actually enhances the relatedness, rather than the separateness, a person experiences with another non-human being. Indeed, this could be one strategy to encourage humans to behave in pro-environmental ways. Specifically, Schultz (2000) insists it is those experiential, multi-sensory interactions, like seeing a snake up close, touching a fern in the woods, or collecting shells, which occur during time spent in nature, that should help humans to identify and empathize with the natural world. This is an important point for later reference when examining the role of environmental education.

A more recent study carried out by Geng, Xu, Ye, Zhou and Zhou (2015), social and natural science researchers at Nanjing University in China, builds on Schultz’ theory about links between pro-environmental behavior and an individual’s heightened sense of belonging to the natural world. These researchers wanted to specifically investigate implicit and explicit traits of connectedness and how they corresponded to participants’ implicit and explicit behaviors since, in a general sense, “measurement of environmental behaviors has been challenging for scientists” (p. 3). First, the researchers defined

connectedness to nature as “an individual’s feelings (not only emotionally, but also cognitively) regarding connections with nature and belongingness to nature” (p. 2). In addition, the degree of implicit connection was designated through a timed exercise that demonstrated the extent to which participants actually identify with natural objects; in other words, they were shown rapid images of objects from both the natural and built world and asked to sort them into *me* and *other* categories. Implicit environmentally oriented behavior was measured through a proxy activity that analyzed student participants’ spontaneous or automatic behavior after their participation in the research study had finished. In contrast to the *implicit* category, explicit representations of the connection to nature were determined by asking participants to rank a list of descriptive statements--such as “I often feel a sense of oneness with the natural world around me” (2015, p. 4)-- in terms of how accurately the statement represented their feelings. Further, the explicit behaviors were measured through a questionnaire which asked student participants to report on their own actions regarding the environment.

According to Geng et al. (2015), the trait of implicitness, in both nature connectedness and in behavior, is marked by spontaneity, automaticity, rapidity and unconscious, rather than conscious, factors. On the other hand, the opposing explicit qualities researchers attribute to deliberation, thinking, planning, and slower conscious factors and processes.

The results of Geng et al. (2015) denote that, as predicted, implicit or tacit connectedness to nature was positively correlated to automatic or implicit pro-environmental behaviors, e.g., those enacted without premeditated thought. In contrast, the participants who ranked highly for explicit connection through the statement-ranking

instrument reported higher degrees of deliberate actions on their own parts. One interesting feature of the results suggested that those with primarily explicit attitudes were more likely to be influenced by social factors; that is, their behavior was assumed to be less stable over time. However, the most potent correlation, that of implicit feelings with implicit behaviors, was less likely to be influenced by social judgments or opinions (2015).

In accord with the most robust correlation in the results, and data from other research claiming exposure to be the best way to engender connection, Geng et al. (2015) also recommend that direct contact with nature could be an important pathway to developing greater implicit links to the natural world, thus leading to more automatic environmental behaviors. As compelling as the results are, it would be useful to gain more information about where--or even when--those implicit feelings originated, as this knowledge could be highly relevant when looking to propel people to action. And in a general sense, the researchers do acknowledge that it would be beneficial to have a theoretical basis to demonstrate the link between an individual's attitude toward the natural environment and their sense of belonging to that environment.

Interestingly, the role of explicit connections and explicit behaviors, also correlated, could be valuable in impacting behavior despite the fact that they are subject to variation. For example, if explicit behaviors can supersede implicit behaviors, they might be necessary to override automatic tendencies that are not environmentally friendly or even those implicit positive behaviors that need modification to stay current with changing conditions or recommendations.

Synthesis: Nature connectedness studies.

In examining Schultz' study alongside that of Geng et al., it seems that both projects identify empathy with nature as an important element in protecting nature. Whereas Schultz (2000) emphasizes that it is the experience, and not simply knowledge, of the natural world that engenders the aforementioned empathy or oneness, the Nanjing study (2015) does not explore the origins of the connectedness but instead contends that innate connectedness is what most strongly promotes spontaneous, regular and beneficial actions. Furthermore, in terms of the role of purposeful education, Schultz (2000) diminishes the value of experiences that might accentuate the differences between people and nature. Using the case of "visiting a zoo to see animals in cages" (p. 403) Schultz (2000) presumes it would not produce a sensation of identification for the person. I, on the other hand, believe it might be difficult to predict what exactly engenders empathy on the part of different individuals. Perhaps those more removed experiences could be beneficial in that they at least expose humans to other species, and any type of exposure that stimulates a human to consider the lives of non-human beings might evoke fraternal feelings. Moreover, the value of this type of contact may be to further one's explicit connection; in the zoo example, a human may articulate, "that is a majestic lion" and feel that the lion, a separate species perceived as *other*, is nonetheless worthy of protection. In this case, that person considers taking action, e.g. displaying explicit behavior, the next time an opportunity for protecting lion habitat comes about.

Concerning empathy's potential role in activism, another question to ponder is where this sensibility originates. Is it exclusively a product of experience as Schultz'

(2000) works hints at, or perhaps something innate? Geng et al. (2017) did not stipulate where or when the implicit feeling of participants' nature identification originated. In his study of "Pro-Environmental Behavior and Adolescent Moral Development," Tobias Krettenaur (2017) investigates why children have this empathy when they are small, and how the trait seems to diminish during adolescence. Although Krettenaur (2017) found that young children almost universally experienced strong emotion-based connections to nature and felt an accompanying obligation to protect the natural world (2017, pp. 584-585), there was a consistent decline in that feeling and the willingness to act on it, during adolescence. The derivation of this downtrend was not clear but it does lead the author to recommend that opportunities for teens to engage with nature need to be increased and perhaps "...embedded in the context of peer interaction and...be socially rewarding" (p. 590). This fascinating research provides concrete results that strongly suggest several avenues for further study into the origins of feeling connected to nature.

Reflecting on Krettenaur's (2017) results regarding children, E.O. Wilson's *biophilia* hypothesis (1984) from his book by the same name, along with various studies that support this theory, should be taken into account here. As described in Saunders (2003), Wilson postulated that the "human species evolved in the company of other life forms, and we continue to rely—physically, emotionally, intellectually—on the quality and richness of our affiliations with natural diversity" (as cited in Saunders, 2003, p.143). If these connections are already present in humans, as Wilson speculates, do they remain latent over a person's lifetime? Do they disappear if not activated? More importantly, is that interdependence evoked, shaped and even attenuated by experience? Regarding potential areas of related research, the question of how virtual reality affects empathy

would be an appropriate topic. For instance, does the presence of screens in human lives influence implicit feelings of connection, and/or replace real life experience? In addition, if this quality of connection becomes dormant, can it be rekindled?

The role of education.

The importance of acquiring knowledge about the natural world has been touched upon in many of the studies mentioned. Particularly, several researchers have advised that experiential education, which stimulates feelings, holds an important position in engendering care for the environment. The Association of Experiential Education describes this type of learning as a "...philosophy and methodology in which educators...engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values" ("VCU Experiential Education," n.d.). Three additional research projects are introduced in this section, all of which look more closely at the impact that environmental education has on students.

To begin, Sairaj Patki (2018), concerned about the consumption-oriented, environmentally unsustainable lifestyle of many college students in India, conducted an exploration into how materialistic values influence Indian students' behavior in caring for the environment. Patki cites Richins and Dawson (1992) who define materialism as the degree to which physical possessions are germane in one's life as well as the strong belief that procuring such items will bring significant feelings of contentment, security and accomplishment (2018, p. 122). In support of his study's objective, Patki (2018) finds accordance with Porrit (1984) who states that damage to nature is a concomitant consequence of these materialistic values, which are encouraged by economies that primarily thrive on consuming goods (as cited in Patki, 2018, p. 123). This research

project is motivated by Patki's (2018) opinion that effective methods are urgently needed to influence India's young adult population due to the severity of their environmental problems.

