

**A STUDY OF THE PROCESS OF DEVELOPING
COMPETENCY-BASED ENVIRONMENTAL EDUCATION
CERTIFICATION PROGRAMS
FOR NON-FORMAL ENVIRONMENTAL EDUCATORS**

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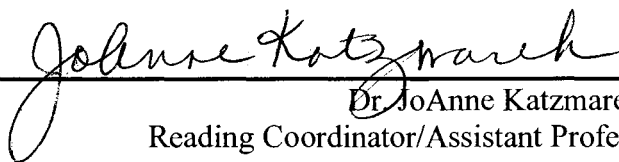
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ABSTRACT

Certification is a method by which the field of Environmental Education (EE) can achieve legitimacy, a method of professional standardization and accountability, a greater understanding by the public and EE professionals, and hopefully, greater overall acceptance. Since the 2000 publication of *Guidelines for the Initial Preparation of Environmental Educators*, competency-based certification programs have gained more popularity among organizations looking to assess and train EE professionals. EE competency-based certification programs require participants to demonstrate competence in EE specific areas. Recent certification program developments in Utah, Kentucky, Georgia and Texas have paved the way for other EE competency-based programs across the country.

This study examined the program evolution of two competency-based environmental education certification programs (located in Utah and Kentucky) between 2003 and 2004. Similarities and differences between the two 2004 state programs were also documented. The programs examined in this study were supported by the Utah Society for Environmental Education (USEE) and Kentucky Environmental Education Council (KEEC).

Interviews were conducted with seven certification officers from Utah and Kentucky and four USEE certification program participants. Certification officer interviews provided program information, opinions on program successes and challenges, and suggestions for improvement. USEE program participants provided demographic information, identified motivations for participating in the program, and offered their opinions of program strengths and weaknesses.

The results of the study indicated that many factors impacted the evolution of the study states' programs between 2003 and 2004. Some of the important factors that played a

role in program evolution include: additional development time, the influence of external organizations and cooperative meetings, and the emergence of new information.

Recommendations for future certification states pertain to: development team formation, certification program development, use of “people” resources, use of prior EE events and cooperative results, pilot testing, and marketing.

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Life is a great big canvas; throw all the paint on it you can.

--Danny Kaye

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CHAPTER I – INTRODUCTION

Abbreviations found within this publication are explained in Appendix A.

The first chapter is an introduction to the study and is organized in the following manner:

1. Background
2. Problem Statement
3. Subproblems
4. Research Questions
5. Importance of Study
6. Delimitations
7. Assumptions
8. Definition of Terms

1. Background

In 1995, North Carolina became the first state to offer state certification for non-formal environmental educators. A similar program in Missouri closely followed the North Carolina certification program. These programs are classified as experience-based certification programs; that is, they require attendance at specified programs but do not require demonstration of specific skills and knowledge.

In 2000, the North American Association for Environmental Education (NAAEE) published the *Guidelines for the Initial Preparation of Environmental Educators*. This publication provided the framework for state competency-based environmental educator certification programs across the nation. The first states to complete certification programs utilizing this framework were Utah, Georgia, Kentucky, and Texas. Other states are looking into developing a non-formal environmental educator certification.

This study examined the program evolution of two competency-based environmental education certification programs and proposed recommendations to other states considering the development of certification programs.

2. Statement of the Problem

The goal of this study is to critically analyze the development and implementation of two competency-based non-formal environmental educator certification programs for the purpose of developing recommendations for others considering developing a certification program.

3. Subproblems

Subproblems were created to provide structure and direction to Chapter III (Research Procedures), Chapter IV (Results), and Chapter V (Conclusions, Implications, and Recommendations.) The five subproblems are listed below.

- 1 Identify and select two study states with competency-based non-formal environmental educator certification programs to participate in the project.
- 2 Gather and evaluate program specific data via interviews with state EE certification officers.
 - 2.1 Create question objectives for certification officer survey instrument
 - 2.2 Create a survey instrument.
 - 2.3 Administer the survey instrument.

- 2.4 Choose a coding method that will be used with certification officer and participant interviews and written program-related data.
- 3 Gather and evaluate written program-related materials of two state competency-based environmental education certification programs.
 - 3.1 Collect program evolution data from each state from program administrators and key resource experts.
 - 3.2 Identify key organizational entities aiding state certifying bodies in certification program development and implementation.
 - 3.3 Document key meetings that have influenced the evolution of state programs.
- 4 Gather data from program participants regarding demographics, career background, and motivations for pursuing certification.
 - 4.1 Create question objectives.
 - 4.2 Create a survey instrument.
 - 4.3 Administer the survey instrument.
- 5 Analyze and synthesize data, and make certification recommendations for states interested in creating an environmental education certification program for non-formal environmental educators.

4. Research Questions

Research questions were used when analyzing and synthesizing data. Furthermore, the research questions provided the format for Chapters IV and V.

1. Study state certification program attributes/components
 - 1.1. How have the certification program attributes/components evolved over the development and implementation timeframe
 - 1.2. Why have certification program attributes/components evolved over the development and implementation timeframe?
2. How do USEE program participant responses compare with USEE certification officers' responses?
3. Cross-case comparison – Similarities/differences of program components
 - 3.1. How similar/dissimilar are the study states' program components?
 - 3.2. Why are the study states' program components similar/dissimilar?
4. What implications will this study have for the study states, other states considering EE certification, and the EE field?

5. Importance of Study

Non-formal environmental educators strive to present balanced and thematic programs to diverse audiences in many different settings. Frequently, non-formal environmental educators assist formal classroom teachers in presenting programs to increase students' subject awareness, knowledge, and values, as well as encourage responsible citizen action. Unfortunately, the definition and intent of environmental education has been misunderstood by critics and environmental educators alike. Certification is a method by which the EE community can attain standardization, legitimacy for the profession, a greater understanding of EE by the public and professionals within the field, and hopefully, greater overall acceptance. A certification program provides a system of accountability that can be used to insure that people who call themselves environmental educators have the knowledge and skills to provide balanced, quality educational programs.

This project used a case study approach to analyze two competency-based non-formal environmental educator certification programs. Programs in Utah, and Kentucky were analyzed and evaluated for common elements. The researcher made program recommendations based on data from certification program representatives and key resource experts. Comparisons of 2003/2004 programs and resulting recommendations will provide guidance and assistance to others considering developing non-formal environmental educator certification programs. Persons considering a certification program will understand the challenges Utah and Kentucky encountered while creating and implementing competency based non-formal environmental educator certification programs. In summary, this study will assist states interested in developing effective certification programs for environmental educators.

2. Limitations

- 1 This research project relied on a great number of short interviews conducted within the last 3 ½ months of the project (17). As a result of a limitation of time, the researcher was unable to transcribe the entire contents of each interview. The recommendations, state program tables, cross state program comparison table, and USEE program participant table were based on interviews that were transcribed verbatim (14). The remainder of interviews that were not entirely transcribed were not coded but were used to provide background information on North Carolina's certification program, external organizations, and meetings.
- 2 Due to time constraints, the researcher was unable to pilot test questionnaires for certification officers and program participants. If the researcher had time to engage in pilot testing of the study instruments, it would nevertheless have been difficult for the researcher to locate pilot testers who possessed knowledge comparable to the actual intended audience.
- 3 All pertinent information could not be located through program documents and past interview data, as the matrix instrument was not available to the researcher until May 2004. In these cases, gaps were filled in with information gained through discussions with certification officers
- 4 This study did not analyze the national certification program.
- 5 Only competency-based certification programs for non-formal environmental educators were analyzed.

- 6 This project does not represent all of the competency-based EE certification programs presently in the United States.
- 7 The study analyzed two the identified four competency-based non-formal environmental educator certification programs.
- 8 This study did not evaluate or gather any opinions regarding the certification program leadership.

7. Assumptions

- 1 This study will be practical and useful to state and national environmental education professionals and organizations.
- 2 Utah and Kentucky will have certification programs falling into the competency-based model upon program implementation.
- 3 Comments made by certification officers and program participants represent their true feelings and opinions.
- 4 There will be certification program elements and factors that are unique to the certifying state. A few examples of such elements may include: a specific leader's personality, a state certifying organization's level of trust with state EE stakeholders, and a state's commitment to furthering and improving EE. These factors may not be reproducible in other states and thus can not be generalized.

8. Definition of Terms

Affiliate – Refers to associations that belong to the “Affiliates Network.” This Network “strives to promote environmental education and support the work through strengthening the capacity of state, territorial, regional and provincial EE associations” (Affiliate Network of NAAEE, n.d., p 1). Affiliates mentioned in this study are: Utah Society for Environmental Education (USEE), Kentucky Association for Environmental Education (KAEE), Missouri Environmental Education Association (MEEA), and Environmental Education Alliance of Georgia (EEA).

American National Standards Institute (ANSI) – ANSI accredits professional certification programs.

Assessment – A determination of an applicant’s competency made by authorized persons based on the use of assessment tools. Exams, debates, and reports are some methods/tools that can be used to assess an applicant’s competency.

Certification – An evaluation process by which a person demonstrates his/her competence in a subject and compliance with a standard method of evaluation. “In certification, the focus is on assessing current knowledge and skills” (Rops, 2002).

Certification officer – Any individual who processes certification applications and/or handles certification appeals in a paid or voluntary capacity.

Certification States (capitalized) – An inclusive term including certification officers and representatives from the four primary certification states (Utah, Kentucky, Georgia, and Texas) as well as key resource experts and facilitators who participated in the Certification States’ meetings held in 2003 and 2004.

certification states (not capitalized) – An inclusive term including certification officers and representatives from present and future certification states.

Certifying Administration Body – The administration entity receives the applications, maintains the database and tracks applicants' progress. This entity may or may not fall under the umbrella of a parent organization.

Competencies – Knowledge, skills, and abilities professionals need to be successful (Combest, 2002).

Competency (demonstration of) – Demonstration of specific knowledge, skills and abilities to a required level or standard.

Competency-based certification program – Certification program based on the completion of tasks requiring the demonstration of specific competencies.

Construct Validity – “the degree” to which a concept can or cannot be “directly measured or observed” (Kweit and Kweit, 1981, as cited in Leedy, 1989, p 41).

Credential – A broad term referring to a certificate or title granted to an individual or organization that has achieved minimum standards within a professional discipline. Programs offering credentials include professional certification, accreditation, or licensure (Glassie, 2003).

Environmental Education (EE) – Education which seeks to develop a world population that is aware of, and concerned about the environment and its associated problems, and which has the knowledge, skills, attitudes, motivation and commitment to work individually and collectively toward solutions to current problems and the prevention of new ones (UNESCO/UNEP, 1976).

Evaluation – Determining the value and worth of a certification program, assessments, program staff and other program elements.

External Validity – The soundness by which the data can be generalized to a larger sample or “other cases” (Leedy, 1989, p 41).

Internal Validity – The “freedom from bias in forming conclusions in view of the data” (Leedy, 1989, p 41).

Experience-based certification program – Certification program based on the completion of a set number of tasks; e.g., the completion of courses, or workshops without the actual demonstration of competency.

Formal environmental educator – An environmental educator employed by a school system, college, or university.

Grandfathering – Receiving an exemption from present requirements due to prior participation, experience or credentials.

Likert Scale – A type of question where respondents are asked at which level they agree or disagree with a statement.

National Commission for Certifying Agencies (NCCA) –The NCCA accredits professional certification programs for the National Organization for Competency Assurance (NOCA).

National Skill Standards Board (NSSB) – The NSSB accredits professional certification programs.

Non-formal environmental educator – Environmental educators that do not fit the definition of a formal environmental educator. These educators frequently work in zoos, museums, nature centers and parks.

Reliability – The accurateness of a study instrument in measuring the intended subject/object/topic (Leedy, 1989, p 42), or the ability for a study to be replicated by another researcher using the same study instruments (Yin, 2003).

Stakeholders – Agencies, organizations, businesses, industries that have a vested interest in advancing the field of environmental education or positively impacting citizens' environmental sensitivity.

Training Vehicles – Products or programs used to convey program knowledge, skills or abilities to program participants. Examples of training vehicles are: “workshops, online tutorials, retreats, workbooks, lectures, and chat rooms” (Valence, 2001).

Parent Organization – An organization commonly considered as the original source from which other committees, boards, groups, or entities stem from. For the purpose of this thesis, a parent organization represents the population to be served.

Program Administrator – “An individual who provides the vision and leadership to carry out the administration and development of an organization’s mission, goals, and objectives” (Byrd, 2000).

Program Coordinator – An individual responsible for organizing different groups to accomplish specific goals.

CHAPTER II - REVIEW OF RELATED LITERATURE

The review of related literature examined literature pertaining to certification, EE certification in the U.S., and the study methodology. This chapter is organized in this way:

1. Certification Background
2. Certification Process Suggestions
 - 2.1. Certification Development Team
 - 2.2. Core Competencies and Training Vehicles
 - 2.3. Application Procedures and Materials
 - 2.4. Program Marketing
 - 2.5. Certification Program Evaluation
 - 2.6. Program Credibility
3. Certification in Environmental Education
 - 3.1. History
 - 3.2. Value of Certification to Environmental Education
 - 3.3. Current State of EE Certification
 - 3.3.1. Experience-based Certification Programs
 - 3.3.1.1. North Carolina
 - 3.3.1.2. Missouri
 - 3.3.2. Competency-based Certification Programs
 - 3.3.2.1. Utah
 - 3.3.2.2. Kentucky
 - 3.3.2.3. Georgia
 - 3.3.2.4. Texas
 - 3.3.2.5. North American Association for Environmental Education (NAAEE)
 - 3.4. External Organizations
 - 3.4.1. EPA OEE
 - 3.4.2. EETAP
 - 3.4.3. NAAEE
 - 3.4.4. EEQA Initiative
4. Literature Supporting Study Methodology
 - 4.1. A Case Study Research Strategy
 - 4.2. Multiple-case Sampling Designs
 - 4.3. Choice of Interviewees
 - 4.4. Sources of Data
 - 4.4.1. Documentation
 - 4.4.2. Archival Records
 - 4.4.3. Interviews
 - 4.4.4. Direct Observations
 - 4.5. Certification Officer Interview Questions
 - 4.6. USEE Program Participant Interview Questions
 - 4.7. Validity Panel
 - 4.8. Data Coding
 - 4.8.1. Code Development
 - 4.8.2. Coding Method
 - 4.9. Result and Conclusion Generation

1. Certification Background

Many occupations require a testing or evaluation process to ensure that employees are competent and knowledgeable about their subject matter. Medicine, law, and accounting are among the many careers that would lack credibility without a strong and rigorous evaluative certification program. There are many reasons to develop a professional certification program.

Certification:

- Encourages compliance to standards and strengthens a professional's credibility (Healthcare Compliance Certification, 1999).
- Provides job security ensuring only certified personnel are hired (Black & Smith, 1998).
- Establishes a level of competency and proficiency (Rops, 2001).
- Pinpoints weaknesses in the training and learning of a subject (Turner, 2000).
- Motivates candidates to pursue further training (Turner, 2000).
- Provides recognition of participants for achieving a level of competency in a subject. (Turner, 2000; Rops, 2001).
- May lead to a monetary bonus or monetary raise (A+ Certification and Training FAQ, n.d.).

Developing a certification program may not be for everyone. Specific needs for developing the program should be defined. Joan Knapp (2001) lists five reasons credentialing may be a good idea. First, the field may have changed quickly and drastically

requiring professionals to learn “new skills or knowledge.” Second, the field may have experienced an enormous increase in knowledge in a short period of time. Third, academic degrees may quickly become dated and insufficient for the field. Forth, there may be increasing pressure to have professional standards for the field. Lastly, the profession may want to avoid “government regulation” by implementing a certification program (Knapp, 2001).

2. Certification Process Suggestions

Based on the following review of literature, many steps should be taken to develop a successful certification program that would be respected by the discipline. The steps listed below do not necessarily need to occur in the listed order. These steps may also not be representative of all of the steps needed to develop a certification program.

2.1. Certification Development Committee

According to Fells (2000), members on a certification committee should be representative of the range of occupations in the discipline. These participants may include academia representatives, discipline professionals, well-respected senior members of the discipline, as well as program certification officers (Fells, 2000). Knapp (2003) recommends if the certification program is being driven by a separate entity, representatives of that entity should be involved in the program development process. Combest (2000) suggests that employers in the field also participate in the program development.

2.2. Core Competencies and Training Vehicles

Combest (2002) also adds, the certification development committee is responsible for identifying competencies that participants will be expected to achieve. Since a certification program is responsible for guaranteeing participants possess discipline-specific competencies, the competencies should be spelled out (Combest, 2002). These competencies should be based on what certified members will be expected to accomplish in their job. A job analysis can help determine what program participants should be competent in. Mickie Rops (2001) recommends a combination of the following methods to produce a quality job analysis:

1. Literature review
2. Interviews
3. Focus groups
4. Log diaries
5. Questionnaires
6. An expert panel
7. Delphi Technique
8. Nominal Delphi Technique.

(Rops, 2001)

According to Combest (2002), the development committee is also responsible for identifying how the competencies will be used. In many cases, the competencies will be used to ensure the certification program curriculum matches what program participants should know. The competencies may also be used to categorize the discipline's body of knowledge; or to match professional job knowledge, skills, and abilities with those of similar job positions throughout the profession (Combest, 2002). According to Valence (2001), the certification development committee should determine how the competencies will be evaluated. Success indicators for program participants and the program should be identified and tracked (Valence, 2001). Rops (2000) suggests that the certification development

committee or the certifying organization develop a list of readings (competency-related books, articles, and other materials) to help participants achieve competency (Rops, 2000).

Valence (2001) suggests that if training vehicles (workshops, online tutorials, retreats, workbooks, lectures and chat rooms) are used to disseminate competency-related information, skills or abilities, the competencies should be directly correlated to the training vehicle. Each training vehicle has advantages and disadvantages (Valence, 2001). Rops (2000) believes that a self-assessment instrument may be useful to help participants pinpoint their strengths and deficiencies (Rops, 2000).

2.3. Application Procedures and Materials

Fells (2000) recommends that the certification development committee develop an application procedure. The procedure would detail how applications will be disseminated, received, evaluated and approved/rejected, as well as the decision appeal process (Fells, 2000). Fells (2000) also recommends that the development committee should look at existing programs, publications, and resources to simplify the development process. There is no purpose in reinventing the wheel when such resources already exist.

According to Dorn (2000), the certification application should contain a waiver clause protecting the organization's right to grant, deny, or revoke certification credentials. A disciplinary code or code of ethics should be included in the application materials. The application should also include a paragraph releasing the certifying organization and its representatives from any claims, "with specific exemption from claims of gross negligence or bad faith" (Dorn, 2000). Applications may contain the certifying organization's policy on releasing applicant contact information. Finally, Dorn (2000) recommends the application

contain a signature line indicating the applicant has read the contents of the application and guarantees the contents are correct.

2.4. Program Marketing

Lofty (1997) suggests that certification program marketing techniques should be kept in mind throughout the program development and implementation. Establishing a logo, slogan, program website, and a brochure increases awareness and interest in the certification program and the value of the credential. Media and professional organization news releases increase program awareness and can also be used to recognize new certification recipients. Certification recipients may also be recognized in an existing association membership directory (Lofty, 1997).

2.5. Certification Program Evaluation

Valence (2001) mentions that one internal certification program evaluation method involves reviewing the assessment indicators to determine if the program is successfully meeting the needs it was designed to fill. Program content and assessment indicators should be evaluated periodically to keep the certification program current with discipline advancement. Focus groups and expert panels may be used to evaluate program content (Knapp, 2003). Robert Portman (2001) also recommends that certifying organizations recertify their credential holders often to keep the credential base up-to-date and lower the liability the certifying organization may face for the actions of individuals no longer certified. Associations should update their program content every three to five years (Rops, 2001).

Unlike an internal evaluation, according to Hamm (2002), an external evaluation may or may not be necessary or desirable. Certification program accreditation is an external evaluation method that provides program credibility. Three organizations that accredit programs are: the National Commission for Certifying Agencies (NCCA), American National Standards Institute (ANSI), and the National Skill Standards Board (NSSB) (Hamm, 2002). These accrediting organizations expect certification programs to meet minimum standard requirements to insure adequate due process for any participants who fail to receive credentials. Accrediting organizations also require that the certifying administration body work independently of the parent organization. This separation insures the certification program will not be unfairly biased by the parent organization. A parent organization bias could negatively impact the credibility or value of the certification credential (Glassie, 2003).

2.6. Program Credibility

Lisa Washington (2003) suggests five ways to maintain the credibility of the certification credential.

1. The certification program's credentialing organization should insure that "qualified" participants (people who have passed the minimum standards of the certification program) receive the credential. Likewise, the credentialing organization should not bestow the credential on "unqualified" participants until they are able to demonstrate they are qualified.
2. The credentialing organization should be able to demonstrate that all certified people have been evaluated in a comparable way. Participants certified through a grandfather clause should somehow demonstrate or document that they possess the knowledge required of other certified participants.
3. Stakeholders and certification holders should be valued as sources of program suggestions. Gaining input from these parties will allow the certifying organization to adjust to changes in the field and identify issues that should be addressed or defended by the certifying organization.

4. When announcing the certification program, show a link between the certification program, the organization's mission, and the knowledge requirements. Demonstration of the link will insure that only qualified participants will be certified.
5. Throughout the program marketing, emphasize that certifications are not easily acquired. If the program appears too easy, the value of the certification will be reduced.

(Washington, 2003)

Although "waivers, grandfathering, or documented life experiences" may be used to increase program participant numbers, program "growth should not occur at the expense of program integrity" (Washington, 2003).

3. Certification in Environmental Education (EE)

3.1. History

In 1993, the North American Association for Environmental Education (NAAEE) initiated the National Project for Excellence in Environmental Education. The goal of the National Project for Excellence in Environmental Education was to identify, develop and publish guidelines that could aid educators in developing and teaching balanced, truthful, and inclusive environmental education programs (NAAEE, 1997). The first guide (published in 1996), *Environmental Education Materials: Guidelines for Excellence*, focused on identifying and describing quality EE teaching materials. The second guide, *Excellence in Environmental Education – Guidelines for Learning (K-12)*, and its executive summary were published by NAAEE in 1999. The *Guidelines for Learning* identified key topics that school children should understand at grade benchmarks. The publication of these two sets of

guidelines paved the way for the publication of *Guidelines for the Initial Preparation of Environmental Educators* in 2000 (NAAEE, 2000).

“*Guidelines for the Initial Preparation of Environmental Educators* contains a set of recommendations about the basic knowledge and abilities educators need to provide high-quality environmental education” (NAAEE, 2000, p 1). The intended use of the *Guidelines* was to prepare environmental educators, both in the formal and non-formal setting, to present K-12 environmental educational programs. The *Guidelines* was organized into themes, guidelines, and guideline success indicators that outline concepts an environmental educator should grasp to present effective programs. An outline of the six themes and related guidelines can be found in Appendix B. Since the *Guidelines* listed these essential concepts, it could be used to evaluate “pre-service programs and the abilities of new environmental educators” (NAAEE, 2000, p 1). With the development of the *Guidelines*, the NAAEE (and other EE organizations) had a detailed list of competencies for environmental educators (NAAEE, 2000).

The Program Director of the National Project for Excellence in Environmental Education and Writing Team Chairperson for all three sets of *Guidelines* was Deborah Simmons, Ph.D. After attending a training of the *Guidelines for the Initial Preparation of Environmental Educators*, taught by Deborah Simmons, some members of NAAEE began to discuss the next logical step after the *Guidelines* publication. A session was planned at the 2000 NAAEE conference in South Padre, Texas to discuss the option of a national certification program for environmental educators. That exploratory session opened the subject of a national certification program to the NAAEE membership for input (D. Simmons, personal communication, March 2004). Although there were two state environmental

educator certification programs (which will be discussed under heading 3.3.1.), those programs were developed prior to the publication of the *Guidelines*. The *Guidelines* (or documents adapted from the *Guidelines*) later became the framework for state competency-based environmental educator certification programs across the United States.

3.2. Value of Certification to Environmental Education

Although “defining” the boundaries (knowledge, skills and abilities) of a profession is an important component for certification programs professionals have been trying to define environmental education for many years. One statement, proposed at the Tbilisi Conference in 1976, outlines an accepted vision for environmental education.

The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones.

(UNESCO/UNEP, 1976)

To accomplish this goal, a non-formal educator must possess skills and knowledge related to the material being taught, teaching methods, and the age appropriateness of material being used. According to the Missouri Environmental Education Association (MEEA) (2002),

“The goals of a certification program are: to provide an educational program that improves technical competency of environmental educators; to create incentives for individuals to continue their professional development and excel in the field of environmental education; to provide a standard that identifies professionals who have demonstrated a thorough knowledge of environmental education principles, practices and skills; to implement a high level of skill, competency, and environmental education that enhances opportunities for growth, encourages new environmental educators and serves as support for professionals in the field.”

