

PHILOSOPHICAL ORIENTATION TO ADULT LEARNING:  
A DESCRIPTIVE STUDY OF MINNESOTA ENVIRONMENTAL EDUCATION  
PRACTITIONERS

THESIS

Presented in Partial Fulfillment of the Requirements for  
The Master of Education in Environmental Education in the  
College of Education and Human Service Professions

By

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University of Minnesota Duluth  
2009

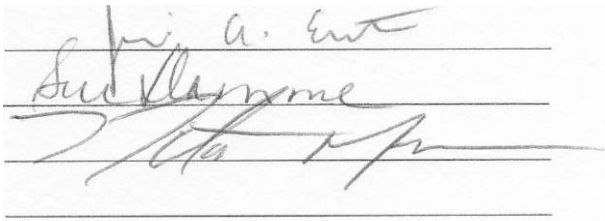
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## ABSTRACT

Adult education and environmental education (EE) are well-established, separate fields whose intersection requires further research and understanding. To reach the adult audience, EE practitioners throughout the state of Minnesota offer adult EE programs that work toward a variety of EE's goals. This study explored the adult education philosophical orientations of Minnesota EE practitioners using The Philosophy of Adult Education Inventory© (PAEI). As a result, this study also addressed the relationships of adult education philosophical orientation to position, training, and experiences of EE practitioners. Results inform EE practitioners' strategies for designing and delivering adult EE programs.

## ACKNOWLEDGEMENTS

I sincerely thank my committee members, Julie Ernst, Sue Damme, and Nate Meyer. I have come to see that it takes an entire professional community to raise a graduate student, and your well-balanced perspectives and valuable feedback helped me achieve that for which I entered graduate school.

Thank you to Frank Maragi for successfully emerging with me from our joint graduate school endeavors; we did it! As Sigurd Olson wrote, we are sitting quietly on some high lovely place.

My appreciation and gratitude to Karen and Brian Zoellick for being exactly the parents you have been. Your immense love, support and pride permeate everything I have done.

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## CHAPTER 1

### INTRODUCTION

#### **Background**

Understanding how values and beliefs about education influence teaching can make one a better educator. Adult educators are one group of educators whose personal philosophies of education have been shown to influence their teaching (Apps, 1976; Elias & Merriam, 1995; Zinn, 1998). The literature suggests that specific groups of adult educators, such as Extension educators, trainers in business and industry, and agricultural education teachers, show trends in their philosophical orientations to teaching (Boone, Gartin, Wright, Lawrence & Odell, 2002; Roth, 1987; White & Brockett, 1987). Adult environmental education (EE) has emerged as a focus within the field of EE. Identifying the adult education philosophical orientations of EE practitioners can increase understanding of and improve teaching approaches to this audience.

Adult EE has a growing role in society. Since the emergence of EE almost 40 years ago, school children are often the target audience for EE programs (Marsden, 1997). The children to whom this EE programming has been delivered now have the opportunity to participate in environmental decision making as adults; certainly this is one of the long term goals of EE. These generations that now comprise a group of the nation's adult learners must be remembered when designing EE programming. In addition to the adults who participated in EE in their formal P-12 schooling, there also are



adults who have been exposed to environmental issues outside of the formal education system. Coyle (2005) asserts that adults have a high level of interest in and basic awareness of the environment. Also, we see individuals, families, and communities showing greater recognition of their environmental impact. Along with a greater interest in the environment, adults are seeking more learning opportunities. Additionally noteworthy are reports that the number of senior citizens is growing, and retirees are seeking meaningful opportunities to continue learning in a non-formal setting, offer their time by volunteering, and participate in community leadership opportunities (Schultz & Galbraith, 1993). Thus, all adults can be considered a potential audience for EE.

There is much support for adult EE coming from organizations and publications, and indeed a call for adult EE programs. In an international context, UNESCO (1999) reported that adult EE moves beyond creating understanding and awareness, and aims at developing skills, creating a sense of commitment, and stimulating individual and collective action. International adult EE efforts have focused on issues of social justice, disenfranchised communities, and direct and indirect physical impact the environment has on those who are the most threatened by potential environmental hazards (Clover, 2003). On a national level, adult EE is recognized as one part of holistic EE.

Organizations such as the North American Association for Environmental Education are growing to support adult EE in the context of professional, community, and recreational opportunities in addition to the P-12 audience (MOEA, 2008). Adults are being recognized by agencies, organizations and their respective publications regarding EE guidelines as a potential, yet largely untapped, audience for EE efforts.

Despite the potential of this adult audience, statewide EE efforts remain largely focused on K-12 classrooms (Elder, 2003; Murphy, 2008). Studies have begun to report barriers that prevent organizations from developing or providing adult EE programs. These include barriers such as the following: adult interests link to scenic beauty and recreation rather than organized learning experiences; lack of funding for adult programming; challenges in marketing to and recruiting adult participants; low cost-benefit; challenges within the organization; a lack of experienced staff; and competition for adult participants' time and money (Ballantyne, Connell & Fien, 1998; Markle, 2008; Skylander, 2005). EE facilities like environmental learning centers and nature centers tend to avoid adults in their target audiences and are often uninformed on adult learning theory (Skylander, 2005).

Although many barriers have been documented, there are also significant motivations for offering adult EE programming. The National Institute of Adult Continuing Education (1993) lists several reasons for providing adults with the opportunity to become environmentally literate. These include the following: insufficient time to wait for younger generations to mature before environmental action is taken; EE must be lifelong; understanding of environmental issues changes over time; adults must change if the EE of children is to have credibility; and environmental change requires engagement of the widest possible range of people. EE providers can tap this audience to enhance their programming and ultimately to assist in the widespread awareness of and participation in environmental citizenship.

Underlying any adult educational program are philosophies of adult education. Adult education as a field of practice and study exploded in the 1960s with the theories

and research of Malcolm Knowles, who is often referred to as the father of adult education (Merriam, 2001). Along with this new approach and way of thinking about adult education came much contemplation and debate surrounding the ultimate purposes of adult education as well as the philosophical approaches to it (Elias & Merriam, 1995). While titles of philosophies can be synonymous with one another, Elias and Merriam (1995) identified and described what they considered the five philosophies of adult education, which are liberal, progressive, behaviorist, humanistic, and radical. Within the descriptions or profiles of these five philosophies are the philosophical foundations of adult education, as well as roles of the teacher and learner according to the philosophy, methods and key concepts embodied by the philosophy, and examples of programs that demonstrate that philosophy (Elias & Merriam, 1995).

In working with adult audiences, EE practitioners stand to benefit from clarifying their values and beliefs regarding adult education. This can result in better understanding and communication, improved working relationships among coworkers, more effective planning and decision making, and a better fit between the adult educator's purposes and the needs of the adult learner (Zinn, 1998). To clarify beliefs relating to adult education, the Philosophy of Adult Education Inventory (PAEI) was developed by Lorraine Zinn in 1983. It is designed to help adult educators begin a process of philosophical inquiry and reflection on beliefs and actions. Identifying one's own philosophical orientation using the PAEI identifies the individual's main adult education philosophy as liberal, behavioral, progressive, humanistic, or radical. Within each of these main philosophies are descriptions of: purpose of adult education, learners, teachers, concepts/key words, methods, and people/practices (Zinn, 1998). Results from taking the PAEI provide

valuable information on several aspects and underlying beliefs related to philosophical orientation.

McKenzie (1985) found that a relationship existed between adult educators' philosophical orientations and their experiences as educators in different adult education contexts. A study exploring the adult education philosophical orientations of environmental education practitioners has not yet been conducted. Zinn (1998) states,

It is up to you to decide how your beliefs may influence your decisions and actions as an educator, and how your personal educational philosophy may be well suited, or perhaps not the best match, for the educational setting in which you work. (Zinn, 1998, p. 72)

By facilitating a broad study utilizing this instrument, rather than one individual taking and self-scoring the PAEI, more extensive knowledge can be gained about EE practitioners and what trends they may display in their philosophical orientation. A greater comprehension of EE as a field can be reached as EE practitioners identify their philosophical orientations to adult education.

### **Research Question**

What are the adult education philosophical orientations of Minnesota environmental education practitioners?

### **Definitions of Terms**

#### *Adult Education*

Activities intentionally designed for the purpose of bringing about learning among those whose age, social roles, or self-perception define them as adults (Merriam & Brockett, 1996).

### *Environmental Education*

A process aimed at developing a world population that is aware of, and concerned about, the total environment and its associated problems, and which has the knowledge, attitudes, skills, motivation, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones (UNESCO, 1978).

### *Adult Environmental Education*

Any course, workshop, training, seminar, lecture, demonstration or combination of these that is designed specifically for adult audiences to promote learning or taking action concerning the environment (Clover, Follen & Hall, 2000).

### *Environmental Education Practitioner*

For the purpose of this study, an environmental education practitioner is a professional who works within EE's framework and toward EE's goals; the term practitioner includes both those in program director roles as well as those in front-line environmental educator roles.

### *Philosophical Orientation*

The philosophical foundation(s) an individual associates with, according to identification and categorization of their beliefs, values, and attitudes (Elias & Merriam, 1995; Zinn, 1998). In this study, philosophical orientations will be in relation to adult education.

### **Significance**

From this study, trends or patterns about the ways Minnesota EE practitioners approach adult education emerged based on what subjects report as their amount of experience working with adults, formal training in adult education, and position. Zinn

(1998) states, "Sometimes it is difficult to take time out from 'doing' adult education, in order to think about *why* you do what you do" (p. 54). This is important to the field of EE because individuals, organizations, and the field itself may more fully understand and reflect upon their teaching philosophy by identifying their philosophical orientations to adult education; this can lead to better program design and delivery, staff unity, adherence to an organization's mission, and progress toward accomplishing the overarching goals of EE.

The Philosophy of Adult Education Inventory (PAEI) was used with EE practitioners to identify their adult education philosophical orientation. Identifying the underlying perceived purposes and intended outcomes of adult education, program planning, teaching methods, and characteristics of adult learners helped reveal the philosophical approaches of EE practitioners in Minnesota. This knowledge can be used to assist environmental learning centers in staff development and teaching methods appropriate for adult EE as well as the development of future programs for adults. Further, this topic has not been studied. A considerable body of literature exists on the utilization of the PAEI with various groups of adult educators, but there has been no investigation into the philosophical approaches of those who design and deliver EE. This research provides a better understanding of the philosophical orientations underlying EE practitioners' approach to adult education. It essentially provides a snapshot of how current EE practitioners think about working with adults.

### **Limitations**

1. The study population is limited to EE practitioners in Minnesota. The results of this study apply only to the respondents and should not be generalized to all EE practitioners.

2. The results are in essence perceptions of respondents; what they say they do or believe (espoused theory) may be different from what they actually do or believe (theory in use). Thus, the results may actually shed light into espoused theory, rather than theory in use.

### **Assumptions**

1. Adults are an appropriate and necessary audience for EE.
2. There is a need for greater intentionality in adult EE programs among EE practitioners.
3. Knowing one's philosophical orientation to adult education can foster this intentionality.

## CHAPTER 2

### LITERATURE REVIEW

The following chapter presents a review of the literature related to adult environmental education. This review justifies the importance of investigating adult EE program design and delivery based on adult education philosophical orientation. The literature suggests that links between adult learning theory and EE can be made, but adult education philosophical orientations of EE practitioners remains to be studied.

#### **Adult Education**

Adults may define themselves as such in a variety of ways. Smith (1999) states that in addition to age, an adult may see him/herself as an adult because of biological or legal state (post-puberty or over 18 years old), psychological state (self concept of adult), or forms of behavior or social roles such as being a full-time employee or a parent. As early as the 1920s, researchers, theorists, and educators felt the need for an alternative to pedagogy in relation to teaching adults (Knowles, 1973; Smith, 2002). Malcolm Knowles introduced the concept of andragogy in 1970, developing and revising it throughout his career. Andragogy has been hailed and criticized for its differentiation between child and adult learners (Smith, 2002). Despite this, adult learning theories have extensively developed from the concept of andragogy, as described next.



From learning theory to delivery methods, the field of adult education has developed substantially since the 1980s (Cranton, 1994). Because adults are no longer required to attend school, adult learning is considered voluntary, even when an adult is participating in a higher education program. Thus, the range of educational goals and settings for adult learners is vast. Voluntary participation does not necessarily imply that the learner is motivated and enthusiastic. In addition to it being voluntary, adult learning is also considered self-directed and practical (Cranton, 1994). However, "self-directed" means that adults can direct their own learning only once they have the skills to engage in it (Knowles, 1980). Other characteristics include being participatory and involving a sharing of experiences and resources.

Habermas (1971) and Mezirow (1991) each identified three domains of knowledge and learning in relation to adults. Technical knowledge (instrumental) involves cause and effect relationships in the environment. Practical knowledge (communicative) involves understanding what others mean, which includes understanding social norms, values, and political concepts, as well as making ourselves understood. Lastly, emancipatory knowledge (transformative) is reached through critical self-reflection.