The results of this study demonstrate, as predicted by Patki (2018), that the actions of participants with increased materialistic values correlate negatively with pro-environmental behavior. However, Patki (2018) employed data by Deci and Ryan (1985) as a premise for examining the role of motivation, and not only values, as a factor in affecting behaviors. Since values are, according to Rokeach, "enduring beliefs and not situation specific..." (as cited in Patki, 2018, p. 122), Patki reasons that instead of trying to alter them, a more efficient way to directly influence behavior may be through motivational factors. For example, Patki's (2018) results suggest that persons with materialistic values seem to be influenced by extrinsic or external motivation characteristics; that is, they are moved to gain or achieve something for reasons related to greater society—outside of their selves. For those who are low on the materialistic end, extrinsic motivation, such as financial incentives or monetary penalties, did not appear to make a difference in disposing of an unsustainable behavior in exchange for a pro-environment one. Instead, according to Deci (1971), those intrinsically motivated individuals tend to enact "...behaviors that are performed for their own sake, i.e., for the pleasure and satisfaction derived from performing them" (as cited in Patki, 2018, p. 122).

In addition, Patki (2018) references two other important issues that impede pro-environmental behavior. First, there is the invisibility of many environmental challenges; that is, students often cannot see the immediate results of their individual actions, or at least not until harm has occurred. This is significant when considered alongside Clayton's

(2009) work which asserts that perception is important in the feedback loop of changing behavior; therefore, a relevant question here is how we can expect individuals to change what they do not consciously notice. The second challenge this study exposes is that environmental data is often presented, according to Preuss (1991), and Fliengenschnee and Schelakovsky (1998), as "...secondary information, which fails to help them to connect emotionally to it [the environmental problem at hand] and thus often leads to non-involvement" (as cited in Patki, 2018, p. 126). Here, similar to Schultz' (2000) assertion that feelings of relationship are created only through students' active, multi-sensory involvement with nature, Patki (2018) concurs that emotional engagement with the topic is necessary for students to care about the knowledge imparted to them. In sum, Patki (2018) believes that attending to these issues, i.e., the invisibility of the problem and unimaginative educational methods, is critical--especially in helping high-materialist individuals to override their egocentric values.

S. Patki's (2018) work adds to the field by illustrating how different value systems and their attendant motivational factors will require the use of different approaches. It also outlines which methods may be most effective with divergently motivated individuals. This point recalls the work of Geng et al. (2015) in linking different types of connections, implicit and explicit, to those respective behaviors. Likewise, while psychology does matter in terms of values and motivation indirectly influencing behavior, exposing what is hidden from view as well as providing engaging education methods may be equally important.

A study by Arda Arikan (2009) in an English as Foreign Language (EFL) grammar classroom in Ankara, Turkey utilizes environmental peace education, a

pedagogical approach which according to Harris (2004) encourages an individual's knowledge and activism regarding problems of both the natural and human world (as cited in Arikan, 2009, pp. 88-89). Multiple additional sources of research also suggest that education methods where students are active are highly effective in the classroom, specifically when teaching social justice issues such as how humans can exist in harmony with their environment. Arikan's (2009) study, though narrow in scope, demonstrates a highly favorable response from pre-service teachers and their students when implementing and participating in activities that use Socially Responsible Teaching (SRT), a type of critical pedagogy that builds students' personal knowledge and understanding within the context of greater societal challenges--both political and social. This linking of education and society in pedagogy is an influential educational model that was proposed by American philosopher John Dewey (Piedra, 2018) as well as other philosophers and educators.

In Ankara, the approach of using real-life application worked particularly well with adolescent English language learners (ELLs), who appreciated being entrusted to interface with important adult topics. Through using contextualized spoken and written grammar (CGT) in combination with SRT one of Arikan's (2009) student participants explained their satisfaction thus, "I did something with my English. Now I can go to England and help them solve their pollution problems. Or, they can come here and we can solve our pollution problems" (p. 94). Similarly, other students expressed how much they enjoyed being "active" and feeling that their studies were useful as they worked out challenging issues, both globally and nationally (pp. 94-96). Students also reported that helping "...each other was the most compelling part of this process" (2009, p. 95); and

Arikan (2009) cites Higgins (2007) who corroborates the value of applying real-life situations to learning in order to increase students' capacity to learn through empathizing (as cited in Arikan, 2009, p. 96).

Although only four activities were measured over a short period, Arikan's (2009) distinctly positive results in terms of learner enthusiasm and engagement were notable. This is impressive considering the fact that these new methods, being unfamiliar, required more work of the students (2009). These favorable data are useful in investigating the role of environmental education in behavior change. While students were not actually outdoors interacting with nature as Schultz' study (2000) recommended, these students, of their own description, became more empathic, more engaged, and felt a greater sense of *agency*—or ability to act—when learning about real-life issues via authentic materials and multi-sensory, multi-modal activities. This fact also affirms what Patki (2018) speculated; when learner emotions are engaged, empathy and interest may occur more readily. And finally, the instigation of learner agency in the classroom may be pertinent to encouraging student activism outside the classroom, as the following research will show.

A third study that looks at the role of environmental education and behavior change called "Battling Ecophobia: Instilling Activism in Non-science Majors When Teaching Environmental Issues" by Mark Bloom and Molly Holden (2011) introduces a significant new element into the discourse: students' emotions and the part they play in learning. While other researchers recommended that students should be emotionally engaged in educational material, Bloom and Holden (2011) discovered through their

classroom experience that negative emotions actually reduced students' ability to integrate what they learned in the classroom.

While teaching a college course designed to promote science literacy through using currently popular biology topics for students who had little science background, Bloom (2011) received feedback indicating that his curriculum caused students to feel overwhelmed and highly negative at times. As Bloom (2011) became cognizant of this phenomenon, he drew upon the research of Sobel (1996, 2007), an environmental educator, who had coined the term "ecophobia" as a way to describe how science data can affect students by "instilling in them a sense of fear and helplessness" (p. 47). Bloom (2011), too, realized that his students' negative feelings could actually cause inertia rather than pro-environmental actions, proving Sobel's claim (2007) that piquing activist behavior is not simply a matter of imparting information (as cited in Bloom & Holden, 2011, p. 49).

Through observation, feedback, research and struggle, Bloom (2011) challenged himself to solve the dilemma he was facing. The problem was how to reach students and increase their literacy in the topic without overloading them with dense science facts that bored, frightened and overwhelmed them. In a two-pronged approach, Bloom (2011) was first careful to introduce the science issues incrementally, beginning with the more tangible and readily remedied topics and then later introducing the larger and more insurmountable ones. Secondly, as a way to mediate negative emotions evoked by the science information and to instead stimulate a sense of personal capacity, Bloom (2011) created an extra-credit activity for students to experiment with small-scale, personal, pro-environmental actions.

The results of this classroom research surprised Bloom and Holden (2011); more than two-thirds of the class voluntarily participated and students expressed a greater sense of agency and optimism, in addition to demonstrating notable creativity in their work. As Bloom (2011) recounts, it is possible that the motivating factor was the extra credit but, regardless, the students' interest and engagement with the more intractable topics grew substantially. Further, Bloom (2011) gained valuable information about the role of emotions in educational instruction, discovering that it is how a teacher frames the science, and not the scholarship itself, which is most important (p. 47). To expand on that, it seems that providing tools to counterbalance the students' affective reactions to the facts actually made the difference.

Although it is not clear through this study if incorporating real-life pro-environmental behaviors into curricular instruction leads to longer term behavior changes, Bloom (2011) believed that it certainly changed attitudes in the short term. Bloom's students grew to feel they could personally impact difficult challenges instead of feeling the opposite, powerlessness. That attitude change is consistent with Sobel's findings (2007) that "a sense of agency and control leads to the knowledge of issues and action strategies, which lead to an intention to act" (as cited in Bloom & Holden, 2011, p. 49). In this way, we see a reverse order which suggests that providing student control through demonstrating and incentivizing pro-social actions allows learners to apply and absorb their knowledge, stay engaged with the data, generate new ideas, and perhaps feel confident to become more involved in the future.

Synthesis: The role of education.

When comparing the studies focused on the role of the educational setting in raising environmental awareness and changing behavior, all three recommend a need for high-quality educational methods that engage students more readily. First, Patki's (2018) research showed how values correspond to motivation and the importance of this in terms of behavior change. As a result, Patki (2018) calls for instruction that is more absorbing for the student, and then advises that "...interventions for educating and training youth in environmental behaviors and planning conservation activities" (p. 127) should be better tailored to individual students' patterns of motivation and values. The question of customizing the delivery of educational material is a salient one; in other words, would students' environmental behavior be improved if their personal motivational factors, e.g., the desire to accumulate material goods, were targeted when designing the curriculum? And how would that be possible considering the seemingly opposite quality of the stated objectives? Perhaps it is a matter of using the motivational factors to affect the manner in which the material is presented rather than to influence the content of the material. Certainly, we can surmise that students will be more engaged if they find the scholarship personally relatable.