(MEEA, 2002)

Environmental educator certification demonstrates that a candidate possesses basic skills, a thorough knowledge of the subject matter, and professional knowledge relating to environmental education. The basic skills are determined by the certifying or credentialing organization in the state. Subject knowledge standards should test for a more connected understanding of the subject at a higher learning level than is being taught to the learners. The core competencies or professional knowledge standards encompass not only the professional “academic requirements”, but also the professional skills: i.e., the know-how “to plan, organize, deliver, assess, manage, and expand on” the material being taught (Aligning Student Learning..., 2000).

The certification process helps reaffirm that an educator possesses the skills and knowledge to perform effectively (National Association of Interpretation, 2002). This evidence (certification) qualitatively and quantitatively accounts for an educator’s competency, time dedication, and the type of training and instruction completed by the educator (Chandler, 2002). It is the hope that through certification, EE will be lifted to a higher level of acceptance and legitimacy among EE peers, critics, and the public (Chandler, 2002). Acceptance and legitimacy gained through certification may advance environmental education by providing additional opportunities (e.g., financial) to educators (MEEA, 2002). Competency-based certification officially recognizes those who have gone through the program and creates incentives for participants to pursue further training.

3.3. Current Status of EE Certification

3.3.1. Experience-based Certification Programs

Prior to the publication of the *Guidelines for the Initial Preparation of Environmental Educators*, two states, North Carolina and Missouri, developed and implemented certification programs for non-formal environmental educators. The two programs are very similar in format, knowledge, and skill expectations. Both programs are described as experience-based environmental education certification programs. The program requirements are illustrated in Table 2.1 and are described in more detail below. As of May 2004, the number of credentialed individuals in both programs was increasing.

Table 2.1: State Experience-Based Environmental Educator Certification Comparison					
EE Certification Program State	Minimum program requirements				
	Instructional workshops	Out-of-Doors Experiences (documented hrs.)	Knowledge of EE Resources and Facilities (documented hrs.)	Teaching components (documented hrs.)	Action Partnership/Leadership (documented hrs.)
North Carolina	7 workshops (70 hrs.)	50	30	30	20
Missouri	7 workshops (70 hrs.)	30	30	30	30

3.3.1.1. North Carolina

North Carolina professionals began developing an environmental educator certification program in 1995. The program, implemented in 1996, recognizes both formal and non-formal educators, and is administered by the Office of Environmental Education within North Carolina Department of Environment and Natural Resources (DENR). According to the personal communication with Libby Wilcox, EE Certification Program Manager (May 23, 2004) and the Office of Environmental Education certification website (accessed on October 21, 2002), the North Carolina certification program requires

completion of five components for achievement of the certification program. These components include: Instructional Workshops, EE Experiences in Out-of Doors, Knowledge of Additional EE Resources and Facilities, Teaching, and Action Partnership. These components are described in more detail below.

1. Participation in Seven (7) Instructional Workshops (70 hours) – These workshops must be approved by the Office of Environmental Education for use in this program. Four of the seven required workshops must be Project WILD, Project Learning Tree (K-8 or High School Modules), Environmental Education Learning Experience (EELE), and an approved aquatic workshop. The remaining three workshops needed to complete the Instructional Workshops requirement are “electives” that may be selected from a list of accepted programs posted on the certification website:

<http://www.ee.enr.stste.nc.us/Certification/workshops>. When consulted in March 2004, the accepted electives website list contained nearly 30 programs sponsored by a variety of agencies and organizations.

2. Participation in Experiences in the Out-of-Doors (50 hours minimum) – North Carolina requires a minimum of 50 hours of documented out-of-doors experiences led by a qualified instructor. These experiences must support the definition and principles of EE. Any one experience can count for a maximum of 10 hours. The website managed by the North Carolina Office of Environmental Education lists the following qualifying experiences that may meet this requirement:

- a. College/University related courses with an outdoor lab (e.g., ecology, geology, forestry);
- b. “Instructional workshops or field trips held in an outdoor environment;”

- c. Organized programs led by an EE professional in an environmental education center; and
- d. Independent study projects under the direction of a professional environmental education.

(North Carolina Department of Environment and Natural Resources Certification Components, n.d.)

3. Possession of Knowledge of Additional Environmental Education Resources and Facilities (30 hours minimum) – These activities provide participants with awareness and knowledge of support resources, current areas of concern in the field of environmental education, and networking opportunities. Participants must attend environmental education conferences and seminars, as well as visit environmental education centers and museums (North Carolina Department of Environment and Natural Resources Certification Components, n.d.).
4. Teaching Component (30 hours minimum of documentation) – This component is designed to recognize the knowledge and skills gained in other certification components or activities. The teaching activities should provide hands-on, interactive experiences for the audience. Applicants must teach at least three distinctly different lessons for a minimum of 10 hours each. The 10 hours may include preparation time, activity with students, and follow-up, but at least 6 hours must be actual teaching time with participants. It may include teaching the same activity to three different audiences (North Carolina Department of Environment and Natural Resources Certification Components, n.d.; L. Wilcox, personal communication, May 23, 2004).
5. Action Partnership/Leadership (20 hours minimum) – This component encourages leadership, stewardship, partnership, and action. Actions that qualify for this category

may include leadership in school or community projects promoting environmental stewardship (North Carolina Department of Environment and Natural Resources Certification Components, n.d.).

A one-time-only \$25.00 certification program enrollment fee is required, but the workshops are free. Programs are taught throughout the state by various agencies and organizations. Participants have four years in which to complete all required components of the program. Participants may use documented activities completed throughout the application process and extending as far back as one year prior to program enrollment. One specific instructional workshop can only be applied to one category area. Workshop facilitation does count towards program requirements (North Carolina Department of Environment and Natural Resources, 2002).

The North Carolina certification program has been widely accepted into the public, private, and academic sectors. Park Rangers employed by the North Carolina Department of Environment and Natural Resources (DENR) are required to complete the environmental education certification program. Other agencies strongly encourage certification as an employment factor. Community colleges and universities have been cooperating with the Office of Environmental Education to offer courses that certify participants upon completion of two semester courses. In North Carolina, the certification credential does not need to be renewed. As of March 2004, over 1700 teachers, park rangers, non-formal educators and citizens were enrolled in the program and over 500 participants had been certified (L. Wilcox, personal communication, March 29, 2004).

A future goal for the North Carolina certification program includes developing an advanced certification credential. The advanced certification program may include competency-based components (L. Wilcox, personal communication, March 29, 2004).

3.3.1.2. Missouri

The Missouri environmental educator certification program is sponsored by the Missouri Environmental Education Association (MEEA), and co-sponsored by the Missouri Department of Conservation (MDOC) and the Missouri Department of Natural Resources (MDNR). The program is endorsed by the Association of Missouri Interpreters and administered by the Missouri Office of Environmental Education. Missouri's certification program, like North Carolina's, recognizes both formal and non-formal educators. MEEA's certification program informational packet lists the following requirements that must be fulfilled and documented to become certified (MEEA Informational Packet, n.d.):

1. Instructional Workshops – Participants must attend and document participation in seven approved workshops totaling at least 70 hours. Three of the required workshops must be from the following list: Project Learning Tree (sponsored by the MDOC), Project WILD (MDOC), Project WET (MDNR), Leopold Education Project (Southwest Missouri State University), and Investigating and Evaluating Environmental Issues and Actions (MDNR). Examples of workshops offered in 2003 that satisfy the requirement for four additional instructional workshops can be found in Appendix F.
2. Environmental Education Experiences in the Out-of-Doors – A minimum of thirty (30) hours of structured out-of-doors experiences is required. A structured out-of-doors experience is led by a qualified instructor, supports the definition of environmental

education, and includes out-of-doors activities. Any one experience can count for a maximum of ten hours towards the requirement. Like North Carolina's certification program, out-of-doors experiences can be selected from the following sources:

- a. College/University courses, such as ecology, environmental geology, and forestry, with an outdoor lab component
- b. "Instructional workshops or field trips held in an outdoor environment"
- c. "Organized programs led by EE professionals" in an environmental education center (including but not limited to nature centers, parks, forests, demonstration areas, zoos and aquariums)
- d. An independent study project under an environmental education professional's direction (MEEA Informational Packet, n.d.).

3. Knowledge of Additional Environmental Education Resources and Facilities –

Participants must document thirty (30) hours of activities that provide participants with awareness and knowledge of environmental education support resources and networking opportunities. "The participant must attend seminars, conferences, museums, nature centers, or zoos with a minimum of two hours and a maximum of ten hours per experience. Examples of locations and events where this requirement could be met include: zoos, science centers and botanical gardens; seminars, conferences (i.e., the Missouri Environmental Education Conference, the Missouri Natural Resources Conference, Interface, and the Missouri Association for Interpretation conferences), and NSTA or STOM conventions" (MEEA Informational Packet, n.d.).

4. Teaching – Teaching activities totaling thirty (30) hours are required and should support the definition of environmental education. The teaching lessons should include hands-on, interactive experiences for the audience. Participants must teach at least three distinct lessons, one of which must contain an outdoor component. The ten hours may include preparation time, activity, and follow-up with the audience. The same lesson may be taught multiple times with different audience types or in different surroundings.

5. Action Partnership – Thirty (30) hours in a demonstrated action partnership/leadership role is required for this certification program. An action partnership/leadership role “demonstrates the effect of the participant’s environmental education through leadership, stewardship, and action while developing a partnership with an outside group.” The participant must assume a leadership role in a community involvement activity that promotes environmental stewardship. Hours counted may include set-up, activity time and follow-up with the students. Student-initiated activities do not qualify towards fulfillment of this requirement. Examples of possible action leadership projects are: Stream Team, Forestkeepers, Adopt-A-Highway/Adopt-A-Trail, Earth Day or Arbor Day activities, water festivals or Ecology Day, campus recycling programs, and vacant lot clean-up for neighborhood gardens. Serving in a leadership capacity in an organization with an EE focus would also qualify towards this requirement (MEEA Informational Packet, n.d.).

MEEA’s certification credential expires after four years and must be renewed.

Renewal portfolios must document ten contact hours of category 1, 2, or 3 activities and ten hours of category 4 or 5 activities. The hours do not need to be divided equally but should

represent a balance between the instructional activities (category 1, 2, and 3) and the teaching/action activities (category 4 and 5). Like North Carolina's program, Missouri applicants can apply a specific instructional workshop to only one category area. There is no fee to renew the credential, but the initial certification fee is \$25.00 (MEEA Informational Packet, n.d.).

3.3.2. *Competency-based Certification Programs*

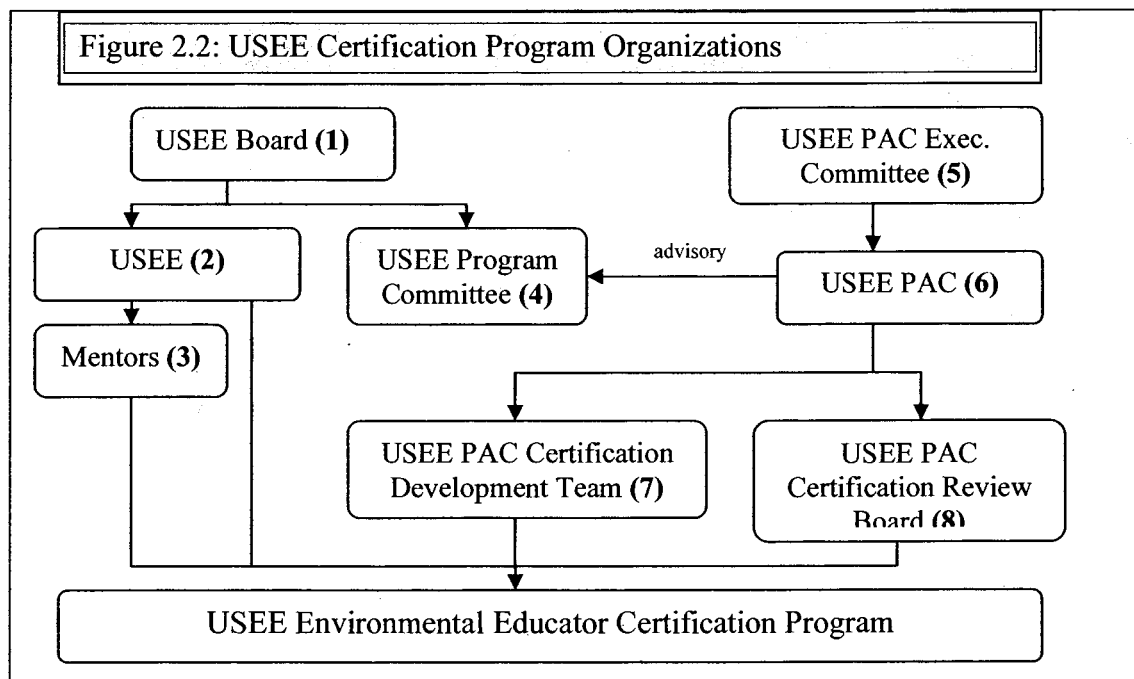
At the time of this writing, in July 2004, four states had implemented competency-based certification programs for non-formal educators. Participants from these states – Utah, Kentucky, Texas and Georgia – began working together in 2003 to collectively advance the program development in all four states. Other states may be considering developing a certification program but are waiting to see the progress and performance of these four competency-based state programs and any headway achieved by the North American Association for Environmental Education (NAAEE) (B. Simmons, personal communication, September 20, 2002).

3.3.2.1. Utah

Utah Society for Environmental Education (USEE) was started in the 1980 as an environmental education office within the U.S. Forest Service (H. Scheel, personal communication, April 11, 2003; J. Visitacion, personal communication, July 6, 2004). The idea of certification began during the development of Utah's framework document *Guidelines for Environmental Education Providers in Utah*. A summary of the Guidelines and themes for Utah's *Guidelines* can be found in Appendix B. The Utah *Guidelines*' themes,

guidelines, and indicators were developed using NAAEE's *Guidelines*. Utah's *Guidelines* personalize NAAEE's *Guidelines* to the state EE atmosphere existing in Utah. Appendix C is a comparison chart of NAAEE's *Guidelines for the Initial Preparation of Environmental Educators* and USEE's *Guidelines for Environmental Education Providers in Utah*.

USEE is a 501(c)(3) non-profit organization. Their mission is "to foster environmental knowledge, skills, attitudes, and actions through statewide leadership that serves to expand the quality, scope and effectiveness of environmental education and to benefit society as a whole" (*Guidelines for EE Providers in Utah*, 2001, p front cover). USEE is governed by a Board of Directors which is advised by a Program Committee. An external Program Advisory Council (USEE PAC) aids USEE with special programs and projects which require input from the EE stakeholders in Utah. USEE PAC is represented by an executive committee. Figure 2.2 shows the organizational hierarchy that supports the USEE certification program. Numbers in Figure 2.2 refer to the board and committee discussion below.



Utah's certification program is supported by eight boards, committees, and groups of individuals specializing in various tasks. Some of these entities play an integral part in the daily running of the program while others provide a supervisory or overseeing role.

1. USEE Board of Directors governs USEE and the activities run by USEE.
2. USEE (Utah Society for Environmental Education) administers the daily activities of the program, accepts program funds, stores the documentation, assigns mentors to applicants, addresses applicant questions if they occur prior to the mentor assignment, markets the program to EE professionals and the public, and acts as a "link between local EE providers and national EE organizations" (Utah Environmental Education Certification Program, 2003, p 4).
3. Mentors are assigned to the applicants to guide them through demonstration of the competencies. In the near future mentors will go through a training process. Each applicant is assigned one mentor to whom the applicant must demonstrate his/her competency to a degree. The mentor then endorses the applicant to become certified.
4. The USEE Program Committee reports activities directly to the USEE Board.
5. The USEE PAC Executive Committee initially receives certification program grievances and distributes the written grievance to USEE and USEE PAC Development.

6. USEE PAC is an organization made up of EE professionals from around the state of Utah. This organization, guided by the Executive Committee, makes recommendations to the USEE Program Development Committee.
7. USEE Certification Development Team duties include the development decisions concerning the certification program. This team receives participant comments and evaluates suggestions. This team can also authorize program changes to be made. This team is made up of 6-7 individuals. Eventually this team will be eliminated. Presently, the individuals serving on the Certification Development Team are also members on the on the Certification Review Board.
8. USEE Certification Review Board (presently made up of members of the Certification Development Team) serves as the ombudsman/grievance committee. Made up of five USEE PAC members of various disciplines this board is appointed/re-appointed for a two-year term. Members of the Review Board must be certified, and they possess the authority to censure, suspend, or revoke the certification credential. The Board reviews participant applications in November of every year to bestow certification credentials on applicants. This Board also notifies participants of the outcome of their review. The USEE Certification Review Board is the certifying body of the USEE certification program.

(J. Visitacion and H. Scheel, personal communications, May 24, 2004)

USEE pilot tested the rubrics in the fall of 2002. The first program pilot test, a summit held in January 2003, was by invitation only. This pilot test provided a seed bank of participants who, after being certified, could serve as mentors for future certification

applicants (E. Chandler, personal communication, April 11, 2003; Jennifer Visitacion, personal communication, July 6, 2004). A final (third) pilot test has been ongoing since fall 2003. Since 2003 many program changes have been implemented. Those changes will be discussed in more detail in Chapter 4.

Funding for the certification program development was acquired through EETAP renewable grants beginning in 2002. The program fees for the first three pilot test groups were covered through EETAP grant funds. The program staff is supported through USEE funds.

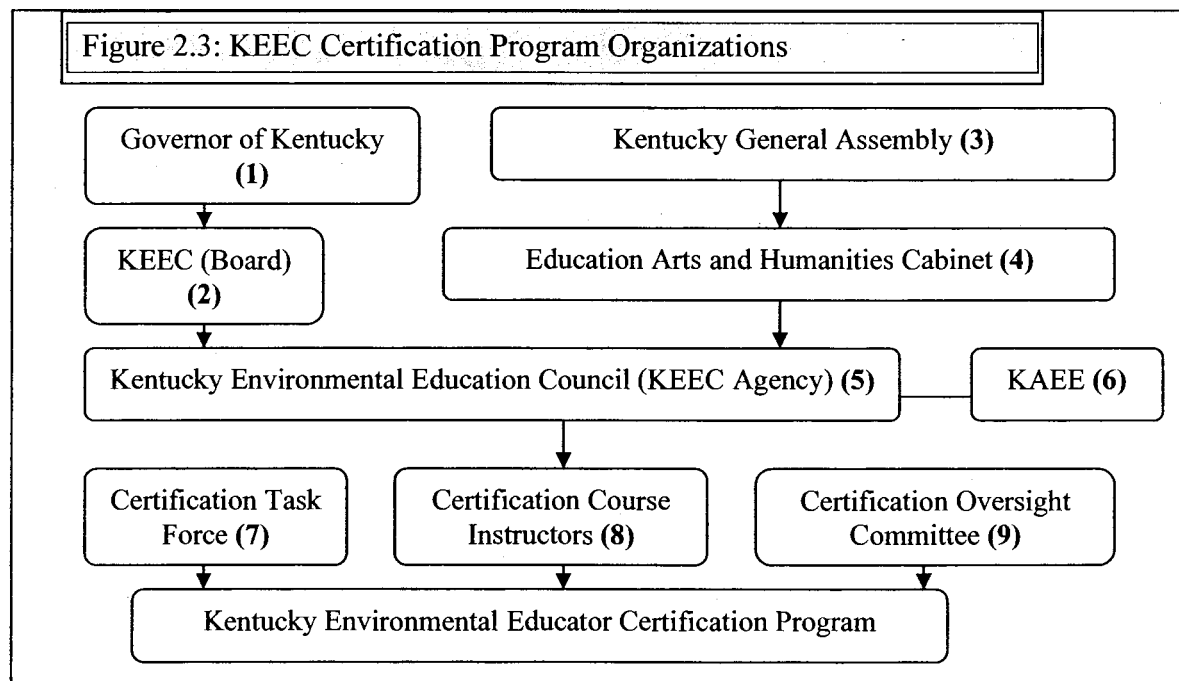
3.3.2.2. Kentucky

In the late 1980s, the representatives of 66 school districts sued the State of Kentucky claiming the Kentucky education system was unconstitutional. The State of Kentucky lost the lawsuit and, as a result, the Department of Education was disbanded and a completely new education system was created. This drastic educational change was carried out through the legislative act entitled the Kentucky Environmental Education Reform Act (KERA). When KERA passed in 1990 it eliminated about two-thirds of the Department of Education jobs, including the Director of Environmental Education position. To keep an environmental education presence in the Kentucky's government EE stakeholders lobbied to get a new agency, called the Kentucky Environmental Education Council (KEEC), created within the Education Arts and Humanities Cabinet. In 1990, just months after the establishment of KEEC, the state of Kentucky ran into a budget deficit that resulted in the closing of KEEC for four years. These funding source problems prompted the need to secure more stable monies from environmental fines and penalties through the Heritage Land Trust Fund to maintain the new office (J. Eller, personal communication, May 23, 2004). In an effort to

trim costs, a recent bill in the Kentucky General Assembly was proposed that may eliminate agencies with a staff of fewer than five people. KEEC is run by two staff members, and the state will decide the necessity of the agency in the near future (J. Eller, personal communication, May 25, 2004).

KEEC's sole purpose is to increase the environmental literacy of citizens from the commonwealth of Kentucky (J. Baust, personal communication, March 30, 2004). Among KEEC's duties is to update and carry out Kentucky's Master Plan for Environmental Education. This document, originally created by EE stakeholder consensus in 1997, is updated every five years. The Master Plan lays out plans for improving environmental literacy in Kentucky (Kentucky's Plan for Improving Environmental Literacy, 2003).

Figure 2.3 shows the organizational hierarchy that supports the certification program. Numbers in Figure 2.3 refer to the organization/board discussion below.



Like Utah, Kentucky's certification program is supported by many groups/organizations specializing in various tasks. Some of these entities play an integral part in the daily running of the program while others provide a supervisory or overseeing role.

1. The Governor of Kentucky appoints representatives to the KEEC Board for four-year terms. The governor also provided funding to the Education Arts and Humanities Cabinet who used the funding for the KEEC certification program (J. Eller, personal communication, May 23-24, 2004).
2. The KEEC Board is appointed by the Governor of Kentucky to oversee the work of KEEC. This nine-member board voluntarily meets four times per year representing the "four constituencies: businesses and industry, the environment, education and government" (KEEC: Who We Are and What We Do, 2003).
3. The Kentucky General Assembly appropriates funds to run the Education Arts and Humanities Cabinet.
4. The Education Arts and Humanities Cabinet, led by the Cabinet Secretary, administers the KEEC (Agency) and provides funding for the certification program.
5. KEEC (Agency) administers the daily activities of the certification program. They accept applications and maintain the database of certified participants. KEEC markets the certification program and addresses questions about the program from interested parties. The Certification Oversight Committee is notified of grievances through KEEC. KEEC also transfers the program fees to KAEE.

6. KAEE is the Kentucky Association for Environmental Education. They maintain a database of environmental education professionals across Kentucky. KAEE receives program applicant fees and they provide a link between the EE professionals in KY and national EE organizations.
7. The Certification Task Force is the program development committee composed of representatives from over 40 EE stakeholder agencies, businesses, and academic institutions. They receive participant comments and evaluate suggestions. If necessary, the Certification Task Force authorizes program changes to be made.
8. The three certification course instructors represent the EE academic sector and developed the courses used as a basis for the certification program. The instructors answer questions related to the courses and evaluate the participants for competency. With over 70 years of combined experience in the EE field, and NAAEE leadership experience representation, this team is considered well qualified to assess competency.
9. The Certification Oversight Committee serves as the grievance/ombudsman committee. This committee, made-up of well-respected state leaders considered members of excellent character. These committee members will, most likely, not be certified. They participate on a voluntary basis and possess the authority to censure, suspend, or revoke the certification credential. Any program-related grievances are delivered to this committee through KEEC.

(J. Eller, personal conversations, May 23-24, 2004)

Although the idea of certification was discussed in 2001 the Certification Task Force, convened by KEEC, began developing Kentucky's certification program in 2002. The

certification program's first class, made up of nominated representatives from various EE stakeholders around KY, met in March 2004. The program's first class is expected to be certified in early 2005. More information on Kentucky's certification program will be presented in Chapter 4.

Funding for the certification program is primarily state-sponsored. KEEC supplied \$10,000 of their agency money. The Kentucky Education Arts and Humanities Cabinet Secretary approved the use of \$30,000 (discretionary funds provided by the Governor's office), and EETAP provided \$1,000. The first cadre's program costs have been covered by KEEC or by applicants' employers.

3.3.2.3. Georgia

Members of the Environmental Education Alliance of Georgia (EEA) began discussing the creation of a professional development training program in 2000. Between 2000 and 2002, a series of six courses were developed by Richard Osorio, Project Director for the Georgia Project for Excellence in Environmental Education (GPEEE), to provide EE instruction in content knowledge and environmental education skills to formal and non-formal educators (paid and volunteer).