Cranton (1994) offers three similar but alternative types of adult learning: subject-oriented, consumer-oriented, and emancipatory. Subject-oriented is related to content being learned, which includes facts, skills, and problem-solving strategies. In this type of learning, learners turn the decision-making over to the expert. Consumer-oriented learning involves the consumer expressing a need to learn, turning to an educator to help, and learning while making each decision him/herself. The last type of adult learning is

emancipatory learning. As Mezirow (1991) describes, "emancipatory knowledge is gained through critical self-reflection, as distinct from the knowledge gained from our 'technical' interest in the objective world or our 'practical' interest in social relationships" (p. 87). According to Cranton (1994), emancipatory learning ultimately involves changing behavior or taking action based on changes that have occurred within the learner. She continues:

Clearly, emancipatory learning cannot be the single or even the most common objective of adult education. Little of what adults want to and need to learn involves revisions to basic assumptions and beliefs or transformations of perspective... On the other hand, if we view education as the means by which individuals and societies are shaped and changed, fostering emancipatory learning is the central goal of adult education.  
(p. 19)

Stein (1998), a proponent of situated learning, lists content, context, community, and participation as the components of adult learning. Cognitive apprenticeship is also a main feature of situated learning, in which the learners observe cognitive processes of others, apply it, and reflect on its relation to the situation (Stein, 1998). Contextual learning is another significant adult learning theory. The premise of this adult learning approach is that the individual life contexts of the adult learners will inform the design and delivery of the learning situation (Camozzi, personal communication, September 25, 2008; Imel, 2000). In addition to learning types, the characteristics of adult learners, educators, and programs are essential in understanding adult education.

Adult learners possess several characteristics, which may include the following: they can be self-directed; learn more when their experiences are acknowledged and utilized; must be physically comfortable; are influenced by self-concept; are motivated to learn by practical needs but not always able to articulate them; experience stronger

emotions than children when learning; have strong time perceptions; have problem-solving abilities based on life experience; have a variety of learning styles; and, like children, have developmental and transitional points in life (Brundage & MacKeracher, 1980; Camozzi, 1994; Knowles, 1980).

Characteristics of adult programs have also been documented. Quality adult programs are characterized by the following: content appropriate to learner needs and related to the learner's job or life; program elements within the educator's range of competence; a flexible schedule; clear goals and formatting; a comfortable learning environment; time allowed for climate-setting; appropriate materials and methods; components that challenge and encourage the learners' personal development (Andrews, Camozzi, & Puntteney, 1994; Cross, 1981).

Characteristics of adult educators have also been identified. Successful adult educators perform the following: effectively facilitate learning; authenticate participation and the reflection process; raise challenging questions; value diversity, local action, and social change; engage in critical reflection; engage the adult participants as co-inquirers; present material clearly and emphasize relevance; are enthusiastic and motivating; and keep their power and control in check (Imel, 1995; Larson, 2004; Yorks, 2005; Zemke & Zemke, 1984).

### *Adult Education Philosophy*

An adult education philosophy, or philosophical orientation, is the categorization of an individual's beliefs, values, and attitudes toward adult education and what the purpose and outcome of adult education should be. The following are descriptions of

five adult education philosophies identified, researched, and defined by Elias and Merriam (1995).

### Liberal

The liberal adult education philosophy stresses the development of intellectual powers. Liberals always seek knowledge. They work to transmit knowledge and clearly direct learning. The educator is the "expert", and directs the learning process with complete authority. Learning methods used include lecture, study groups, and discussion. Socrates, Plato, and Piaget were practitioners of the liberal philosophy. (Note: Liberal adult education does not refer to liberal political views; it is related to Liberal Arts.). According to liberal adult education, "the educated person possesses the four components of a liberal education: rational or intellectual education which involves wisdom, moral values, a spiritual or religious dimension, and an aesthetic sense" (Elias & Merriam, 1995, p. 26). Liberal adult education emphasizes liberal learning, organized knowledge, and the development of the intellectual powers of the mind. It also stresses philosophy, religion, and the humanities over science. The teacher is given a prominent place within this philosophy, and must be well-versed in many intellectual interests. Liberal adult education employs heavy promotion of theoretical thinking. This philosophy is suited for adult learners because it requires life experience in order to fully gain from the reflection and contemplation involved in liberal education's goals. To illustrate the significance of this philosophy, Elias and Merriam (1995) write:

As long as the human person does these things [searches for truth, desires to develop their moral character, strives for spiritual and religious visions, and seeks the beautiful in life and nature], the liberal tradition in education will be a potent force. (p. 42)

## Behaviorist

A major tenet of behaviorism is the belief that "all human behavior is the result of a person's prior conditioning and is determined by external forces in the environment over which a person has little or no control" (Elias and Merriam, 1995, p. 79). Because behaviorism fundamentally aims toward individual and societal survival, emphasis is put on skill acquisition and learning how to learn. Thus, the teacher must create an environment that is optimal for bringing about behavior that ensures survival. The behaviorist adult education philosophy emphasizes the importance of the environment in shaping the learner. The traits of the behaviorist teacher are close to those of the liberal, in that the behaviorist "manages" the learning process and directs learning. Behaviorist concepts include mastery learning and standards-based education. Some teaching methods used by behaviorist educators include programmed instruction, contract learning, and computer guided instruction. Learners are active and able to demonstrate a measurable, learned behavior. Accountability is an important concept in behaviorism and punctuates that teachers and learners are both accountable for successful learning. Behaviorism is strong in setting clearly defined purposes, learning objectives, and in selecting experiences that work toward those purposes and objectives. Evaluation is valued in assessing the attainment of the behaviors being taught. Vocational training and teacher certifications are both behaviorist practices. Skinner, Thorndike, and Steinberg were believers in the behaviorist philosophical tenet.

## Progressive

The power of progressivism runs deep in American adult education, as stressed by Elias and Merriam (1995): "Progressivism has had a greater impact upon the adult

education movement in the United States than any other single school of thought" (p. 45). The progressive philosophy of adult education stresses an experiential, problem-solving approach to learning. Like behaviorism, progressivism sees the goal of education being individual and societal. However, the goal of progressive education is improvement rather than survival, which is achieved through liberating the learner. There are five basic principles of adult progressive education. The first is a broadened view or concept of education, meaning that education is not restricted to formal, classroom instruction but is a lifelong process influenced by many sectors of society and daily life. The second principle is a new focus on the learner and the potential of that person to learn more than his or her immediate interests. The third principle is the introduction of new instructional methodologies. Diversifying these teaching methods in turn diversified learner knowledge gained by learning from those methods. The fourth principle is a new teacher-learner relationship that is interactive and reciprocal. The fifth principle is that education is an instrument for preparing learners to change society. Learners of this philosophy need problem solving skills and practical knowledge. They learn by doing, inquiring, being involved in the community, and responding to problems. Teaching methods used in this philosophy include problem solving, the scientific method, and cooperative learning. The educator is an organizer who guides learning instead of directing learning and evaluates the learning process. Progressive proponents include Spencer, Dewey, and Lindeman.

### Humanistic

Humanistic education aims at the development of people who are open to change and continued learning, people who strive for self-actualization, and people who can live

together as fully-functioning individuals. The humanistic philosophy of adult education follows some basic principles such as the following: human nature is naturally good; freedom and autonomy influence behavior; individuality and potentiality are unlimited and should be nurtured; self-concept leads to self-actualization; perception of the world explains behavior; and individuals have a responsibility to humanity. Foundations of humanistic education lie in the following: the notion of self-concept; that the adult defines himself in terms of the accumulation of a unique set of life experiences; that an adult's readiness to learn is linked to developmental tasks unique to a stage in life; and that adults desire an immediate application of knowledge. The humanistic adult education philosophy seeks to facilitate personal growth and development. Humanists are highly motivated and self-directed learners; responsibility to learn is assumed by the learner. The humanist educator facilitates learning but does not direct learning.

According to Elias and Merriam (1995), "Humanistic adult educators are concerned with the development of the whole person with a special emphasis upon the emotional and affective dimensions of the personality" (p. 109). The educator and learner are "partners." Concepts that define the humanistic philosophy include experiential learning, individuality, self-directedness, and self-actualization. Humanistic teaching methods contain group discussion, team teaching, individualized learning, and the discovery method. Rogers, Maslow, Knowles, and McKenzie are facilitators of the humanistic philosophy.

### Radical

The radical adult education philosophy promotes extreme social, political, and economic change through education. Radical education does not work within existing

social norms or structures, but strives to change those structures. Within this philosophy, the educator and learner are equal partners in the learning process. The educator is the coordinator of the class and makes suggestions but does not direct the learning process. This philosophy embraces concepts such as noncompulsory learning and deschooling. Exposure to the media and people in real life situations are considered effective teaching methods. Holt, Freire, and Illich are proponents of the radical adult education philosophy. Radicalism falls outside the realm of mainstream adult education philosophy, mainly because the purposes of many adult education activities are not parallel with the purposes of radical adult education.

#### *Identification of Adult Education Philosophical Orientation*

Using these five philosophies of adult education as a framework, Dr. Lorraine Zinn (1983) developed a questionnaire with the purpose of identifying one's adult education philosophical orientation. This survey instrument is titled Philosophy of Adult Education Inventory and utilizes a numerical scoring rubric that leads to identifying a dominant philosophy from the five. Once a numerical score is reached and a dominant philosophy is identified, a chart provides a description and interpretation of the five philosophies so as to offer information to the individual regarding his or her dominant philosophy.

#### *Adult Education Philosophical Orientations of Other Professionals*

Several studies utilizing the PAEI have been conducted with various groups of adult educators. In most of these cited studies, comparisons were made among demographic or professional groups within the studies' subjects. Age, sex, training, experience, position, and pay rate were common comparisons. The following are overall



dominant philosophies that emerged from these studies. Price (1994) found that Cooperative Extension Service field agents in various specialty areas had a most dominant philosophy of progressive, followed by humanistic, behavioral, radical, and finally liberal. Carson (1985) found that continuing educators had a progressive dominant philosophy, and Gago (1985) found that four categories of adult education providers had a most dominant philosophy of progressive. A study of philosophical preferences among human resource professionals used an instrument modeled after the PAEI and found that the humanistic philosophy was dominant among respondents (Ihejieta-Aharanwa, 1990). McKenzie (1985) reported that trainers in business and industry and adult education graduate students had liberal, behavioral, and progressive philosophies, while religious educators had humanistic and radical philosophies. In a study using the PAEI with agricultural education teachers, the progressive philosophy was most dominant (Boone, Gartin, Wright, Lawrence, & Odell, 2002).

Among many professions and throughout many studies, philosophical orientations to adult education become known through use of the PAEI or similar instruments. In the context of adult education, philosophical orientations revealing the values, beliefs, and attitudes of educators working with adults can inform and contextualize additional studies on adult education philosophical orientation.

### **Environmental Education**

The term 'environmental education' has many definitions, affiliations, and associations. In order to assess adult EE programming being offered in Minnesota, it is necessary to compile characteristics of what 'good' adult EE looks like. This section attempts first to identify characteristics of quality EE.

In 1975, United Nations representatives met in the former Yugoslavia for the United Nations Educational, Scientific and Cultural Organization (UNESCO) conference to define EE and establish basic objectives. The Belgrade Charter was unanimously adopted at this conference, providing a widely accepted goal statement for EE.

According to the Belgrade Charter (1975), the guiding principles of EE programs are that they should: consider the environment in its totality; be a continuous life-long process; be interdisciplinary; emphasize active participation; examine major environmental issues from a global and regional perspective; focus on current and future environmental situations; examine all development and growth from an environmental perspective; and promote the value and necessity of local, national, and international cooperation in the solution of environmental problems.

Ultimately, EE aims toward environmental literacy (Roth, 1992). Through the goal of creating an environmentally literate citizenry, EE aims to develop an informed and action-taking public (Disinger & Roth, 1992; Roth, 1992). Coyle (2005) identifies the three environmental literacy levels as environmental awareness, personal conduct knowledge, and true environmental literacy. Roth (1992) identifies three similar levels: nominal, functional, and operational. The first level involves general environmental awareness and the identification of basic terms and rough definitions of their meanings. The second level indicates a broader knowledge of human and natural interactions, as well as limited willingness to weigh personal decisions in relation to the environment. The third level involves deep understanding, skills, and action. Environmental literacy can be gauged by four components: knowledge, skills, affects (environmental sensitivity and attitudes and values), and behaviors (personal investment and responsibility and

active involvement) (Disinger & Roth, 1992; Roth, 1992). Furthermore, environmentally literate individuals have the following: environmental knowledge; environmental attitude and sensitivity; problem solving skills, planning and collaborative/facilitative skills; action strategies; and the ability to take action to improve the environment (Roth, 1992). This aligns with objectives of EE as well, which are knowledge, skills, attitudes and behaviors.

While EE strives to educate and empower participants in order to build environmental literacy, environmental advocacy promotes a specific course of action. Therefore, EE does not attempt to make people do what the educator wants them to do (or think, or believe), but it does educate about various viewpoints and options with the goal of behavior change (Jickling, 2003).

Regarding the behavior component of environmental literacy, Hungerford and Volk (1990) noted that educators are able to change learners' behaviors when they do the following: teach environmentally significant ecological concepts and the environmental interrelationships that exist within these concepts; provide carefully designed and in-depth opportunities for learners to achieve some level of environmental sensitivity that will promote a desire to behave in appropriate ways; provide a curriculum that will result in an in-depth knowledge of issues; provide a curriculum that will teach learners the skills of issue analysis and investigation as well as provide the time needed for the application of these skills; provide curriculum that teach learners the citizenship skills needed for issue remediation as well as the time needed for the application of these skills; and provide an instructional setting that increases the learner's expectancy of reinforcement for acting in a responsible way.

## **Adult Environmental Education**

Currently the United States is experiencing a reemergence of the recognized social, economic, and educational value of EE (Venkataraman, 2008). Likewise, the environment is becoming a frequent topic of reporting and concern in many segments of professional and private life of citizens across the country and throughout the world (Williams, 2008).