Focused on the experience within the educational setting, the two articles by Arikan (2009) and Bloom and Holden (2011) highlight the favorability of hands-on learning using real-life challenges and application. While the studies shared similarly positive results in terms of student satisfaction and their feelings of powerfulness, creativity and confidence, the studies demonstrate a slightly different sequence of cause-and-effect. Whereas Arikan (2009) started by using experiential education, Bloom and

Holden (2011) seemed to arrive at it after grappling with how to overcome students' emotions--responses that often interfered with their assimilation of the content.

In the EFL classroom, Arikan (2009) found that using real-life challenges and application supported language development, and increased students' comprehension of the various issues. The result of this was higher rates of student empathy, and greater confidence in their ability to effect change, i.e., greater sense of *agency*. Bloom and Holden (2011), on the other hand, appeared to use student activism to quell emotions that were obstructing their students' ability to learn the facts needed in order to become well versed in the issues. By initially stimulating student agency, the experience of feeling powerful in their actions functioned as a mediating element in increasing the efficacy of the academic work in Bloom's classroom. Although Bloom and Holden (2011) did not touch on empathy, it would be interesting to know if the quality of connectedness to nature was increased in their students simply by taking pro-environmental action. It would appear that their explicit expressions of connectedness, such as that explained by Geng et al. (2017), might have been strengthened.

Discussion

Thus far, the introductory and initial group of primary articles explores empathy for nature as both a potential driving factor in behavior change as well as an organic outcome of spending time in nature. Although the origin of this reciprocal relationship is not made clear, especially in terms of it possibly being a inherent human characteristic, multiple studies show that its presence--or perhaps its activation--can and does stimulate pro-environmental behavior. In addition, the studies show the psychological links of behavior to self-representation, values, social norms, specific types of motivation, and

attitudes as complex and interrelated elements that can be challenging to identify and analyze as separate factors. An additional compelling and potentially remarkable topic suggested by the literature is the role of language in changing behavior; specifically, how it can bolster or, by its lack, hinder individual influence on broad-range societal pro-environmental behavior.

The second set of studies begins with S. Patki's (2018) research, which provides an overlap between the research concerning empathy and language in relation to behavior, and the subject of education's role in behavior. In my own impression, one of the central reasons that education is so critical is largely related to how few of us live primarily outdoor lifestyles in the industrialized world. Without the constant contact, opportunities for observation and interaction are severely limited. This regular surveillance is crucial in order to glean a deeper understanding of what is occurring beneath the outward appearance of non-human species and elements in nature. Routine observation is also needed in order to compare environs over time and sharpen our senses so we can be alert to where attending is needed.

Another theme that the education--and conservation psychology--research in this IPP suggests is that best practices in experiential types of learning appear to increase agency, which could in turn transfer to daily, personal-life applications. Further, agency can help young learners in particular cope with feelings of fear and despair due to the enormity of environmental challenges; feelings which can be debilitating and close off the pathway from knowledge to action. Moreover, through active methods of instruction, teachers are more likely to engender empathy in their learners, which has been shown to have various positive outcomes in terms of inspiring helping behaviors.

Regarding future steps, it is clear so far that neither nature relatedness, nor environmental education alone will be sufficient to fully support individuals and societies to take all the actions needed to bring the biosphere into a less precarious and more healthy balance. In addition, we need to continue consulting the data from human psychology in order to understand how to reach, and move to action, diverse individuals. Additionally, intra-species communication along with language as a form of personal expression are both fertile areas for future research. Finally, the essential role of emotions surrounding this topic warrants further exploration and should not be dismissed.

Whereas Bloom and Holden's work provides an introduction, there exists a substantial amount of thought-provoking literature on acknowledging, confronting and coping with the tangible matter of human emotion. In particular, the book *A People's Curriculum for the Earth*, edited by Bigelow and Swinehart (2015), a copious source of information and ideas for teaching environmental education, contains multiple comments from educators, scientists, activists, ecologists, leaders of environmental organizations and parents about this phenomenon. The comments of these leaders point out various ways that individuals are confronting, and helping others to confront, vulnerable and frightening feelings without retreating from the critical issues at hand.

Embracing a different perspective on the role of emotions, one reference called *Mourning Nature* (2017) is an anthology of essays from writers, poets and scientists that specifically addresses the loss that humans experience when they are connected to the natural world. In the prologue named "She Was Bereft," A. Cunsolo (2017, pp. xiii-xxii) chronicles her personal process of confronting and responding to emotions of fear, grief and despair generated by her work with indigenous communities in the Far North of

Canada. According to Cunsolo's (2017) narrative, she finds herself, her co-workers, and the community she is working to support, overcome by the effects of present and potential future ecological loss. In looking for a pathway to cope without negating the experiences of her close companions, and likewise without suppressing her own feelings, Cunsolo (2017) gives voice to the necessity of spoken language as well as a willingness to stay connected to others. In this example, the writer needs language in order to acknowledge the damage sustained by the natural world as well as the resulting loss she experiences due to her interdependence with that world. Moreover, Cunsolo (2017) eventually finds that verbal communication with other people brings a sense of kinship and that is what sees her through the grieving process; furthermore, she counsels that we humans must recognize our connections with nature and be willing to grieve ecological loss if we hope to find the inspiration to carry forward and take action.

Part Two: Application

Acknowledgement

Before beginning this second part, I wish to openly acknowledge the influence that my background, and life experience as a U.S. citizen and ESL teacher at an American university has had on this paper. There is no way to escape the fact that my identities—cultural and otherwise--have shaped my opinions and worldview, even as I attempted to soften that influence by questioning my assumptions while researching this topic. In addition, the primary source research used for this IPP, though conducted in a few culturally diverse contexts, has principally been carried out in Anglophone-influenced settings, and more significantly, has engaged college or K-12 students as participants. From my best deductions, the great majority of these participants are citizens

of highly or moderately industrialized countries. In fact, during my investigations I have not encountered data collected from studies of tribal peoples, people who are not formally educated, or people who live in a subsistence manner. These types of data would greatly extend the field and likely provide further illumination and valuable suggestions for this line of inquiry. Studies of diverse participants would be valuable because the discussion of a relationship between humans and nature, or the lack of one, presupposes a separateness or binary situation that is a product of a particularly Westernized and industrial paradigm. In this paradigm, humans generally see themselves as apart from, or outside of, nature.

Consequently, the research and suggested applications of this IPP are based on my presumption of a particular imagined context: the university ESL classroom in an Anglophone and industrialized country.

Rationale: Why the ESL Classroom?

By introducing research which illuminates prominent influences upon humans' intra- and inter-species behavior, my intention is that such data will inspire ESL instructors toward the goal of supporting students' environmental awareness and activism within a context of culturally diverse opinions and experiences.

In this section I have chosen to focus on climate change as an exemplar, when one is needed, as opposed to other crucial issues. The reason for this is not only the urgency of the problem but that its complexity and broad scope make for rich discussion to which the majority of students will be able to relate. That is, the topic may be applied similarly to many localities. In contrast, using biodiversity loss as an example discussion topic

could be more challenging due to the fact that some students live in urban areas where they might not have the opportunity to notice other species.

In considering an industrialized nation ESL context, there are various and compelling reasons why a communicatively oriented, multi-cultural context is appropriate and favorable.

General advantages.

To begin, it should be recognized that the era of excluding environmental topics as part of any higher education curriculum is, or should be, over. The environment is a concern now solidly situated within the public domain, and therefore, is a viable and crucial subject to explore for young adults who are transitioning into broader society. As Kip Cates (1990) declares in her advocacy of a “global education” approach, the gravity and complexity of the globally entwined problems that humanity is encountering, as well as the fact that youth need skills and real life knowledge to prepare them to tackle the issues of their collective future, point out the responsibility of educators to help young adult students in that task (pp. 41-42).

The rapidly advancing effects of climate change are being noted by many populations throughout the world, along with calls for action from the international science community becoming more prevalent and more urgent. According to the Yale Climate Connections website (2019), the aforementioned, recently released reports all warn that climate change is likely the most threatening and pressing problem that is affecting, and will affect, humanity during this 21st century. Moreover, researchers Ripple et al. (2017) note these various reports indicate that unless our environmental challenges are confronted substantively, human beings will be unable to function

normally and/or continue to lead lives that are not in a state of constant low- or high-level crisis; the physical environment must be supportive in order for human development to both survive and to flourish. In other words, health-promoting balance within earth's ecosystems is a foundational piece of a thriving human civilization. This is confirmed by an overwhelming majority of the international science community--for example, Ripple and colleagues (2017) accepted 15,000 scientist signatories from 184 countries for their article called "World Scientists Warning to Humanity: A Second Notice."