The voluntary program is housed at the University of Georgia College of Agricultural and Environmental Sciences, and is administered by Richard Osorio, Project Director for the GPEEE. The GPEEE is a partnership between the "University of Georgia (UGA), Department of Environmental Health Science, and the Environmental Education Alliance (EEA) of Georgia" (Georgia Project for Excellence in Environmental Education's - Certification Program, n.d.). The GPEEE is the certifying organization for Georgia's

program. Funding organizations like the Department of Natural Resources and the U.S. EPA have provided Mr. Osorio the opportunity to work almost exclusively on professional development trainings.

Georgia's certification program, like Kentucky's, relies on the successful completion of a series of courses. Six courses, one course for each of the NAAEE *Guidelines for the Initial Preparation of Environmental Educators*, were designed to teach and encourage discussion on EE topics. The six courses are: Environmental Literacy, Foundations of Environmental Education, Professional Responsibilities of the Environmental Educator, Planning and Implementing Environmental Education Programs, Fostering Learning, and Assessment and Evaluation. Each course integrates a solid waste component into the course curriculum. Presently Richard Osorio teaches all courses and, with a Department of Education person, team facilitates Core Course 4 dealing with Planning and Implementing Environmental Education Programs. The courses can be completed in any order (Georgia Project for Excellence in Environmental Education's - Certification Program, n.d.).

Course dates can be found on the Georgia Project for Excellence in Environmental Education website. The program requires participants to attend all six courses and pass required assessments. In addition, a 40 hour practicum site-based/work-based project, connecting course content to the site/organization, is required to obtain certification. Once certified, educators must complete at least 100 hours of continuing education to maintain the certification (Georgia Project for Excellence in Environmental Education's - Certification Program, n.d.).

Applicants have 3 years to complete the six courses and most of the 30 participants are about 50% completed. No participants have completed all six courses. The credential is

renewable after 5 years as long as the participant documents 100 hours of professional development courses (Richard Osorio, personal communication, March 30, 2004).

Various grants support Richard Osorio's salary. The University of Georgia provides office space and indirect costs. The largest financial contributor, the DNR Environmental Protection Division, provides grant monies through the Solid Waste Fund (accumulated through public fees for the disposal of scrap tires) (Richard Osorio, personal communication, March 30, 2004).

3.3.2.4. Texas

The certifying organization, the Texas Environmental Education Partnership (TEEP), is a relatively young all volunteer organization. In 1997 EETAP granted funds to Texas to create TEEP. TEEP's certification program used NAAEE's *Guidelines for the Initial Preparation of Environmental Educators* as its source of certification program standards.

In December 2003 TEEP received a grant to fund a pilot test with eight participants. The EE certification program was officially announced at the Informal Science Education Association statewide meeting March 3-4, 2004. TEEP developed a website to provide certification materials to the public. According to the TEEP certification program website, <http://www.texaseepartners.org>, certification participants first submit an application packet to enter the certification program. The application packet contains a Letter of Intent, Application Form, copy of a Texas driver's license or TDPS ID card, and a signed Code of Ethics. Participants must submit 3 copies of the assessment component packet. A completed assessment packet should contain:

- Professional Resume or Vitae
- Letters of Reference
- Open Book Environmental Literacy Test

Competencies Worksheet
Lesson Plan/Instructional Program Outline
Video of Instruction
Computer-generated Product (EE Certification Application Packet, n.d.)

Certification assessment packets are reviewed twice a year (March and October). Once certification packets are approved participants receive a plaque and his/her name is added to the TEEP website for certified educators (C. Stanco, personal communication, March 30, 2004). If the application is not approved, the applicant is given information on deficient areas and is given one year to meet the criteria and fulfill the deficiencies (B. Weiser, personal communication May 22, 2004).

TEEP's certification program presently does not rely on content courses but may, in the future, incorporate training courses and workshops (B. Weiser, personal communication, May 22, 2004). TEEP does not incorporate mentorship as a program component due to the size of the state. As a result, the program is described as very self-driven. TEEP's Development Team is finalizing participant assessment tools (C. Stanco, personal communication, March 30, 2004). Courses and workshops are being considered to provide necessary training

3.3.2.5. North American Association for Environmental Education (NAAEE)

The status of a NAAEE certification program is not yet determined. In the *Phase One Progress Report* the Environmental Education Quality Assurance (EEQA) Initiative made three recommendations to the NAAEE Board of Directors for recognizing state EE certification programs:

1. "The state model must be based upon the NPEEE Guidelines for Excellence"
(identified in this thesis as the NAAEE Guidelines for the Initial Preparation of Environmental Educators).
2. "The process of certification must be a competency-based system, based on a measurable set of core-competencies....Candidates must demonstrate their knowledge/competency, as opposed to merely completing coursework, taking a class, or participating [*sic*] a workshop."
3. "The demonstration of competencies must be based on an assessment system of some sort for the individual candidate."

(EEQA Initiative, 2004 as cited in Dent, Jr., W, 2004, p 2)

As of May 2004, the *Phase One Progress Report* is being updated to account for recent changes within/to NAAEE. As a result, the recommendation that NAAEE take on the role of "providing central authority for consistent program content and structure via the NPEEE Guidelines" while the Affiliate Network provides "the coordinating mechanism" is being reconsidered (EEQA Initiative, 2004 as cited in Dent, Jr., W, 2004, p 1). This recommendation was based on the assumption that "NAAEE simply does not have the organizational capacity for the administrative management of a 'National EE Certification Program'" (EEQA Initiative, 2004 as cited in Dent, Jr., W, 2004, p 1).

Although the *Phase One Progress Report* suggested the design of a multi-tiered certification system to the NAAEE Board of Directors, this "program" is still in its early stage of development and nothing definite can be reported.

3.4. External Organizations

Four organizations have been consistently contributing to the Certification States' efforts. They are the EPA OEE, EETAP, NAAEE, and EEQA Initiative. These organizations donated personnel time, funding, and experience to further the certification movement.

3.4.1. US EPA OEE

The United States Environmental Protection Agency Office of Environmental Education (US EPA OEE) was created to implement the congressional mandate known as the National Environmental Education Act of 1990. Section 5 of that act, "requires [*the*] EPA to provide national leadership to increase environmental literacy. The EPA established the Office of Environmental Education within the Office of Communications, Education, and Media Relations" (National Environmental Education Act, 2004, p 1). The OEE seeks EE-related collaborations; offers grants, internships, and fellowships; and presents EE-related awards to worthy recipients (National Environmental Education Act, 1990, p 1). The EPA OEE entered into an agreement with the University of Wisconsin-Stevens Point to fund EETAP's efforts to "train EE professionals in the development and delivery of environmental education and training programs and studies" (National Environmental Education Act, 1990, p 5).

3.4.2. EETAP

Environmental Education and Training Partnership (EETAP) is a partnership of organizations dedicated to advancing environmental education. EETAP 1 was managed by NAAEE from 1995 through 2000. In fall 2000, the management of EETAP was transferred to University of Wisconsin-Stevens Point. This last EETAP organization (EETAP 2) is the entity that will be referred to as EETAP for the purpose of this study. EETAP Partners include: the “Association for Supervision and Curriculum Development (ASCD), Groundwater Foundation, National Environmental Education Advancement Project (NEEAP), The North American Association for Environmental Education (NAAEE), Northern Illinois University Department of Teaching and Learning, Ohio State University Department of Teaching and Learning, Project del Rio, Project Learning Tree, Project WET, University of Wisconsin-Stevens Point (UW-SP), and World Wildlife Fund” (EETAP, n.d.2, p 1). EETAP’s goal is to promote “academic achievement and environmental literacy”. It supports the development and “delivery of environmental education training for education professionals” (EETAP, 2003, p 1).

3.4.3. NAAEE

North American Association for Environmental Education is a professional organization seeking to promote environmental education and help instructors integrate environmental issues into instruction. NAAEE published the *Guidelines for Excellence* Series which includes the *Guidelines for the Initial Preparation of Environmental Educators* which is presently being used as a framework for competency-based certification programs.

3.4.4. EEQA Initiative

Brought together in 2003 by the Affiliate Network, Mike Way, and Joe Heimlich, the Environmental Education Quality Assurance (EEQA) Initiative played a brief role in the certification effort. EEQA's members were divided among two working groups, the Certification Working Group worked on components that would help states further their goal of certifying individuals, and the Material/Program Review Working Group sought out processes that could be used to review programs and materials. From January 2003 through May 2004 Mike Way provided leadership to this group whose goals included serving as an intermediary between the Certification States and NAAEE, developing materials to help evaluate certification programs and materials, and aiding the states in the development of certification assessments (Way, 2003; M. Way, personal communication, June 14, 2004). Present discussions between the present EEQA Chairperson, Scott Fitzpatrick, and the NAAEE Board suggest that the EEQA will be dissolved in 2004 and its duties absorbed into a NAAEE EEQA organization (Fitzpatrick, 2004).

4. Literature Supporting Study Methodology

The sections under this heading refer to components used in the study methodology. The text below each section refers to literature review information pertaining to the definition, use, development, and completion of the section topic. Although the literature review information may not specifically mention the section title the literature review text information was pertinent in carrying out the methodology pertaining to the section title.

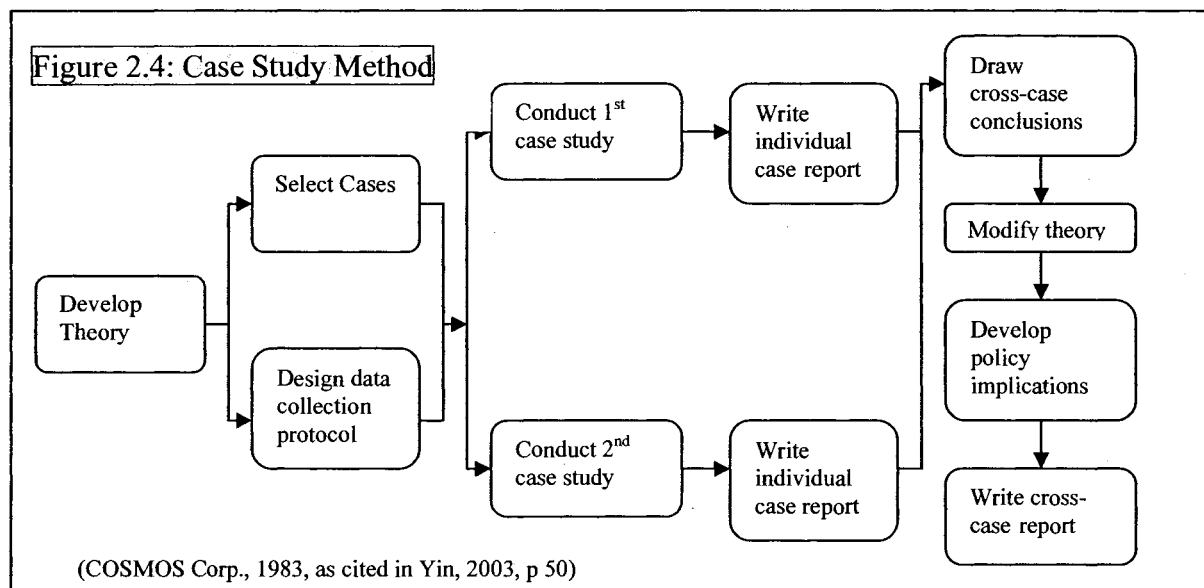
4.1. A Case Study Research Strategy

Choosing a research strategy depends on at least three things: the type of research question, the control an investigator has over events, and the focus on contemporary versus historical events. The case study research strategy is the preferred research method when the research question has a “how” or “why” orientation, when the “researcher has little or no control over the events or behaviors and when the focus of the research question is on a contemporary phenomenon” (Yin, 2003, p 1). This research method “tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result” (Schramm, 1971). In case studies, the study question should focus on uncovering the “how” and “why” of a phenomenon (Yin, 2003, p 21).

4.2. Multiple-case Sampling Designs

Multiple-case studies draw conclusions and develop implications from the examination of more than one case study. When examining multiple-case studies a research theory guides the researcher to select study cases and design a protocol that will be followed during data collection. It is important that the protocol be followed for each of the study cases. Next, the case studies are conducted and individual reports are composed for each state. After writing the individual case studies, conclusions can be drawn and comparisons made between the cases. If the theory is disproved it can be modified. Finally, policy implications can be inferred and a cross-case report published. Figure 2.4 shows an example of a multiple-case method design (Yin, 2003).

While conducting multiple case studies, researchers are able to examine cases much like individual persons by using within-case sampling. Comparative data points (e.g., activities, processes, events, times, roles) from each individual case can be taken. The acceptance of “informants, episodes, and interactions” used in the study “is being driven by a conceptual question, not by a concern for representativeness” leading to an “iterative, ever-expanding list of questions, evidence, and answers” (Miles and Huberman, 1994, p 29). Within-case sampling uncovers local case study patterns and occurrences in depth (Miles and Huberman, 1994).



4.3. Choice of Interviewees

Selecting sites or individuals that will participate in a study may be one of the most important decisions of the study. In some cases, the selection may be clear and straightforward due to the uniqueness of the project. Eligibility criteria should be established beforehand to minimize bias (Yin, 2003).

4.4. Sources of Data

Yin (1984) suggests that varied sources of evidence should be represented in the data collection process. Each type of evidence possesses specific strengths and weaknesses. No one source of evidence has an overall advantage to another. Types of evidence may include: letters, memos, faxes, agendas, meeting minutes, progress reports, news articles or other media sources, and other formal evaluations or studies of the same cases. These sources of data can be divided into six categories: documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts (Yin, 1984). Table 2.2 examines the six sources of data and lists strengths and weaknesses of their use. Documentation, archival records, interviews, and direct observations of meetings were used to obtain data in this study.

4.4.1. Documentation

Documentation can be in the form of letters, memos, agendas, announcements, minutes, administrative documents, studies or evaluations of the study topic, and media articles. Administrative documents may include proposals, progress reports and other internal records. Documentation is most useful when used to corroborate other forms of data or from other sources (Yin, 2003).

This valuable source of evidence typically provides the backbone for most case studies and has many benefits. Due to the tangible nature of documents, they provide a stable data source that can be reviewed at the researcher's leisure. Documents typically provide accurate names, dates, places, other details, and can cover many events over a long period of time (Yin, 2003).

Table 2.5: Six Sources of Evidence			
Source of Evidence	Examples	Strengths	Weaknesses
Documentation	<ul style="list-style-type: none"> Administrative documents Studies or evaluations of the study topic Media articles 	<ul style="list-style-type: none"> Stable - can be repeatedly reviewed Unobtrusive - not created as a result of the case study Exact - contains exact names, references, and event details Broad coverage - of time, events, and settings 	<ul style="list-style-type: none"> Retrievability - can be low Biased selectivity - if data collection is incomplete Reporting bias - reflects (unknown) bias of author Access - may be deliberately blocked
Archival Records	<ul style="list-style-type: none"> Attendance or Service records Organization records - charts and budgets over time Location Maps and charts Lists of names and other items Survey data - census records or other previously collected data about a site Personal records - diaries, calendars, telephone listings 	<ul style="list-style-type: none"> Same as above for Documentation Precise and quantitative 	<ul style="list-style-type: none"> Same as above for Documentation Accessibility due to privacy issues
Interviews	<ul style="list-style-type: none"> Open-ended Interviews Focused interviews Surveys 	<ul style="list-style-type: none"> Targeted - focuses directly on case study topic Insightful - provides perceived causal inferences 	<ul style="list-style-type: none"> Bias due to poorly constructed questions Response bias Inaccuracies due to poor recall Reflexivity - interviewees give what interviewer wants to hear
Direct Observations	<ul style="list-style-type: none"> Observations made on-site 	<ul style="list-style-type: none"> Reality - covers events in real time Contextual - covers context of event 	<ul style="list-style-type: none"> Time consuming Selectivity - unless broad coverage Reflexivity - event may proceed differently because it is being observed Cost - hours needed by human observers
Participant Observation	<ul style="list-style-type: none"> Research observations made as a participant of the topic 	<ul style="list-style-type: none"> Same as above for Direct Observation Insightful into interpersonal behavior and motives 	<ul style="list-style-type: none"> Same as above for Direct Observation Bias due to investigator's manipulation of events
Physical Artifacts	<ul style="list-style-type: none"> Technological device Tool or instrument Work of art 	<ul style="list-style-type: none"> Insightful into cultural features and technical operations 	<ul style="list-style-type: none"> Selectivity Availability

Source: Robert Yin, 2003, p 86

Documentation may also exhibit weaknesses in bias and accessibility. Because documentation was originally written for another purpose or audience, documents may exhibit an innate bias from their author and may be incomplete in content. Documentation may also be withheld by its writer or owner (Yin, 2003).

4.4.2. Archival Records

Archival records can take the form of computer files and records, attendance and service records, organizational records, geographic maps and charts, lists, survey data, and

personal records. Archival records, like documentation, provide a stable, exact source that can cover many topics over a long period of time. Unlike documentation, archival records are typically more precise and quantifiable (Yin, 2003).

Archival records should not automatically be considered accurate because, like documents, archival records were written for a different purpose and audience than the researcher. This challenge may result in similar biases to documentation. The conditions that existed when the archival record was first generated should be considered (Yin, 2003).

4.4.3. Interviews

Interviews are widely considered one of the most important and informative pieces of evidence. In many cases, effective interviews are fluid in nature and are guided conversations. Open-ended interviews typically allow for a greater flexibility to probe into the “why” question. The interviewer can ask about the facts surrounding the main topic as well as the interviewee’s opinions and insights. Focused interviews typically involve asking a set of established questions that may have been derived through a validity process or set protocol. Focused interviews can still be open-ended but the question wording is usually carefully followed. Focused interviews allow the interviewer to take on a naïve role, allowing the interviewee to fully elaborate without being led by additional questions. Surveys are more structured than focused and open-ended interviews and typically allow less flexibility in questioning. Less questioning flexibility may be desired and even necessary for specific study methods. Interviews are frequently recorded and transcribed, providing a more accurate rendition of the interview than any other note-taking method (Yin, 2003).

4.4.4. Direct Observations

Direct observations are used when making a field visit. Direct observations can be formal or informal (Yin, 2003).

4.5. Certification Officer Interview Questions

This section contains materials in the literature review that were helpful in designing and delivering the certification officer interview survey instrument

According to Frey and Oishi (1995), a survey interview is a purposeful and directed conversation between an interviewer and a respondent. Survey interviews can be done in person (face-to-face) or over the phone. Interviews involve administering a set of prepared questions. Interviews differ from paper surveys in that interviews allow researchers the flexibility to guide the questioning, clarify questions, and motivate the respondents to complete the survey. Face-to-face interviews, however, face more resistance than other survey options. Participants may be unwilling to allow interviewers into their homes or workplace. When administering a face-to-face interview in a respondent's workplace, employer permission must be obtained prior to the interview. Administering interviews via the telephone offers researchers a greater cost efficiency, sample coverage, and response rate than other survey methods. Telephone interviews allow for rapid data collection and supervisor quality control. Interviews are commonly regarded as one of the best methods to obtain specific and detailed information (Frey and Oishi, 1995).

When developing effective interview questions, the researcher must consider study objectives. According to Frey and Oishi (1995), questions should be written so they mean the same thing to both the interviewer and the respondent. Each question should directly

relate back to the research goal. Questions should be structured in a neutral tone to reduce bias and should be consistent with previous and subsequent questions. Each question should only address one concept. Questions should be mutually exclusive so respondents can only choose one answer. Questions should be concrete and specific as possible. The researcher should word questions in the respondents' language and at the respondents' age or comprehension level (Frey and Oishi, 1995). According to Dillman (2000), questions must require an answer from all survey participants. Participants will feel more motivated to respond if the questions are easy to understand, and easy to answer. When wording questions, the writer should use complete sentences. Respondents are more likely to complete questions where only one response can be accepted (mutually exclusive responses). When asking for a specific answer, the use of vague quantifiers, like "regularly" or "occasionally", should be avoided. Because respondents frequently read questions quickly, questions using double negatives may not yield the expected result (Dillman, 2000). Frey and Oishi (1995) recommend that the question writer avoid using slang terms, abbreviations, inflammatory words, and loaded language that may suggest one answer is preferable to another. All-inclusive terms like "never" and "always" should be avoided. Question response option lists should be kept to five items or less unless the respondent physically has a copy of the questionnaire in hand to answer from (Frey and Oishi, 1995).

According to Dillman (2000), a brief prenotice letter sent to respondents prior to the survey informs participants of what is to come and emphasizes the importance of participation. Correspondence should be hand signed with ball-point pen and manually stamped (as opposed to postal machine stamped) for optimum response return rate (Dillman, 2000).

4.6. USEE (Utah) Program Participant Interview Questions

According to Dillman (2000), when developing survey instruments, researchers should remember that responders are more inclined to participate if they receive a reward. A token of appreciation goes a long way in establishing a level of trust. Including a couple of dollars with the mailed materials encourages participants to return their completed materials and provides a gesture of trust (Dillman, 2000).

4.7. Validity Panel

Frey and Oishi (1995) suggest the data collection instrument should also be evaluated prior to administering the interview. The question clarity and the questionnaire flow are important components to evaluate (Frey and Oishi, 1995).

4.8. Data Coding

Data are typically formatted and organized to provide easy access to the essential data sets. Indexing, or coding, is a method of managing and organizing data. Coding involves setting clear data categories, organizing the categories into a structure, and placing data under the related categories. Codes are essentially tags that associate portions of data to a meaning or concept for quick retrieval at a later time (Miles and Huberman, 1994).

4.8.1. Code Development

One method of coding involves initially “creating a provisional start list of codes prior to field work” (Miles and Huberman, 1994). The provisional codes can come from study research questions or subproblems, literature searches, hypotheses, or problem areas. Provisional codes help tie data back to the research subproblems. Codes should be named using words or abbreviations, instead of numbers, so that the researcher can quickly and easily infer the original concept any specific code refers to. Codes should provide data connectedness and structure. One method of coding involves connecting data to general domains. General domains are categories that codes can fit under. Examples of general domains may include: processes, activities, strategies, methods, relationships and social structure, events, and setting/context (Miles and Huberman, 1994).

4.8.2. Coding Method

According to Miles and Huberman (1994), the researcher should create a single sheet table that includes a brief description of the code’s meaning, the abbreviation or code being used, and a cross-reference to the study research question or subproblem the code refers to. After data are collected, the researcher reviews data line-by-line, assigning codes. Propositions are “connected sets of statements reflecting the findings and conclusions of the study” (Miles and Huberman, 1994, p 75). Propositions can be created by collecting the data statements, writing each on a separate card, and dividing the statements into similar or related categories (Miles and Huberman, 1994). The coding categories and propositions may change during the process of analysis. The researcher can manually code data by reviewing the data

and marking codes in the margins. Data can also be coded via computer programs manually or automatically (Miles and Huberman, 1994).

4.9. Result and Conclusion Generation

Whatever evidence is used, it is recommended that multiple sources be used or “triangulated” to draw conclusions. “The most important advantage presented by using multiple sources of evidence is the development of *converging lines of inquiry*” (Yin, 2003, p 98). Using multiple data sources balance evidence source components, which results in stronger, more accurate conclusions. Four types of triangulation can be used to strengthen case studies. Data triangulation, investigator triangulation, theory triangulation and methodological triangulation can all be used to support conclusions and reduce the chance of construct validity problems (Yin, 2003).

CHAPTER III - RESEARCH PROCEDURES

This project utilized a case study research approach to collect the qualitative data pertaining to each state's certification program. The case study methodology was chosen because it best helped answer the "how" and "why" components of the survey research problem. This chapter is organized in the following manner:

1. State Program and Study Participant Selection
 - 1.1. State Program Selection
 - 1.2. Study Participant Selection
 - 1.2.1. Certification Officer Participants
 - 1.2.2. USEE Program Participants
2. Data Collection
 - 2.1. Program Documentation and Archival Materials
 - 2.2. Study Participant Data
 - 2.3. Survey Instrument Development
 - 2.3.1. Certification Officer Survey Instrument
 - 2.3.2. USEE Program Participant Survey Instrument
 - 2.4. Survey Instrument Comparison
 - 2.5. Validity Panel Review
 - 2.6. Institutional Review Board Review
 - 2.7. Administering the Interview Surveys
 - 2.7.1. Certification Officer Interviews
 - 2.7.2. USEE Program Participant Interviews
 - 2.8. Survey Instrument Comparison
3. Data Analysis
 - 3.1. USEE Program Participant Interview Data
 - 3.2. Code Generation
 - 3.3. Data Coding Procedures
 - 3.4. Triangulation
4. Validity and Bias
 - 4.1. Construct Validity
 - 4.2. Internal Validity
 - 4.3. External Validity
 - 4.4. Reliability
5. Comparison Matrices
6. Recommendation Development
 - 6.1. Suggestions and Recommendations
 - 6.2. Review of Draft Suggestions

1. State Program and Study Participant Selection

1.1. State Program Selection

The study programs were chosen based on two selection criteria. The first criterion required the certifying organizations to be in the implementation stage of a competency-based environmental educator certification program. This criterion was used to gain information from certification officers who were far enough into the development process to yield useful information. The second criterion examined certification programs in states with contrasting levels of host-state government support for the certification program. The researcher created this criterion with the goal of surveying certification programs that were varied enough to yield results from a wider spectrum. Based on these criteria, environmental educator certification programs from two states, Utah and Kentucky, were examined.