The public receives EE in several ways. Many children experience EE at school. Children often transfer their environmental knowledge to their parents, who are in turn more environmentally aware if not environmentally educated. Non-formal and formal EE programming is being targeted specifically toward adults. Media sources provide programs and highlights that expose the public to environmental information and news. Facilities, careers, and products are developed with regards to environmental interest or impact. As the public becomes more aware of the environment, educational programming must be developed to address this awareness. The Tblisi Declaration states that EE should cater to all ages and socio-professional groups in the population, and that it should be a continuous lifelong process (UNESCO, 1978). As exposure to EE continues to grow with each new generation, it must develop effective adult programming through its methodology and innovation.

Adult EE is a potentially empowering and viable facet of EE programming. But despite a growing national public awareness of environmental issues and impact and the clear behavioral objectives of EE, adult EE programs tend to be focused on teaching natural history or outdoor skills rather than critical thinking and decision making. Simmons (1991) states that the goals of nature and environmental learning centers reflect

certain purposes and philosophies that guide the development of their programs and services. An organization's approach to adult EE reveals what it believes the purposes of adult EE to be. Further, Markle (2008) states:

Organizations need to be supportive of adult environmental education. This may be depicted in a site's mission, goals, vision, and overall support of initiatives to provide adult environmental education opportunities. Organizations can also be supportive through developing staff to facilitate adult programming. (p. 98)

As EE works toward an environmentally literate citizenry, EE centers must demonstrate this commitment by offering adult EE programs. By keeping the adult audience in mind, the general public is encompassed in EE efforts.

Adult EE has different meanings depending on the international, national, or local contexts in which it occurs. In global conferences and international literature, adult EE ranges from education about poverty and pollution to women's rights and empowerment. Despite this range, many guiding documents assert similar values on adult audiences in EE efforts. For instance, at the 1975 UNESCO conference, this statement was included in the Belgrade Charter:

The principle audience of environmental education is the general public. Within this global frame, [a] major [category is] the non-formal education sector: including youth and adults, individually or collectively from all segments of the population, such as the family, workers, managers and decision makers, in environmental as well as non-environmental fields. (p. 3)

The Tbilisi Declaration of 1978 (p. 26) declared that EE should cater to all ages and socio-professional groups in the population, and should be addressed to the general non-specialist public of young people and adults whose daily conduct has a decisive influence on the preservation and improvements of the environment." Additional documents state the importance of using local and regional resources to educate adults on environmental

issues, incorporating school, corporate, and non-governmental perspectives, and aiming at the further training of decision makers (MOEA, 2008; UNESCO, 1992). Generally, EE proponents have been encouraging adult EE in a variety of ways for at least 30 years. In discussing what makes 'good' adult EE, the Belgrade Charter definition of EE is particularly essential in identifying the main goals of EE and how they can be accomplished most effectively in teaching adults.

According to Clover (2003) and Haugen (2006), adult EE connects environmental, social, economic, political and cultural aspects of life; is an engaged and participatory process and not solely a matter of individual behavior change and information transmission; and recognizes peoples' ecological knowledge(s) and brings these together through dialogue and debate to create new ecological understandings of our world. According to Haugen (2006), adult learning theory should inform adult EE theory and practice. To illustrate this potential alignment, Figure 1 shows three common levels that emerge from the intersection of Cranton's adult learning theory and Roth's environmental literacy.

| <u>Adult Learning Theory</u>  | <u>Environmental Literacy</u>  |
|---|--|
| <ul style="list-style-type: none"> <li>• Subject-oriented learning               <ul style="list-style-type: none"> <li>- Behaviorism, positivist, technical knowledge, instrumental</li> </ul> </li> <li>• Consumer-oriented learning               <ul style="list-style-type: none"> <li>- Constructivism, communicative, practical knowledge, self-directed</li> </ul> </li> <li>• Emancipatory learning               <ul style="list-style-type: none"> <li>- Transformative/constructivist, critical self-reflection, personally and socially liberating, non-authoritarian</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Nominal               <ul style="list-style-type: none"> <li>- Basic terms, working definitions</li> </ul> </li> <li>• Functional               <ul style="list-style-type: none"> <li>- Broader knowledge, interactions between human and natural systems</li> </ul> </li> <li>• Operational               <ul style="list-style-type: none"> <li>- Impacts and consequences of actions, choosing among alternatives, taking action</li> </ul> </li> </ul> |

*Figure 1.* Comparison of Cranton's adult learning theory to Roth's environmental literacy

In order to address adult EE, adult environmental literacy must also be discussed. St. Clair (2003) states that environmental literacy for adults means developing and participating in the social practices likely to change the way our societies think about and act upon ecological issues. A 2008 Minnesota document is of particular significance when discussing adult environmental literacy. The 3<sup>rd</sup> Minnesota Report Card on Environmental Literacy provides results of the 2007 statewide survey on citizen knowledge, attitudes and behaviors related to topics such as environmental problems, air pollution, energy issues, water quality, and global warming. The results reported that 62% of Minnesotan adults have at least an average knowledge about the environment, which means that 38% of the state's adults have below-average knowledge about the environment. Although Minnesotans were more knowledgeable than other U.S. state citizens, it is significant that "average knowledge" was achieved if a participant answered 4 out of 8 (50%) questions correctly regarding environmental knowledge. By any public school standards, this percentage would be a failing grade, yet in statewide adult knowledge this is a passing (and average) grade.

Minnesotans (59% to 66%) strongly believed regulations regarding environmental issues had not gone far enough. Interestingly, in the section on "attitudes toward environmental education," adults were asked whether EE should be provided in schools. Ninety-three percent of Minnesotans want schools to provide EE (a result consistent with much of the rest of the country). There was no question asked on the desire for post-12<sup>th</sup> grade EE opportunities. The findings of this report reflect the individuals that may comprise audiences of adult EE in Minnesota, as well as the EE practitioners providing the programming.

Finally, in investigating EE practitioners' philosophical orientations to adult education, it is helpful to report types and components of adult EE programs, as well as barriers of educators and learners in an adult EE context. The following are some examples of types or components of adult EE: public interpretive programs (adult or intergenerational); formal classes; volunteer and community organizations; workshops; exhibits; problem solving opportunities; contact with experts/officials; citizen participation; media presentations; and utilization of multiple senses (Arnold, Burke, Car, D'Arcy & Barb, 1991; Disinger, 1991; EETAP, 2004; Grill, 2003). Educators identified the following barriers to offering adult EE programs: little knowledge of what to teach or how to work with adults; discomfort in addressing controversial issues; amount of planning required to offer creative and well-planned programs; lack of funding, marketing, and recruiting; and low cost-benefit (Disinger, 1991; Guevara, 2002; Imel, 1990; Markle, 2008; Skylander, 2005). Adult learners have also expressed barriers to participating in adult EE programs such as: distance to program locations; lack of time and/or money; concern with issues that take higher priority over the environment; and low or inconsistent interest in topics of programs offered (Disinger, 1991; Markle, 2008; Skylander, 2005).

## **Summary**

Where and how the fields of adult education and EE intersect indicates the ways in which adult EE programs may be investigated. This study was guided by this overview of adult learning theories relevant to adult EE and putting this in the context of EE and adult education philosophical orientations.



## CHAPTER 3

### METHODOLOGY

The purpose of this study was to identify adult education philosophical orientations of Minnesota EE practitioners; a secondary purpose was to explore relationships between dominant philosophies and position, amount of experience working with adult audiences, and formal training in adult education. This is significant because individuals, organizations, and the EE field itself may more fully understand and reflect upon their adult education philosophy by identifying their philosophical orientations to adult education. This can lead to better program design and delivery, staff unity, adherence to an organization's mission, and progress toward accomplishing the overarching goals of EE.

#### **Research Design**

The design of this quantitative study was descriptive and exploratory, using a cross-sectional survey. A cross-sectional survey was chosen as it provides a quantitative description of a sample of the population through the data collection process of asking questions of people (Fowler, 1988).

#### **Subject Selection**

This study's target population was Minnesota EE practitioners. The accessible population was EE practitioners with current memberships to the Minnesota Association for Environmental Education (MAEE) ( $n = 242$ ), as well as staff at nature or

environmental learning centers listed publicly on the Sharing Environmental Education Knowledge (SEEK) website ( $n = 130$ ). The SEEK partners were included in the accessible population, in addition to MAEE members, so as to access those individuals or organizations who may not be a MAEE member or who may work at an organization that is not a member of MAEE.

MAEE is an organization that supports and advances EE in Minnesota. A \$20 fee pays for an individual one-year membership to the organization. MAEE was an appropriate resource for reaching EE practitioners in Minnesota and agreed to send a 'special request', including my research information and survey link, to their current membership. At the time of the study, 242 current members were contacted by MAEE.

The SEEK website calls itself Minnesota's home of environmental education resources, and is a well-known resource throughout the state. SEEK partners on this website include a variety of nature centers, environmental learning centers, and a number of organizations or agencies that provide or are affiliated with EE in Minnesota. A partnership listing on this website is free of charge, and access to the website is public. From the SEEK partners, 130 individuals were selected because they fit the parameters of the study's subject selection: they worked at an organization such as a nature center or environmental learning center in Minnesota and were identified from their staff profile or position as an EE practitioner. Participation in the study was not limited to one practitioner per EE site.

Participants in this study self-identified themselves as EE practitioners (see invitation to participate). This term includes a range of job responsibilities and positions, including positions such as educational specialist, front line educator, program specialist,

program director, or education director. For the purposes of this study, EE practitioners were sub-categorized into two groups: program directors and front-line environmental educators. To participate, EE practitioners did not need to have experience and training in working with adults in an EE context.

Of the 372 individuals who received the invitation to participate, 136 individuals began the survey, and 111 of those completed it to a point of making their responses interpretable. Therefore the sample size for this study was 111, resulting in a response rate of 29.8%.

### **Data Collection Instrument**

The Philosophy of Adult Education Inventory (PAEI) was used as the data collection instrument for this study. It was first developed by Lorraine M. Zinn in 1983, and is designed to help adult educators determine their philosophy of adult education and compare it to other educators' philosophies (1998). The PAEI was selected as a survey instrument because it was developed for purposes similar to that of this adult EE study, and because it has been used in similar studies and found to provide valid, reliable results. It can be used by adult educators in various professions and provided a clear way of interpreting the results for individuals taking the questionnaire. The PAEI was designed to be administered, scored, and interpreted by the respondent (Zinn, 1983).

There are fifteen items on the PAEI (see Appendix A). All begin with an incomplete sentence, followed by five different options that might complete the sentence. A Likert-type scale occurs after each option ranging from 1 (strongly disagree) to 7 (strongly agree). Each of the fifteen items has five sub-items, resulting in participants responding to a total of 75 items. A scoring matrix is provided, allowing for the responses to be totaled; from the totals, a dominant philosophy of adult education is

determined based on the numerical score. Each questionnaire provides five scores of which each correlate with one of the five adult education philosophical orientations used by Zinn in her questionnaire results key:

Your highest score reflects the philosophy that is closest to your own beliefs; your lowest score reflects a philosophy that is least like yours. For example a score of 95-105 indicates that you strongly agree with that philosophy; a score of 15-25 indicates that you strongly disagree with a given philosophy. If you find your scores fairly equal among all of the philosophies, or spread among three or more, you may want to spend some time clarifying your beliefs and values and looking for possible contradictions among them. (Zinn, 1998, p. 72)

The PAEI was taken by EE practitioners who may or may not work with adult audiences. Thus, to collect information relating to the subjects' roles in the field of EE and prior experience with adults, additional questions were included in the online administration of the PAEI. See Appendix A for the data collection instrument, which includes these questions as well as the original PAEI items.

The questionnaire was posted online using SurveyMonkey, a free survey tool on the internet. Each questionnaire, once scored, provided five numbers that correlated with titles and descriptions of five adult education philosophies. These scores were used to summarize the most and least dominant philosophies of EE practitioners in Minnesota.

### **Data Collection Procedures**

Due to the original PAEI being designed for administration in paper format, the researcher requested and was granted permission by Dr. Zinn to transfer the questionnaire to an online format (see Appendix B). SurveyMonkey, an online survey tool, was used to gather questionnaire responses. The survey was piloted prior to sending the survey link to participants.

Following IRB approval, an email invitation including a link to the online questionnaire was sent on April 7, 2009 to select SEEK members (see Appendix C). The MAEE special request was emailed on April 9, 2009 (see Appendix C). The text of the invitation to participate was the same in both the SEEK and MAEE emails. These initial emails included the following: background information, a description of the survey procedure, an explanation of potential risks and benefits of participation, and the contact information of the researcher and also the University of Minnesota Research Subjects' Advocacy Line. Follow-up emails were sent to SEEK members on April 21 and to MAEE members on April 22 (see Appendix D). Access to the online questionnaire closed on April 24, 2009. SEEK and MAEE members had access to the survey for 17 days and 15 days, respectively.

Survey Monkey automatically assigned each questionnaire with a respondent number, which served as an identification number. Each questionnaire was first examined for completeness in order to determine interpretability. Because the PAEI (the instrument in its original paper form) was intended to be self-scored and self-interpreted, it was necessary to code, hand-score and tabulate each of the 111 questionnaires. If an individual respondent did not complete all the questionnaire items, it was not possible to get a valid score from that questionnaire; therefore no dominant philosophy could be extrapolated from the respondent's questionnaire.

Dr. Zinn's permission to use the PAEI stipulated that participants be given the option to receive their questionnaire scores and interpretive material to understand the results. This was provided in the form of a webpage anonymously listing participants' scores and providing a chart to refer to with descriptions of each of the five philosophies

of adult education. This website can be found at  
<http://sites.google.com/site/2009zoellicksurveyresults/>.