Given the fact that scientists such as Ripple, et al. (2017) expect our global ecological crises to continue growing during the next century, along with the present immediacy of the issue, there is strong indication of the appropriateness of the topic for a young adult classroom that comprises multi-ethnic and multicultural students whose futures will be affected. Moreover, in his paper on climate change and teaching English to speakers of other languages (TESOL), Goulah (2017) quotes Sheppard (2014), noting the worrisome fact that "climate change is the single most divisive political issue in the U.S." (as cited in Goulah, 2017, p. 92). By teaching climate change and continuing to bring the facts into the public domain, it's more likely that younger generations will have the scientific knowledge to form their own opinions. In confirmation, Goulah (2017) points out that the public needs to recognize how the topic of climate is often manipulated, by both certain religious groups and by politicians.

Common ground.

In reference to humans' relationship with the earth's elemental systems (air, water, land) and with its non-human species, the diverse ethnic and cultural backgrounds of the students in a typical American ESL college classroom should be viewed as an

asset. According to linguistics professor Alvino Fantini (1997), recent years have brought a new emphasis on the significance of familiarity and fluency in the target culture as fundamental to teaching an additional language. Thus, it is recognized pedagogically that expertise in the praxis of communicating in the target language cannot be achieved without understanding the culture in which it is situated (Fantini, 1997, p. 40). Because of this focus on the link between language and culture, instructors as well as textbook writers typically include cultural topics in language instruction. These topics often call attention to cultural differences within larger culturally shared categories; for example, recreation is a universally familiar cultural topic and a text might introduce sports that are popular in the target or additional language (*Ln*) culture but not necessarily in the first language (*L1*) culture. In this way, the reader views the target culture through comparison; insight into one's own culture is applied to the information presented to the student and then transferred. Pat Moran (2001) identifies this as a key component to learning another culture. A learner's ability to alternate between the role of the insider's *emic* perspective along with undertaking the role of the outsider through the *etic* perspective eventually allows the learner to empathize and enter into another culture's viewpoint (Moran, 2001, p. 126).

Teachers can take advantage of this learning strategy when it comes to exploring environmental topics. The natural environment is fertile ground for building a class' cultural understanding and empathy through the bond of shared habitat. For example, during activities where students alternate between an *emic* perspective on their region of the world and an *etic* perspective on their classmates' regions, cultural learning occurs within the broader *emic* framework in which each student represents an individual

member of the same species. That is, each is a human mammal with similar requisite needs from their larger-scale environment, the planet Earth. With the human tendency to emphasize difference, it's easy to lose sight of the comforting fact that human beings share a common home even while inhabiting geographically diverse areas of that home. What is held jointly provides a base from which students can explore difference, in a potentially less threatening manner.

Diverse viewpoints: An asset.

In contrast to the idea of commonality as asset, human cultural diversity also can, and should be engaged as a resource for tackling seemingly insurmountable ecological problems. While it is the domain of policy makers, social scientists, and natural scientists to focus on large-scale answers to these immense challenges, those professionals may fail to see how the ingenuity and perseverance of individual humans can, and must, be utilized in the quest for solutions.

Undoubtedly, human cultural diversity is one quite plentiful resource. The website for the U.S. government census reports a world population of approximately 7.5 billion and growing ("United States Census Bureau," n.d.). Given that fact, human intelligence, talent, innovation, and creativity should be obvious qualities to exploit. In his book, *Designing Regenerative Cultures*, Daniel Wahl (2016) conjures an in-depth, transformative, and inspiring vision for humans to potentially co-exist on Earth through incorporating a systems approach, similar to nature itself. The result, he believes, can be a fulfilling future where humans, across all sectors, are meaningfully interconnected with one another, and to the natural world (Wahl, 2016). In particular, Wahl (2016) mentions the Three Horizons framework as a collaborative tool for bridging current conditions to

more mutually desirable future scenarios, through valuing multiple perspectives (p. 56). This systems approach was developed by Bill Sharpe and others and has been used by communities, organizations and government entities to find solutions to large and complex problems that seem insurmountable.

Currently, in the industrialized Western model, an undeniable challenge to implementing the resource of human diversity is that of extant inequities. Not all cultures' voices are valued nor received equally in terms of policy and governance on the international and/or national stages. In counterbalance to this situation, Wahl (2016) demonstrates the arena of *social innovation* in which laypeople have gone about creating change through their own novel ideas, bypassing the impediment of regulation or large investments of capital. Social innovation is defined as "...any initiative that employs innovative and experimental methods to tackle one or many of the problems we face...to improve people's lives, community resilience, and the health of ecosystems" (p. 64). Examples of social innovation and its cousin, *social enterprise*, include peer-to-peer social lending websites like Zopa in the U.K., crowdfunding websites like GoFundMe where people get support for different projects through small donations from others, and Avaaz, an international petition-circulating network for political activism (Wahl, 2016). These opportunities are possible due to factors like enhanced communication capabilities through technology as well as political discontent and/or powerlessness. Perhaps too, a strong value placed on the potential of each individual acts as a cultural model to bolster these enterprises. Thus, it is plausible that environmental solutions might appear on local and regional levels before they appear on the national level. Wahl (2016) affirms this by stating that problems will need to be probed from the bottom up and solutions formed by

asking questions that make sense at particular times and in particular locales, along with relying on local knowledge to meet the specific needs of each culture (p. 62).

Significantly, the ESL classroom is a micro-context where these diverse voices could be listened to, encouraged, and explored.

In relation to the present necessity of engendering responses to climate change, Goulah (2017) calls for theories that support frameworks in TESOL which "...promote the urgent need for individuals' volitional and dialogic transformation of beliefs, attitudes and behaviors to 'enhance one's own existence and contribute to the well-being of others'" (p. 93). This recommendation for discussion and dialogue in a language curriculum as a route to personal growth is not far-fetched. When a skilled language instructor facilitates discussion which employs authentic language to bring about cultural learning as an integral part of the curriculum, students' self-understanding and empathy for others are enhanced. In this atmosphere, novel and experimental concepts can surface, survive, and flourish. Specifically, these diverse environmental perspectives may offer valuable and rich information to draw on, resulting in uncovering unique or even unprecedented solutions and applications.

English language learners: A disproportionately affected population.

Another factor which suggests the suitability of exploring ecological issues, and specifically climate change in the English as a Second Language (ESL) classroom, is that according to the Department of Education, a substantial portion of American K-12 ELL students are economically disadvantaged ("Our Nation's English Learners," n.d.). When refugees or immigrants relocate, acquiring English is a critical step on the journey toward upward economic growth. Although this particular population may not be found as

readily in a college classroom, they still are important to think about as the statistics will apply to workers on college campuses who take ESL classes and/or to the families of ESL college students. Due to their socioeconomic status, learners may settle in impoverished communities after emigrating. Significantly, on its webpage about environmental justice, the National Association for the Advancement of Colored People (NAACP) emphasizes that these neighborhoods may be inordinately prone to multiple environmental challenges (“NAACP,” n.d.). According to the US Environmental Protection Agency, the concept of environmental justice is defined as the intent to provide equal protection from environmental threats along with equal agency in ensuring the wellness of learning, working, and living settings for all (“Environmental Justice,” 2019). Adding to the burden in lower-income communities, disenfranchised residents may not have easy access to natural areas that provide rejuvenating and recreational experiences, which conservation psychologist Susan Clayton (2007) claims bring substantial mental and physical health benefits.