1.2. Study Participant Selection

1.2.1. Certification Officer Participants

Interview candidates were selected based on their overall knowledge and experience in the conception, construction, and implementation of the state's certification program and their willingness to participate. Certification officers active in the planning process were contacted and asked if they would be willing to participate. Interviews were conducted with eight certification program certification officers. Appendix H details the survey instrument questions that certification officers were asked during their interviews.

1.2.2. USEE Program Participants

Prior to implementation, USEE arranged for a series of program pilot tests. Participants of the pilot tests were certified using a different method than that used to certify present certification program participants. A different method of certification was used for the handpicked pilot testers primarily to create a base of certified professionals that could serve as certification program mentors. Mentoring is an integral part of the USEE certification program. The pilot test participants were also provided the opportunity to try out the program content, rubrics, and competencies and give immediate program feedback.

Although surveying the pilot study participants would have yielded more participants and data, the researcher chose not to survey participants that were certified using a different method than documented in the current program literature. The USEE Executive Director provided the researcher with five program participants' names and e-mail addresses, and shortly thereafter with their phone numbers. The five Utah program participants were either enrolled in the certification program or already certified through the certification program.

The participants were initially contacted by e-mail to lay the groundwork for their participation in this study. Next, the researcher contacted the participants' via phone and asked them if they would participate in this study. All participants contacted by phone agreed to participate, so interview times were set for each person. One program participant was unreachable, despite numerous contact attempts, so interviews were conducted with the remaining four participants.

2. Data Collection

2.1. Program Documentation and Archival Materials

Copies of documents pertaining to the certification program conception, construction, and implementation were requested of participants prior to their interview. Relevant documents included: letters, memos, faxes, agendas, meeting minutes, progress reports, news and articles or other media sources, and evaluations or studies of the same cases. Documents were obtained by the researcher during interview visits or sent (via postal service and e-mail) by the program administrators.

2.2. Study Participant Data

Two categories of study participants were used to collect data pertaining to the competency-based, non-formal environmental educator certification programs. The two groups, certification officers and program participants, were interviewed to give a more complete picture of each certification program and its audience.

Certification officers from each state were interviewed to collect pertinent information on the development, implementation, and evolution of the certification programs. Officers were also asked to offer suggestions that would be helpful to other states considering the development of a competency-based, non-formal environmental educator certification program.

Program participants currently enrolled or certified through the Utah Society for Environmental Education certification program were interviewed to gain insight into

participant demographics, motivations for entering the program, expectations of the program, and suggestions for program improvement.

The survey instruments used for both groups were developed using identical steps. The researcher identified a survey format, developed study objectives for each participant group, and created study questions based on the study objectives. After the development of the study questions, the questions were examined by a validity panel and approved by the University of Wisconsin-Stevens Point Institutional Review Board. Once interviews were conducted, word-for-word transcripts were made from the taped interviews. The transcripts were sent to the interviewees. The interviewees were asked to carefully read over the transcripts, correct any errors, and clarify any content misunderstandings. The interviewees then approved the use of the transcripts for the research study.

2.3. Survey Instrument Development

2.3.1. Certification Officer Survey Instrument

In this study, the researcher chose to use a semi-structured interview format when conducting certification officer interviews. This interview format was selected because of the nature of the research problem and because this format allowed the researcher to ask clarifying or follow-up questions while still holding to a set of prewritten questions. Each interview covered the same questions in the same order. Implementing a preset survey instrument encouraged consistency among the interviews. A pilot test of the survey instrument was not conducted due to logistical constraints. More certification officers in Utah were interviewed than in Kentucky due to the changing leadership at USEE. Three of the certification officer participants interviewed had, at one time, been Executive Director of

USEE during the certification program development process. Data from each of these participants was essential when creating the recommendations and documenting the program evolution from one year to the next.

The first step involved creating interview questionnaire objectives to use in guiding the development of the questionnaire. Question objectives tied the questions to the problem statement and subproblems. Question objectives also helped the researcher avoid multiple survey questions asking the same thing. These question objectives (Appendix G) and their respective questions (Appendix H) were divided into five themes. The objectives of the interview questions were to document the following program components: program need, purpose, and vision; organizational/program components; program support; marketing; and implications, controversy, and suggestions/recommendations.

After the objectives were developed, they were reviewed and revised based on input from the graduate committee. Interview questions (Appendix H) were developed for the purpose of collecting specific information regarding each state's certification program. Clear, easy to answer questions were designed and tied to the research questions using suggestions from Frey and Oishi (1995), Dillman (2000), and Yin (2003.) A validity panel reviewed and revised the survey instrument to insure the survey questions were valid and addressed the objectives. The open-ended questionnaire was intended for state certification officers involved in state environmental educator certification programs.

2.3.2. USEE Program Participant Survey Instrument

Originally, the survey instrument for the Utah program participants was intended as a mail questionnaire. When the final number (i.e., five) of possible program participants was determined, the researcher decided that adapting the mail questionnaire into a telephone

interview instrument format would be optimal. The benefits of data obtained by telephone interviews, as mentioned by Yin (2003), would better fit the survey conditions than a mail survey instrument. Telephone interviews provided the necessary survey data, were convenient for all parties, and potentially could yield richer overall data through the use of clarifying questions. Like the certification officers' survey instrument, the program participants' survey instrument involved setting clear questionnaire objectives. A pilot test of the participant study instrument was not conducted due to logistical constraints.

The survey questions were specifically limited in content. To get participant cooperation, the researcher wanted the survey to address topics and experiences that the respondent was familiar with, while making the survey short and quick. The answers to some of these questions could, on a limited level, affirm or relate to certification officers' interview responses. Correlations to the certification officers' interview question themes are underlined and indicated with parentheses. With these possibilities in mind, the following five objectives were created:

- Objective 1: Demographics—Demographics of the participant (Marketing)
- Objective 2: Support for the program - Demographics of the organization the person represents. (Support for program)
- Objective 3: Motivation for certification –What was the motivation to enroll in the certification program? (Need-purpose-vision)
- Objective 4: Use of program – How the program is used or will be used?
- Objective 5: Questions pertaining to the certification material –Comments on the certification material and EE certification program as a whole (Implications, controversy, suggestions/recommendations)

After the objectives were developed, they were reviewed and revised based on input from the graduate committee. Interview questions were developed for the purpose of collecting specific information regarding each state's certification program. Clear, easy to answer questions were designed and tied to the research question using suggestions from

Frey and Oishi (1995), Dillman (2000), and Yin (2003.) A validity panel reviewed and revised the survey instrument to insure the survey questions were valid and addressed the objectives. The open-ended questionnaire (Appendix J) was intended for USEE Program Participants.

2.4. Survey Instrument Comparison

For ease of comparison, Table 3.1 indicates the subproblems addressed, the question objective numbers for the certification officers' interviews, the officers' interview question number, participant interview question objectives, and the participant interview questions that relate to the objectives. This table shows the data triangulation from a survey perspective.

Table 3.1: Comparison Between Program Certification Officer Interview Data and Utah Program Participant Data			
	Subproblem 2.1	Subproblem 4.1	Subproblem 4
Certification Officer Interview objectives	Certification Officer Interview questions	Participant Interview Objectives	Participant Interview Questions
1	1	3	13, 14, 18
2	2, 3	3	13, 14, 18
3	4	3	13, 14, 18
4	5, 6, 7		
5	8		
6	9		
7	10		
8	11, 12		
9	13, 14, 15		
10	16, 17	2	10, 11
11	18		
12	19		
13	19, 20, 21, 22	1	1-9, 12, 16
14	23, 24		
15	25	5	20
16	26	5	21
17	27	5	21
		4	15, 17, 19

2.5. Validity Panel Review

As previously noted, a validity panel was organized to review the questionnaire objectives and evaluate the survey instrument questions for accuracy, bias, and clarity. The panel included the researcher's graduate committee. The validity panel also accepted suggestions from key resource experts (Deborah Simmons, Ph.D.; Richard Osorio, and Eric Chandler) conducting competency-based certification program research and offering assistance to states considering the creation of similar certification programs. The panel members offered feedback on the questionnaires, added questions and clarified those already included in the survey instrument.

The researcher provided the validity panel with the survey objectives, interview questions, and a question evaluation form (Appendix K) to evaluate the certification officer survey instrument. The questionnaire evaluation form contained the survey objectives, survey questions that pertained to the objectives, and the theme from the certification officers' interview questions which the objective could relate to.

2.6. Institutional Review Board (IRB) Review

Prior to the development of the survey instruments, the researcher participated in a treatment of human subjects training required by the IRB. This on-line training identified issues that the IRB would use to examine the researcher's documentation. These issues included an understanding of: the risks to human subjects; the importance of informed consent; the rights of human subjects regarding refusal to participate, confidentiality and safety; and ethical guidelines that a study design should follow. The study instruments and

necessary documentation were submitted to the IRB at University of Wisconsin-Stevens Point. The documents conveyed the methods to be used, insuring the safety of study participants and the use of ethical research practices within this study. The IRB approved the study instruments and interview methods for use in this study.

2.7. Administering the Interview Surveys

2.7.1. Certification Officer Interviews

Utah certification officers were informed via telephone about the nature of this research study. A date was agreed upon to meet the certification officers in person in Utah to administer the interviews, to create networking contacts, and to attend a USEE PAC meeting. The researcher flew to Salt Lake City, UT and met first with Eric Chandler, then Executive Director (as of April 2003) Utah Society for Environmental Education (USEE); Tim Brown, Former Executive Director of USEE and Executive Director of the Center for Green Space Design; and Heather Scheel, USEE Deputy Director on April 11, 2003. Due to time constraints, this face-to-face interview was conducted with all three participants present. Adrienne Cachelin, Ph.D., Environmental Education Director for Red Butte Garden, Instructor of Environmental Education at University of Utah, Chairperson for the USEE PAC, and Development Team member, was also interviewed. Dr. Cachelin's interview was divided into two sessions. The first session, on April 11, 2003, was conducted in person and the second interview session was conducted on May 14, 2003 via telephone. A later interview, conducted in person with Jennifer Visitacion, USEE Executive Director, and

Heather Scheel, USEE Deputy Director on May 24, 2004, and a phone interview on July 6, 2004 provided more current information on the Utah certification program.

Kentucky certification officers were also informed over the telephone of the research study. A series of visits by the researcher were planned to coincide with organization meetings (KUPEE and KAEE). Interviews were conducted during those visits. The researcher's interview with Jane Eller, Executive Director, Kentucky Environmental Education Council, was not completed in one session so a follow-up time was arranged. The first interview was conducted on August 4, 2003. Yvonne Meichtry, Ph.D., Professor, NKU College of Education and Director of Center for Environmental Education, Northern Kentucky University, was also in attendance during the first session. The second interview session occurred on August 9, 2003. Both interview sessions were conducted in person. A meeting with Joe Baust, Ph.D. was conducted by phone on March 30, 2004. Later interviews with Jane Eller occurred in person on May 23 and 24, 2004.

Prior to the 2003 interview dates, an e-mailed message was sent to all participants confirming the interview arrangements and including a list of the planned open-ended questions. Each interviewee offered information about the program, history, and recommendations geared toward the construction of certification programs in other states. The interviews were audiotaped with permission of the interviewees to assure accuracy in the data transcription. Since the goal of the interviews was to obtain exact program information and opinions, the interviews were transcribed verbatim. Word-for-word interview transcription reduced the chance of researcher bias. Upon completion of the interview transcription, participants were sent interview transcripts and asked to review the content for accuracy and to clarify any points of possible confusion.

2.7.2. USEE Program Participant Interviews

Participants were originally contacted via e-mail (Appendix M). E-mail was used as an initial contact medium as it was the only contact information the researcher was given for all five participants. The e-mail was followed up with a phone call, at which time a phone interview time was arranged. If the researcher did not have the participant's phone number, that information was requested in the initial e-mail. The participants were e-mailed a copy of the survey questionnaire prior to the interview. Interviews were conducted over the telephone. Institutional Review Board (IRB) forms (Appendix O) were mailed through the U.S. Postal Service in hand-stamped, hand-addressed envelopes. A self-addressed stamped return envelope, two copies of the IRB form (one clearly marked for their records) and clear instructions (Appendix N) were enclosed with the form. The researcher was concerned that since the interviews were completed, the program participants might not return the IRB form in a timely fashion. To encourage form return compliance, the researcher enclosed two loose dollars.

3. Data Analysis

3.1. USEE Program Participant Interview Data

Analysis of the program participants' data was both qualitative and quantitative. The qualitative analysis will be discussed in more detail in the following sections. The quantitative data, obtained through Likert-type survey responses, were calculated using the assigned point values listed in Table 3.2.

Table 3.2: Likert Point Values	
Likert Question Response	Point Value
Strongly Agree	5
Somewhat agree	4
Neither agree nor disagree	3
Somewhat disagree	2
Strongly disagree	1

Numerical data, like participants' age (in years) and number of years working in the EE field were averaged. Check-box data were recorded and all examples mentioned by the program participants were transcribed and inserted into the responses.

3.2. Code Generation

Initially, a loose set of codes was developed to aid the researcher in organizing like data, as suggested by Miles and Huberman (1994). The researcher chose to initially use the questionnaire topics as the preliminary codes to maintain the integrity of the data. In this way, whole paragraphs were kept together to identify the context within which the comments were made. Extraneous comments that pertained to the program but did not address any of the questions were left white with black lettering (a code of its own). Later during data analysis, extraneous data were reevaluated for pertinence and recoded if necessary.

3.3. Data Coding Procedures

Each code was assigned a color sequence by the researcher. The color corresponded to the highlighting that would be used to identify code-related comments within data sources.

Within the data, code-related material was color-coded and the code label was inserted into the transcribed data for future reference. The color-coded material was copied into a master list through the use of a computer. The master list contained all coded data from all of the data sources. Whole color-coded paragraphs were condensed into key concepts called propositions.

The researcher categorized data source quotations and ideas that were very similar in content under propositions. Similar propositions were categorized under sub-themes and themes.

3.4. Triangulation

Through the coding method, like topics from all data sources were categorized together. Categorizing allowed for easy data triangulation. Since chronology data obtained through interviews is subject to memory error and subjective filtering, program documents and interview data were compared, confirmed, and contrasted to yield stronger results with greater accuracy and less potential for bias. Program attribute and component information gained through interviews and surveys was validated and clarified by comparing it with dated program documents. If a discrepancy was identified between the program documents and the interview data, the certification officers were contacted to clarify the discrepancies and additional program documents were sought.

4. Validity and Bias

The quality of a research design can be determined by testing for validity and by data reliability. Table 3.3 lists the four design tests that pertain to case studies.

Table 3.3: Case Study Tactics for Four Design Tests		
Tests	Case Study Tactic	Phase of research which the tactic occurs
Construct Validity	<ul style="list-style-type: none">• Use multiple sources of evidence• Establish chain of evidence• Have key informants review draft case study report	Data collection Data collection Composition
Internal Validity	<ul style="list-style-type: none">• Do pattern-matching• Do explanation-building• Address rival explanations• Use logic models	Data analysis Data analysis Data analysis Data analysis
External Validity	<ul style="list-style-type: none">• Use theory in single-case studies• Use replication in multiple-case studies	Research design Research design
Reliability	<ul style="list-style-type: none">• Use case study protocol• Develop case study database	Data collection Data collection

Source: COSMOS Corporation, 1983 as cited in Yin, 2003, p 34

4.1. Construct Validity

Construct validity involves the degree to which a concept can be measured (Kweit and Kweit, 1981, as cited in Leedy, 1989, p 41). In case studies, construct validity is achieved by using “multiple sources of evidence”, establishing “a chain of evidence”, and having “key informants review draft case study report” (Yin, 2003, p 34). These steps can be taken during the data collection and composition stages of research (Yin, 2003).

This study examined program documents, certification officer transcripts, and program participant transcripts to identify and clarify various concepts evident in this study. This triangulation of data strengthens the study.

4.2. Internal Validity

When addressing internal validity in case studies, the researcher should insure the conclusions drawn are as a result of changes reflected in the “dependent factor” and not influenced by the “manner in which the research was designed” (Leedy, 1989, p 41). In case studies, internal validity can be achieved by practicing “pattern-matching,” “explanation-building,” the use of “logic models,” and addressing “rival explanations” (Yin, 2003, p 34). These steps can be taken during the data analysis stage (Yin, 2003).

In this study, common ideas present in the data directed the concepts evident in the themes. The themes played a large part in developing the emphasis of the recommendations. The coding process insured the researcher was led to conclusions by the data. In addition, the researcher had no prior knowledge or experience with this study topic prior to the study.

4.3. External Validity

External validity examines the extent to which results can be applied to others outside of the original case study (Yin, 2003). In case studies, external validity is achieved by using a “theory in single-case studies and using method” “replication in multiple-case studies” (Yin, 2003, 34). These steps can be taken during the research design stage (Yin, 2003).

In this study the same methods used to extract data from one source were used in all sources. Although some results cannot be generalized to a larger audience, (e.g., participant demographic information with four participants), many key concepts were represented in multiple interview transcripts from certification officers in both study states.

4.4. Reliability

The goal of reliability is to reduce errors and biases to aid in study replication. If a researcher could take a study and replicate the case study, that researcher should be able to produce the same results and draw the same conclusions as the original researcher. The challenge when addressing reliability with case studies is that the same case and conditions must be reproduced to yield the same results (Yin, 2003). When dealing with case studies, replication may not always be possible. However, reliability can be achieved in case studies by using a “case study protocol” and developing a “case study database” (Yin, 2003, p 34). These steps can be taken during the data collection stage of research.

In this study, certain components of the study (e.g., interviews conducted at a time in the past) would be nearly impossible to replicate, as the study is looking at the evolution of certification programs through time.

5. Comparison Matrices

One of the codes initially identified directly related to information pertaining to the program chronology or timeline. This information was useful when identifying when various program components were reviewed and changed. The coded information from 2003 and the more recent interview data and documents became the basis for the Kentucky 2003/2004 Comparison Matrix (Table 4.4) and the Utah 2003/2004 Comparison Matrix (Table 4.5). Taking the 2004 data from Kentucky and Utah a program matrix (Table 4.7) was created. The categories for these matrices came from a model developed in 2003 by Tom Marcinkowski, Ph.D., a resource expert in EE certification program evaluation and

assessment. All pertinent information could not be located through program documents and past interview data, as the matrix instrument was not available to the researcher until May 2004. In these cases, gaps were filled in with information gained through discussions with certification officers.

6. Recommendation Development

6.1. Suggestions and Recommendations

Successful and problematic areas were identified through interviews with program certification officers and program participants, and data analysis of program documents. Certification officers were free to comment on any successful and challenging contacts, methods, and experiences encountered pertaining to the certification program.

Propositions obtained throughout the data analysis process were cut up into strips and organized into recommendation categories as suggested by Miles and Huberman (1984). Final recommendations were developed based on interview and program document data analysis. The recommendations reflected the Kentucky and Utah programs' successful and problematic/challenging contacts, methods and experiences encountered during program development and implementation.

6.2. Review of Draft Suggestions

In addition to the review of the transcripts, study participants were given an opportunity to review a draft of the research results prior to final printing. This review allowed the participants to see how their comments were being used to generate suggestions and recommendations.

CHAPTER IV – RESULTS

1. Introduction

The goal of this study was to describe and critically analyze the development and implementation of two competency-based environmental education certification programs for non-formal environmental educators using a case study approach. The study results include a comparison matrix for each state describing program components and attributes.

Recommendations were also developed to aid others considering developing a competency-based certification program for non-formal environmental educators. As of this writing, both the KEEC and USEE certification programs are still in a stage of adjustment and program alteration. These programs will continue to change in the near future. In the process of forming comparisons and recommendations, a point must be marked to stop collecting additional information and start writing results. That point was June 6, 2004.

Organizations that played a role in the certification evolution and the meeting context within which the certification programs were actively discussed, are described under the “Context” section. Data were collected through interviews, program documents, and e-mail correspondence between August 2002 and June 2004. Data were used to identify program background information, develop certification program recommendations, identify program participant demographics and suggestions, and develop a 2003/2004 Comparison Matrix for the Kentucky program and the Utah program. The 2004 program data from both states are organized in the Cross-State Program Comparison Matrix.

The results are presented in the following order:

- 1 Introduction
- 2 Context
 - 2.1. Entities/organizations involved
 - 2.1.1. US EPA Office of Environmental Education (EPA OEE)
 - 2.1.2. Environmental Education and Training Partnership (EETAP)
 - 2.1.3. North American Association for Environmental Education (NAAEE)
 - 2.1.4. Environmental Education Quality Assurance (EEQA) Initiative
 - 2.2. Chronology of meetings to support certification movement
 - 2.2.1. The Galveston Meeting, Galveston, TX, April 2002
 - 2.2.2. First EEQA meeting, Denver, CO, May 2003
 - 2.2.3. EE Certification States Meeting, Denver, CO, May 2003
 - 2.2.4. EE Certification States Meeting, Columbus, OH, September, 2003
 - 2.2.5. EE Certification States Meeting, Houston, TX, February, 2004
 - 2.2.6. EE Certification States Meeting, Lexington, KY, May, 2004
 - 2.2.7. NAAEE Board of Directors meeting, May, 2004
- 3 Study Cases
 - 3.1. Kentucky 2003 Program Components and Attributes
 - 3.1.1. Background Information
 - 3.1.2. Structural Features of the Program
 - 3.1.3. Human Resources and Capacity-building
 - 3.1.4. Competencies: Form and Substance
 - 3.1.5. Certification Process
 - 3.2. Kentucky 2004 Program Components and Attributes
 - 3.2.1. Background Information
 - 3.2.2. Structural Features of the Program
 - 3.2.3. Human Resources and Capacity-building
 - 3.2.4. Competencies: Form and Substance
 - 3.2.5. Certification Process
 - 3.3. 2003/2004 Kentucky Program Comparison
 - 3.3.1. Development Time
 - 3.3.2. Influence of External Organizations and EE Certification States' Meetings
 - 3.3.3. New Information
 - 3.4. Utah 2003 Program Components and Attributes
 - 3.4.1. Background Information
 - 3.4.2. Structural Features of the Program
 - 3.4.3. Human Resources and Capacity-building
 - 3.4.4. Competencies: Form and Substance
 - 3.4.5. Certification Process
 - 3.5. Utah 2004 Program Components and Attributes
 - 3.5.1. Background Information
 - 3.5.2. Structural Features of the Program
 - 3.5.3. Human Resources and Capacity-building
 - 3.5.4. Competencies: Form and Substance

- 3.5.5. Certification Process
 - 3.6. 2003/2004 Utah Program Comparison
 - 3.6.1. Development Time
 - 3.6.2. Influence of External Organizations and EE Certification States' Meetings
 - 3.6.3. New Information
 - 3.7. USEE Program Participant Results
 - 3.7.1. Program Participant Responses
 - 3.7.2. Program Participant and Certification Officer Response Comparisons
- 4 Cross-Case Comparison
 - 4.1. Background Information
 - 4.2. Structural Features of the Program
 - 4.3. Human Resources and Capacity-building
 - 4.4. Competencies: Form and Substance
 - 4.5. Certification Process

2. Context

In 2002, 2003, and 2004, four states were independently involved in the development and implementation of competency-based environmental educator certification programs. The certification programs were, in some way, influenced by external organizations. These organizations, interested in furthering the field of environmental education, had a vested interest in aiding the certification process. A description of the organizations can be found in Table 4.1.

Certification officers from each of the states participated in combined meetings in May 2003, February 2004, and May 2004. These meetings identified common program elements, needs, and questions common among the states. Certification officers took ideas from the meetings back to the state development teams. The researcher conducted interviews with Utah certification officers shortly before the first EE Certification States Meeting (May 2003). Interviews with Kentucky certification officers were conducted shortly after the first EE Certification States' Meeting. A summary of this information can be found in Table 4.2.

2.1. External Organizations

Four organizations played integral parts in creating an optimal environment for the state program development teams to create the best certification programs possible. These organizations contributed funds, staff hours, expertise, and technology to meet the needs of the certification states. These organizations, the US EPA OEE, EETAP, NAAEE, and EEQA Initiative helped advance the certification process and impact the states' program evolution. Background information on these organizations can be found in Chapter 2.