### **Data Analysis**

Responses to the survey questions were coded and entered into Statistical Package for the Social Sciences version 17 (SPSS 17.0) for analysis. Respondents were also coded and entered into SPSS based on two sub-groupings relating to position: program director and front-line environmental educator. Respondents' results were analyzed using descriptive statistics. Frequencies were used to determine most and least dominant philosophies overall, as well as most and least dominant philosophies by position, experience working with adult audiences, and formal training in adult education. Correlational analyses were used to determine if there was a relationship between dominant philosophies and position, amount of experience working with adult audiences, and formal training in adult education. These quantitative results provided insight into the adult education philosophical orientations of EE practitioners in Minnesota.

## CHAPTER 4

### RESULTS

The purpose of this study was to identify the adult education philosophical orientations of Minnesota EE practitioners. Adult education philosophical orientation is a term used to describe the association of an individual's attitudes, values and beliefs about adult education with categories that summarize their philosophical foundation. The Philosophy of Adult Education Inventory© (PAEI) was the survey instrument used to identify the philosophies of education of Minnesota EE practitioners and to compare them with prevailing philosophies in the field of adult education (liberal, behavioral, progressive, humanistic, and radical).

The following chapter will describe results of the study. These results are limited to the respondents and cannot be generalized to other groups of EE practitioners. Additionally, the results apply to adult education philosophy rather than education philosophy in general. A descriptive study of the adult education philosophical orientations of Minnesota EE practitioners is useful in assessing the current professional approach to working with adults in an EE context.

The following sections include the results of the online PAEI. Results for the respondents as a group provide an overall review of data, including most and least dominant adult education philosophical orientations. Next the results are provided for comparisons made by position, experience working with adults, and type of training in

adult education. Collectively these sections help investigate whether EE practitioners' philosophies are related to factors such as position, experience working with adult, and formal training in adult education.

### **Respondent Demographics**

All respondents ( $N = 111$ ) are referred to as EE practitioners, and this term is comprised of the two sub-categories of program directors and front-line environmental educators. Within the 111 respondents, 39 (35.1%) identified themselves as program directors (which includes both education directors and program directors), and 72 (64.9%) identified themselves as front-line environmental educators (which includes front-line environmental educators, educators, and interpreters).

One hundred seven (96.4%) respondents had worked with adult audiences in any teaching/learning context, and four (3.6%) had not. Ninety-five respondents (85.5%) had worked with adults in an EE context and 16 (14.4%) had either no previous experience working with adults in an EE context, or did so less than one time per year. Fifty-five respondents (57.9%) reported working with adult audiences in their current positions several times per year; 25 (26.3%) currently worked with adult audiences several times per month; and 15 (15.8%) currently worked with adult audiences every day or several times a week.

Of the 111 respondents, 101 (91.8%) had prior training in working with adult audiences; nine (8.2%) did not; and one (0.9%) did not respond. Of the 101 respondents that did have training, two (2%) had done individual reading or research; 32 (31.7%) had received informal or anecdotal information from colleagues; 30 (29.7%) had formal coursework or training; 17 (16.8%) had done individual reading or research and had



received informal or anecdotal information from colleagues; 17 (16.8%) had done individual reading or research, had received informal or anecdotal information from colleagues, and had formal coursework or training; and three (3%) had received informal or anecdotal information from colleagues and had formal coursework or training.

### **Dominant Adult Education Philosophy**

This study identified both the most and least frequent dominant adult education philosophies of respondents. These can be reviewed in Table 1. The most dominant philosophy is the adult education philosophy with which an individual respondent identified the most strongly. Among the respondents, the most frequent dominant philosophy was the humanistic philosophy (education for self-actualization) with 37 respondents (33.3%) having this as their dominant philosophy. The second most frequent dominant philosophy was the progressive philosophy (education for practical problem-solving) with 31 respondents (27.9%) having this as their dominant philosophy. Combined, the progressive and humanistic philosophies accounted for 68 of the respondents (61.3%). Nineteen respondents (17.1%) identified with the behavioral philosophy, six (5.4%) were liberal, and four (3.6%) were radical.

Fourteen respondents had equally high scores between two philosophies for their individual most frequent dominant philosophies. These combinations included humanistic/progressive ( $n = 6$ ); behavioral/humanistic ( $n = 3$ ); behavioral/liberal ( $n = 1$ ); behavioral/progressive ( $n = 1$ ); behavioral/radical ( $n = 1$ ); humanistic/liberal ( $n = 1$ ); and humanistic/radical ( $n = 1$ ). These equally dominant adult education philosophies are consistent with the most frequently occurring single most dominant philosophies. Five of

these seven equally dominant categories include one or both of the two most frequent dominant single philosophies: progressive or humanistic.

The least frequent dominant philosophy is the adult education philosophy with which and individual respondent identified the least. The least frequent dominant philosophy among respondents was the radical philosophy (education for major social change), with 39 respondents (35.1%) identifying with this philosophy. The next least frequent dominant philosophy was liberal (education for intellectual development), with 35 respondents (31.5%) identifying with this philosophy. These two least frequent dominant philosophies, radical and liberal, totaled 74 respondents (66.7%). Twelve respondents (10.8%) identified least with the behavioral philosophy (education for competence and compliance). The humanistic philosophy was the least frequent dominant philosophy for nine respondents (8.1%), and the progressive philosophy was the least frequent dominant philosophy for eight respondents (7.2%).

As with the most frequent dominant philosophies, some respondents also provided equal scores for the least frequent dominant philosophies. The combinations are liberal/radical ( $n = 4$ ); liberal/behavioral ( $n = 1$ ); behavioral/radical ( $n = 1$ ); progressive/radical ( $n = 1$ ); and humanistic/radical ( $n = 1$ ). Eight respondents (7.2%) had a combined least dominant philosophy. These equally least frequent dominant adult education philosophies are consistent with the most frequently occurring single least dominant philosophies. All five equally least frequent dominant categories include one or both of the two least frequent dominant single philosophies: radical or liberal.

Table 1  
*Comparison of most and least frequent dominant philosophies*

| Philosophy name        | Most frequent dominant | Least frequent dominant |
|------------------------|------------------------|-------------------------|
| Liberal                | 6 (5.4%)               | 35 (31.5%)              |
| Behavioral             | 19 (17.1%)             | 12 (10.8%)              |
| Progressive            | 31 (27.9%)             | 8 (7.2%)                |
| Humanistic             | 37 (33.3%)             | 9 (8.1%)                |
| Radical                | 4 (3.6%)               | 39 (35.1%)              |
| Progressive/Humanistic | 6 (5.4%)               | 0                       |
| Behavioral/Humanistic  | 3 (2.7%)               | 0                       |
| Liberal/Radical        | 0                      | 4 (3.6%)                |
| Liberal/Behavioral     | 1 (0.9%)               | 1 (0.9%)                |
| Behavioral/Progressive | 1 (0.9%)               | 0                       |
| Humanistic/Liberal     | 1 (0.9%)               | 0                       |
| Behavioral/Radical     | 1 (0.9%)               | 1 (0.9%)                |
| Humanistic/Radical     | 1 (0.9%)               | 1 (0.9%)                |
| Progressive/Radical    | 0                      | 1 (0.9%)                |

### **Comparison by Position**

Analyses were conducted to determine if a difference in adult education philosophies was present between the two sub-groupings of respondents - program directors and front-line environmental educators, as it was hypothesized that there would potentially be differences between the groups in terms of not only philosophical orientations, but also prior experience and training. All 39 program directors and 67 of 72 front-line environmental educators (93%) had worked with adults in any teaching context and in an EE context. Most program directors and most front-line environmental educators indicated working with adult audiences in their current positions several times

per year or several times per month (see Table 2). Most program directors had done individual reading about adult education, had received informal or anecdotal information from colleagues about adults, and had formal training in adult education (see Table 3). Most front-line environmental educators had received informal or anecdotal information from colleagues and had formal training. Twenty-two program directors (57.9%) and 28 front-line environmental educators (44.4%) had formal training (see Table 3).

Table 2  
*Frequency of EE practitioners working with adults in their current position by position*

| Frequency of working with adults  | Program directors<br>( <i>n</i> = 37) | Front-line environmental educators ( <i>n</i> =58) |
|-----------------------------------|---------------------------------------|--|
| Several times per year            | 19 (51.4%)                            | 36 (62.1%)   |
| Several times per month           | 11 (29.7%)                            | 14 (24.1%)   |
| Every day or several times a week | 7 (18.9%)                             | 8 (13.8%)  |

Table 3  
*Type of adult education training by position*

| Type of training                                  | Program directors<br>( <i>n</i> = 38) | Front-line environmental educators ( <i>n</i> = 63) |
|---|---------------------------------------|---|
| Individual reading or research                    | 0 (0%)                                | 2 (3.2%)  |
| Informal or anecdotal information from colleagues | 11 (28.9%)                            | 21 (33.3%)  |
| Formal coursework or training                     | 9 (23.7%)                             | 21 (33.3%)  |
| Individual reading AND informal                   | 5 (13.2%)                             | 12 (19%)  |
| Individual reading AND informal AND formal        | 12 (31.6%)                            | 5 (7.9%)  |
| Informal AND formal                               | 1 (2.6%)                              | 2 (3.2%)  |

To investigate if respondents differed in philosophy based on position, frequencies were first analyzed. The aim was to assess if there was a relationship between position and philosophical orientation. For both groups, the two most frequent dominant philosophies were progressive and humanistic. However, the most frequent dominant philosophy for program directors was progressive followed by humanistic, and the most frequent dominant philosophy for front-line environmental educators was humanistic followed by progressive (see Table 4). This indicates a potential relationship between position and philosophical orientation. The least frequent dominant philosophy for program directors was radical, and the least frequent dominant philosophy for front-line environmental educators was equal between radical and liberal (see Table 5).

Table 4  
*Comparison of most frequent dominant philosophies by position*

| Program directors<br>(n = 39) |            | Front-line environmental educators<br>(n = 72) |            |
|-------------------------------|------------|--|------------|
| Philosophy                    | Frequency  | Philosophy                                     | Frequency  |
| Liberal                       | 2 (5.1%)   | Liberal  | 4 (5.6%)   |
| Behavioral                    | 4 (10.3%)  | Behavioral                                     | 15 (20.8%) |
| Progressive                   | 15 (38.5%) | Progressive                                    | 16 (22.2%) |
| Humanistic                    | 9 (23.1%)  | Humanistic                                     | 28 (38.9%) |
| Radical                       | 0 (0%)     | Radical  | 4 (5.6%)   |
| Humanistic/liberal            | 1 (2.6%)   | Behavioral/liberal                             | 1 (1.4%)   |
| Humanistic/behavioral         | 2 (5.1%)   | Behavioral/progressive                         | 1 (1.4%)   |
| Humanistic/progressive        | 5 (12.8%)  | Behavioral/humanistic                          | 1 (1.4%)   |
| Humanistic/radical            | 1 (2.6%)   | Behavioral/radical                             | 1 (1.4%)   |
|                               |            | Progressive/humanistic                         | 1 (1.4%)   |

Table 5  
*Comparison of least frequent dominant philosophies by position*

| Program directors<br>(n = 39) |            | Front-line environmental educators<br>(n = 72) |            |
|-------------------------------|------------|--|------------|
| Philosophy                    | Frequency  | Philosophy                                     | Frequency  |
| Liberal                       | 11 (28.2%) | Liberal  | 24 (33.3%) |
| Behavioral                    | 6 (15.4%)  | Behavioral                                     | 6 (8.3%)   |
| Progressive                   | 2 (5.1%)   | Progressive                                    | 6 (8.3%)   |
| Humanistic                    | 3 (7.7%)   | Humanistic                                     | 6 (8.3%)   |
| Radical                       | 15 (38.5%) | Radical  | 24 (33.3%) |
| Radical/liberal               | 1 (2.6%)   | Radical/liberal                                | 3 (4.2%)   |
| Radical/behavioral            | 1 (2.6%)   | Radical/progressive                            | 1 (1.4%)   |
|                               |            | Radical/humanistic                             | 1 (1.4%)   |
|                               |            | Liberal/behavioral                             | 1 (1.4%)   |

After using frequencies, a correlational analysis was conducted which indicated there was no significant relationship between position and numerical scores for each of the five philosophical orientations (see Table 6). These results are somewhat consistent with the results of the analysis using frequencies, as for both groups, the two most frequent dominant philosophies were the same - progressive and humanistic. However, because each position differed in the single most frequent dominant philosophy (program directors were progressive and front line educators were humanistic) a relationship may exist. Thus, this may be an area to consider in future research.

Table 6  
*Relationship between philosophical orientations and position*

| Philosophical orientation | <i>r</i> | <i>p</i> |
|---------------------------|----------|----------|
| Liberal                   | .03      | .79      |
| Behavioral                | .00      | .97      |
| Progressive               | -.18     | .07      |
| Humanistic                | -.11     | .24      |
| Radical                   | -.01     | .96      |

### **Comparison by Experience Working With Adults in an EE Context**

In order to investigate if respondents differed in philosophy based on experience working with adults, frequencies were first used. The aim was to assess if there was a relationship between experience in working with adult audiences and philosophical orientation. Comparisons were made between those working with adults several times a year or more and those never working with adults. Because those who worked with adults once a year were not considered to have significant experience working with adults, they were inserted into the group of those never working with adults. For those working with adults several times a year or more ( $n = 95$ ) the most frequent dominant philosophy was humanistic (34.7%), and for those working with adults less than once a year ( $n = 16$ ) the most frequent dominant philosophy was progressive (37.5%) (see Table 7). Similar to the results from the analysis by position, the top two dominant philosophies for both groups (experience and no experience) were the same - humanistic and progressive. The least frequent dominant philosophy for both those working with adults several times a year and for those working with adults less than once a year was radical (see Table 8).