In the US, the health and welfare of marginalized peoples and value of their property is often not given equal treatment to that of residents in wealthier socio-economic areas. Therefore, when weather-related emergencies occur in neighborhoods with crowded living conditions and inferior quality housing, the occupants may be affected disproportionately. In addition, adequate and timely funding may not be allocated for cleanup efforts, nor are these areas frequently selected as sites for the investment of public funds for preventative measures. In fact, citing UNESCO’s recommendations regarding climate change as it is included in the United Nations Decade of Education for Sustainable Development (UNDESD) global initiatives, Jason

Goulah (2017) points out that the worst effects of climate change are experienced by “racially, ethnically, and linguistically marginalized communities” (p. 92). These neighborhoods are often where immigrants, a poorer and disenfranchised population, settle. In addition, a new form of gentrification that is beginning to occur due to climate change may affect immigrants. In his article called, “Gentrification: Climate Change’s Latest Threat,” Alexander Gelfand (“Johns Hopkins SPH,” 2018) explains how the effects of climate change are now redefining which areas of a city are more desirable and therefore, more costly. In Miami Beach, this is already occurring as affluent residents are relocating from coastal neighborhoods once considered prime property to more interior areas, seemingly safer from the effects of rising sea levels. Indeed, local ESL classes may be one possible avenue to giving these residents a voice for expression and a chance to participate in solutions.

In addition to the environmental justice issues they face as immigrants, these same ELLs confront challenges by way of their emigration history. The homelands with which they maintain ties may be less prosperous and thus more vulnerable to weather events caused by global warming and due to geographic characteristics (“CPR Perspective: International Environmental Justice and Climate Change,” 2019). Since the results from both rising temperatures and the consequently elevated sea levels will require costly mitigation efforts, economically poorer areas throughout the world will have less access to needed infrastructure support. As a relevant side note, these regions and nations have traditionally been called *developing countries*, *underdeveloped regions*, *majority world countries*, *low-income nations*, and even *third world nations* (“If You Shouldn’t Call it Third World, What Should You Call It?” 2015). More recently, some

scholars use the term *Global South* to indicate less industrially developed and less affluent regions. Admittedly, there are drawbacks to each term, but for the purpose of this paper, we will use Global South to explore the theme of environmental justice and climate change.

The term *Global South*, according to an introduction on the Global South Studies website at the University of Virginia, encompasses three critical concepts rather than referencing a geographical location (“Global South Studies,” Mahler, 2017). In relation to capitalism, Global South refers to peoples and regions that sustain harm and damages from “contemporary capitalist globalization” (“What/Where is the Global South?” Mahler, 2017). This includes any areas where people have been oppressed by dominant nations or political constructs; hence, “there are economic Souths in the geographic North and Norths in the geographic South” (“What/Where is the Global South?” Mahler, 2017). And lastly, the term is used to disengage Global South areas from being identified purely by their oppressed post-colonial past histories, and instead to illicit and demonstrate their potential power gained through collaboration and commonalities “among the world’s Souths” (“What/Where is the Global South?” Mahler, 2017). These following examples illustrate how environmental justice issues could play out in the future for urbanization in the Global South.

In their panel discussion on resilient cities of the future, University of Virginia professors Ellen Bassett from the Department of Urban and Environmental Studies and Deborah Lawrence of the Environmental Science department point out the high likelihood that urbanite inhabitants of the Global South will be strongly affected by the effects of global warming (2019). Migrations from countryside to city have increased

substantially over the last twenty years globally, and experts expect the trend to continue. Specifically, the World Health Organization reports that urban populations grew and will continue to increase globally from 30% in 1950 to an estimated 60% in 2030 (“Urban Population Growth,” 2014). Furthermore, according to National Aeronautics and Space Administration (“NASA: Nairobi Swells with Urban Growth,” n.d.), prominent examples of this phenomenon can be found in many African nations, relevant since according to scholars Dados and Cornell (2012) the continent of Africa is included in the Global South. Referring to her research which focuses on climate change and deforestation, Lawrence (2019) points out that urbanization generally has a positive effect on CO₂ emissions due to shared resource use and dense settlement. These factors decrease sprawl, preserve flora, and provide habitat for fauna around urban areas; however, cities are by nature hotter environments due to their density. Lawrence (2019) designates Nairobi, Kenya, as one such example of an increasingly hot and rapidly growing city in the Global South. Her global climate models show alarming upward trends in temperature over the next thirty years for the capital city. Significantly, 22% of Nairobi’s citizens live in poverty, and, according to statistics from a Norwegian United Nations Environment Program (UNEP) Center, Nairobi residents comprise about 32.4 % of all Kenyans as of 2009—up from 5.2% in 1948 (“GRID Arendal Norway,” n.d.).

In comparison to Nairobi, Miami-Dade County, USA, also considered part of the Global South due to the legacy of slavery in the southern U.S. (“What/Where is the Global South?” Mahler, 2017), is a large urban area of about 2.8 million people. As already mentioned, the area is coping with quite notable effects of climate change from rising sea levels, including salinization of groundwater. Although Miami may certainly

be at a disadvantage to more geographically and economically *northern* areas, it seems likely that this coastal area, being less populated and part of a highly industrialized nation, will be able to implement adaptive measures more readily than a city such as Nairobi.

In sum, all geographical regions will, sooner or later, directly or indirectly, experience the effects of Earth's changing climate, but as Bassett (2019) notes in her research on international development and urban land management, fast-growing, poorer, and inferiorly-designed cities will likely experience more intense challenges more immediately.

In terms of empowering environmental justice issues in ESL classrooms, there are two other significant considerations. First, it should be recognized that although Global South locales may have greater challenges in coping with environmental problems due to poverty, those denizens might also possess local knowledge and adaptation methods to aid resilience to the effects of global warming. If so, those resources could be valuable coping strategies to share inter-culturally. Secondly, as Goulah (2017) hypothesizes, the increase of climate-induced migrations, along with the crucial personal concerns that these climate migrants will likely carry from their home locales, should increase the salience of the topic for ELLs in educational settings. These migrants may need and want language to express their own and community members' experiences.

Culture change.

Finally, as environmental changes speed up and transform the landscape, there will be corresponding changes in cultures everywhere. Geography and natural phenomena are not only shaping agents of the land we inhabit, but also of the cultures

that are linked with those places. For example, the revered role of olive oil in Italian cuisine—part of Italy’s cultural heritage-- would not be possible if olive trees did not thrive and flourish in that region. Therefore, along with rapid change in our natural world, comes, necessarily, substantive cultural changes for many people and communities. For some, it’s a whole way of living, especially for communities that are forced to relocate such as Pacific Islanders, certain Eastern Shore residents of Virginia (Kahn, 2019), and even Far North communities, (Cunsolo, 2017); for others there are small but significant changes in customs that are simply no longer possible. This is exemplified in the research of Greg Kahn (2019), documentary fine arts photographer, as presented at a recent National Geographic Science and Storytelling Symposium. Kahn (2019) related several stories about the cultural impacts of climate change on diverse communities, including the decline of shell fishing along sea shore communities, the loss of the art of *bird calling* for waterfowl hunters, and even the downturn in skiing or snowshoeing in recently warmed northern areas where snow is becoming less prevalent—all are cultural practices that are being forced to change.

For language students, culture is an avenue to language learning. That is, language students are also culture students. After all, as Moran (2001) emphasizes, language is needed in order for humans to label, interpret, implement, reflect on, and express much experience that is considered to be cultural. In an example of this, the names used for specific cultural artifacts or customs for which there is no direct translation (*Jai Alai*, *crepes*, *boba*) extend into the lexicons of other languages so knowledge of the custom can be communicated and made available to participants in a

foreign culture. In this way, a language classroom is an appropriate place to examine phenomena that impact culture, and especially those that will cause cultural change.

Summing Up

This IPP, exploring and encouraging students' willingness to care for the environment, mostly touches on the individual level and even in that, a subset of individuals—ELLs. Further, while it is beyond the scope of this paper to examine how changes in our education systems can make larger necessary impacts at the level of government policy, Ripple et al. (2017) urge that multiple levels must be addressed simultaneously in consideration of the broad and deep changes that are being called for. This paper is meant to begin an exploration as to why people behave as they do, and consider if and in what manner that behavior can be influenced. If awareness can be raised and behavior changed, it may increase the possibility of a carry-forward to levels where more extensive impact can be implemented, either through political or social action.

Part Three: Tools

For Teachers: The Kafar Refocusing Practice

Introduction.

This tool, which I call a teacher refocusing practice, is for teachers who want and need to listen more actively in their multicultural classrooms. The fact that it is labeled a *practice* is significant. I wanted something that teachers could use on a regular basis, repeatedly, to enhance their self-awareness. In that way, it is similar to mindfulness techniques where a question, method, or action is applied internally in varied situations. Through the discipline of applying the action or method with constancy to situations that

change depending on many other factors, a person builds awareness and learns by mentally comparing something that changes (externally) with an (internal) feature that remains relatively stable. During regular practice, the individual may begin to notice and be more informed about themselves and their thinking process, and thereby have an opportunity to transform how they think, and to integrate mental input as well.