2.1.1. US EPA OEE

By funding EETAP, the Office of Environmental Education (OEE) started to support EE certification financially in October 2001 (M. Way, personal communication, June 14, 2004). OEE has supported numerous efforts to advance the field of EE across the country through policies, grants, EETAP, and the non-profit organization NEETF. The EPA's primary role in the environmental education movement was to provide grant funding to certifying institutions.

The EPA directly supported Utah's development of the *Guidelines for Environmental Education Providers in Utah*. An EPA grant also provided funds to support the efforts of Richard Osorio during the Georgia certification program development and the Certification States' program development stage. Pass-through funding from the Office of Environmental Education to EETAP supported the efforts of the Certification States as well as the investigation of a national certification program.

2.1.2 EETAP

Funded by the EPA's Office of Environmental Education through a cooperative agreement with the University of Wisconsin-Stevens Point, EETAP was a large contributor to the certification movement. These contributions were in the form of grants to entities supporting the certification efforts. EETAP also provided technical support to aid the EE Certification States' efforts in developing competencies and assessments. This support included:

“Assistance with the development of a working team (*EE Certification states team*),
Facilitation of one or more targeted planning workshops,
Providing background information on the certification process,
Identification of goals,
Review of materials as they are developed, and
Facilitation of communication among states developing certification programs.”
(EETAP, n.d. 1, p 1).

Through financial support, EETAP helped “facilitate coordination with the development of the NAAEE national environmental educator certification process” (EETAP, n.d. 1, p 1).

EETAP funded (through NAAEE and EEQA) the development of rubrics and other measures of EE competencies appropriate for use at the national and state levels, Utah's certification program development and implementation, and Utah's pilot testing efforts. Finally, EETAP financially supported NIU's (Deborah Simmons) and OSU's (Joe Heimlich) efforts in aiding the Certification States.

2.1.3. NAAEE

Funded by EETAP, NAAEE's certification contributions have included providing funding for the EEQA Initiative, hiring contractors to lend expertise in the certification

process, and investigating the options for a national certification program. NAAEE also provided technical support in the form of a certification listserv.

2.1.4. EEQA Initiative

The EEQA Initiative served as an intermediary between the Certification States and NAAEE. Although documentation (Way, 2003) suggested that EEQA planned to help the Certification States develop assessments and program evaluations, the researcher noticed the support was primarily financial in nature. EEQA funded numerous Certification States' meetings with the financial assistance of NAAEE. EEQA gathered information about each state program and compared/contrasted the programs. In early 2004, EEQA produced written recommendations (*Phase One Progress Report*) to the NAAEE Board regarding the feasibility of a national certification program. As of May 2004, the *Phase One* document has been reconsidered and amendments made. The original *Phase One Progress Report* outlined three recommendations for recognition of state certification programs by NAAEE. These recommendations, for the most part, have remained consistent. The recommendations for future "recognized" certification programs included: a competency-based component, a basis on the *NAAEE Guidelines for the Initial Preparation of Environmental Educators*, and the competency demonstration based on acceptable completion of applicant assessments (Dent, 2004). One amendment presently being considered pertains to the use of specific terminology (e.g., accreditation, recognition) when referring to the national program (Fitzpatrick, 2004).

Table 4.1: Summary of EE organizations Affecting Kentucky and Utah State Certification Program Development

No.	Organization	Components	Response
1	EPA-OEE	Brief description of organization/acronyms	The US Environmental Protection Agency, Office of Environmental Education was created to implement the congressional mandate known as the National Environmental Education Act of 1990. The EPA OEE's goal is to provide leadership to improve and enhance environmental education as a field by providing support, and ensuring quality and professionalism in the EE field. They seek to improve and enhance environmental education through many means. They seek EE-related collaborations; offer grants, internships, and fellowships; and present EE-related awards to worthy recipients (National Environmental Education Act, 1990, 1). The EPA OEE entered into an agreement with the University of Wisconsin-Stevens Point to fund the Environmental Education and Training Partnership's efforts to "train EE professionals in the development and delivery of environmental education and training programs and studies" (National Environmental Education Act, 1990, p 5).
		Date entered certification process	By funding EETAP, the OEE started financial support of EE certification in October 2001.
		Major roles/responsibilities	This agency's primary role in the environmental education certification movement is to provide funding in the way of direct grants to certifying institutions and other financial support through EETAP.
		Significant activities	The Office of Environmental Education has supported numerous efforts to advance the field of EE across the country through policies, grants, EETAP, and the development of NEETF. This agency directly supported Utah's development of the <i>Guidelines for Environmental Education Providers in Utah</i> . An EPA grant also provided funds to support the efforts of Richard Osorio during the Georgia certification program development and the Certification States' program development stage. A regional EPA grant helped fund the Galveston meeting in 2002. Pass-through funding from the Office of Environmental Education to EETAP supported the efforts of the Certification States as well as the investigation of a national certification program.

Table continued on next page

No.	Organization	Components	Response
2	EETAP	Brief description of organization/acronyms	Established in Fall 2000, the Environmental Education and Training Partnership (EETAP) is a partnership of organizations dedicated to advancing environmental education. Partners include: the "Association for Supervision and Curriculum Development (ASCD); Groundwater Foundation; National Environmental Education Advancement Project (NEEAP); The North American Association for Environmental Education (NAAEE); Northern Illinois University Department of Teaching and Learning; Ohio State University Department of Teaching and Learning; Project del Rio; Project Learning Tree; Project WET; University of Wisconsin-Stevens Point (USWP); and World Wildlife Fund" (EETAP, n.d.2, p 1). Funded by the EPA's Office of Environmental Education through a cooperative agreement with the University of Wisconsin-Stevens Point, EETAP's goal is to promote "academic achievement and environmental literacy." It supports the development and "delivery of environmental education training for education professionals" (EETAP, 2003, p 1).
		Date Entered Certification Process	October 2001
		Major roles/responsibilities	Provide technical support to aid the EE Certification States' (KY, UT, TX, and GA) efforts to develop competencies and assessments. This support includes: "assistance with the development of a working team (<i>EE Certification states team</i>) facilitation of one or more targeted planning workshops providing background information on the certification process identification of goals review of materials as they are developed, and facilitate communication among states developing certification programs" "Facilitate coordination with the development of the NAAEE national environmental educator certification process" (EETAP, n.d. 1, p 1). Aid the EEQA Initiative as they examine the methods appropriate for participants to demonstrate competence in an EE certification program. Fund (through NAAEE and EEQA) the development of rubrics and other measures of EE competencies appropriate for use at both the national and state levels. Fund Utah's certification program development and implementation and pilot testing efforts.
		Significant activities	Financially support NIU's progress in aiding the Certification States progress. Fund Ohio State University's efforts in identifying certification assessments. Fund the EEQA Initiative's efforts through NAAEE. Financially support Certification States progress. Financially support NAAEE certification program feasibility analysis. Utah's January 2003 Summit to certify environmental educators in Utah with the goal of seeding the bank of certified individuals to serve as mentors for future program applicants. Fund Utah's certification program development through the EETAP States Grant Program. (R. Wilke, personal communication, June 11, 2004)

Table continued on next page

No.	Organization	Components	Response
3	NAAEE	Brief description of organization/acronyms	North American Association for Environmental Education is a professional organization seeking to promote environmental education and help instructors integrate environmental issues into instruction.
		Date Entered Certification Process	NAAEE started funding the EEQA Initiative in January 2003 but had hosted certification related discussion sessions at national conferences since 2000.
		Major roles/responsibilities	Review EEQA Initiative's assessment of a potential national certification. Provide listserv access to aid in communication between the Certification States members. Pursue a national certification program.
		Significant activities	Provided backing by NAAEE staff and financial support to the certification states to develop certification competencies and assessments. Facilitated the communication needs of the certification states. Pursued a national certification program. Funded the development of rubrics and other measures of EE competencies appropriate for use at both the national and state levels.
4	EEQA Initiative	Brief description of organization/acronyms	As of May 2004, Environmental Education Quality Assurance Initiative is a volunteer group of individuals brought together by the Affiliate Network, Mike Way and Joe Heimlich. This organization had two working groups, the Certification Working Group (co-chaired by Brenda Weiser and Tim Brown) and the Material/Program Working Group (M. Way, personal communication, June 14, 2004). This "team was 'sunset'" in late May, 2004 and a new team, to be known as the EEQA Advisory Council, is to be formed in early summer, 2004" (S. Fitzpatrick, personal communication, June 15, 2004). The EEQA chairperson through May 2004 was Mike Way.
		Date Entered Certification Process	December 2002 members of the "Affiliate Network presented a proposal to the NAAEE Board, whereby the Affiliates Network would take the lead role in exploring the potential for a tri-National EEQA program, which would be linked to their developing EEQA efforts at the state level" (S. Fitzpatrick, personal communication, June 15, 2004). EEQA started forming in January 2003 and first met in April, 2003 (M. Way, personal communication, June 14, 2004).
		Major roles/responsibilities	Assume the role of an intermediary between the EE Certification states and NAAEE. Provide recommendations to the NAAEE Board pertaining to the feasibility of a national certification program. Support the EE Certification states certification efforts while gathering information about target audiences and program components Identify processes to review program and materials.
		Significant activities	Funded EE Certification states efforts (through NAAEE by an EETAP grant) to identify and develop assessments and rubrics that can be adjusted to fit each state's needs. Served as an intermediary between the EE Certification states and NAAEE Identified a model for materials based on the Colorado state affiliate and the EE Certification states (NAAEE, 2003, p 3). Produced written recommendations (Phase One Progress Report) to the NAAEE Board regarding the state certification programs and the feasibility of a national certification program.

2.2. Meetings

Meetings provided the vehicle for the exchange of ideas, materials, and program components. As a result, meetings contributed to the evolution of Kentucky and Utah's certification programs. Seven meetings were coordinated by various entities. This information can be summarized in Table 4.2. The seven meetings were as follows:

- The Galveston Meeting, Galveston, TX, April, 2002
- First EEQA meeting, Denver, CO, April, 2003
- EE Certification States Meeting, Denver, CO, May, 2003
- EE Certification States Meeting, Columbus, OH, September, 2003
- EE Certification States Meeting, Houston, TX, February, 2004
- EE Certification States Meeting, Lexington, KY, May, 2004
- NAAEE Board of Directors meeting, May, 2004

2.2.1. *The Galveston Meeting, Galveston, TX, April 2002*

The Galveston Meeting was a gathering for all states with certification programs, states in the process of developing a program, and states interested in learning more about certification programs. This meeting was primarily an opportunity for certification officers to begin sharing information. Representatives from Florida, Georgia, Kentucky, Louisiana, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, and Texas met with members of NAAEE, NEETF, US FWS, US EPA, EETAP, Project WET, Project Learning Tree, and the World Wildlife Fund to discuss certification program attributes and anticipated program requirements. This meeting was paid for by grants from the US Forest Service (Southeastern Region) and the EPA. It was coordinated by Richard Osorio, Deborah Simmons, and Brenda Weiser (B. Weiser, personal communication, June 7, 2004).

2.2.2. First EEQA Meeting, Denver, CO, April 2003

This meeting started with program updates, outlined program features and components, and examined some ideas of certification program assessment and evaluation. This meeting also identified potential items that the Certification States may need to proceed with their programs' development (Weiser, 2004).

2.2.3. EE Certification States Meeting, Denver, CO, May 2003

This meeting, attended by three representatives per state, key resource experts, and the facilitators, was convened not only to encourage the sharing of program information and needs, but also to begin to communally work with key resource experts on the Certification States' program assessment tools. This meeting identified individual state and collective state needs and challenges, and included program updates and a discussion on rubrics and other assessment tools (e.g., presentations, essays). Within each state, key resource experts worked with the certification representatives to identify and discuss individual state assessment tools.

2.2.4. EE Certification States Meeting, Columbus, OH, September 2003

The Certification States' meeting in Columbus was coordinated by Joe Heimlich from Ohio State University. This meeting was initially expected to address assessment tools. Unfortunately, the assessment components were not completed on schedule. Instead, the meeting allowed participants to identify the next steps and objectives for future meetings. A discussion regarding how each state was expecting to address the NAAEE *Guidelines* (themes one and two) began. It became apparent that the states were widely divided on the

interpretation and assessment of these themes (B. Weiser, personal communication, June 7, 2004; T. Marcinkowski, personal communication, April 7, 2004). The meeting was attended by certification representatives from each state, key resource experts and Joe Heimlich from NAAEE (B. Weiser, personal communication, June 7, 2004).

2.2.5. EE Certification States Meeting, Houston, TX, February 2004

Coordinated by Brenda Weiser and attended by representatives from each of the certification states and key resource experts, this meeting helped the states create a tangible product that would be used to develop the assessment tools. A common set of measurable objectives were identified for each of the themes identified in NAAEE's *Guidelines*.

Identifying a common set of objectives was crucial to addressing goals set for the Lexington Meeting in May 2004 (B. Weiser, personal communication, June 7, 2004).

2.2.6. EE Certification States Meeting, Lexington, KY, May 2004

The Lexington, KY meeting was coordinated by Brenda Weiser and Jane Eller; the content was organized by Deborah Simmons, Tom Marcinkowski, M. Lyn Fleming, and Kate Wiltz. Participants from Kentucky, Utah, Texas, and North Carolina, and key resource experts participated in short program updates. At the end of the meeting, participants developed a set of assessment tools with objectives and rubrics that could be used and adapted by the certification states to meet the needs of the individual certification states.

2.2.7. NAAEE Board of Directors meeting, May 2004

Coordinated by Bill Dent, Jr. and Abby Ruskey, this meeting set the stage for acceptance of future EE certification programs by NAAEE. The original Phase One Progress Report, submitted by EEQA, was discussed. A summary of the Progress Report, written by William Dent, Jr., was discussed with the NAAEE Board of Directors and Scott Fitzpatrick of EEQA (S. Fitzpatrick, personal communication, June 15, 2004).

Table 4.2: Summary of EE Meetings/Gatherings Affecting Kentucky and Utah State Certification Program Development

No.	Meeting/Gathering name and place	Component	Response
1	The Galveston Meeting Galveston, TX April 2002	Coordinated by whom	Richard Osorio, Deborah Simmons, Brenda Weiser
		Convened for what purpose	Bring together states with certification programs, states developing programs, and states considering the development of a certification program. Reports from each state developing a program were presented (UT, KY, GA, and TX). Various program attributes and ideas were discussed (B. Weiser, personal communication, June 7, 2004).
		Meeting Attended By:	Attended by: <u>Florida</u> - Greg Ira - Florida Department of Environmental Protection, Office of Environmental Education; Tom Marcinkowski - Associate Professor, FL Institute of Technology <u>Georgia</u> - Christi Heidt - DeKalb County Extension Service; Kerry Carlin Morgan - Curator of Exhibits and Outreach, Georgia Museum of Natural History <u>Kentucky</u> - Lee Carolan - Director of Information and Education, Kentucky Dept. of Fish and Wildlife Resources; Mary Kathryn Dickerson - District Coordinator, Boone, Kenton, and Campbell Conservation Districts; Jane Eller - Director, Kentucky Environmental Education Council (KEEC); Rosetta Fackler - Nonpoint Source Education Coordinator, KY Division of Water <u>Louisiana</u> - Michelle Abington-Cooper - Leadership Development/Environmental Science, LSU Research and Extension, LSU Research and Extension; Ann Wilson - Science Program Coordinator, Louisiana State Department of Education <u>Missouri</u> - Karen Armstrong - Education Consultant; Sydney Hime - Environmental Education Coordinator, Missouri Department of Conservation; Irene Unger - Assistant Professor of Biology, Southwest Missouri State University <u>New Mexico</u> - Mary Dwyer - Co-Coordinator, Bosque Ecosystem Monitoring Program; Debra N. Thrall - WERC Professional Development Coordinator, University of New Mexico <u>North Carolina</u> - Joe Hogue - Information and Education Chief, North Carolina Division of Forest Resources; Libby Wilcox - NC Environmental Education Certification Program Manager, North Carolina Office of Environmental Education <u>Oklahoma</u> - Mary Coley - Education Outreach Coordinator, The Nature Conservancy; Christine Moseley - Assistant Professor of Science Education, Oklahoma State University; Suzanne Spradling - Associate Dean of Education, St. Gregory's University <u>South Carolina</u> - Jerry L. Shrum - Environmental Education Coordinator - SC PLT Coordinator <u>Texas</u> - Sue Bumpous - Senior Program Coordinator, Texas Natural Resource Conservation Commission; Leslie Dubey - Resource Education Specialist, Big Thicket National Preserve; Cheryl Stanco - Texas PLT Co-Coordinator, Texas Forestry Association, <u>Sponsors:</u> Janet Ady - US Fish and Wildlife Service; Samantha Blodgett - NEETF; Ed Curran - Environmental Education Coordinator, Office of External Affairs, US EPA; Office of External Affairs; Gerald Helton - USDA Forest Service ; Augusto Medina - Project Manager, EETAP <u>Conference Planners:</u> Richard Osorio, Coordinator, GPEEE; Deborah Simmons - Department of Teaching and Learning, Northern Illinois University; Brenda Weiser - EE Program Manager, Environmental Institute of Houston <u>Invited Guests/Partners</u> - Judy Braus - Director of Education, World Wildlife Fund; Tim Brown - Executive Director, USEE; Gary Cook - Coordinator, Project WET; Josetta Hawthorne - Executive Director, Council for Environmental Education; Kathy McGlaughlin - Director, Project Learning Tree; Connie Smith - Membership Development and Services Manager, NAAEE (Regional Conference Roster, 2002, p 1-7)
		Who supported/funded meeting	Forest Service Southeastern, EPA Region grants

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No.	Meeting/Gathering name and place	Component	Response
2	First EEQA Meeting, Denver, CO April 2003	Coordinated by whom	Mike Way, EEQA Chairperson
		Convened for what purpose	Identify the need for certification Articulate the goals of the EEQA Initiative Outline state program key components and comparison features Identify items that the EE Certification states entities need Examine the ideas of program evaluation and participant assessment within EE Certification Divide the duties among two newly formed working groups (Personal communication with B. Weiser, June 7, 2004; T. Marcinkowski, April 7, 2004; M. Way, June 14, 2004; and S. Fitzpatrick, June 15, 2004)
		Meeting Attended By:	Attended by: Tim Brown – USEE Executive Director and EEQA Certification committee Co-Chairperson Mike Way – EEQA Initiative Chairperson Laura Downey – Executive Director, Kansas Association for Conservation and Environmental Education Scott Fitzpatrick – Manager, Prescott Farm Audubon Center, Chair of Affiliates Communication and Membership Committee Brenda Weiser, - EE Program Manager, Environmental Institute of Houston, EEQA Certification Working Group Co-Chairperson Terry Wilson – Past-President, NAAEE, Director, Center for Mathematics, Science and Environmental Education at Western Kentucky University Katy Wang – Project Manager EE Link, NAAEE Kathy McGlaufflin – Executive Director, Project Learning Tree Ali Goulstone-Sweeney (recorder) – Assistant Executive Director, Colorado Alliance for Environmental Education Lori Mann – EE Certificate Coordinator, University of California Extension Santa Cruz
		Who supported/funded meeting	EETAP grant through NAAEE
3	EE Certification States Meeting Denver, CO May 2003	Coordinated by whom	Dr. Deborah Simmons, Richard Osorio, Mike Way
		Convened for what purpose	Identify program commonalities. Provide Committee with certification states' progress/updates. Identify and discuss individual and collective needs and challenges of the certification states. Present ideas on rubrics and other assessment tools (e.g. presentation, essay). Within same-state groups, identify needs and discuss of assessment tools (Way, 2003 May)
		Meeting Attended By:	Attended by: <u>Kentucky</u> - Gwenda Atkins - UK Cooperative Extension Agent and current President of KAEE; Jane Eller - Director, Kentucky Environmental Education Council (KEEC); Dr. Yvonne Meichtry - College of Education <u>Texas</u> - Pat Marks - Director of Education, Houston Arboretum & Nature Center; Cheryl Stanco - Texas PLT Co-Coordinator, Texas Forestry Association, Brenda G. Weiser, Ed.D. - Director of Environmental Education, Environmental Institute of Houston. <u>Utah</u> - Tim Brown - USEE (Past) Executive Director; Eric Chandler - USEE Executive Director; Heather Scheel - USEE Deputy Director <u>Conference Planners/Facilitators</u> - M. Lynette Fleming, Ph.D.; Richard E. Osorio – Coordinator, Georgia Project for Excellence in Environmental Education; Dr. Deborah Simmons - Department of Teaching and Learning, Northern Illinois University; Dr. Tom Marcinkowski - Associate Professor, FL Institute of Technology <u>Partners/Sponsors/Guests</u> - Julie McDonald - UWSP Researcher; Katy Wang - Project Manager EE Link, NAAEE; Mike Way - EEQA Initiative Chairperson; CeCe Forget - EE Program Manager, US EPA, Region 8 (Osorio, 2003)
		Who supported/funded meeting	EETAP grant through Northern Illinois University

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No.	Meeting/Gathering name and place	Component	Response
4	EE Certification States meeting Columbus, OH September 2003	Coordinated by whom	Dr. Joe Heimlich
		Convened for what purpose	Identify funding sources for state certification effort. Identify all of the states and representatives that will be participating in the communal certification effort. Identify measurable objectives for each state Identify next steps and objectives for future meetings Identify how the state programs intend to address each NAAEE <i>Guidelines</i> themes (Themes one and two discussed) Establish a plan to identify state program commonalities and develop assessments (B. Weiser, personal communication, June 7, 2004; T. Marcinkowski, personal communication, April 7, 2004)
		Meeting Attended By:	Attended by: <u>Florida</u> - Dr. Tom Marcinkowski - Associate Professor, FL Institute of Technology <u>Kentucky</u> - Carol Hanley, Ed. D. <u>Texas</u> - Brenda Weiser - Director of Environmental Education, Environmental Institute of Houston <u>Utah</u> - Eric Chandler - USEE Executive Director Dr. Joe Heimlich - Past president of NAAEE, Professor, Ohio State University Dr. Deborah Simmons - Department of Teaching and Learning, Northern Illinois University Kate Wiltz - Extension Associate, Program Development and Evaluation, Ohio State University Extension Cindy Sommers - Ohio State University Sunita Hilton - Assistant Professor in Natural Resource Recreation and Tourism, Colorado State University M. Lyn Fleming, Ph.D. (B. Weiser, personal communication, June 7, 2004; T. Marcinkowski, personal communication, April 7, 2004)
		Who supported/funded meeting	EETAP grant through NAAEE
5	EE Certification States Meeting Houston, TX February 2004	Coordinated by whom	Dr. Brenda Weiser; Content developed by Deborah Simmons, William Dent, Jr., Mike Way, Tom Marcinkowski, and Lyn Fleming
		Convened for what purpose	Identify and agree on a common set of key measurable objectives based on the six themes of the <i>Guidelines for the Initial Preparation of Environmental Educators</i> that can be used as the basis for EE certification assessment. The objectives identified in this meeting were used to establish assessment tools/rubrics at the May 2004 meeting in Lexington, KY Certification States' updates on programs and objectives. (Weiser, 2004, February, p 1; T. Marcinkowski, personal communication, April 7, 2004)
		Meeting Attended By:	Attended by: <u>Utah</u> - Heather Scheel - USEE Deputy Director; Jennifer Tucker Visitacion - USEE Executive Director; Jon Orris - Four Corners School of Outdoor Education <u>Kentucky</u> - Carol Hanley, Ed.D.; Jane Eller - KEEC Executive Director <u>Texas</u> - Sue Bumpous - Senior Program Coordinator, Texas Natural Resource Conservation Commission; Leslie Dubey - Resource Education Specialist, Big Thicket National Preserve; Cheryl Stanco - Texas PLT Co-Coordinator, Texas Forestry Association <u>Conference Planners/Facilitators</u> - Mike Way - EEQA Initiative Chairperson; Deborah Simmons Ph.D. - Department of Teaching and Learning, Northern Illinois University; Kate Wiltz - Extension Associate, Program Development and Evaluation, Ohio State University Extension; Brenda Weiser, Ed.D - Director of Environmental Education, Environmental Institute of Houston; Mike Way - EEQA Initiative Chairperson; Dr. Tom Marcinkowski - Associate Professor, FL Institute of Technology; Dr. M. Lyn Fleming; William Dent, Jr. - NAAEE Executive Director (B. Weiser, personal communication, June 7, 2004)
		Who supported/funded meeting	EEQA Initiative through NAAEE by a grant from EETAP

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No.	Meeting/Gathering name and place	Component	Response
6	EE Certification States Meeting Lexington, KY May 2004	Coordinated by whom	Brenda Weiser and Jane Eller; Content developed by Deborah Simmons, Tom Marcinkowski, M. Lyn Fleming, and Kate Wiltz
		Convened for what purpose	"The states (KY, TX, UT) will leave the meeting with a group of assessment tools/methods and simple rubrics or other scoring mechanisms (ready for pilot testing/usage) to accompany the measurable objectives as identified from the February 2004, Houston, TX meeting. Note: rubrics, scoring mechanisms, assessment tools/methods may be revised to match the needs of the individual states" (Weiser, 2004 May, p 1).
		Meeting Attended By:	Attended by: <u>Kentucky</u> - Jane Eller - KEEC Executive Director; Carol D. Hanley, Ed.D. <u>Texas</u> - Cathy Porter - Conservation Education/Outreach Coordinator, The Nature Conservancy of Texas <u>Utah</u> - Jennifer Tucker Visitacion - Executive Director; USEE, Heather Scheel - Deputy Director, USEE <u>North Carolina</u> - Libby Wilcox - EE Certification Program Manager, Office of Environmental Education Julie McDonald - UWSP Researcher Conference Planners/Facilitators - William H. Dent, Jr. - Executive Director, North American Association for Environmental Education; M. Lynette Fleming, Ph.D.; Tom Marcinkowski, Ph.D. - Associate Professor, Florida Institute of Technology; Deborah Simmons, Ph.D. - Department of Teaching and Learning, Northern Illinois University; Kate Wiltz - Extension Associate, Program Development and Evaluation, Ohio State University Extension; Brenda G. Weiser, Ed.D. - Director of Environmental Education, Environmental Institute of Houston
		Who supported/funded meeting	EEQA Initiative through NAAEE by a grant from EETAP
	NAAEE Board of Directors Meeting Lexington, KY May 15, 2004	Coordinated by whom	William Dent, Jr. - NAAEE Executive Director Abby Ruskey - NAAEE President
		Convened for what purpose	Discuss the Phase One Progress Report changes and discuss the potential of a national certification program. Since this meeting occurred shortly before this publication was finalized, it is impossible to determine the ultimate impact or significance that this meeting will have. However, it has enormous potential to influence and possibly shape the future of certification within NAAEE (Fitzpatrick, 2004).
		Meeting Attended By:	William Dent, Jr. - NAAEE Executive Director Scott Fitzpatrick - EEQA Interim Chairperson Joe Baust; Joe Heimlich; Teresa Mourad - NAAEE; Gus Medina; Hilda Castillo; Abby Ruskey; Caroline Alston; Diane Cantrell; J. Allen Johnson; Karen Hollweg; Kathe Conn; Sabiha Daudi; Sandra Ryack-Bell; Mary Smith; John Guyton (S. Fitzpatrick, personal communication, June 15, 2004)
		Who supported/funded meeting	NAAEE

3. Study States' Program Evolution and Comparison

Both state certification programs evolved between the 2003 interviews and the 2004 interviews. This section will examine those changes and offer some explanations as to why the programs evolved. This section considers the following research questions when addressing the subject material:

1. Study state certification program attributes/components
 - 1.1 How have the certification program attributes/components evolved over the development and implementation timeframe?
 - 1.2 Why have certification program attributes/components evolved over the development and implementation timeframe?
2. How do USEE program participant responses compare with certification officers' responses?
3. Cross-case comparison – Similarities/differences of program components
 - 3.1 How similar/dissimilar are the study states' program components?
 - 3.2 Why are the study states' program components similar/dissimilar?
4. What implications will this study have for the study states, other states considering EE certification, and the EE field?