Table 7

*Comparison of most frequent dominant philosophies by experience working with adults*

| Several times a year or more<br>(n = 95) |            | Not at all or less than once a year<br>(n = 16) |           |
|--|------------|---|-----------|
| Philosophy                               | Frequency  | Philosophy                                      | Frequency |
| Liberal                                  | 5 (5.3%)   | Liberal   | 1 (6.3%)  |
| Behavioral                               | 16 (16.8%) | Behavioral                                      | 3 (18.8%) |
| Progressive                              | 25 (26.3%) | Progressive                                     | 6 (37.5%) |
| Humanistic                               | 33 (34.7%) | Humanistic                                      | 4 (25%)   |
| Radical                                  | 4 (4.2%)   | Radical   | 0 (0%)    |
| Liberal/behavioral                       | 1 (1.1%)   | Behavioral/progressive                          | 1 (6.3%)  |
| Liberal/humanistic                       | 1 (1.1%)   | Progressive/humanistic                          | 1 (6.3%)  |
| Behavioral/humanistic                    | 3 (3.2%)   |   |           |
| Behavioral/radical                       | 1 (1.1%)   |   |           |
| Progressive/humanistic                   | 5 (5.3%)   |   |           |
| Humanistic/radical                       | 1 (1.1%)   |   |           |

Table 8

*Comparison of least frequent dominant philosophies by experience working with adults*

| Several times a year or more<br>(n = 95) |            | Not at all or less than once a year<br>(n = 16) |           |
|--|------------|---|-----------|
| Philosophy                               | Frequency  | Philosophy                                      | Frequency |
| Liberal                                  | 29 (30.5%) | Liberal   | 6 (37.5%) |
| Behavioral                               | 12 (12.6%) | Behavioral                                      | 0 (0%)    |
| Progressive                              | 8 (8.4%)   | Progressive                                     | 0 (0%)    |
| Humanistic                               | 7 (7.4%)   | Humanistic                                      | 2 (12.5%) |
| Radical                                  | 32 (33.7%) | Radical   | 7 (43.8%) |
| Liberal/behavioral                       | 1 (1.1%)   | Liberal/radical                                 | 1 (6.3%)  |
| Radical/liberal                          | 3 (3.2%)   |   |           |
| Radical/behavioral                       | 1 (1.1%)   |   |           |
| Radical/progressive                      | 1 (1.1%)   |   |           |
| Radical/humanistic                       | 1 (1.1%)   |   |           |

After using frequencies, a correlational analysis was conducted, which indicated there was no significant relationship between experience in working with adults and numerical score for the dominant philosophies of humanistic and progressive (see Table 9). While there did not appear to be a relationship between most dominant philosophy and experience, there appeared to be a significant relationship between liberal philosophy



scores and experience; a higher liberal philosophy score occurred if the respondents did not work with adults in an EE context. However, there was no significant relationship across other philosophies and whether or not respondents worked with adults in an EE context.

The results of the correlational analysis are somewhat consistent with the results of the analysis using frequencies; experience working with adults in an EE context does not appear to be related to numerical scores for humanistic and progressive philosophies; likewise for both groups, humanistic and progressive were the two most frequent dominant philosophies. However, since frequencies indicated that humanistic was the most frequent dominant philosophy for those who work with adults and progressive was the most frequent for those who do not, it could be that further research is needed to explore whether or not a relationship exists. In this study, the unequal sample size between the two groups makes interpreting the results more difficult.

Table 9  
*Relationship between philosophical orientations and experience working with adults*

| Philosophical orientation | <i>r</i> | <i>p</i> |
|---------------------------|----------|----------|
| Liberal                   | .19      | .05*     |
| Behavioral                | .17      | .07      |
| Progressive               | .15      | .12      |
| Humanistic                | .11      | .27      |
| Radical                   | .15      | .11      |

*Note: asterisk (\*) indicates significance at the .05 level.*

## Comparison by Formal Training in Adult Education

In order to investigate if respondents differed in philosophy based on formal training in adult education, frequencies were first used. The aim was to assess whether there was a relationship between philosophical orientation and the formal training of respondents in adult education. Comparisons were made between those who reported having formal training and those who reported not having formal training. Of the EE practitioners that reported having formal training in adult education, the most frequent dominant philosophy was humanistic (see Table 10). Of the EE practitioners who reported having no formal training in adult education, the most frequent dominant philosophy also was humanistic (see Table 10). For those who had formal training, the least frequent dominant philosophy was liberal (see Table 11). For those who did not have formal training, the least frequent dominant philosophy was radical (see Table 11).

Table 10

*Comparison of most frequent dominant philosophies by formal training in adult education*

| Several times a year or more<br>(n = 51) |            | Not at all or less than once a year<br>(n = 60) |            |
|--|------------|---|------------|
| Philosophy                               | Frequency  | Philosophy                                      | Frequency  |
| Liberal                                  | 2 (3.9%)   | Liberal   | 4 (6.7%)   |
| Behavioral                               | 11 (21.6%) | Behavioral                                      | 8 (13.3%)  |
| Progressive                              | 14 (27.5%) | Progressive                                     | 17 (28.3%) |
| Humanistic                               | 15 (29.4%) | Humanistic                                      | 22 (36.7%) |
| Radical                                  | 2 (3.9%)   | Radical   | 2 (3.3%)   |
| Humanistic/progressive                   | 5 (9.8%)   | Humanistic/progressive                          | 1 (1.7%)   |
| Humanistic/radical                       | 1 (2%)     | Behavioral/progressive                          | 1 (1.7%)   |
| Liberal/behavioral                       | 1 (2%)     | Behavioral/humanistic                           | 3 (5%)     |
|  |            | Behavioral/radical                              | 1 (1.7%)   |
|  |            | Humanistic/liberal                              | 1 (1.7%)   |

Table 11

*Comparison of least frequent dominant philosophies by formal training in adult education*

| Several times a year or more<br>( <i>n</i> = 51) |            | Not at all or less than once a year<br>( <i>n</i> = 60) |            |
|--|------------|---|------------|
| Philosophy                                       | Frequency  | Philosophy  | Frequency  |
| Liberal  | 20 (39.2%) | Liberal   | 15 (25%)   |
| Behavioral                                       | 6 (11.8%)  | Behavioral  | 6 (10%)    |
| Progressive                                      | 3 (5.9%)   | Progressive   | 5 (8.3%)   |
| Humanistic                                       | 2 (3.9%)   | Humanistic  | 7 (11.7%)  |
| Radical  | 16 (31.4%) | Radical   | 23 (38.3%) |
| Radical/liberal                                  | 2 (3.9%)   | Radical/liberal   | 2 (3.3%)   |
| Radical/behavioral                               | 1 (2%)     | Radical/humanistic                                      | 1 (1.7%)   |
| Radical/progressive                              | 1 (2%)     | Liberal/behavioral                                      | 1 (1.7%)   |

After using frequencies, a correlational analysis was conducted, which indicated that there was no significant relationship between presence or absence of formal training and numerical score on the philosophic orientations (see Table 12). The results of the correlational analysis are consistent with the results of the analysis using frequencies, indicating that a relationship between formal training in adult education and philosophical orientation is unlikely.

Table 12

*Relationship between philosophical orientation and formal training in adult education*

| Philosophical orientation | <i>r</i> | <i>p</i> |
|---------------------------|----------|----------|
| Liberal                   | -.16     | .10      |
| Behavioral                | -.11     | .25      |
| Progressive               | .02      | .83      |
| Humanistic                | .00      | 1.00     |
| Radical                   | .03      | .79      |

## Summary of results

One hundred eleven respondents completed the PAEI online for this study. Most environmental education practitioners (including both program directors and front-line environmental educators) indicated working with adult audiences in an EE context (85.5%). Of those working with adults in their current position ( $n = 95$ ), over half (57.9%) worked with adults at least several times per year. Of all respondents that had some kind of training in adult education ( $n = 101$ ), 50 (49.5%) reported that they had received formal training in adult education.

Overall, the respondents' two most frequent dominant philosophies were humanistic and progressive. The two overall least frequent dominant philosophies were liberal and radical. Among all three comparison groups (by position, experience working with adults, and formal training in adult education) the most frequent dominant philosophies were humanistic and progressive, while the least frequent dominant philosophies were liberal and radical. Based on frequency analyses and correlational analyses, most and least dominant philosophies did not appear to be related to position, experience or training, although this may be an area for further research.

## CHAPTER 5

### DISCUSSION

The purposes of this study were to identify the most and least frequent dominant philosophical orientations of Minnesota EE practitioners and to investigate the relationship between philosophical orientation to adult education and position, formal training in adult education, and experience working with adults. In order to identify their adult education philosophical orientations, 111 Minnesota EE practitioners completed the Philosophy of Adult Education Inventory online. Clarifying one's philosophical orientation as an EE practitioner, and also reflecting on ways in which each of these philosophies align with or contradict goals of EE, may help in reaching the goals EE sets out to accomplish. This chapter summarizes and discusses the implications of the survey results, provides recommendations for EE practitioners, and offers suggestions for future research.

#### **Most Frequent Dominant Philosophies and Their Implications**

The most frequent dominant philosophical orientations of the overall group of respondents were humanistic ( $n = 37, 33.3\%$ ) and progressive ( $n = 31, 27.9\%$ ). For a description of each philosophy see Appendix E.

The humanistic philosophy of adult education aims to enhance personal growth and development and to facilitate self-actualization (Elias & Merriam, 1995). According to the humanistic philosophy, the learner is highly motivated and self-directed, and assumes responsibility for learning. The educator identifying with this philosophy sees

the teacher as a facilitator, helper and planner, who should promote but not direct learning. Key concepts associated with this philosophy are experiential learning, freedom, individuality, self-directedness, interactiveness, openness, authenticity, self-actualization, empowerment, and feelings. Methods employed by the adult educator with a humanistic philosophy include the following: experiential learning, group tasks, group discussion, team teaching, self-directed learning, individualized learning, and discovery method.

It is not surprising that this was the most frequent dominant philosophy among the respondents, as humanism works toward developing people who are open to change, strive for self-actualization, and can live together as fully-functioning individuals. Generally speaking, this is what EE works toward as well. Society must include adults who are open to change, are motivated to constantly learn, and can live harmoniously in order to achieve the goals of EE.

The progressive philosophy of adult education, the second most frequent philosophical orientation, aims to promote societal well-being, enhance individual effectiveness in society, and to give learners practical knowledge and problem-solving skills (Elias & Merriam, 1995). The learners' needs, interests and experiences are key elements in learning, and have unlimited potential to be developed through education. The adult educator who identifies with this philosophy believes that the teacher is an organizer and guides learning through experiences that are educative. The teacher also serves to stimulate, instigate and evaluate the learning process. Some key concepts associated with the progressive philosophy include the following: problem solving, experience-based education, democratic ideals, lifelong learning, pragmatic knowledge,

needs assessment, and social responsibility. Methods employed by the adult educator with a progressive philosophy include the following: problem solving, scientific method, activity curriculum, integrated curriculum, experimental method, project method, and cooperative learning.

Progressivism is not a surprising dominant philosophy among EE practitioners. The solving of common problems is perhaps the most significant characteristic of progressivism in relation to EE. The historical and philosophical roots of modern progressivism include educational and social reform, which are also at the foundations of EE.

The humanistic and progressive philosophies of adult education support many goals of EE. The humanistic philosophy of adult education holds the student as the center of the experience, sees the teacher as facilitator, views learning as a personal, internal process, and values group activities. Humanism is well-matched with democratic values in that it promotes cooperation and communication among individuals. It is "a stance or philosophical orientation toward the place of human beings in the scheme of things" (Elias & Merriam, 1995, p. 136). This aligns with EE as it promotes individuality and self-awareness within the larger context of society and environment. In a broad sense, self-actualization may be comparable to or parallel with environmental literacy; an individual reaches full understanding of the ecology of the self or of the self in relation to the environment. Clearly a criticism of humanism is that it devotes too much time to the self. However, in EE one can see the connections educators make between specimens or issues in nature and the learner's personal life. Despite this, Stables and Scott (2001) contend that humanistic education is the very reason humanity is facing environmental

crises. They explain that the focus on the self in humanistic education turns humans away from environmental concerns, even though understanding environmental issues is essential to our survival. Humanistic adult EE may serve to support or negate the efforts of EE as we ultimately work toward participation in resolving and preventing environmental problems.

The progressive philosophy of adult education strives to engage people in joint activity to solve their common problems; this philosophical orientation can be incorporated into adult EE and, in particular, into environmental problem solving. Progressivism emphasizes experiential learning, scientific inquiry, community involvement, and responsiveness to social problems; these emphases are supported by the methodology and learning goals of adult EE programming. The philosophical foundations of progressive adult education "are compatible with ecological and environmental ways of thinking," (Roberts, 2007, p. 222). A major criticism of the progressive philosophy is that too great an influence has been attributed to the power of education to bring about social change. EE practitioners are certainly aware of the faulty assumption that knowledge leads to behavior change and, as this criticism implies, may need to critically reflect on how this assumption may appear in adult EE programs. The progressive philosophy translates into adult EE by providing meaningful educational experiences, focusing on lifelong learning, recognizing the potential for human growth, encouraging teachers and learners to be co-learners, and providing a means for changing society.

Because of the ways these two adult education philosophical orientations are generally supportive of EE goals and aims, these dominant philosophies can be



considered a positive reflection on those EE practitioners identifying with these humanistic and progressive philosophies. However, it is also essential that practitioners recognize the potential risks of disregarding aspects of these adult education philosophical orientations as they design and deliver adult EE programming.

### **Least Frequent Dominant Philosophies and Their Implications**

In addition to discussing the most dominant philosophies of Minnesota EE practitioners, the least dominant philosophies are also indicative of the philosophical orientations of these professionals. The most frequent least dominant philosophical orientations for the overall group of respondents were radical ( $n = 39$ , 35.1%) and liberal ( $n = 35$ , 31.5%).