I developed this refocusing practice in response to my own need to recognize and curtail assumptions that I make on a moment-to-moment basis, and which then influence me. I notice how these assumptions interfere with fully understanding what others are saying or just as importantly, what they are not saying. In her work, “Listening: A Framework for Teaching Across Differences” Katherine Schultz (2003) describes one of the acts of listening which teachers must attend to as *listening for silence and acts of silencing*. Schultz positions this type of listening at the most broad level, and her theory has confirmed my instincts not only for listening in the classroom, but also in this internal practice: to make conscious that which is unconscious in myself when teaching. To clarify further, this practice attempts first to expose what is beneath the teacher-practitioner’s surface awareness and then separate it from the input being presented. If we apply this notion to facilitating a discussion in a context of diverse viewpoints, the trick would be for the facilitator to realize that in the initial and even subsequent stages, the picture is not yet complete. For that reason, this practice is imagined as one that is cyclical and repeats, bringing a discussion or dialogue to progressively deeper and more essential levels.

The practice.

The imagined context is a class or small group discussion for which the instructor has a general objective, and will act as facilitator. For instance, and in keeping with the theme of human-nature relationship, a teacher may want to engage their students' opinions on renewable energy sources as replacement for fossil fuel usage. That would be the surface goal, but given the cross-cultural setting, there might be an additional instructor goal for the students to experience a particular cultural learning. In his book, Moran (2001) shares several models of culture learning, and states their appropriateness for a context where students are acclimating to a new culture through the use of the target language. This describes the ESL classroom. Moran goes on to summarize similar characteristics of these models by stating that the learner cumulatively obtains understanding, and ultimately transformation, through reacting to experiences of difference they have while interacting in the new culture (2001). This type of learning aspires to promote understanding and empathy by leading each student to explore and express how the discussion topic relates to them in terms of their cultural background and individual identity.

Starting with this explicit--and also broad--goal, the instructor can begin applying the KAFAR practice as the topic is introduced. As the teacher facilitates, they mentally proceed through the following steps:

Knowing- "What is known here?" "Is it through an emic (in-group) or etic perspective?" "Through which channels do I actually know what I *believe* I know?" For example, "Was it told to me? Am I receiving visual or other sensory cues? Did I get official information?" Then, "What is not known?"

Assumptions- “What do I notice myself thinking or believing as I interact?”
“What attitudes do I harbor or display?” “Are these based on factual information, guesses, generalizations, stereotypes, perceptions?”

Framing- Return to what is clearly known and form a question. This requires setting assumptions aside and compartmentalizing one’s thinking. The language used for the question is also important and should be as indirect or open-ended as possible, rather than leading.

Active Listening- Use the principles of Active Listening (Turpin, 2017) at the most basic level. This includes, first, listening with open-ended attention and a lack of judgment, and secondly, intermittently intervening to synthesize and restate as accurately as possible what the speaker expressed verbally. For the next step, the listener waits to hear if there is affirmation or clarification from the speaker. The speaker continues their narrative after both parties are in accord. Active Listening is centered on benefitting the speaker through the listener’s interpretation of their words.

Re-Application- The facilitator takes the new information and returns to the first step, *Knowing*. At this point, the new information is integrated into the foundation of mutual understanding, and the cycle can be repeated as many times as necessary.

By assigning this practice an acronym, KAFAR, I’m hoping to make the steps easier to remember. I believe this will be useful for disentangling the multi-layered and rapid thinking processes that stop me, or any teacher, from being as aware as possible in the dynamic context of a classroom. It will take practice to develop skillful, culturally competent facilitation techniques, but the use of an easy-to-remember practice will help its automaticity as it becomes assimilated into the instructor’s repertoire.

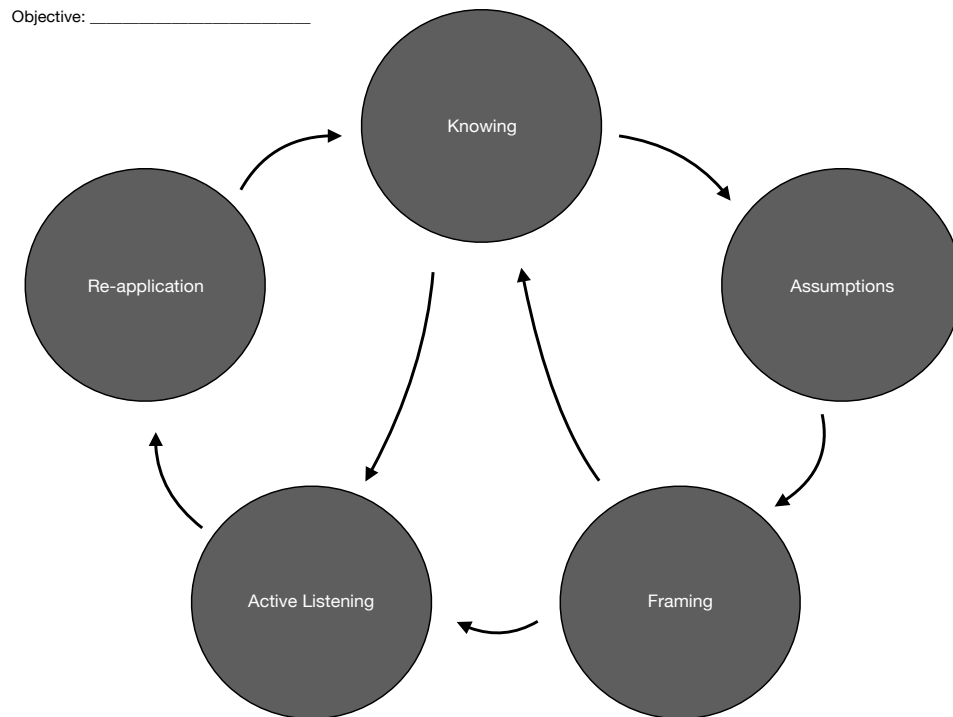


Figure 1. KAFAR, A Teacher Practice. The sequencing of the stages with allotted space for the teacher’s overall objective.

My expectation is that this tool will reduce my own reactivity as a teacher during situations when the atmosphere is dynamic and complex. Additionally, I am hoping for the outcome of cultural discussions to be more nuanced from using the technique, and that students will learn beyond what Moran (2001) refers to as the “functionalist view on culture” (p. 84). This way of thinking recognizes culture in its broadest definition, “...most often at the national level, using the nation as the focal point” (2001, p. 84). Although useful in certain ways, this viewpoint also has potential to reinforce already formed generalizations and stereotypes.

Future development.

This KAFAR Practice for refocusing is not a finished product. I see it as a work in progress that I will want to change and adapt to different contexts. Specifically, steps one and two, “K” and “A,” are particularly challenging and need further development. For instance, the differentiation between *knowledge*, which may include intuition or impressions for some people, and *assumption* can be a gray area. I also may need to expand the practice in order to encompass novel insights about information gleaned in the process. I hope, too, that other teachers will find the practice useful, adapting or adding to it.

Even as a small and experimental step, imagining and contextualizing the practice has created a foundation for teasing out assumptions, thus leading to richer discussions as well as improved cultural understanding. Moreover, the facilitator’s awareness should gradually increase, resulting in palpable attitude changes, thus providing an indirect model for the students. In addition, KAFAR can act as a guide for instructors, highlighting their weaker areas, and inspiring them to improve. For all these reasons, KAFAR will be a tool to use in my own teaching, even if only with the result of illuminating the fact that inter-cultural understanding is complex and often difficult to achieve.

I envision this practice being applied to full class, small group, pair, and even individual activities. For this IPP’s imagined context of an oral and listening skills university class, I picture discussion activities being used for about one-third of the instructional time. These activities will be stimulated by the assignments that students

carry out in nature, outside of class. The discussions will be oriented toward building empathy and understanding, both within the human sphere and the biosphere, so that the widest possibility of solutions to ecological issues can be explored. In addition, I think that instructors could utilize the practice to inform the design of lessons and exercises used in writing and reading skills classes.

Cultural Framework

Adaptation of Moran's five dimensions of culture.