These evolutionary changes were documented through interviews with certification officers as listed in table 4.3 below. Contact information for these participants can be found in Appendix Q.

Table 4.3: Certification Officer Interviews			
State	Certification officer name	Initials used	Interviews conducted
KY:	Jane Eller	JE	July 20, 2002 August 4/9, 2003 May 24, 2004 June 29, 2004
KY:	Joe Baust, Ph.D.	JB	March 30, 2004
KY:	Yvonne Meichtry, Ph.D.	YM	August 4, 2003
UT:	Tim Brown	TB	April 11, 2003
UT:	Eric Chandler	EC	July 20, 2002 April 11, 2004
UT:	Heather Scheel	HS	April 11, 2004 May 24, 2004
UT:	Adrienne Cachelin, Ph.D.	AC	April 11, 2004 May 14, 2003
UT:	Jennifer Visitacion	JV	May 24, 2004 July 6, 2004

3.1. Kentucky 2003 Program Components and Attributes

Initial program information was collected in a two-part interview with Jane Eller. The first part of the interview (August 4) was also attended by Yvonne Meichtry. Information pertaining to sections 3.3 and 3.4 (Kentucky's 2003 and 2004 program components and attributes) is summarized in Table 4.4. Jane Eller's initials are followed by the date of the interview which that information was discussed e.g., (JE, August 4, 2003).

3.1.1. Background Information

Kentucky's Certification Task Force first discussed the idea of a certification program in July 2001 and began to take steps towards program development in February 2002. KEEC's address has appeared on program documents since program inception (JE, August 4, 2003).

3.1.2. Structural Features of the Program

Although the target audience was identified as non-formal environmental educators in 2003 the expected size of the audience was unknown. A code of professional ethics was borrowed from Texas in 2003 (JE, June 29, 2004).

3.1.3. Human Resources and Capacity-building

In summer 2003, the Task Force was uncertain who was going to administer the certification program. Members of KAEE, KEEC, and KUPEE were discussing the roles that each organization could assume to best accomplish certification development and implementation tasks. The Certification Task Force was identified as the certifying organization. The Oversight Committee had not yet been established but its role was identified (JE, August 4, 2003).

Although the course instructors were just beginning to look at the course development, ideas for assessment tools were identified prior to August 2003. The three course instructors were later paid for their course development time. No additional professional development was planned for the staff other than participation in the certification process (JE, August 4, 2003). The course instructors are well respected in the field of environmental education. One instructor is a past-president of NAAEE, one member is a NAAEE president-elect, and the third has state and national experience in the EE field. All three instructors bring a combined total of 70 years of professional experience in EE to the program. In 2003, the Task Force expected that the course instructors would play a role in assessing the program applicants, although that role had not been clarified (JE, June 29, 2004).

3.1.4. Competencies: Form and Substance

The Kentucky competencies were derived from NAAEE's *Guidelines for the Initial Preparation of Environmental Educators* (GIPEE in table) (JE, August 4, 2003). The Task Force also used experience gained through Kentucky's education system (use

of authentic assessments and holding teachers accountable for students' progress) and Utah's rubrics to establish competencies. Kentucky's Task Force decided to address guidelines 1.1, 1.2, and 1.3 in Theme 1 of NAAEE's *Guidelines* (see Appendix B). The Task Force chose not to address guideline 1.4 out of concern that the topic (Personal and civic responsibility) would be "too hot for Kentucky" (J. Eller, May 4, 2004). Under NAAEE's *Guidelines* Theme 2, Kentucky chose to address guidelines 2.1, 2.2, and 2.3. Other themes identified in NAAEE's *Guidelines* were not laid out in the 2003 interview. Communication of required competencies to applicants was not covered in the 2003 interviews.

3.1.5. Certification Process

Although program marketing was not thoroughly identified in 2003, Jane Eller did identify the target audiences and marketing vehicles that would be used (Table 4.4, E1). The application process identified in 2003 was directed only for first cadre of participants. Members of the first cadre would be accepted into the program based on nominations from EE employers in Kentucky. Jane Eller mentioned that the Task Force wanted a mixture of EE entities to be represented in the first class.

Although the courses had not been developed, the Task Force decided that instructional courses would be available to program participants. In 2003 the interviews with Jane Eller (August 4 and 9, 2004) revealed that the coursework would be optional and the courses would initially be presented by the course instructors, Drs. Joe Baust, Yvonne Meichtry, and Terry Wilson. KUPPEE was also being considered as a source for

course instructors for the teacher endorsement courses and potentially for the certification courses. Those plans were still in their infancy.

Although the Task Force members knew they wanted to use authentic assessments, such as debate and lesson plan components, they were not in agreement how the courses and assessments would fit together. The assessment components were still being determined, but the Task Force knew the course instructors would assess program participants to some degree.

Although attendance was originally not going to be required, the Task Force thought most participants would attend the courses. However, some participants could submit a portfolio containing all of the required elements and just attend the debate (August 4, 2003).

No program evaluation methods had been identified in 2003.

3.2. Kentucky 2004 Program Components and Attributes

The final program information was collected by the researcher from interviews with Jane Eller in May 24-25, 2004 and June 29, 2004.

3.2.1. Background Information

Since the 2003 interviews, the role of the certification program administrator had been finalized (JE, May 24, 2004). Kentucky has a one-tier certification program. The Task Force decided that it would be best to have everyone at a consistent high level while maintaining the feeling that everyone is equal (JE, August 4, 2004).

3.2.2. Structural Features of the Program

Non-formal environmental educators are still the targeted audience. KEEC is estimating the size of the target audience at over 900 persons. Although the primary target audience resides in the state of Kentucky, interested parties from neighboring states have voiced interest in being certified by Kentucky's program. However, recruitment and promotional efforts are not expected to extend outside of the state. The Certification Task Force integrated a professional code of ethics by reviewing the code of ethics designed by Texas' certification development team (JE, May 25, 2004).

3.2.3. Human Resources and Capacity-building

KEEC, the Certification Task Force, and the Oversight Committee all contribute to the certification program in unique ways. Information on each entities' role can be found in Table 4.4, C2.

The 2004 interview confirmed the roles of advisors. In 2004, the course instructors played a more integral role than in 2003; they developed the certification courses and participant assessments and taught the courses. The instructors do not require any additional professional development as all three of the course instructors possess Ph.D. degrees and collectively have contributed 70 years of experience to the environmental education field. Courses continue to serve as professional development for staff (JE, May 24, 2004).

Applicants seeking answers to questions may go through a chain of expertise. This chain starts with the KEEC staff. If the KEEC staff cannot answer questions that pertain to the courses, the instructors are next in the chain. The Oversight Committee

will be able to address questions regarding fairness. The Certification Task Force would be the last link in the chain of expertise. Later in the program's evolution, Kentucky plans to integrate a mentor committee for the participants. Until that occurs, the course instructors will serve as mentors for the first class. In the future, the mentor committee will be composed of three persons. Two of the committee members must be certified and one of the committee members must be a formal educator. Then, if an applicant was in need of help, he/she may turn to the mentor committee and/or the course instructors.

Program evaluators will come from many sources. Program participants will have the opportunity to add constructive feedback regarding all facets of the program. Instructors will also have the opportunity to provide feedback as to the effectiveness of instruction, among other things. If, in the future, NAAEE implements a national certification program or an "endorsement" program, then NAAEE will also formulate a type of program evaluation as a form of "acceptance" or "endorsement". Organizations that provided funding may conduct their own evaluation of the program (JE, May 25, 2004).

3.2.4. Competencies: Form and Substance

Kentucky's certification program is based upon a framework laid down by NAAEE's *Guidelines for the Initial Preparation of Environmental Educators*, USEE's rubrics, and experience gained through Kentucky's education system. Kentucky's Task Force decided to address all of the guidelines found in NAAEE's Guidelines. Although the Task Force did not initially choose to address guideline 1.4, the instructors were able to integrate the guideline (Personal and civic responsibility) into the courses in a

thoughtful manner. Communication of the program requirements and competencies addressed is three-fold. The applicants receive a binder that specifically lists the program competencies and expectations. NAAEE's Guidelines are also included in the binder. Finally, applicants are told of the competencies and requirements through the instructional courses.

3.2.5. Certification Process

A marketing plan is an identified need (JE, June 29, 2004). Targeted marketing tools may include: word of mouth by program participants and task force members, newsletters, a certification website, conferences (NAAEE, KAEE); meetings (forestry marketing meetings); workshops (Projects WET, WILD, Learning Tree); and university courses.

The application process for the first cadre was through employer nomination. In future classes, applicants will be able to nominate themselves. Applicants must agree to serve as a mentor and a completed application and program fee must be submitted (JE, May 24, 2004).

Any breach of ethical standards will be reported to KEEC. KEEC will contact the Oversight Committee. The Committee will be asked to meet with any necessary parties. The applicants can directly contact the Oversight Board but must contact KEEC first.

Although a self-assessment tool presently has not been developed, Jane Eller feels that a self-assessment tool may be developed in the future, so applicants can identify their own strengths and weaknesses with regard to the program content. Participant professional development is primarily addressed through the third course. This course

specifically targets instructional strategies and learner styles (NAAEE *Guidelines* Themes 3-6). Course instructors will deliver the courses. Although KUPÉE instructors will be teaching future certification courses, instructor training has not yet been developed. KEEC is pursuing funding to train future certification course instructors.

The NAAEE *Guidelines* Theme 1 is addressed in the first course, Environmental Literacy. Two assessments are being used for this course. The first assessment is a short-answer paper and pencil test on the interactions of “systems.” The second assessment for this course is participation in a structured debate. The debate roles are assigned beforehand, and participants must research their roles and play them during the debate. The goal of the debate is to not only address the issue incorporating all roles, but also to reach a consensus among the parties. Theme 2 in the Guidelines is covered in the second course, Foundations of Environmental Education. This course is assessed through a paper and pencil test. The questions are a series of open response questions with one-page answers. NAAEE *Guidelines* themes 3-6 are combined in the third course, Instructional Strategies. This course is assessed by an annotated unit of study. The KEEC uses a comprehensive unit of study format designed by the Kentucky Department of Education that applicants must follow.

Summative feedback received by KEEC is filtered to the course instructors and Task Force members. Jane Eller has submitted a grant proposal to incorporate a more in-depth summative review of the program. If approved, this review would include interviews with program participants and their employers. After summative evaluations are received, the Task Force will receive copies of any comments. Program participants (from the initial cadre) will be invited to attend a Task Force meeting in early 2005 to

contribute any other recommendations. The Task Force will consider the suggestions and adjust the program as needed.

Certified participants will have their names posted in the KAEE newsletter and possibly on the Department of Education website. This effort will help market the certified participants in the EE field. The Task Force is considering a professional development component but none has been developed as of June 2004. Participants presently do not need to renew their credential although a professional development renewal component is being considered.

Presently no program evaluation, monitoring of the program operations, or program impacts have been developed. Components for these are expected in the future.

3.3. 2003/2004 Kentucky Program Comparison

Although many components of the Kentucky program have remained the same, some changes were noted in the 10 months between the 2003 and 2004 interviews. The changes to Kentucky's program have come from three main elements: additional development time, influence of external organizations through the EE Certification States' meetings, and the presence of new information.

3.3.1. Development Time

Given enough time any program will change to adjust to a changing environment, audience, or discipline knowledge. In this program the passage of time has allowed the Task Force to clarify program components and define roles. Time has allowed for additional research to be done on existing components. As a result, many of the program

components that were just being discussed in 2003 are now a reality in 2004. Time will continue to play a part in this certification program.

In 2003, the program administrative leadership was still being decided. As a result, the roles of KEEC and the course instructors were more clearly defined in 2004. Marketing, too, has progressed within the past year. Presently, a certification website is live, and various other information vehicles – e.g., workshops, meetings, and conferences - have allowed certification program information to become more accessible to the public (May 25, 2004).

KEEC has clarified application requirements. Presently applicants must agree to serve as a mentor to be accepted into the program and the fee submitted goes to the state EE affiliate, KAEE (May 24, 2004).

After developing the courses, members of KEEC and the course instructors doubted that all of the assessments could be successfully given and passed unless the courses were required. Although this issue is still being debated, it is likely that the coursework will become mandatory for participants. Presently, participants are not required to attend the courses. They are required to participate in the assessments (June 29, 2004).

Since 2003, competency clarification and course development have allowed the development of assessments to progress. Although ideas for the assessments were in place prior to the August 2003 interviews, integration of the assessments and coursework was not completely developed until after the 2003 interviews.

3.3.2. Influence of External Organizations and EE Certification States' Meetings

As mentioned earlier in this chapter, external organizations have provided the Certification States with resources to develop their programs while collectively bringing the states together periodically. The meetings have helped identify collective similarities from which assessments could be developed. In addition, bringing the states together has allowed the certification officers to borrow ideas or components from one program to integrate into another.

Kentucky's Code of Professional Ethics is a new component borrowed from Texas' program and incorporated after the EE Certification States meeting in Denver, CO in May 2003. That document has been adapted by other states as well.

Although the idea of a mentor committee was still being discussed in 2003, Kentucky's mentor committee is a 2004 component adapted from Utah's one-person mentor system. The Kentucky mentor committee will be made up of participants chosen by the applicant, but must include two certified non-formal environmental educators and one formal educator. Integration of the formal education discipline into non-formal certification provides participants the opportunity to have a different perspective and a mingling of ideas. In the future, when enough participants have been certified, the mentor committees will play a more visible role with program participants.

A self-assessment component, suggested by Utah and Texas, may be incorporated into future application packets to help gauge what applicants understand about the field of EE prior to acceptance into the program. If an applicant has had no experience in the EE field and knows little about the history, main goals, and challenges experienced in EE,

an applicant can be encouraged to seek additional information (e.g., readings, workshops) prior to entry into the courses.

A professional development component, presently being examined by Kentucky as a renewal component, has been a strong core component in North Carolina's certification program for many years. In addition, Kentucky has added the "Personal and civic responsibility" (Guideline 1.4) into the coursework in a thoughtful way.

3.3.3. New information

As in any program development and implementation, new information has surfaced in the past 10 months to impact Kentucky's certification program. As a result, changes have been made to adjust to these new developments.

In 2003, KAEE was expected to participate to a large extent in the development and implementation of the program. Unfortunately KAEE, as an organization, has been unable to participate in the development and implementation. KUPPE's role as a pool of future course instructors is still viable, but adequate program development training is needed to prepare these university teachers for the challenge (JE, May 24, 2004).

Although the target audience (non-formal environmental educators) remained consistent, the physical location of applicants was not expected to come from outside the state of Kentucky. However, certification of out-of-state participants is presently being discussed. KEEC will accept applications from out-of-state applicants, but recruitment and promotional efforts will continue to remain exclusively within the state borders (JE, May 25, 2004).

A recently submitted grant proposal, not addressed in the 2003 interviews, may allow for a more extensive program evaluation. Obtaining additional funding will certainly expand the potential for new evaluation elements and a more thorough program evaluation (JE, May 24, 2004).

Table 4.4: Major Characteristics Of State EE Certification Programs In Kentucky

	CHARACTERISTICS	KENTUCKY – August 2003	KENTUCKY - June 2004
A.	Background Information		
	1. State	KY	KY
	2. Program Title	Certification Program for Kentucky's Non-formal Environmental Educators	Certification Program for Kentucky's Non-formal Environmental Educators
	3. Organizational Leader(s)	KEEC	KEEC
	4. Name of Key Contact(s)	KEEC	KEEC
	5. Contact Information	Kentucky Environmental Education Council 2107 Capitol Plaza Tower Frankfort, KY 40601	Kentucky Environmental Education Council 2107 Capitol Plaza Tower Frankfort, KY 40601
	6. Began Development	Began discussion in 7/2001 First met 2/2002	Began discussion in 7/2001 First met 2/2002
	7. Organization Structure Supporting Development.	Unknown at the time	State agency
	8. Decision-Making Process	Issues brought to Task Force and large decisions decided by consensus	Brought to Task Force and large decisions decided by consensus. Daily running of program can be decided by Executive Director of KEEC. Instructors may decide on instructional decisions.
B.	Structural Features of the Program		
	1. Nature of the Target Audience(s)	Non-formal EE educators	Non-formal EE educators
	2. Size of Target Audience(s)	Unknown at the time	An estimate being used by KEEC is 900+ persons
	3. Geographic Distribution of Target Audience(s)	Primary target Kentucky	Primary target Kentucky Secondary target: Region Recruiting and promotional efforts are not going outside of the state
	4. Program Purposes/Objectives		
	(a)	Provide a strong professional development program for non-formal environmental educators	Provide a strong professional development program for non-formal environmental educators
	5. Code of Professional Ethics	Yes	Yes
C.	Human Resources & Capacity-building		
	1. Administrative Partner(s) (design and implementation)	KEEC, KAEE, KUPEE	KEEC, Task Force, Oversight Committee
	2. Roles of Administrator		
	(a) KEEC	Facilitates meetings, Distributes agendas, minutes and other materials Accepts applications Maintains database of applicants Tracks applicants Raises program funds Helps design instruction	Accepts applications Maintains database of applicants Tracks applicants Raises program funds Helps design instruction
	(b) Task Force	Certifying organization: organization that bestows credential	Certifying organization: organization that bestows credential Provide field buy-in and word of mouth marketing
	(c) Oversight Committee	Not created at this point	Handle grievances.
	3. Advisory Body or Bodies	KEEC Board, Course instructors	KEEC Board, Course instructors
	4. Roles of Advisors		
	(a) KEEC Board	Program monitoring	Program monitoring

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	KENTUCKY	KENTUCKY – August 2003	KENTUCKY - June 2004
	(c) Course instructors	Develop courses and assessments	Develop courses and assessments Advising on course related topics
	5. Program/Support Staff	2 permanent staff assigned to tasks as needed	2 permanent staff assigned to tasks as needed, 3 course instructors
	(a) Staff Professional Development	Courses used as professional development	Certification program serves as KEEC staff professional development. No professional development is necessary for the three course instructors. All three hold Ph.D.s
	(b) Staff Formative Assessment		KEEC conducts a formative assessment
	(c) Staff Summative Assessment		No additional assessment above the certification program assessment is needed (refer to C.5.a)
	6. Sources of Paid Program Staff	KEEC	KEEC; Course instructors are contracted.
	7. Staff Orientation/Training	Staff go through certification program	Staff go through certification program Program development Self training
	8. Staff Training Providers	Course instructors - Drs. Joe Baust, Terry Wilson, Yvonne Meichtry; 1 President-elect NAAEE, 1 Past-NAAEE President, NAAEE member	Course instructors - Drs. Joe Baust, Terry Wilson, Yvonne Meichtry; 1 President-elect NAAEE, 1 Past-NAAEE President, NAAEE member
	9. Contacts for Applicants		
	(a) Procedures/Questions	Not determined at that point	KEEC staff Instructors Oversight Committee Task Force
	(b) Requests for Help/Support	Not determined at that point	Mentor committee (when enough participants are trained) Course Instructors (serve as mentors for first class)
	10. Program Evaluation Providers	Participants Instructors	Participants Instructors NAAEE (certifying programs) EPA (grant proposal submitted to gain funds for assessment)
	11. Roles of/Reporting by Program Evaluators		
	(a)	Participants - Program participants	Participants - Program participants
	(b)	Course instructors - Instructors of content courses Participant assessors of competency	Course instructors - Instructors of content courses Participant assessors of competency
	(c)		Mentors - First line of contact for participants Mentor for program participants Past participant of the certification program
	(d)		NAAEE - Potential accreditation entity for EE certification programs
	(e)		EPA - Potential funding source
D.	Competencies: Form & Substance		
	1. Format for Competencies	Task Force used NAAEE's Guidelines, Utah's rubrics, authentic assessments, and "holding teachers' accountability for student progress" (J. Eller personal communication, June 29, 2004).	Task Force used NAAEE's Guidelines, Utah's rubrics, authentic assessments, and "holding teachers' accountability for student progress" (J. Eller personal communication, June 29, 2004).
	(a) Broadest Statements is called...	Competencies	Competencies
	(b) middle statement is called...	Objectives	Objectives
	(c) Most Specific Statements is called...	Indicators	Indicators

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	CHARACTERISTICS	KENTUCKY – August 2003	KENTUCKY - June 2004
	2. NAAEE/GIPEE Theme 1: Environmental Literacy	Competencies to address guidelines 1.1, 1.2, and 1.3 (see Appendix B)	Competencies to address guidelines 1.1, 1.2, 1.3, and 1.4 (see Appendix B) in course one
	3. NAAEE/GIPEE Theme 2: Foundations	Competencies to address guidelines 2.1, 2.2, and 2.3 (see Appendix B)	Competencies to address guidelines 2.1, 2.2, and 2.3 (see Appendix B)
	4. NAAEE/GIPEE Theme 3: Professional Responsibilities.		Competencies to address guidelines 3.1, 3.2, and 3.3 (see Appendix B)
	5. NAAEE/GIPEE Theme 4: Planning / Implementation.		Competencies to address guidelines 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, and 4.7 (see Appendix B)
	6. NAAEE/GIPEE Theme 5: Foster Learning		Competencies to address guidelines 5.1, 5.2, and 5.3 (see Appendix B)
	7. NAAEE/GIPEE Theme 6: Assessment and Evaluation.		Competencies to address guidelines 6.1, 6.2, and 6.3 (see Appendix B)
	8. Other (Describe)		Utah's rubrics Kentucky's education assessment formats
	9. Communication of Competencies		List Initial Prep Guidelines Told about requirements
E.	Certification Process		
	1. Marketing	No marketing plan developed	No marketing plan developed
	(a) Targeted audiences	EE employers EE professionals Students General public Formal Teachers	EE employers EE professionals Students General public Formal Teachers
	(b) Marketing tools	Word of mouth/networking Newsletters (KEEC) Website University courses	Word of mouth/networking Newsletters (KEEC) Website http://www.state.ky.us/agencies/envred/certification.htm Conferences (KAEE, NAAEE, KSTA) Meetings (forestry marketing meetings) Workshops (Projects WET, WILD, and Learning Tree) University courses
	2. Application process	The first cadre nominated by variety of organizations representing diversity in EE field. In future, applicants nominate themselves.	The first cadre nominated by variety of organizations representing diversity in EE field. In future, applicants nominate themselves. They must agree to serve as a mentor. Application and fee must be submitted.
	3. Grandfathering	No grandfathering	No grandfathering
	4. Ethical Standards Review	The action will be reported to KEEC. KEEC will contact the instructors and Oversight Board. Oversight Board will be asked to meet with the applicant. Applicants may contact Oversight Board but must contact KEEC beforehand.	The action will be reported to KEEC. KEEC will contact the instructors and Oversight Board. Oversight Board will be asked to meet with the applicant. Applicants may contact Oversight Board but must contact KEEC beforehand.
	5. Self-Assessment	No	No, but may be developed in the future
	6. Program Participant Professional Development	Course content	Third course/workshops on instructional strategies (will incorporate themes 3-6)
	(a)	Instructors	Instructors
	(b)		KUPEE instructor training not developed but expected.