As the least dominant philosophy overall, the radical philosophy of adult education aims to bring about fundamental social, political, and economic changes in society through education. As Elias and Merriam (1995) point out, "while progressives and humanists attempt to utilize education to reform society, it is only the radical critics that propose profound changes in society" (p. 140). According to the radical philosophy, the learner is equal with the teacher in the learning process, has personal autonomy, and can create and change history and culture by combining reflection with action. The educator identifying with this philosophy sees the teacher as a coordinator who suggests but does not determine direction for learning, and has equality with the learner. Key concepts associated with this philosophy include the following: consciousness raising, praxis, noncompulsory learning; autonomy, social action, empowerment, "deschooling", and social transformation. Methods employed by the adult educator with a radical

philosophy include the following: dialogue, problem posing, critical reflection, maximum interaction, discussion groups, and exposure to media and people in real life situations.

It is not surprising that the radical philosophy was not dominant among EE practitioners. The extreme nature of this philosophy and its push for social liberation and political upheaval may not sit well with organizations like non-profit nature centers who may be offering occasional adult EE programs or county or park district nature centers whose mission statements and types of programs may be quite neutral.

A criticism of the radical philosophy, which is also a criticism of the progressive philosophy, is that radical educators are rather optimistic in presuming the close connection between knowing and acting. As was the case with progressivism, EE practitioners can see the inherent misstep in assuming knowledge leads to behavior. Identifying this threat to achieving the goals of EE can help guide deliberate adult EE program design and delivery. Radical adult educators can be more critical and reflective in their work and also provide visions of alternative or future possibilities. On the surface, certainly the radical philosophy of adult education seems to most directly support the ultimate EE goal of solving and preventing environmental problems through social action. However, the philosophical foundations of this philosophy are so strongly contextualized by the time and place of its emergence as a movement (anarchist and Marxist traditions, Paulo Friere in Brazil during the 1960s) that EE practitioners in Minnesota would need to work to redefine a radical philosophy of adult education to best fit EE's objectives. In other words, the radical philosophy is so contextualized that it may not readily translate to EE.

As the second least dominant philosophy overall, the liberal philosophy of adult education aims to develop intellectual powers of the mind, and to make a person literate in the broadest sense - intellectually, morally, spiritually, and aesthetically (Elias & Merriam, 1995). According to the liberal philosophy, the learner is a cultured 'renaissance person,' is always a learner, and seeks knowledge and conceptual and theoretical understanding. The educator identifying with this philosophy sees the teacher as the expert and the transmitter of knowledge, is authoritative, and clearly directs the learning process. Key concepts associated with this philosophy include the following: liberal arts, learning for its own sake, rational, intellectual education, general, comprehensive education, traditional knowledge, and classical humanism. Methods employed by the adult educator with a liberal philosophy include the following: lecture, dialectic, study groups, contemplation, and critical reading and discussion. The liberal philosophy strongly suits adult education rather than education in general because adults' life experiences enable them to embrace learning experiences more completely and to grasp the depth and richness of a liberal education. Likewise, adult education best practices encourage validation of the learner's experiences.

In an EE context, a liberal philosophy of adult education could be well-supported by group learning and cohort environments. The liberal philosophy would help work toward awareness, knowledge and skills. It is not surprising that the liberal philosophy was underrepresented in this study. Development of the intellect may not be a high priority for EE practitioners working with adult audiences. Also, this philosophy stresses the values of philosophy, religion, and the humanities over science. When so many EE

programs are science-based or related, this deemphasizing may remove some justification for a liberal philosophy within an EE context.

While not surfacing as frequent philosophical orientations among Minnesota EE practitioners, the radical and liberal philosophies of adult education also support many goals of EE. In particular, these philosophies seem to move toward some of what might be called the ultimate goals of EE such as behavior, participation, and action, and critical environmental literacy. Because these two adult education philosophical orientations are supportive of these EE goals, it is worth noting that they were the least dominant philosophies with which the respondents identified; this may be problematic for a field whose ultimate purposes are to promote a society whose awareness, knowledge, attitudes, skills, and participation help them reach environmental literacy.

### **Behaviorism: The Fifth Philosophy**

It is important here to also reflect on the behavioral philosophy of adult education (education for competence and compliance). In the results of this study, the behavioral philosophy was most often the middle of the five scores on an individual questionnaire. The behavioral philosophy aims to promote skill development and behavioral change, and ensures compliance with standards and societal expectations (Elias & Merriam, 1995). According to this philosophy, the learner takes an active role in learning, practicing new behavior and receiving feedback, and is strongly influenced by the learning environment. The teacher is seen as a manager or controller who predicts and directs learning outcomes. Concepts associated with this philosophy include competency-based, mastery learning, standards-based, behavioral objectives, trial and error, feedback, and reinforcement. Methods employed by this philosophy include

programmed instruction, contract learning, criterion-referenced testing, computer-aided instruction, and skill training.

The behavioral philosophy of adult education also supports some of EE's goals. This philosophy could play a role in introducing adults to some of the basic knowledge in EE programming. It also works toward behavioral competency, meaning that the learner would be able to meet measurable outcomes in terms of knowledge, skills, and behavior. However, the behavioral philosophy would work against the EE objective of developing positive environmental attitudes; in fact it maintains that all human behavior is the result of a person's prior conditioning and is determined by external forces in the environment over which a person has little or no control. This, combined with other characteristics of behaviorism such as the controlling or managerial teacher, the de-emphasizing of individual success, and the production of people who can maximize the chances of survival, is not supportive of EE's goals and objectives.

Perhaps for EE practitioners' philosophical orientations the behavioral philosophy appropriately falls between the other philosophies. EE, after all, is not always found in mainstream, traditional, formal education systems. For many program participants the programs offered by EE practitioners can be seen as a hobbies or side interests. Due to this, many program participants may come to EE programs with the interest of learning skills such as identifying native plants. Basic skills related to EE programs would be well-suited by behaviorism, and certainly most nature centers or environmental learning centers would offer these kinds of programs throughout the year. However, skills programs do not meet the end goals of EE such as behavior change and participation.

Certain types of adult EE, however, may be well-served by this philosophy. For instance, if behaviorism emphasizes skill development, perhaps a professional development basic skills program would be an appropriate fit. Because behaviorism strongly involves accountability of the learner and measuring behavioral changes demonstrated by the learner, adult EE programs may not have the time or follow-through to achieve these outcomes. Despite the accountability factor, the structure of a behavioral adult education program closely follows the lesson plan structure used by EE practitioners: clearly define a purpose, write specific objectives, select learning experiences that help obtain these objectives, facilitate the learning experience, and evaluate the learners. Behavioral adult education advocates self-directed learning in that the learner identifies his own learning process along with an educator. Simply put, the educator becomes more of a personal consultant rather than an environmental educator. Considering the aforementioned barriers to offering adult EE programs listed in Chapter 2, this approach is not feasible or practical for EE practitioners. Although behavioral methods may be effectively used by adult EE practitioners, the behavioral philosophy on its own may not be an appropriate philosophical orientation for EE practitioners.

### **Summary of Dominant Philosophies and Their Implications**

It is important to remember that these five philosophies of adult education all support the goals of EE in different ways, and as Zinn points out, there isn't a single preferred philosophy of education (Zinn, 1998, p. 72). However, if EE practitioners are most strongly identifying with the humanistic and progressive philosophies, they may be lacking in the philosophical representation of radical and liberal adult education in adult EE programming. What does this mean for the EE profession? The aims of the radical

and liberal philosophies support the change-oriented goals of EE. This may bring EE professionals to question the likelihood of these change-oriented EE goals being met. EE practitioners perhaps may not see the purposes of adult education as being to bring about fundamental social, political, and economic changes in society or to develop intellectual powers of the mind and make a person intellectually, morally, spiritually, and aesthetically literate. Is this because they do not see these as being relevant to adult EE programming, or because they avoid embracing and working toward these purposes of adult education? Reflecting on the low representation of these two adult education philosophies can help supplement our adult EE programming when aligned with an organization's mission, a lesson's or program's learning goals, and an EE practitioner's role in providing these programs. For those EE practitioners working with adults now or in the future, knowing how strongly one identifies with these philosophies can be helpful in understanding how to supplement one's philosophy with program planning that works toward participation and environmental literacy.

### **Influence of Position, Experience, and Training on Philosophical Orientation**

In addition to exploring the most and least dominant adult education philosophical orientations of Minnesota EE practitioners, a finding of this study is the weakness and lack of relationships between adult education philosophical orientation and EE practitioners' positions, experience working with adults, or formal training in adult education. In each comparison (by position, by experience, and by formal training), respondents identified most with humanism and progressivism, regardless of their position, experience or training. This may indicate that philosophical orientations are already so strongly ingrained in the practitioner that their specific EE position, amount of

experience working with adults, and type of adult education training they have had do not change or influence the individual's philosophical orientation.

While the top two most frequent dominant orientations for the two sub-groupings of respondents by position were similar (progressive and humanistic), the single most frequent dominant orientation differed. Program directors identified the most with the progressive philosophy ( $n = 15$ , 38.5%), and front-line environmental educators identified most with the humanistic philosophy ( $n = 28$ , 38.9%). Characteristics of the progressive philosophy include the teacher as an organizer; a problem-solving and experiential approach; and unlimited potential development of the learner. These characteristics seem to align well with the role of a program director. The humanistic philosophy includes characteristics that align with a front line environmental educator position, such as the teacher being a facilitator who promotes experiential learning, and attempts to enhance personal growth in the learner. Perhaps an individual's position may not explain their particular dominant philosophical orientation, but it may be that qualities of that philosophy complement the skills and qualifications needed in program director or front-line educator positions. It is difficult to know if a philosophy leads one to a professional position, if a position shapes one's philosophy, or if there is no relationship. Further research is first needed to explore whether a relationship exists and how it relates to position.

Program directors identified least with the radical philosophy, and front-line environmental educators identified equally least with the liberal and radical philosophies. Because of the nature of EE programming, it is reasonable that the liberal philosophy would not be identified with due to the traditional nature of its character. In liberal adult



education, the teacher teaches to the 'whole' learner, is an expert or transmitter of knowledge, and conducts lectures. These characteristics do not mesh as well with adult EE programs as do the characteristics of other adult education philosophical orientations. Likewise, EE practitioners and the field itself shy away from advocating too strongly on behalf of the environment. Because advocacy can be associated with action, this may help explain why the radical philosophy of adult education was not a dominant orientation among EE practitioners. The radical philosophy works to change society and to empower the learner, as well as to expose the learner to real life situations. These combined could create a type of programming that may more appropriately be called adult environmental advocacy rather than adult EE.

In addition to discussing the implications of most frequent dominant philosophies by *position*, the most frequent dominant philosophies by *experience* must be addressed. Due to the small sample size of those who worked with adults not at all or less than once a year ( $n = 16$ ), interpreting the comparisons between those with and without experience with adults is difficult. Like the comparison between position and philosophical orientation, progressivism and humanism dominated the philosophical orientations of those who had experience working with adults. Many of the same implications from the discussion on position and philosophical orientation apply here as well. It was first learned that those who are program directors or front-line educators had dominant philosophies of humanistic and progressive. Similarly, those who work with adults several times a year or more (those who have significant experience and perhaps better understanding of adult audiences) had dominant philosophies of humanistic and progressive. Consistency among Minnesota EE practitioners was revealed. However,

much like the results of position comparisons and philosophical orientation, two strongly dominant philosophies regardless of experience working with adults indicate that the three remaining philosophies are not represented among EE practitioners.

Finally, implications of reported *formal training* and philosophical orientation should be discussed. Perhaps important to note is that 51 respondents reported having had formal training in adult education, while 60 reported having had no formal training. This comparison showed that the 111 subjects were more evenly distributed within this comparison as opposed to the subjects being more heavily front-line environmental educators and also more heavily experienced in working with adults. Formal training, while not assessed for quality in the scope of this study, did not seem to have a relationship with philosophical orientation. Consistent with the position and experience comparisons, humanism and progressivism surfaced as the two most dominant philosophies regardless of reported formal training.

According to Sharan Merriam (personal communication, July 11, 2009), most adult educators identify with humanistic and progressive qualities. By investigating the relationship among philosophical orientation, position, experience, and formal training, it is worth posing this question: Is it desirable to have EE practitioners associating most frequently with humanistic and progressive orientations as their dominant philosophic orientations, regardless of their position, experience and formal training? While this indicates a strong uniformity of EE practitioners with other adult educators, it also indicates that the liberal, behavioral and radical philosophies are underrepresented. An opportunity for reflection is presented in asking if or how EE practitioners can balance the five philosophies of adult education knowing that the three factors investigated

revealed weak or absent relationships among philosophical orientation and position, experience, or training.

### **Minnesota EE Practitioners' Experience and Training in Adult Education**

From this study, important information arose about the experience and training specifically of Minnesota EE practitioners in adult education. Respondents reported a high level of experience and training related to adult audiences. For instance, most EE practitioners ( $n = 95$ , 85.6%) reported working with adults several times a year ( $n = 55$ ), several times a month ( $n = 25$ ), or several times a week or every day ( $n = 15$ ). As a reflection of adult EE in Minnesota, this level of experience indicates a high level of awareness of adult audiences in relation to EE programming, on the part of the educators or trainers of EE practitioners and the organizations employing the EE practitioners. Additionally, nearly half of EE practitioners ( $n = 51$ , 45.9%) reported having received formal training in adult education.