Building on the work of other scholars' who have tried to compartmentalize and identify the features that culture comprises, Pat Moran (2001) has developed an expanded framework for that same purpose. Moran's (2001) *The Five Dimensions of Culture* framework includes *persons*, the humans that carry out aspects of a society's common culture; *products*, objects which are utilized and/or made by the persons of that culture; *practices*, ways that the members interact alone or with each other, including ritualized behaviors; *communities*, the societal clustering of persons who engage in cultural actions within the context of their varied relationships to one another; and *perspectives*, the set of understandings, beliefs, reasons, values, and viewpoints that undergird the previous four dimensions and the way they link to one another (pp. 23-33). Since Moran (2001) associates his *perspectives* category with meaning, ideas, or knowledge, he designates that cultural dimension as implicit or unstated, while the other four dimensions are discernable and explicit to the observer. The beauty of this framework is that it is both a simple and complex structure, making it doubly useful. Its accessibility to the beginning student is apparent in the simple categories it utilizes, but as soon as the scholar of culture begins to explore one dimension, it becomes evident that each is connected inextricably

to the others. Moran (2001) sums it up through defining culture as, "...the evolving way of life of a group of persons, consisting of a shared set of practices associated with a shared set of products, based upon a shared set of perspectives on the world, and set within specific social contexts" (p. 24).

I see Pat Moran's (2001) framework as quite useful for the imagined contexts of this IPP in two pedagogical applications. First, I envision it as a foundation for promoting pro-environmental behavior in students for this project's ESL classroom context. That is, the framework should support students to articulate values, discover common purpose and objectives, as well as establish their own ground rules for how to effectively interact while engaged in activities that elicit divergent perspectives. Secondly, this framework can be adapted to provide a way for the classroom community to view themselves as members of the larger biosphere, with the purpose of enhancing that relationship. My conceptualization is that after the instructor introduces Moran's (2001) framework itself and explains possible applications for both teachers and students, the first half of the semester will be spent employing the framework as a tool through the lens of *communities* in order to build both class cohesiveness and peer empathy, along with cultural learning. For the second half of the class when the students have tailored the framework to their own comfort level, my thought is to suggest an expanded version of the structure, still through the same lens, situating the students in a much larger *community*. In fact, this is only one idea and instructors could decide for themselves how to use the different dimensions.

Application: First half of the semester.

Forming a community that comprises individuals.

The following learning experience would occur within the first week or two and be accomplished through communicative speaking and writing activities with contextualized grammar, vocabulary building, and discrete mini-pronunciation lessons. The end product would be added to the course syllabus and identified as the first cultural artifact (i.e. *product*) that our community produces as an expression of the classroom culture.

Looking at the framework through the viewpoint of students forming a *community* within the larger human sphere and built world, here are general starter questions for ongoing discussion activities that I imagine.

1. As a group of students and instructor, what would it take for each of you to feel that this is a community? Are there guidelines of how you would like to be seen or treated? Are you willing to respect and act in accord with how others want to be viewed or treated?
2. What brought you to this class? What are you hoping to receive from it? What will you contribute to it? Can you name some personal values that you believe will be pertinent to this community?
3. Can you articulate one or more shared purposes or objectives for the class as a community?
4. After discussing: Can we collectively write a document that outlines the critical information that we agree upon as a basis for our semester together?

Cultural beings within the community.

At this point, students would build on their initial work with Moran's (2001) structure by adding in new questions to elicit more specific and individual cultural exploration and learning regarding the natural world.

1. What are some cultural *practices* that you can think of, related to nature or to the human-nature relationship, that are familiar to you? Do you personally take these actions or incorporate the practices? What about others? When were they originated?
2. What are *products* from your home culture that you may be aware of, related to nature or to the human-nature relationship? Do you personally use these products? How do you use them and why? How do others use them? Who produces them?
3. What *perspectives* from your home culture are prominent in relation to nature or to the human-nature relationship? What perspectives are fundamental to the other dimensions already discussed? How do perspectives vary in different communities? What are the origins of these perspectives?
4. What attitudes, values, and language do *persons* from your culture express or possess in relation to nature or to the human-nature relationship? Are individual people influential to each other?
5. Do *communities* have attitudes or values related to nature or to the human-nature relationship? What are the different languages or linguistic features, including words, phrases, and slang that communities employ to describe

this relationship? Do people identify with community values and attitudes in lieu of their own individual values?

6. How do these different dimensions contradict or corroborate each other? What is the interplay? As an individual, how do you see your identity? What part does your home culture play in your individual identity? Does your identity change as you physically change contexts; for example, the relocation from your country of origin to the U.S.?
7. Are you starting to notice any *practices, perspectives, or products* that we as *persons* in a *community* are embodying, using, or producing? What are they?

Application: Second half of the semester.

By the second half of the class, students will be accustomed to applying the framework, and thereby will understand more about each dimension of culture. Additionally, they will have reflected on how interlinked the dimensions are and will depend on the framework as a way to engage difference, and see difference as advantageous. If this occurs, the students will develop a strong sense of being part of a (classroom) community as they begin the second half of the curriculum.

At this point, our small community will be ready to place themselves in a larger circle; rather than the human sphere, we can conceptualize our classroom as part of the biosphere that contains non-human species along with elements consisting of living and also inanimate constituents such as air, water, and earth.

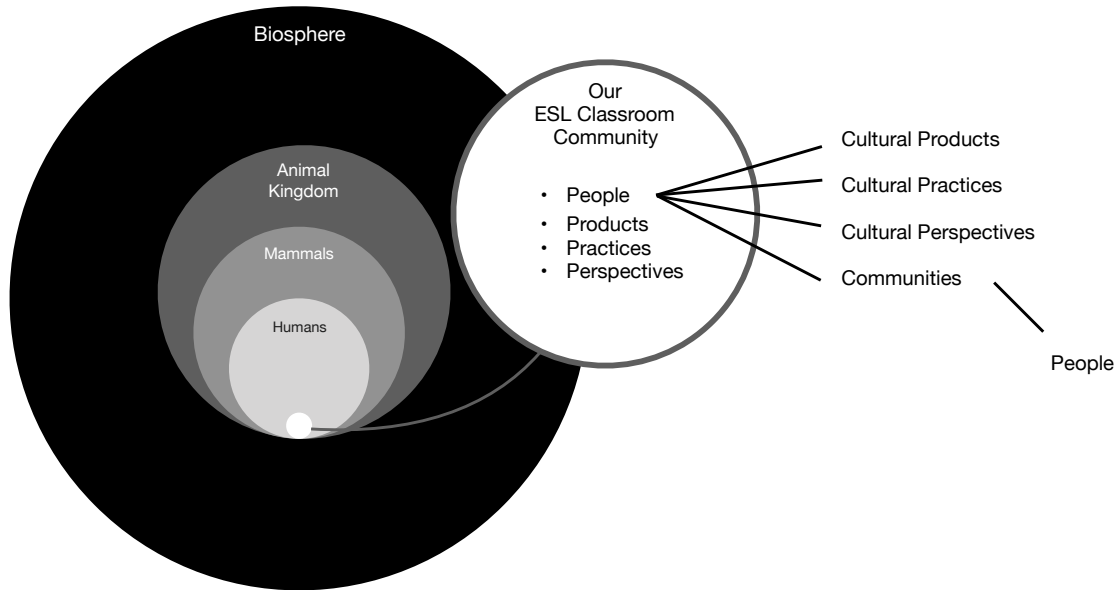


Figure 2. Moran's Adapted Five Dimensions of Culture. Cultural dimensions situated in the ESL classroom *community* (small circle; first segment of curriculum)/ The classroom situated in the greater *community* of human beings within the biosphere (large circle; second segment of the curriculum) which contains multiple other communities of species.

For this expanded focus during the second half of the semester, I initially imagine the students learning in the classroom about other species through stories and data related to current research on animal and plant behavior, and subsequently, spending extracurricular time in nature. These short assignments may be specific observation exercises as well open-ended and structured writing activities that aim to enhance students' awareness of their relationship to other species. This will be effected through

the students' observations of their natural surroundings while simultaneously observing their own feelings and responses to nature. Again, at this point, cultural *perspectives* can be elicited, but the more prominent focus will be to evoke shared perspectives that derive from being members of the same species in the animal kingdom.