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CHARACTERISTICS	KENTUCKY – August 2003	KENTUCKY - June 2004
7. Ways to Document/Demonstrate Competence		
(a)	Written test, Debate and lesson plan components decided but content not determined at this point	Theme 1: Environmental Literacy addressed in Course #1- objective test and debate
(b)		Theme 2: Foundations of Environmental Education addressed in Course #2 – Open response test
(c)		Themes 3-6: addressed in an Instructional Strategies course - Annotated unit of study
8. Who Assesses/Determines Competence	Course instructors	Course instructors Drs. Joe Baust, Terry Wilson, Yvonne Meichtry. For the first cadre scores are averaged together, thereafter, participants will have to pass or redo each assessment individually.
9. Assessment Tools/Procedures		
(a)	Not decided at this point. Course attendance not required to achieve certification.	Course 1 - Interaction of systems short answer exam. May require course/workshop attendance for this component.
(b)		Course 1 - Structured team debate covering civic responsibility and the environment
(c)		Course 2 - Series of open response questions with one page answers
(d)		Course 3 - An annotated unit of study following the KY Department of Education guidelines
10. Formative Review/Feedback Process	Information not taken	Comments will be directed to instructors and the Task Force for program change direction.
11. Summative Review/Feedback Process		
(a) Initial	Information not taken	For the first cadre, program participants and instructors will be invited to a Task Force meeting to discuss strengths, weaknesses, and suggestions for the certification program. In the future, feedback will be distributed to instructors and Task Force.
(b) Subsequent	Information not taken	Summative review planned. Additional funds requested from an EPA grant to conduct a one-year summative review.
12. Means to Address Identified Weaknesses	After weaknesses are identified, Task Force will implement changes.	After weaknesses are identified, Task Force will implement changes.
13. Grievance Process	Participant contacts Oversight Committee representatives listed in program informative packet/binder	Participant contacts Oversight Committee representatives listed in program informative packet/binder
14. Marketing State Certified Participants	KAEE and KEEC will post names in newsletters.	KAEE and KEEC will post names in newsletters. KEEC Executive Director hopes to post names on the Department of Education website.
15. Continuing Professional Development Component/Credential Renewal	Credential will not have a renewal component.	Presently credential does not require renewal. If one is implemented in the future, it will probably not be assessment driven. Officers are looking at a North Carolina professional development certification requirement as a renewal possibility.

3.4. Utah 2003 Program Components and Attributes

Initial program information was collected in a two-part interview with Adrienne Cachelin and a group interview with Tim Brown, Eric Chandler, and Heather Scheel. This information can be found in Table 4.5.

3.4.1. Background Information

Utah's Certification Development Team first discussed the idea of a certification program in winter 2001, and in early 2002 USEE and the Development Team had a draft of measurable rubrics for the certification program. USEE's contact information has always appeared on program documentation. USEE's certification program, originally a three-tier program, was narrowed down to two levels prior to the 2003 interviews. This multi-tier program was designed to encourage professional growth.

3.4.2. Structural Features of the Program

The target audience was originally identified as both formal and non-formal educators in Utah interested in incorporating EE into their instruction, as well as participants interested in an environmental justice component. In 2002, the Environmental Justice component was dropped, and the EE formal and non-formal educators have remained as the target audience. The expected size of the audience was unknown at the time. The audience was expected to reside entirely within the borders of Utah. A code of professional ethics had not yet been developed, but was expected at that

time, due to an incident involving a 2003 summit pilot tester who did not represent the EE field well in the news.

3.4.3. Human Resources and Capacity-building

In 2003, USEE administered to the daily needs of the program, accepted applications, maintained the database of applicants, and tracked their progress. The USEE PAC Program Development Team bestowed the credentials on participants. In addition, an unnamed board or committee would serve as the ombudsman. This board had not yet been assembled in 2003. At that time, the grievance process had not been identified.

The USEE PAC Development Team (a volunteer group of selected participants) was able to develop the program under the supervision of advisory entities. These advisors - the USEE Board, the USEE Certification Program Development Committee, and USEE PAC - reviewed program activities. Four staff members (two permanent staff members and two Americorps staff members) working on the certification program were paid USEE staff. This program was not expected to be a course-based program, so courses did not need to be developed. No additional professional development was planned for the staff other than participation in the certification process and service as mentors. Any additional training would be driven by personal interests and sought after by the applicant.

The rubric pilot tests started as early as summer 2002. Program pilot tests started in January 2003. Both the rubric and program pilot tests included an initial summative assessment, but did not include formative assessment. Although mentor training was

discussed, no procedure had been established. A procedure for applicants to seek answers to questions had been established. Questions that a future mentor could not answer would be directed to the USEE staff and the Development Team (if additional clarification was required).

Official program evaluation procedures were already well underway. Utah had already been through two rubric pilot tests and one program pilot test by the 2003 interviews. Comments were collected by the USEE staff, typed, and directed to the Development Team for consideration. Mentors were not yet being used in April 2003. Since Utah had been using EETAP grant funds since 2001, EETAP required regular reports on development progress from the USEE staff. Although they were not evaluating the program content, they *were* evaluating expenditures and budget related issues.

3.4.4. Competencies: Form and Substance

The Utah competencies were derived from USEE's *Guidelines for Environmental Education Providers in Utah (Appendix C)*. This document was developed in 2001 by personalizing NAAEE's *Guidelines for the Initial Preparation of Environmental Educators* (GIPEE in table) to fit the needs of Utah environmental educators. A comparison of USEE's Guidelines and NAAEE's Guidelines can be found in Appendix D. Utah's Development Team decided to address guidelines 1.1, 1.2, and 1.3 in Theme 1 of NAAEE's *Guidelines* (see Appendix B). Utah chose not to integrate the personal and civic responsibility (NAAEE and USEE guideline 1.4) into the certification requirements. Under NAAEE's *Guidelines* Theme 2, Utah chose to address guidelines 2.1, 2.2, and 2.3.

Other themes identified in NAAEE's *Guidelines* were not laid out in the 2003 interview. The communication of required competencies to applicants was not covered in the 2003 interview.

3.4.5. Certification Process

Program marketing was not thoroughly identified in 2003. Adrienne Cachelin, Tim Brown, Eric Chandler, and Heather Scheel did identify the target audiences and marketing vehicles that would be used. The targeted audiences included: EE employers, EE professionals, students, formal educators, and the general public. The intended marketing vehicles would include: word of mouth through program participants and Development Team members, newsletters (USEE), website (USEE), and university courses. The first and second rubric cadres and the first program cadre (Summit) were by invitation only. The participants were certified upon completion of the requirements of the pilot test. The Summit group (program pilot test 1) selections were based on nominations from the Development Team. It was also important that the 2003 Summit pilot testers provide a good mix geographically and professionally. The Summit group was certified in a weekend workshop; a primary goal of that workshop was to certify people who could serve as mentors for future participants.

Utah certification officers announced in 2003 that the certification program would not be course-based, nor would courses be offered, due to the size of the state. Participants could, however, supplement their information by participating in workshops. USEE and the USEE PAC Certification Development Team wanted to create the program so that participants could design their own competency demonstration, as long as mentors

approved it and the UAEE PAC Development Team would agree. Rubrics would be used as a primary assessment tool to determine competency. Since attendance at courses was not going to be required, the Development Team thought that the participants would submit a portfolio containing all of the required elements. Mentors would be the initial voice determining competency, but the USEE PAC Review Board was to be the final judge of competency.

Comments from pilot testers were directed to the Development Team through USEE staff. The Development Team would review comments and consider program changes. Although USEE staff had determined that an oversight committee was needed, the committee had not yet been assembled in 2003, nor had the grievance policy been established. Professional development was encouraged but not required. The credential for the pilot testers, however, would be valid for a shorter period of time than future certification credentials. This was to make sure that everyone would be at the same level within a short period of time, even if the pilot tests did not go as planned.

No program evaluation methods had been identified.

3.5. Utah 2004 Program Components and Attributes

Program information for 2004 was collected through interviews with Jennifer Visitacion and Heather Scheel in May 2004. This information can be found in Table 4.5.

3.5.1. Background Information

USEE's certification program, originally a three-tier program was narrowed down to two levels early in 2003. This multi-tier program was designed to encourage

professional growth. Later in 2003, the two-level certification program was simplified to one level.

3.5.2. Structural Features of the Program

The target audience did not change from the 2003 interview. The target audience remained both formal and non-formal educators in Utah, who are interested in incorporating EE into their instruction. Although the size of the target audience still remains unknown, USEE staff members have been hosting regional workshops to get an idea about the scope of environmental education in Utah. USEE is targeting about 100 key organizations. The source of applicants has grown to include regional program participants from other states. A Code of Professional Ethics has been integrated into the application materials.

3.5.3. Human Resources and Capacity-building

Since 2003, the Development Team has been consistent in their role definition. However, roles are expected to change in the future. USEE administers to the daily needs of the program, accepts applications, maintains the database of applicants, and tracks their progress. The USEE PAC Program Development Team presently certifies individuals. The USEE PAC Review Board serves as the ombudsman. In the future, possibly as soon as 2006, the USEE PAC Program Development Committee will disband. Its duties will be transferred to the USEE PAC Review Board. Presently, members of the Program Development Team serve on the Review Board

Professional development opportunities are still optional at this time. Information on the available workshops can be found on the USEE website. If an applicant identifies a weakness in his/her self-assessment, a mentor can suggest the appropriate workshops to build up the applicant's subject knowledge. Additional conversations with USEE staff since 2003 indicate that the Development Team may not be as opposed to integrating coursework into the program as they had been in the past. However, this component does not exist in the program presently and may not for quite some time. Although some Utah universities offer environmental education courses, there are no known universities in Utah that offer Environmental Education majors.

Since the development of the self-assessment component, applicants can identify content areas of weakness on their own. This can loosely be considered a self-formative assessment. The mentor training component, although not yet developed, will contain both formative and summative assessments.

As of July 2004, Utah had completed three program pilot testing rounds with the last round being as close to the certification process as possible. Mentors were used in the last round of pilot testing. As long as EETAP funds the Utah certification effort, they will require regular reports on development progress from the USEE staff. There has been discussion about a potential NAAEE certification approval process for state certification programs. Since this idea is still in its infancy no concrete facts can be revealed except to say that, if NAAEE decided to offer such a program or approval process, NAAEE could be considered a program evaluator.

3.5.4. Competencies: Form and Substance

Utah's Development Team still intends to address guidelines 1.1, 1.2, 1.3 and 1.4 under Theme 1 of NAAEE's *Guidelines* (see Appendix D) in the certification requirements. Under NAAEE's *Guidelines* Theme 2, Utah chose to address guidelines 2.1, 2.2, and 2.3. Utah's program also addresses NAAEE *Guidelines* 3.1-3.3, 4.1-4.7, 5.1-5.3, and 6.1-6.3.

3.5.5. Certification Process

Program marketing was not directly discussed in the 2004 face-to-face interview due to time constraints. However, written correspondence with Jennifer Visitacion, USEE Executive Director, indicated that USEE's marketing plan includes: a certification information page on the USEE website; advertising at regional conferences (5 regions), Utah EE capacity-building workshops, and the USEE Annual EE conference. The USEE newsletter regularly contains articles on the program but was not identified as a marketing source by Ms. Visitacion. The targeted audiences included: EE employers, EE professionals, students, formal educators, and the general public. The application process identified in 2004 included downloading the application materials from the website, including the self-assessment, and submitting the paperwork with the application fee to USEE. A USEE membership would be free for the first year. Applicants can sign up for the program without being nominated.

Rubrics are used as an assessment tool to determine competency. Mentors are the initial voice determining competency. The USEE PAC Review Board provides a multi-tier check for applicant competency.

The Development Team reviews comments and considers program changes. The grievance policy requires the accuser or wronged participant to submit a written appeal to the USEE PAC Review Board. The Review Board reviews the situation and has the authority to not renew the participant's certification if a violation of the code of ethics has been identified. Program participants, upon completion of the certification program, may have their names printed in the USEE newsletter. Professional development was encouraged but not required. Future applicants will need to renew their certification every 5 years. The credential for the pilot testers, however, would be valid for a shorter period of time than future certification credentials.

3.6. 2003/2004 Utah Program Comparison

Although many components of Utah's program have remained the same, some changes were noted in the 14 months between the 2003 and 2004 interviews. As was true for Kentucky's program, changes to Utah's program have come from three main elements: additional development time, influence of external organizations through the EE Certification States' meetings, and the presence of new information.

3.6.1. Development Time

In Utah's program, the passage of time has allowed the Development Team to clarify program components and better examine participant assessments. Time has allowed for additional research to be done on existing components. As a result, many of the program components that were just being discussed in 2003 are now a reality in 2004. Time will also continue to play a part in this certification program.

Marketing efforts have intensified within the past year. USEE is actively marketing the program through a newly activated certification website. Various other information vehicles, like workshops, meetings, and conferences, have also allowed certification program information to become more accessible to the public.

The oversight Review Board has been assembled since the 2003 interviews. An additional pilot test has more closely matched the actual certification process than previous pilot tests have.

The multi-level certification program was simplified to one level in 2003. Additional assessment tools have been identified. Self-assessment and competency worksheet requirements are used in addition to rubrics.

3.6.2. Influence of External Organizations and EE Certification States' Meetings

External organizations provided Certification States with resources to develop their programs, while collectively bringing the states together periodically. The meetings have helped identify collective similarities from which assessments could be developed. This is certainly an important element of change in Utah's case. EETAP has also directly funded Utah's program development through the EETAP States Program.

Utah's Code of Professional Ethics was also borrowed from Texas' program and incorporated after the EE Certification States meeting in Denver, CO in May 2003.

A self-assessment component has been included in application packets to help gauge what applicants understand about the field of EE prior to acceptance into the program. This is an important component because Utah's program relies on volunteer

mentors to help participants meet the competencies. Identification of weaknesses is essential to effectively produce consistent certified participants. Mentors can then direct applicants to workshops or courses that can help participants address weaknesses.

The assessment elements identified at the May 2004 Lexington, KY meeting are important tools that will help the certification officers mold future state rubrics and assessment requirements at a consistent level.

3.6.3. New information

Initially, Utah's certification targeted in-state educators only. In the past 14 months, there has been increased interest from out-of-state environmental educators. Presently, there is one applicant enrolled in the Utah certification program residing out-of-state. Out-of-state applicants will be accepted, provided they are members of their state NAAEE affiliate.

Utah is continuing to define the scope of EE in Utah, in part to gauge how large their target audience may be. Although presently this information has not affected the program, it may help USEE better design its marketing strategies.

Table 4.5: Major Characteristics Of State EE Certification Programs In Utah

	CHARACTERISTICS	UTAH - April 2003	UTAH - June 2004
A.	Background Information		
	1. State	UT	UT
	2. Program Title	Utah EE Certification Program	Utah EE Certification Program
	3. Organizational Leader(s)	USEE	USEE
	4. Name of Key Contact(s)	Executive Director, USEE	Executive Director, USEE
	5. Contact Information	Utah Society for Environmental Education 350 East South 400 East, Ste G4 Salt Lake City, UT 84111	Utah Society for Environmental Education 350 East South 400 East, Ste G4 Salt Lake City, UT 84111
	6. Began Development	Winter 2001	Winter 2001
	7. Organization Structure	Not-For Profit 501c(3)	Not-For Profit 501c(3)
	8. Decision-Making Process	Matters are brought to Development team; large decisions are decided by consensus; daily running of program may be decided by USEE Executive Director. Mentors may decide on demonstration methods.	Matters are brought to Development team; large decisions are decided by consensus; daily running of program may be decided by USEE Executive Director. Mentors may decide on demonstration methods and acceptability.
B.	Structural Features of the Program		
	1. Nature of the Target Audience(s)	Non-formal and formal educators wanting to incorporate EE into instruction	Non-formal and formal educators wanting to incorporate EE into instruction
	2. Size of Target Audience(s)	Unknown at the time	Unknown at the time. Regional workshops planned to identify potential audience and scope of EE in Utah. Targeting approximately 100 key organizations.
	3. Geographic Distribution of Target Audience(s)	Primary target: Utah	Primary target: Utah Secondary target: Rocky Mountain Region Recruiting and promotional efforts are not going outside of the state.
	4. Program Purposes/Objectives		
	(a)	Professionalize the field of EE	Professionalize the field of EE
	(b)	Increase validity and legitimacy of EE field	Increase validity and legitimacy of EE field
	5. Code of Professional Ethics	No	Yes
C.	Human Resources & Capacity-building		
	1. Administrative Partner(s)	USEE PAC Development Team	USEE, USEE PAC Development Team, USEE PAC Review Board
	2. Roles of Administrator		
	(a) USEE	Accepts application, Maintains database of applicants, Tracks applicants	Accepts application, Maintains database of applicants, Tracks applicants Raises program funds
	(b) USEE PAC Certification Development Team	Certifying organization (governing body). Organization who bestows credential	Certifying organization (governing body). Organization that bestows credential. Responsibilities will be transferred to the Review Board once the Development Team is disbanded
	(c) USEE PAC Review Board	Not created or named at this point	Handles grievances. Presently, the members are also serving on the Certification Development Team. Reviews final applications.

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	CHARACTERISTICS	UTAH - April 2003	UTAH - June 2004
	3. Advisory Body or Bodies	USEE Board, USEE Program Committee, USEE PAC	USEE Board, USEE Program Committee, USEE PAC
	4. Roles of Advisors		
	(a) USEE Board	Program monitoring	Program monitoring
	(b) USEE Certification Program Development Team	Makes recommendations to USEE Board	Makes recommendations to USEE Board
	(c) USEE PAC	Makes recommendations to Program Committee	Makes recommendations to Program Committee
	5. Program/Support Staff	4 (2 permanent staff, 2 Americorps staff)	4 (2 permanent staff, 2 Americorps staff)
	(a) Staff Professional Development	Professional development options available on-line; Mentors	Professional development options available on-line; Mentors
	(b) Staff Formative Assessment	Pilot testing did not contain formative assessment	Pilot testing did not contain formative assessment Mentor training will contain formative assessment Self-assessment may be considered formative assessment
	(c) Staff Summative Assessment	Program participant summative assessment at end of program	Both mentor training and program participant summative assessment
	6. Sources of paid Program Staff	USEE	USEE
	7. Staff Orientation/Training	Staff goes through certification program Self training Mentoring	Staff goes through certification program Self training Mentoring
	8. Providers of Staff Training	Mentors Staff member (self training)	Mentors Staff member (self training)
	9. Contacts for Applicants		
	(a) Procedures/Questions	Mentor USEE staff Development Team	Mentor USEE staff Development Team
	(b) Requests for Help/Support	Mentor USEE staff (if request occurs prior to mentor/applicant pairing)	Mentor USEE staff (if request occurs prior to mentor/applicant pairing)
	10. Providers of Program Evaluation	Participants Mentors EETAP	Participants Mentors NAAEE (certifying programs) EETAP
	11. Roles of Program Evaluators Relationship of Evaluators to Program		
	(a) Participants	Program participants	Program participants
	(b) Mentors	First line of contact for participants Mentor for program participants Past-participant of the certification program	First line of contact for participants Mentor for program participants Past-participant of the certification program
	(c) NAAEE		Potential accreditation entity for EE certification programs
	(d) EETAP	Funding source	Funding source

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	CHARACTERISTICS	UTAH - April 2003	UTAH - June 2004
D.	Competencies: Form & Substance		
	1. Format for Competencies		
	(a) Broadest Statements are called...	Competencies	Competencies
	(b) Middle Statements are called...	Objectives	Objectives
	(c) Most Specific Statements are called...	Indicators	Indicators
	2. NAAEE/GIPEE Theme 1: Environmental Literacy	Competencies to address guidelines 1.1, 1.2, and 1.3 (see Appendix B)	Competencies to address guidelines 1.1, 1.2, 1.3 and 1.4 (see Appendix D)
	3. NAAEE/GIPEE Theme 2: Foundations	Competencies to address guidelines 2.1, 2.2, and 2.3	Competencies to address guidelines 2.1, 2.2, and 2.3 (see Appendix D)
	4. NAAEE/GIPEE Theme 3: Professional Responsibilities.		Competencies to address guidelines 3.1, 3.2, and 3.3 (see Appendix D)
	5. NAAEE/GIPEE Theme 4: Planning / Implementation.		Competencies to address NAAEE Guidelines 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, and 4.7 (USEE Guidelines 4.1, 4.2, 4.5, 4.7, 4.8, 4.9, 4.10) (see Appendix D)
	6. NAAEE/GIPEE Theme 5: Foster Learning		Competencies to address NAAEE Guidelines 5.1, 5.2, and 5.3 (USEE Guidelines 4.3, 4.4, 4.6) (see Appendix D)
	7. NAAEE/GIPEE Theme 6: Assess/Evaluation.		Competencies to address guidelines 6.1, 6.2, and 6.3 (USEE Guidelines 5.1, 5.2, 5.3)
	8. Other (Describe)	Utah Guidelines for EE Providers	Utah Guidelines for EE Providers
E.	9. Communication of Competencies	Guidelines Rubrics Self-assessment	Guidelines Rubrics Self-assessment
	Certification Process		
	1. Marketing	No marketing plan developed	Marketing plan developed
	(a) Targeted audiences	EE employers EE professionals Students General public Formal educators	EE employers EE professionals Students General public Formal educators
	(b) Marketing tools	Word of mouth/networking Newsletters (USEE) Website University courses	Website http://www.usee.org/capacity/certification.html USEE Annual Conference Regional conferences (5 regions) EE capacity-building workshops
	2. Application process	Download information from the website and fax or send application to USEE. After first year, send in application fee. Applicants must be a member of USEE or their state association.	Download information from the website and fax or send application and self-assessment into USEE. After first year, send in application fee. Applicants must be a member of USEE or their state affiliate association.
	3. Grandfathering	Pilot Testers certified to provide program seed people. Some were certified via a weekend Summit. Pilot Test participants certified are subject to a shorter credential period.	Pilot Testers certified to provide program seed people. Some were certified via a weekend Summit. Pilot Test participants certified are subject to a shorter credential period.
	4. Ethical Standards Review	Working on code of ethics	Not at this time, but code of ethics is in use

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	CHARACTERISTICS	UTAH - April 2003	UTAH - June 2004
	5. Self-Assessment	In the development stage	Yes
	6. Program Participant Professional Development	Projects Learning Tree, WET and WILD; UWSP online foundations course; Attendance at the annual conference; Attendance at regional workshops; Database available online detailing calendar of events;	Projects Learning Tree, WET and WILD; UWSP online foundations course; Attendance at the annual conference; Attendance at regional workshops; Database available online detailing calendar of events;
	7. Ways to Document/Demonstrate Competence.	Demonstration is subject to agreement between applicant, mentor and USEE PAC Program Development Team.	Demonstration is subject to agreement between applicant, mentor and USEE PAC Program Development Team.
	8. Who Assesses/Determines Competence		
	(a)	Mentor	Mentor
	(b)	USEE PAC Review Board (multi-tier assessment)	USEE PAC Review Board (multi-tier assessment) made up of people from USEE PAC Development Team
	9. Assessment Tools/Procedures		
	(a)	Rubrics	Self-assessment,
	(b)		Rubrics,
	(c)		Competency worksheets
	10. Formative Review/Feedback Process	Pilot Testing evaluations sent to USEE and distributed to Development Team	Pilot Testing evaluations sent to USEE and distributed to Development Team
	11. Summative Review/Feedback Process		
	(a) Initial	Pilot Testing evaluations sent to USEE and distributed to Development Team	Pilot Testing evaluations sent to USEE and distributed to Development Team
	(b) Subsequent	Not planned at this time	Development planned for later this year.
	12. Means to Address Identified Weaknesses	After weaknesses are identified, USEE PAC Development Team will implement changes	After weaknesses are identified, USEE PAC Development Team will implement changes.
	13. Grievance Process	None identified in interviews	Participant must submit an appeal to the USEE PAC Review Board in writing and the Committee addresses the concern. If participant violates the code of ethics, the Review Board can take action by not renewing the credential.
	14. Marketing State Certified Participants	USEE will post names in newsletter.	USEE will post names in newsletter and USEE website.
	15. Continuing Professional Development Component/Credential Renewal	Summit pilot testing certification credential is valid for 2 years. Future certification credentials will be valid for 5 years	Summit pilot testing certification credential is valid for 2 years. Future certification credentials will be valid for 5 years

3.7. USEE Program Participant Results

This section includes responses taken from interviews with four USEE program participants, conducted between November 23, 2003 and February 15, 2004. The questions asked of program participants can be found in Appendix J. The purpose of the interviews was to collect information on participant demographics, impetus for entering the certification program, support provided by the employer, projected benefits from achieving the credential, strengths of the program, and suggestions for program improvement. After the information was collected, the researcher examined and compared the information from the program participants' responses with the certification officers' interview responses. The researcher understood that generalizations for future program participants based on responses from this cadre cannot be made, given the number of participants and the timing. USEE is presently finalizing the program details and may continue to make adjustments in the future.