A discussion on formal training must be approached with caution; the study does not assess the quality, duration, or circumstances of the reported formal training in adult education. Despite this, if EE practitioners are receiving formal training in adult education, this suggests that those providing that formal training are aware of the importance of recognizing this audience, or that EE practitioners recognize the importance of adult education training. This contrasts the barriers to offering adult EE programs identified in the literature review, where EE practitioners reported having little knowledge of what to teach or how to work with adults. Also, if almost half of EE practitioners are working with adults at least several times a year, this shows that adults are being considered a viable audience by the organizations offering EE programming.

This is inconsistent with the literature review in which organizations were reporting a lack of focus on adult audiences.

### **Development of Philosophical Orientation**

It is important to note that the two most frequent dominant philosophies and the two least frequent dominant philosophies were consistent regardless of position, experience, or training. While it is not clear from this study alone the degree to which position, experience, and training are related to orientation, it is worth at least posing this question: If these factors are not related to the philosophical orientations of EE practitioners in Minnesota, what is? The researcher was unable to locate literature indicating the influences on a person's philosophical orientation. Perhaps this is due to the complexity of how values, beliefs, and attitudes are developed in a lifetime.

It also may be that the nature of EE meshes with the nature of adult education in ways that are manifested by the humanistic and progressive dominant philosophies. Or it could be that people of common philosophical orientations are gravitating toward the EE field. It may also be that any of the participants' education prior to this study caused the humanistic and progressive philosophies to be dominant because of how their characteristics support EE and adult EE programming. If there is a way to encourage the development of characteristics from less dominant philosophies that align with EE goals, an initial step might be using the PAEI or a similar method of identifying one's philosophical orientation to adult education in order to be aware of the range of philosophies and how they may support EE.

The results revealed that a noticeable number of respondents had equally high or low scores for certain philosophies. Almost all of the most dominant philosophies that

were tied included either the humanistic or progressive philosophy. Interestingly, the humanistic and progressive philosophies (the two most dominant philosophies) have key underlying assumptions that can complement or support one another. Because these were both present as tied dominant philosophies and further supported these as the two most dominant philosophies, it is beneficial that they would complement one another in their characteristics. Every tied score for least dominant philosophy included either the radical or liberal philosophy. The radical and liberal philosophies (the two least dominant philosophies) have key underlying assumptions that are inherently contradictory. Because these were the least dominant philosophies, it may not be significant that their characteristics clash with one another. In considering the most and least dominant philosophies of EE practitioners in Minnesota, it is here that individual reflection may be helpful in developing one's adult education philosophy.

A well developed or poorly developed adult education philosophical orientation can be identified by comparing one's five scores (each correlating with one of the five philosophies) in relation to one another. If there is low numerical variation among the scores, this would indicate a poorly developed adult education philosophical orientation, whereas high numerical variation would indicate a well developed philosophy. Again, this is where personal, individual reflection on philosophy of adult education is necessary.

One's beliefs, attitudes, and values regarding the purpose of education cannot be separated from what one teaches. By first identifying one's philosophical orientation then interpreting it within the context of one's position or of environmental education as a field, EE practitioners can work toward individually and collaboratively understanding

how their philosophical orientations can further support EE's goals. Therefore, the PAEI is an instrument that can facilitate this kind of reflection on working toward adult EE. This is especially relevant as adult EE programming becomes more widely offered and attended. Philosophical orientation to adult education is something that can perhaps be addressed in educating or training EE practitioners, but not necessarily taught or molded to reach specific EE outcomes. While not easily changed, awareness of philosophical orientation seems to be a step toward becoming a better EE practitioner. As Zinn suggested in the original PAEI, it may be helpful to complete the questionnaire throughout one's career in order to be aware of changes that may or may not occur in philosophical orientation.

As EE itself continues to develop and grow as a field and profession, adult environmental education will continue to grow as a subset of EE programming. EE organizations such as the National Association for Environmental Education and guiding documents such as the Green Print for Minnesota show that the adult audience and other non-P12 audiences are being considered when developing programs. Awareness of philosophical orientation to adult education is one way we can approach this kind of programming intentionally and with EE goals in mind.

### **Recommendations**

Findings from this study offer insight into the current state of the adult education philosophical orientations of EE practitioners in Minnesota. Based on this study's findings, the following is a summary of recommendations for Minnesota EE practitioners and EE practitioners in general who may work with adult audiences.

- *Consider most and least dominant philosophies in relation to the job you do and the goals of EE:* Think individually about the role of each philosophy in

- *Reflect collectively on adult education philosophical orientation:* Identify the dominant philosophies of an entire staff. Consider how a staff might have conflicting or supporting philosophies.
- *Include an adult education philosophy component in the education and training of EE practitioners:* Although adult education training did not appear to be related to philosophical orientation, awareness of philosophical orientation can guide our understanding of how EE practitioners can work toward accomplishing EE goals. Thus, perhaps the more training should involve developing an awareness of what one's philosophical orientation is.
- *Work toward adult environmental literacy as a profession:* Adults are a growing recipient of EE programming with increasing awareness and interest in nature and environmental issues. As our work with adults grows, our understanding of philosophical orientation can help achieve the goals of EE and adult environmental literacy.

## **Future Research**

This study scratches the surface of adult environmental education. Many future studies can help add to the knowledge gained about how EE practitioners in Minnesota think about adult audiences. The following are suggestions for future research related to this study:

- *Common philosophical orientations among EE practitioners:* Do the commonalities in philosophical orientation that have emerged among Minnesota EE practitioners align with those of EE practitioners in general? Replication of this study with other or broader groups of respondents, or with a random sampling of EE practitioners, is recommended.
- *Relationship among position, experience and training and orientation:* Does a relationship exist among these factors and philosophical orientation? If so, do factors influence orientation, or does orientation influence factors?
- *What shapes one's orientation:* How does one develop a philosophical orientation? What are personal or professional influences or experiences that nurture a philosophy?

- *Effect of employing organization on philosophical orientation:* Does an employer or organization shape how an employee would respond to the PAEI (based on the programming they do), or does one's philosophical orientation emerge regardless of professional worksite influence?
- *PAEI results over time:* If taken more than once would results change? Would this depend on the specific position, amount of experience, etc., or would an individual's philosophical orientation remain the same throughout their career?
- *Philosophies of adult education and their relation to environmental education:* More formally study how philosophies of adult education align with goals of environmental education (and, therefore, environmental literacy).
- *Conflicting philosophies of adult education:* How can we learn more about EE practitioners who may have conflicting philosophical orientations of adult education? How might these translate into the programs those practitioners may offer to adults?

While the following recommendations have not emerged from the study results, they stem from the literature review and gaps in existing research.

- *Formal coursework or training in adult education:* What does adult education formal coursework or training look like? How might adult education training differ from adult environmental education training?
- *Adult participants in EE programming:* Who are the adults participating in adult EE? What draws them to this programming, and how can we design programs to reach all the goals of EE, rather than only awareness and skills?
- *Educating the educators:* Do environmental education degree programs address the adult audience? If so, how does teaching about and to this audience align with the ultimate goals of environmental education?

## **Conclusion**

These research findings are an important first step toward understanding the philosophical orientations to adult education in the field of EE. Individual EE practitioners may gain insight into their own philosophical orientations and translate those into their teaching or managing of environmental education programming for adult audiences. Identifying one's adult education philosophical orientation may also cause



reflection on the purpose and role of adult environmental education in working toward and environmentally literate society. Considering one's personal beliefs, values, and attitudes about adult EE is critical to effective adult EE programming. Influences on philosophical orientation should continue to be studied if we are to truly understand the effects of EE practitioners' philosophical orientations on EE's ultimate goals and outcomes. With further research and follow-up studies, we can learn more about what is needed for effective training of EE practitioners and how adult education philosophical orientations may be harnessed to fully reach the goals of adult EE.

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APPENDIX A  
SURVEY INSTRUMENT

STUDY OF MINNESOTA ENVIRONMENTAL EDUCATION PRACTITIONERS'  
PHILOSOPHICAL ORIENTATIONS TO ADULT LEARNING

**Introduction**

Hello, and thank you for participating in this survey. After answering some questions about yourself, please complete the Philosophy of Adult Education Inventory (PAEI). It will take approximately 15 minutes to complete. If you have any questions regarding this research survey, please contact Erin Zoellick at zoell007@d.umn.edu or UMDResearch.Zoellick@gmail.com.

**Experience, position and training**

The following are questions regarding your individual background related to the research topic.

**How did you find out about this survey? Select all that apply.**

- MAEE email
- direct email from researcher
- forwarded email from colleague
- other

**Please check which of these best fits your current title:**

- Program Director or Director of Education
- Environmental Educator/Educator/Interpreter
- Unemployed or currently not working in field of EE or a related field

**Have you worked with adult audiences in any teaching/learning context?**

- Yes
- No

**Have you worked with adult audiences in an environmental education context?**

- Yes
- No

**If yes, how often do you work with adult audiences in your current environmental education position?**

- Infrequently (less than once a year)
- Several times per year
- Several times per month



Every day or several times each week

**Have you had any training in working with adult audiences?  
Select all that apply:**

None

Individual reading/research

Informal or anecdotal information from colleagues

Formal coursework, training, or professional development

### **Philosophy of Adult Education Inventory**

The Philosophy of Adult Education Inventory is an assessment tool developed to assist the adult educator to identify his/her personal philosophy of education and to compare it with prevailing philosophies in the field of adult education.

If you do not work with adult audiences, please answer all questions with your most likely responses, or what you would mostly likely do.

Each item on the survey begins with an incomplete sentence (in bold), followed by five different options that might complete the sentence. Rate your agreement for each option, using 4 (neutral) if you don't have any opinion or aren't sure about a particular option. Please respond to every option, even if you feel neutral about it. **THERE ARE NO RIGHT OR WRONG ANSWERS.**

**IN PLANNING AN EDUCATIONAL ACTIVITY, I AM MOST LIKELY TO:**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
|   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Identify, in conjunction with learners, significant social, cultural, and/or political issues and plan learning activities around them. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Clearly identify the results I want and construct a program [class workshop] that will achieve those results.                           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Begin with a lesson plan that organizes what I plan to teach, when and how.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Assess learners' needs and develop valid learning activities based on those needs.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Consider the areas of greatest interest to the learners and plan to deal with them regardless of what they may be.                      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**PEOPLE LEARN BEST:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| When the new knowledge is presented from a problem-solving approach.                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| When the learning activity is clearly structured and provides for practice and repetition. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Through discussion with other learners and a group coordinator.                            | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| When they are free to explore, without the constraints of a "system".                      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| From an "expert" who knows what he or she is talking about.                                | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**THE PRIMARY PURPOSE OF ADULT EDUCATION IS:**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
|   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| To facilitate personal development on the part of the learner.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| To increase learners' awareness of the need for social change and to enable them to effect such change. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| To develop conceptual and theoretical understanding.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| To establish the learners' capacity to solve everyday problems.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| To develop the learners' competency and mastery of specific knowledge and skills.                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**MOST OF WHAT PEOPLE KNOW:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Is a result of consciously pursuing their goals, solving problems as they go.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They have learned through critical or reflective thinking focused on important social, cultural, and political issues. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They have learned through a trial-and-feedback process.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They have gained through self-discovery rather than some "teaching" process.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They have acquired through a comprehensive educational process.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**DECISIONS ABOUT WHAT TO INCLUDE IN A LEARNING ACTIVITY:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Should be made mostly by the learner in consultation with a facilitator.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Should be based on what learners know and what the teacher believes they should know at the end of the activity. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Should be based on a consideration of key social, political, and/or cultural situations.                         | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Should be based on a consideration of the learners' needs, interests, and problems.                              | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Should be based on careful analysis by the teacher of the material to be covered and the concepts to be taught.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**GOOD ADULT EDUCATORS START PLANNING INSTRUCTION:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| By considering the specific outcomes they are looking for and the most efficient ways of producing them in learners. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| By identifying everyday problems that can be solved as a result of the instruction.                                  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| By clarifying the content, concepts, and/or theoretical principles to be taught.                                     | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| By clarifying key social, cultural, and/or political issues that affect the lives of the learners.                   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| By asking learners to identify what they want to learn and how they want to learn it.                                | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**AS AN ADULT EDUCATOR, I AM MOST SUCCESSFUL IN SITUATIONS:**

|   | <b>Strongly<br/>Disagree</b> |   |   | <b>Neutral</b> |   |   | <b>Strongly<br/>Agree</b> |
|---|------------------------------|---|---|----------------|---|---|---------------------------|
|   | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| That are unstructured and flexible enough to follow learners' interests.  | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| That are fairly structured, with clear learning objectives and built-in feedback to the learners.   | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| Where I can focus on practical skills and knowledge that can be put to use in solving problems.   | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| Where the scope of the new material is fairly clear and the subject matter is logically organized.  | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| Where the learners have some awareness of social and/or political issues and are willing to explore the impact of such issues on their daily lives. | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |

**IN PLANNING AN EDUCATIONAL ACTIVITY, I TRY TO CREATE:**

|   | <b>Strongly<br/>Disagree</b> |   |   | <b>Neutral</b> |   |   | <b>Strongly<br/>Agree</b> |
|---|------------------------------|---|---|----------------|---|---|---------------------------|
|   | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| The real world - problems and all - and to develop learners' capacities for dealing with it.                        | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| A setting in which learners are encouraged to examine their beliefs and values and to raise critical questions.     | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| A controlled environment that attracts and holds the learners, moving them systematically towards the objective(s). | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| A clear outline of the content and the concepts to be taught and learned.   | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |
| A supportive climate that facilitates self-discovery and interaction.   | 1                            | 2 | 3 | 4              | 5 | 6 | 7                         |