These assignments, providing both internally-based knowledge as well as factual scientific data via the application of theories in systems thinking, writing personal narratives and poetry, conducting field work, reading journal articles, and listening to stories about nature will be a point of departure for students' in-class discussions. The expanded framework will also assist as a basis for new themes and ideas to continue the exchange of novel ways to envisage the human-nature relationship and to build connection. In addition, this framework could scaffold the class' delving into language and lexicon as a way to articulate newly felt emotions, insights, and awareness, as recommended by Carol Saunders (2003). Daniel Wahl (2016) also exemplifies this usage of unconventional words and phrases throughout his entire work, *Designing Regenerative Cultures*, to convey experimental ideas in relation to humanity's position in nature. Examples include *re-indigenize*, *inter-being*, and *life-friendly* (2016).

Similarly, an example of novel ways to explore humans in nature can be found in the article called "Legal Rights for Lake Erie? Voters in Ohio City Will Decide" by T. Williams (2019). Williams (2019) relays the story of Ohio's recent pioneering ballot proposal which introduces the concept that a non-human entity "has a legal right 'to exist, flourish and naturally evolve'" (para. 2) and can be defended legally against those who defile it. The question of whether "...a body of water be given rights normally associated with those granted to a person?" (2019, para. 1) is salient since established environmental

laws seem, over time, to be failing to make the strides needed for a thorough cleanup of Lake Erie. This notion is unorthodox, but its inclusion on an American voting ballot rearranges the position of humans in nature as not simply the beneficiaries and/or consumers of natural entities, but as just one of the species that shares a vast and interdependent ecosystem with other species. It is interesting to consider what types of new lexical items might derive from this novel viewpoint.

Although students will be constrained by their *Homo sapiens* perspective, if they can conceive their classroom *community* as one tiny constituent of the human species within the order of primates which are a subset of the mammal class within the animal kingdom, then the following discussion questions might lead to new perspectives.

1. What are other *communities* that exist within this larger biosphere? Are they only social groups or whole species? Can humans identify all of them?
2. Although these communities may not be composed of *persons*, can we adapt Moran's (2001) framework and employ another term such as *members*? How do members participate in their diverse communities?
3. And do these members produce either abstract or concrete objects that could be likened to *products*? What is the purpose of these products? To whom do the items or products belong, and how is that decided?
4. Is there an equivalent of Moran's (2001) practices for non-human individuals? What do other animals and plants do regularly as part of their species' "culture"? Could involuntary occurrences such as shedding leaves or reproducing be viewed as rhythmic behaviors that are practices of a sort; similar to ritualized cultural practices that humans enact?

5. In terms of *perspectives* as the tacit concept of ideas or meaning that propel members of communities to use and make products and perform practices, do other species assign meaning in the same way as humans? How can we know? And if not, could biological directives or perhaps, biological instinct, substitute for the so-called meaning behind non-human products and practices?

These are a few example queries to stimulate robust class discussions and progress into additional engaging assignments that will begin to impact changes in students' environmental behaviors.

Musings for Future Development

In accordance with the theoretical background data and as this context has been conceptualized, the imagined ESL course aims to promote inter- and intra-species connection, self-awareness, intercultural knowledge and ultimately, action. Moving forward, there are endless possibilities and I hope this project will act as inspiration and a platform for other teachers' ideas.

Firstly, for this type of course I anticipate a robust oral and listening skills component that addresses grammar and vocabulary in a contextualized approach, but also through explicit instruction when called for. For this aspect I would hope to use class and small group discussions as well listening, reading and watching stories and documentaries related to nature. This will not only increase science knowledge but also at the same time engage the students through the medium of story. An example might be resources found on websites such as <https://www.npr.org/tags/137305685/animals> or publications like *Animal Wise*, a book of essays by Virginia Morell. Grammatical features such as conditionals, verb tense and modals would all be appropriate topics for activities

related to the aforementioned input. Language for comparison of past, present and future realities as well language to imagine future possibilities will be useful. In addition, descriptive language will be needed to enhance students' outdoor participation and observation experiences, and will add nuance to expressions of personal insight. Using scientific language also will add a rich element, thus increasing vocabulary and scaffolding students' ability to understand what they read or hear in the media. Both descriptive and scientific language will give students the ability to explain and persuade through their speaking and writing skills; and in order to call others to action, pragmatic knowledge will be needed to develop the language, e.g. modals and phrases, for diplomacy.

In terms of generating new language for the students' blossoming intercultural and self-awareness, I see value in exploring of English language roots, suffixes, affixes as a way to invent new words. This alludes to the recommendations of several scholars that language must be improved in order to demonstrate and improve humanity's relationship to nature. In addition, the book *Designing Regenerative Cultures* by D. Wahl (2016) contains many useful novel concepts and the consequent language to express those concepts. This book, in abridged sections, would be an excellent tool for inspiring class discussion activities.

When considering class activities in nature, I think it may be challenging to find ways that students can engage and be involved; I invite other teachers to develop and share their own ideas. One thought I had was to encourage various activities while in outdoor settings; for example, writing poems, sports or exercise, socializing, gathering empirical data, journaling, or even observation exercises such as bird watching. In

relation to observing one's surroundings, spending time outside is critical for expanding students' capacity to maximize what and how much they notice. Several scholars in the literature mentioned this act of perceiving. In addition, in order to ameliorate the factor of delayed feedback loops, building routines of regular outdoor exposure, over a period of time, may amplify a student's accuracy in the conclusions they make about their observations.

Lastly, the article called "Three Horizons: the patterning of hope" (2015) describes a framework or practice, developed by Bill Sharpe and others at the International Futures Forum (IFF). This framework appears to be highly adaptable and shows promise as a potential tool for teachers in multicultural contexts. According to Sharpe (2015), the Three Horizons is a structure or framework that utilizes systems thinking for transformational change when the challenges that impede that change are deeply interwoven and complex. Through applying the three lenses of *present awareness*, *transition awareness*, and *future awareness*, this framework guides people to integrate and value what is occurring in the present while simultaneously supporting their vision of what could be in the future. It is particularly apropos for groups of diverse participants who want to create change through working together by confronting difficult obstacles while recognizing potential assets and aspirations; and to acknowledge both the unknown and known factors in a situation (2015). In writing this paper and imagining the possibilities, I found the book called *The Three Horizons: The Patterning of Hope* by Bill Sharpe (2013) to be extremely useful. In terms of application, the Three Horizons framework has been implemented by multiple organizations, governments and

communities in the arenas of farming, healthcare, education, broadcasting, and climate change (Sharpe, 2013, pp. 59-86).

For instructors who are interested, the IFF website explains the Three Horizons concept, and provides free games, kits, and materials for groups that want to utilize it (<http://www.internationalfuturesforum.com/>). As well, the website contains abundant additional information, including other activities and games related to helping society, businesses and organizations find ways to communicate clearly and take action even in challenging situations.

Reflections: Unclear Outcomes, Community and How to Fight

“To be creatures who love, we must be creatures who despair at what we lose”
(Solomon, 2001, as cited in Cunsolo, 2017, Prologue).

For me, beginnings are anxiety producing, especially when the outcome is uncertain, and the pathways unclear. This is the primary insight I’ve gleaned through embarking on this IPP journey. Fortunately in regard to beginnings, I also have discovered a counterbalance to that uncertainty which allows me to move forward given the fact; and that is, *community*. Within the fields of environmental literature, journalism and the Academy, the number of voices expressing thoughts I had believed to be my own has provided me an unexpected pleasure. While I admit that echo was initially a bit unnerving when trying to write an “original paper,” it later became empowering—providing solace and guidance when I faltered or began to succumb to emotional fatigue and despair from reading the climate change statistics reports.

On a related note, the second truth of this experience stems from being a human mammal, replete with a finely tuned flight or fight response. I’ve come to see how difficult, and simultaneously satisfying it is to write an academic paper regarding topics

in which I am personally emotionally invested. This project has shown me how deeply attached I am to life on this planet, non-human life as well as my own; and perhaps like many of us humans, I am not one to give up easily or be fatalistic.

While writing this paper, I have shifted back and forth between that human tendency to think too positively, sinking back into apathy and believing all “will be okay,” and my primal emotions of fear and hopelessness when confronting climate change and biodiversity loss data. I now realize that I am not alone in this struggle; I share it with many, many global citizens also alive at this moment in history. We are all trying to come to terms with “the inconvenient truth” of the impact of our own human actions on our own ecosystem.

I have spent enough time reading, writing and absorbing; it is time now to take action.

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