**THE LEARNERS' FEELINGS DURING THE LEARNING PROCESS:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Must be brought to the surface in order for learners to become truly involved in their learning. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Provide energy that can be focused on problems or questions.                                     | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Will probably have a great deal to do with the way they approach their learning.                 | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Are used by the skillful adult educator to accomplish the learning objective(s).                 | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Are likely to get in the way of teaching and learning by diverting the learners' attention.      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**THE TEACHING METHODS I PREFER TO USE:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Focus on problem-solving and present real challenges to the learner.                               | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Emphasize practice and feedback to the learner.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Are mostly non-directive, encouraging the learner to take responsibility for his/her own learning. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Involve learners in dialog and critical examination of controversial issues.                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Are determined primarily by the subject or content to be covered.                                  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**WHEN LEARNERS ARE UNINTERESTED IN A SUBJECT, IT IS PROBABLY BECAUSE:**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
|   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They do not realize how serious the consequences of not understanding or not learning the subject may be. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They do not see any benefit for their daily lives.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| The teacher does not know enough about the subject or is unable to make it interesting to the learner.    | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They are not getting adequate practice or feedback during the learning process.                           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They are not ready to learn it or it is not a high priority for them personally.                          | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**DIFFERENCES AMONG ADULT LEARNERS:**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
|   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Are relatively unimportant as long as the learners gain a common base of understanding through the learning experience.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Enable them to learn best on their own time and in their own way(s).  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Are primarily due to differences in their life experiences and will usually lead them to make different applications of new knowledge and skills to their own situations. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Arise from their particular cultural and social situations and should not be minimized even as they recognize common needs and problems.                                  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Will not interfere with learning if each learner is given adequate opportunity for practice and reinforcement.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**EVALUATION OF LEARNING OUTCOMES:**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
|   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Is not of great importance and may not be possible, because the impact of learning may not be evident until much later.                     | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Should be built into the system, so that learners will continually receive feedback and can adjust their performance accordingly.           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Is best done by the learners themselves, for their own purposes.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Lets me know how much learners have increased their conceptual understanding of new material.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Is best accomplished when the learner encounters a problem, either in the learning setting or the real world, and successfully resolves it. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**MY PRIMARY ROLE AS A TEACHER OF ADULTS IS TO:**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
|  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Guide learners through structured learning activities with well-directed feedback.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Systematically lead learners in acquiring new information and understanding underlying theories and concepts.                              | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Help learners identify and learn to solve problems better.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Increase learners' awareness of environmental, social, and political issues and help them learn how to have an impact on these situations. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| Facilitate, but not to direct, learning activities.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |



**IN THE END, IF LEARNERS HAVE NOT LEARNED WHAT WAS TAUGHT:**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
|   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| The teacher has not actually "taught".  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They need to repeat the experience, or a portion of it.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They may have learned something else that they consider just as interesting or useful.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| They do not recognize how learning will enable them to significantly influence social change.                                 | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| It is probably because they are unable to make practical application of new knowledge to solve problems in their daily lives. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**Conclusion**

Again, thank you for your participation. Your contributions are greatly appreciated, as collectively your responses will provide greater understanding of how philosophical orientation of adult education in EE relates to the ultimate goals of EE.

With permission from the author, the PAEI was attained from:

Zinn, L. M. (1998). Identifying your philosophical orientation. In M.W. Galbraith (2nd Ed.), Adult learning methods. (pp. 39-56). Malabar, FL: Krieger Publishing Company.

*If you wish to receive information about the philosophical orientation(s) you most identify with, please fill in an anonymous code below. Results correlating with your code will be posted on the following website no later than June 30. Please record or bookmark this website in order to view your results:*

*<http://sites.google.com/site/2009zoellicksurveyresults/>*

*Enter the two-digit number of the month of your birth (eg. January = 01), followed by the last four digits of your phone number. Keep track of your code in order to view your results once they are posted.*

APPENDIX B  
PERMISSION TO USE PAEI

Hello, Dr. Ernst,

This sounds like an interesting study, and I'm pleased that Ms. Zoellick considers the Philosophy of Adult Education Inventory a useful instrument for her research. Yes, she has my permission to use the instrument for this study. My only request is that she use the PAEI in its entirety without making any changes.

The PAEI is used primarily in booklet form. I am attaching a fact sheet in case you are not familiar with the booklet. However, I have created a separate version of the instrument for research purposes, separating the instrument (along with instructions for administration and scoring) from the interpretive material. I suggest that the researcher offer the interpretive section as a follow-up, if that is feasible.

Rather than a per-instrument fee, I usually request a flat \$50 courtesy fee for use of the PAEI for research. I am willing to communicate with the researcher by e-mail and/or telephone if I can be of assistance.

Please let me know how I can further assist with this proposed research. I would be interested in reading a synopsis of the research proposal.

Sincerely,

Lorraine M. Zinn, Ph.D.  
Lifelong Learning Options  
420 South 12th Street, Suite 107  
Quincy, IL 62301-4304 USA  
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APPENDIX C

INITIAL QUESTIONNAIRE CONTACT EMAIL

## **Greetings!**

As a member of MAEE, you have the opportunity to help support and advance environmental education (EE). The MAEE Board of Directors supports our mission by encouraging research in a diversity of disciplines, especially in the field of EE. A current M.Ed. graduate student at University of Minnesota Duluth is asking for your help in her EE research. Please read below for more information on how you can continue to support the credibility and advancement of our field.

Thanks so much.

Sincerely,  
MAEE Board of Directors

### University of Minnesota Duluth Research Opportunity:

Hello, my name is Erin Zoellick, and I am an Environmental Education graduate student at University of Minnesota-Duluth. You are invited to participate in a research project investigating the philosophical orientations to adult education that environmental educators in MN have.

I am asking you to complete an online questionnaire. You do not need to work with adult audiences in order to complete this questionnaire. You have been selected for participation because you are a member of MAEE or an environmental educator in Minnesota working for an organization that appears on the SEEK website. Following the survey link, you will find important information regarding this research and your consent to participate. Please keep a copy of it for your records.

[http://www.surveymonkey.com/s.aspx?sm=d\\_2b3u6lpJwkNhU7CrgRzdLQ\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=d_2b3u6lpJwkNhU7CrgRzdLQ_3d_3d)

- It is fine for several staff members at one site to take the survey, but please only take it once.
- Feel free to forward this email to fellow environmental educators, environmental education administrators or organizations that provide environmental education in the state of Minnesota.
- The survey will be accessible until Friday, April 24.

Additional information and contact information is provided below. Thank you in advance for considering participating in the research.

Sincerely,  
Erin Zoellick  
M.Ed. Candidate

Additional research and consent information:

The purpose of this study is to identify adult education philosophical orientations of MN

environmental educators and to draw out any trends or patterns that may emerge based on amount of experience, formal training in adult education, and position. This is important to our field because individuals, organizations, and the EE field itself may more fully understand and reflect upon their teaching philosophy by identifying their philosophical orientations to adult education; this can lead to better program design and delivery, staff unity, adherence to an organization's mission, and progress toward accomplishing the overarching goals of EE.

As a member of MAEE or a Minnesota environmental educator, you are invited to participate in an online questionnaire that helps to identify your individual adult education philosophical orientation. Philosophical orientation is a way of categorizing your beliefs, values, and attitudes. You do not need to work with adult audiences in order to complete this questionnaire. I invite you to follow the link below to a questionnaire called the Philosophy of Adult Education Inventory (PAEI). This questionnaire is located on Survey Monkey

[http://www.surveymonkey.com/s.aspx?sm=d\\_2b3u6lpJwkNhU7CrgRzdLQ\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=d_2b3u6lpJwkNhU7CrgRzdLQ_3d_3d) and will take approximately 15 minutes to complete.

There are no foreseeable risks or benefits to participating in this study. While there is no compensation for your participation, please know that your insights and experiences will further the profession of environmental education. Your contributions are greatly appreciated, as collectively your responses will provide greater understanding of how philosophical orientation of adult education in EE relates to the ultimate goals of EE.

The results of your questionnaire will be strictly anonymous; your participation will in no way be attached to your individual identity, and will not be affiliated with any proper name of your place of employment. The records of this study will be kept private. In any report or manuscript I might publish, I will not include any information that will make it possible to identify a participant. Research records will be stored securely, and only I will have access to the records. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or to withdraw at any time without affecting those relationships.

If you have questions now, or have questions later, please contact Erin Zoellick at [zoell007@d.umn.edu](mailto:zoell007@d.umn.edu) or [UMDRsearch.Zoellick@gmail.com](mailto:UMDRsearch.Zoellick@gmail.com), or Julie Ernst by mail at the University of Minnesota, Duluth, Dept. HPER, 110 SpHC, 1216 Ordean Court; Duluth, MN, 55812, by phone (218-726-6761), or by email ([jernst@d.umn.edu](mailto:jernst@d.umn.edu)). If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

APPENDIX D  
REMINDER EMAIL

Greetings,

My name is Erin Zoellick, and I am an Environmental Education graduate student at University of Minnesota Duluth. In the past two weeks you were invited to participate in a research project investigating the philosophical orientations to adult education that environmental educators in MN have.

This is a reminder that the survey will close on the afternoon of Friday, April 24 (this Friday). If you intend to take the survey, please do so by following this link:  
[http://www.surveymonkey.com/s.aspx?sm=d\\_2b3u6lpJwkNhU7CrgRzdLQ\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=d_2b3u6lpJwkNhU7CrgRzdLQ_3d_3d)

As mentioned in my last correspondence, you do not need to work with adult audiences in order to complete this questionnaire. Please refer to my prior email for further details and consent information. Thank you in advance for considering participating in the research.

Sincerely,  
Erin Zoellick  
M.Ed. Candidate



APPENDIX E

SUMMARY OF THE FIVE ADULT EDUCATION PHILOSOPHIES

### Humanistic

**Purpose of adult education:** enhance personal growth and development, and to facilitate self-actualization.

**Learner characteristics:** highly motivated and self-directed; assumes responsibility for learning.

**Teacher characteristics:** facilitator, helper, and partner; promotes but does not direct learning.

**Concepts and key words:** experiential learning; freedom; individuality; self-directedness; interactive; openness; authenticity; self-actualization; empowerment; and feelings.

**Methods:** experiential learning; group tasks; group discussion; team teaching; self-directed learning; individualized learning; and discovery method.

**People and practices:** Rogers, Maslow, Knowles, Tough, McKenzie, encounter groups, group dynamics, self-directed learning projects, human relations training, and Esalen Institute.

### Progressive

**Purpose of adult education:** to promote societal well-being; enhance individual effectiveness in society; to give learners practical knowledge and problem-solving skills.

**Learner characteristics:** Learner needs, interests and experiences are key elements in learning; people have unlimited potential to be developed through education.

**Teacher characteristics:** organizer; guides learning through experiences that are educative; stimulates, instigates and evaluates learning process.

**Concepts and key words:** Problem solving; experience-based education; democratic ideals; lifelong learning; pragmatic knowledge; needs assessment; social responsibility.

**Methods:** Problem solving; scientific methods; activity curriculum; integrated curriculum; experimental method; project method; cooperative learning.

**People and practices:** Spencer, Dewey, Bergevin, Brameld, Sheats, Lindeman, Benne, Blakely, ABE, ESL, citizenship education, community schools, cooperative extension, university without walls.

### Behavioral

**Purpose of adult education:** promote skill development and behavioral change; ensure compliance with standards and societal expectations.

**Learner characteristics:** take an active role in learning; practicing new behavior and receiving feedback; strong environmental influence.

**Teacher characteristics:** manager; controller; predicts and directs learning outcomes.

**Concepts and key words:** competency-based; mastery learning; standards-based; behavioral objectives; trial and error; feedback; reinforcement.

**Methods:** programmed instruction; contract learning; criterion-referenced testing; computer-aided instruction; skill training.

**People and practices:** Watson, Skinner, Thorndike, Steinberg, Tyler, APL, vocational training, teacher certification, military, religious indoctrination.

### Liberal

**Purpose of adult education:** develop intellectual powers of the mind; make a person literate in the broadest sense - intellectually, morally, spiritually, and aesthetically.

**Learner characteristics:** "Renaissance person"; cultured; always a learner; seeks knowledge; conceptual and theoretical understanding.

**Teacher characteristics:** the "expert"; transmitter of knowledge; authoritative; clearly directs learning process.

**Concepts and key words:** liberal arts; learning for its own sake; rational, intellectual education; general, comprehensive education; traditional knowledge; classical humanism.

**Methods:** lecture; dialectic; study groups; contemplation; critical reading and discussion.

**People and practices:** Socrates, Aristotle, Plato, Adler, Rousseau, Piaget, Houle, Great Books Society, Paideia Proposal, Center for the Study of Liberal Education, Elderhostel, Chautauqua.

### Radical

**Purpose of adult education:** bring about through education fundamental social, political, and economic changes in society.

**Learner characteristics:** equality with teacher in learning process; personal autonomy; people create and change history and culture by combining reflection with action.

**Teacher characteristics:** coordinator; suggests but does not determine direction for learning; equality between teacher and learner.

**Concepts and key words:** consciousness raising; praxis; noncompulsory learning; autonomy; social action; empowerment; "deschooling"; social transformation.

**Methods:** dialogue; problem posing; critical reflection; maximum interaction; discussion groups; exposure to media and people in real life situations.

**People and practices:** Holt, Kozol, Freire, Illich, Shor, Ohliger, Perelman, Freedom Schools, Friere's literacy training, free schools, Social Action Theatre.

Adapted from:

Zinn, L. M. (1998). Identifying your philosophical orientation. In M.W. Galbraith (Ed.), *Adult Learning Methods*, 2<sup>nd</sup> Edition (pp. 37-72). Malabar, FL: Krieger Publishing Company.