These interviews were only conducted with USEE participants because Kentucky was not yet at the point where participants were being certified. This section addresses research question 2 (i.e., How do USEE program participant responses compare with USEE certification officers' responses). USEE program participant names were kept confidential for the purpose of the study and were identified by a number (1-4). The number system was used only for the purpose of data organization and not as a ranking system. Comments in *italics* and set apart by parentheses are used to clarify pronouns and the context in which the comment was made, e.g., the mission (*of KEEC*) is.... Transcripts are not included with this study.

3.7.1. Program Participant Responses

Table 4.6 lists responses (Likert and open-ended) made by each USEE program participant. As of November 2003, five applicants participated in USEE's final pilot testing round. By this time, the program had advanced to a point where the participants could be certified by a method most congruent with the intended program standards. All intended program components were in place and were used to gain feedback on the certification process. Of the five participants, four could be reached and agreed to participate in the program participant survey. References to comments made by specific participants are noted with the participants' number set apart by parentheses, e.g., (1), unless otherwise noted.

There were two male and two female program participants with a combined average age of 28.75. All participants possessed a Bachelor's degree. The participants have been working in the environmental education field for an average of 6.25 years (responses, 9, 3, 7, and 6 years).

Each program participant went through some sort of job-training and outside training or activities to prepare them for the EE field.

Presently, two of the participants categorize themselves as "Directors." One participant (3) classifies him/herself as a formal educator while another (2) classifies him/herself as a non-formal educator teaching in a formal setting.

Table 4.6: USEE Program Participant Response Summary

Participant	Age	College Major	Years Working in EE Field	Previous training	Type of job presently have	Support provided by employer	"EE certification important to organization?" agree/disagree	Most influential in convincing participant to become certified	"Certification will improve the quality of instruction I provide"
#1	31	Nat. Resources: Recreation and Tourism, Emphasis Interpretation	9	Leave No Trace Master Educator Conferences: <ul style="list-style-type: none"> • Association for Experiential Education • National Association for Interpretation 	Director of facility that serves about 5000 people	Program cost reimbursement, Travel cost reimbursement (participant was uncertain)	Strongly agree (5 points)– organization's mission	Place of Employment	Strongly Agree (5 points)
#2	28	Biology	3	Camp on-the-job training Project WET, Project Learning Tree Fundamentals of EE course.	Non-formal Educator teaching in a formal setting	None	Somewhat disagree e (2 points)– did not try to get environmental educator for EE job position	Other – personally motivated to pursue professional development	Neither Agree nor Disagree (3 points)-doesn't think it will affect the way s/he provides instruction
#3	26	Environmental Science	7	Americorps volunteer training Environmental Activist training NW Earth Institute participant	Formal Educator	None	Somewhat Disagree (2 points) Employer more interested in formal education training	USEE staff or USEE PAC member	Somewhat Disagree(2 points)
#4	30	Parks Recreation and Tourism: Emphasis - Commercial Recreation Management	6	Wilderness First Responder Volunteer training for River Guide and Ski Naturalist	Director of facility that serves about 1000 people	Compensation (comp) time	Strongly agree (5 points) – Environmental stewardship part of mission for organization. Goal – link young people to nature and local environment	USEE staff or USEE PAC member	Strongly Agree (5 points)
Averages	28.75		6.25		2 Directors 1 Non-formal Educator 1 Formal Educator	2 – receive some employer incentive 2 – no employer incentive	3.5 on a 5 point scale.	2 – USEE staff or USEE PAC member 1 Employer 1 – Other (self)	3.75 on a 5 point scale

Table continued on next page

Table 4.6 continued USEE Program Participant Response Summary

Participant	Professional goals in 3 years	How will certification help meet future goals?	Do you plan to pursue additional training in EE or EE-related field?	Are you interested at becoming certified at higher levels?
#1	Continuing to direct organization considering graduate school	Will help "continue to promote and legitimize the field of EE"	Yes – As a result of program. Plans to "take another Foundations of EE course, and pursue workshops on specific categories within the certification process"	Yes – "I think it increases credibility"
#2	Graduate school,-Continuing to stay with EE in some capacity	"it makes me more marketable in looking for a job"	Yes – Not as a result of program. Planning training in "Leopold Education Project"	Yes – but only if pursuing EE related career "I don't see any reason why I would need to go if it's not for some specific career."
#3	Continue as formal educator	"it will help me stay connected to other environmental educators"	No – "Pursuing "more education in formal ed right now." Plans "to keep learning from the community around "	No – perhaps Yes in future "Maybe after it was more established like right now I don't think I have a lot of energy to help kind of be a pioneer which is what the movement needs right now. That's not where I'm at right now." "I would if it's not too much work for people like me."
#4	Continuing to direct organization	"it can add credibility to our programs, something to possibly list in a grant narrative or program application"	Yes – As a result of the program. "Maybe Curriculum specific training" (<i>WET, WILD, PLT</i>)."	Yes – "I'd be interested in if it was something I could realistically do time wise."
Averages	3 remain in present position, 2 considering further academic education		2 Yes as a result of program 1 Yes not as result of program 1 No, not at this time	1 Yes - no conditions 1 Yes - if it did not take up too much time 1 No - but may do so when program is more established if doesn't take up too much time 1 Yes - only if pursuing EE-related career

Participant	Strengths of USEE certification program	How do you feel this certification program can be improved
#1	<ul style="list-style-type: none"> • "One of first programs to be happening across the country." • "There's a good community of people who will provide excellent feedback in the pilot program." • "It's a doable process but not necessarily an easy process so I think the credibility gained from the certification program will be just." 	<ul style="list-style-type: none"> • "The monitoring aspect it, the evaluation of the program which is kind of just beginning, the recertification aspect, those are aspects that are still being defined and developed." • "The mentoring component, just know exactly what that looks like and how we can provide support for that."
#2	<ul style="list-style-type: none"> • "They are based on proficiencies." • "It gets you to think about more to think about how you are going to apply it and you have to show how you are going to show it." 	<ul style="list-style-type: none"> • "You didn't necessarily show all the indicators but show how you did the objective they would be things like 'Describe...' or things like that which were mostly essay questions type things." • "There's one (<i>guideline</i>)...how do you create a safe environment for physical and emotional safety. Unless I provided a video that showed that really well I'm just going to have to talk about what I do would or what are some important points to consider."
#3	<ul style="list-style-type: none"> • "We have some really great cheerleaders like Adrienne who is definitely a real inspiration and helped me believe in it." • "I really like the flexibility of the certification process in terms of how I could personalize my attainment of the rubrics." 	<ul style="list-style-type: none"> • "I think it would be nice to offer ways to further your education while you're working on your certification - whether it's a discussion group or little classes or reading groups to provide options that were specific tracts for people." • "I think we've got to be more flexible in terms of the time that it takes and those kinds of things." • "It's more geared towards non-formal educators than formal educators."
#4	<ul style="list-style-type: none"> • "There's a lot of emphasis on core knowledge and beginnings of environmental education." • "It (<i>the program</i>) has pretty good support especially non profit and even some government organizations support the idea and think it's a good idea." • "I like the mentor and mentee aspect of it." • "You have someone that you're working with that you can ask questions from to make sure you're on-track." • "It seems pretty accessible. You can find it on-line" 	<ul style="list-style-type: none"> • "Is more workshops specifically geared towards certification, maybe you would sign up for a series of classes or workshops where you would learn the information and get to be able to discuss it with other people so it would be more of a group process rather than individual." • "Maybe some more outreach to the general community. So that people are aware of it and say, 'oh wow, this program is certified this is one that we want to go with.'" • "It seems like now it's kind of an internal motivation, 'oh wow do I want to be certified, I think that would be cool' rather than 'wow, I really need to be certified if I'm going to be doing.'" • "I think that would help the certification process overall if people really felt a need to do it or were required to have it." • "Have an incentive with education credits for teachers so it could possibly work into something that affects their scale of pay, you now they have to do a certain number of in-service hours."

Two participants (2 and 3) did not receive employer-supported compensation (compensation time, a raise, reimbursement for travel, or reimbursement for other expenses). Of the two participants that did receive some sort of employer support (1 and 4), one received program cost reimbursement but was unsure about receiving travel cost reimbursement, and the other received compensation time.

Of the four participants, two (1 and 4) strongly agreed that their employer valued environmental education certification within the organization. These two participants were the same participants who earlier categorized themselves as “directors.” These participants believe their organizations feel certification is important because of the organizations’ missions. Another participant (2), a non-formal educator, “somewhat disagreed” that his/her organization felt EE certification was important because the organization hired the program participant without attempting to secure the employment of an environmental educator for an EE position. The other participant (3), a formal educator, also “somewhat disagreed” with the statement, “My employer feels that EE certification is important to the organization.” He/she felt the employer was more interested in formal education training than EE certification. This question was designed as a Likert scale question with strongly agree equaling a score of 5, “somewhat agree” equaling 4, “neither agree nor disagree” equaling 3, “somewhat disagree” equaling 2 and “strongly disagree” equaling a score of 1. The combined scores of the program participants, when averaged, equaled 3.5.

The people credited most with influencing the program participant to consider certification were the “USEE Staff or USEE PAC members.” This option was chosen by two of the four participants (participants 3 and 4).

When asked “if certification would improve the quality of instruction I (*the program participant*) provide,” two participants (1 and 4) “strongly agreed”, one participant (2) “neither agreed nor disagreed”, and one participant (3) “somewhat disagreed”. When rated on a Likert scale with “strongly agree” equaling a score of 5, “somewhat agree” equaling 4, “neither agree nor disagree” equaling 3, “somewhat disagree” equaling 2 and “strongly disagree” equaling a score of 1, the combined scores of the program participants averaged a 3.75.

When asked about future plans, two participants (1 and 4) responded that they would like to continue working as Director for their organization. Participant 1 also added that he/she would like to pursue further education (graduate school). Participant 3 replied that he/she would like to continue as a formal educator. Participant 2 was considering graduate school.

When asked how certification would help them attain future goals, participant 1 felt that the credential would help him/her “continue to promote and legitimize the field of EE.” Participant 2 mentioned that certification would improve his/her credibility in the job market. Participant 3 hoped that certification would help him/her “stay connected to other environmental educators.” Participant 4 felt that certification would lend credibility to his/her programs and could be something to “possibly list in a grant narrative or program application.”

Participants were asked if they planned to pursue additional training in EE or an EE-related field. Participants 1 and 4 responded that they planned to pursue additional EE training as a direct result of the certification program. Participant 2 said he/she planned to pursue additional training, but not as a result of the program. Participant 3 did not plan to

pursue additional EE training because he/she will pursue more formal education training in the near future. However, he/she plans to continue learning from the EE community.

When participants were asked if they were considering certification at higher levels, participant 1 said “Yes,” because certification increases credibility; participant 2 said “Yes,” but only if he/she were pursuing an EE-related career; participant 3 said “No” in the short term, but would consider it later when the program becomes more established, and if the certification wouldn’t take up too much time.

The final questions were asked to gain insight on the participants’ perspective of program strengths and areas needing improvement. Participants’ comments can be found in table 4.6.

3.7.2. Program Participant and Certification Officer Response Comparisons

Certification officer responses are taken from interviews conducted with Tim Brown (TB), Eric Chandler (EC), and Heather Scheel (HS) on April 11, 2004 and Adrienne Cachelin (AC) on April 11 and May 14, 2004. The certification officers are identified by their initials and, if necessary, by date. Direct quotations can be found in Appendix R. Program participants are identified by their assigned number. Direct quotes can be found in Table 4.6. These participants represent both the formal (3) and non-formal (1, 2, and 4) target audiences.

All program participants received exposure to the field of EE through on-the-job training. Although marketing to employers was discussed (EC and HS), targeting environmental educator trainers was not identified in the certification officer interviews.

Marketing the program to employers for the purpose of training was also not brought out in the certification officer interviews.

Although half of the program participants were employed as upper management of non-profit organizations, this may not be consistent in future classes. USEE certification officers recognize that organizations may not want to pay for everyone (front-line educators to upper management) to become certified.

Certification officers (EC and HS) identified the plan to market specifically to employers of environmental educators. Two participants that represented employers of environmental educators (1 and 4) both “strongly agreed” that “EE certification is important to their organization” citing the presence of EE in their organizations’ mission. The program participants (2 and 3) that rated this question lower were front-line educators, and they did not identify themselves as supervisors or trainers of other environmental educators.

In this participant class, word of mouth from USEE staff or USEE PAC members was the most represented motivating factor in encouraging participants to pursue certification (3 and 4). One person was self-motivated to participate without external incentives (2). In one case, an employer motivated the participant to pursue certification (1).

The certification officers listed increasing the validity and legitimacy of the EE field (EC, TB, HS, and AC, May 14, 2004), and providing some form of training pertaining to EE (EC, TB, and AC, May 14, 2004) as goals for the certification program. However, two of the four program participants (2 and 3) did not agree with the statement “certification will improve the quality of instruction I provide.”

Two of the four participants (1 and 2) are considering additional education at a graduate level. Although Adrienne Cachelin (May 14, 2004) mentioned that she speaks

about the program in her college-level courses, none of the other 4 certification officers mentioned universities as a target for marketing efforts. All participants mentioned that participation in the certification program will help them achieve their future goals.

Certification officers mentioned some goals for certification in the program were to: teach environmental educators their role in the profession (EC and TB), train applicants in the foundations of the profession (AC, May 14, 2004), and encourage continual learning (EC). Three of the program participants (1, 2, and 4) plan on pursuing additional professional development training. Two of the three participants (1, and 4) claim the pursuit towards professional development is as a result of participation in the certification program. Although certification at higher levels appealed to all participants, three of the four (1, 2, and 4) were prepared to pursue that option in the near future. The one participant that was not interested in pursuing additional certification (3) mentioned that he/she didn't have the energy to be a program pioneer at the moment but would be interested, perhaps later, when the program was more established. Of those that would pursue additional certification, lack of time (4) and future career opportunities (2) would be barriers to overcome. One participant (1) listed no barriers present in his/her pursuit towards additional certification.

4. Cross State Comparison

Data under this section were taken from interviews conducted with Jane Eller (KY), Jennifer Visitacion (UT), and Heather Scheel (UT) in May 2004. This information is current as of July 2004, but may change as the programs evolve in the future.

Up to May 2003, the certification states developed their programs independently. Since then, each state has regularly shared program updates, rubrics, application material, reading material, and documents. Although these meeting opportunities have helped the states standardize some components, each state continues to have its own unique program features and progresses at its own pace. Table 4.8 examines Kentucky's and Utah's present program components (June 2004).

4.1. Background Information

Kentucky's program is administered by a state agency (KEEC) and the certifying entity, the Certification Task Force, is a volunteer group of EE employers and stakeholders. Utah's program is administered by a non-profit 501 (c)(3) organization (USEE), which is also the state NAAEE affiliate. Utah's certifying body is a group of hand-picked volunteer representatives from USEE PAC (USEE PAC Development Team). Both state programs allow the daily decisions to be handled by the administrator and the larger decisions to be made by a Development Task Force/Development Team consensus.

4.2. Structural Features of the Program

Kentucky's certification program is targeting only non-formal environmental educators. Formal environmental educators will have the option of receiving a teaching endorsement through a similar program to be offered by Kentucky universities. Utah's certification program is targeting both formal and non-formal environmental educators. The size of the targeted audience is, at this point, still uncertain in both states, but Kentucky is

estimating over 900 persons and Utah is working toward identifying its audience through regional workshops.

KEEC is hoping to develop a program marketing plan in the near future and USEE is actively marketing its program within Utah. Both programs have received requests to participate from people residing in neighboring states. Both states plan on receiving and accepting regional applicants but will continue to market exclusively within their states. An out-of-state participant is presently enrolled in Utah's certification program.

4.3. Human Resources and Capacity-building

KEEC and USEE administer the day-to-day program duties. Both states also have an independent ombudsman committee to handle grievance issues. In Kentucky, this committee is made up of representatives that do not necessarily represent the EE field and may never pursue certification but its members are widely considered persons of excellent character by certification officers. Presently, Utah's USEE PAC Review Board is made up of representatives of the Development Team.

Advisory boards and other entities play important roles in both states. Those roles can be reviewed in Table 4.7, C4.

KEEC operates with a two person staff. The courses are taught by three instructors who are employed by universities within Kentucky. KEEC staff members are encouraged to participate in the certification program as professional development. USEE is operated by two permanent staff and two Americorps staff. These staff members are encouraged to participate in the certification program but are not required to participate in additional development training. The certified staff will participate in mentor training in the future.

In Kentucky, the course instructors provide the professional development (via participation in the certification program). In Utah, staff members independently learn required information to accomplish tasks. The staff may also have mentors (through the certification program) to suggest additional training.

4.4. Competencies: Form and Substance

Kentucky's competencies are derived directly from NAAEE's *Guidelines for the Initial Preparation of Environmental Educators*. In 2001, USEE designed its own *Guidelines for EE Providers* based on a framework from the NAAEE *Guidelines*. The primary difference between the two state program competency usages lies in the NAAEE and Utah *Guideline 1.4*. Kentucky program participants receive the guideline integrated into a course while Utah program participants work with their mentor to demonstrate this through a more personalized method. Although the "Personal and civic responsibility" guideline (4.1) has been a point of debate in both states, both organizations included it in their respective program requirements.

4.5. Certification Process

Utah certification officers have developed a marketing plan. Kentucky officers intend to have one in the near future. The target audiences for both states include: EE employers and professionals, students, the general public, and formal educators. Although Kentucky's program was not designed to include formal educator applicants, numerous conversations with Kentucky certification officers reinforced the need to have formal and non-formal educators working from the "same page." A mentor committee, a three-person resource

group that will work with all Kentucky applicants in the future, must include a formal educator.

The marketing tools being used for both states include websites, state conferences, and workshops. Kentucky certification officers also intend to use word-of-mouth techniques, newsletters, university courses, and meetings to market the program.

Both state application processes for the pilot test groups (first cadre) are different than the future process will be. Kentucky's first class is made up of individuals that were nominated by their employers to participate. In the future, applicants can nominate themselves by submitting the required documentation and fee. Kentucky applicants must agree to serve as a mentor to other applicants in the future. In Utah, the program and rubric pilot participants were nominated and sought out by USEE staff. Presently, applicants can download the materials on-line, and submit the required self-assessment, documentation, and fee to participate. In Utah, applicants must be members of USEE, if from another state, that state's affiliate organization.

Since KEEC is a government entity, it cannot accept the application fee to run the program. As a result, the application fee is forwarded to the state affiliate KAEE. In Utah, USEE is the state affiliate and receives the program fees to run the certification program.

Kentucky has not used grandfathering to certify any participants. USEE grandfathered pilot testers, but certification credentials bestowed through grandfathering are valid for a shorter period of time (2 years) than the standard certification credentials (5 years).

Kentucky developed an ethical standards review process using the Oversight Board as an impartial judge. Kentucky also requires applicants to sign a code of professional ethics included with the application materials. Utah, presently, does not have a review process but

does have a Review Board and requires that applicants complete a code of professional ethics with the application materials.

The USEE PAC Development Team developed a self-assessment tool to gauge an applicant's knowledge of the field prior to entering the certification program. Completion of this component allows mentors and USEE staff to suggest applicable professional development workshops or courses to fill in applicants' knowledge and skill deficiencies. Kentucky certification officers are discussing the issue further. A self-assessment may be integrated into the requirements in the future.

Kentucky's certification program is primarily a course-based program. Applicants are taught how to fulfill the requirements of the competencies. Utah's program does not require professional development coursework, but the issue has been heavily debated. Presently, competency is demonstrated through the use of a mentor. There has been discussion in Utah about developing optional courses or workshops to help applicants address the competencies. At the time of this thesis publication, any professional development workshops or courses suggested by mentors of USEE staff would be external workshops such as Projects Learning Tree, WET, and WILD. A UW-SP Foundations of Environmental Education online course may also be used as professional development. Applicants may search the USEE website to find other professional development opportunities offered in Utah.

Kentucky applicants demonstrate their competencies through tests, a structured debate, and through the development of an annotated unit of study. Applicants in Utah work with their mentors to identify ways to best demonstrate competency in the specified areas. Rubrics and competency worksheets are used and tests may be offered for some components.

The credential renewal process is also unique in both states. Kentucky's credential presently has no time limit. Utah's certification credential presently is valid for 5 years. Those applicants that participated in the Summit pilot testing weekend workshop have a shorter credential period. This only applies for the first renewal for Summit participants.

Table 4.7: Major Characteristics Of EE Certification Programs In Utah And Kentucky

	CHARACTERISTICS	KENTUCKY – June 2004	UTAH – June 2004
A.	Background Information		
	1. State	KY	UT
	2. Program Title	Certification Program for Kentucky's Non-formal Environmental Educators	Utah EE Certification Program
	3. Organizational Leader(s)	KEEC	USEE
	4. Name of Key Contact(s)	KEEC	Executive Director - USEE
	5. Contact Information	Kentucky Environmental Education Council 2107 Capitol Plaza Tower Frankfort, KY 40601	Utah Society for Environmental Education 350 East South 400 East, Ste G4 Salt Lake City, UT 84111
	6. Began Development	Began talking about in 7/2001 First met 2/2002	Winter 2001
	7. Organization Structure Supporting Development	State agency	Not-For Profit 501c(3)
	8. Decision-Making Process	Matters are brought to Task Force; large decisions decided by consensus, daily running of program can be decided by Executive Director of KEEC, Instructors may make instructional decisions.	Matters are brought to Development team; large decisions decided by consensus; daily running of program can be decided by USEE Executive Director. Mentors may decide on demonstration methods and acceptability.
B.	Structural Features of the Program		
	1. Nature of the Target Audience(s)	Non-formal EE educators	Non-formal and formal educators wanting to incorporate EE into instruction
	2. Size of Target Audience(s)	An estimate being used by KEEC is 900+ persons	Unknown at the time. Regional workshops planned to identify potential audience and scope of EE in Utah. Targeting approximately 100 key organizations
	3. Geographic Distribution of Target Audience(s)	Primary target Kentucky Secondary target: Region Recruiting and promotional efforts are not going outside of the state.	Primary target: Utah Secondary target: Rocky Mountain Region Recruiting and promotional efforts are not going outside of the state.
	4. Program Purposes/Objectives		
	(a)	Provide a strong professional development program for non-formal environmental educators	Professionalize the field of EE
	(b)		Increase validity and legitimacy of EE field
	5. Code of Professional Ethics	Yes	Yes
C.	Human Resources & Capacity-building		
	1. Administrative Partner(s) (design and implementation)	KEEC, Task Force, Oversight Committee	USEE, USEE PAC Development Team, USEE PAC Review Board
	2. Roles of Administrator		
	(a)	KEEC - Accepts application, Maintains database of applicants Tracks applicants Raises program funds Helps design instruction	USEE - Accepts application, Maintains database of applicants Tracks applicants Raises program funds
	(b)	Task Force - Certifying organization. Organization that bestows credential Provide field buy-in and word-of-mouth marketing	USEE PAC Program Development Team - Certifying organization (governing body). Organization that bestows credential. Development Team to disband in future and duties absorbed by the Review Board.
	(c)	Oversight Committee - Handles grievances.	USEE PAC Review Board - Handles grievances. Presently, members also serve on the Development Team.
	3. Advisory Body or Bodies	KEEC Board, Course instructors	USEE Board, USEE Program Committee, USEE PAC

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	CHARACTERISTICS	KENTUCKY – June 2004	UTAH – June 2004
	4. Roles of Advisors		
	(a)	<u>KEEC Board</u> - Program monitoring	<u>USEE Board</u> - Program monitoring
	(b)	<u>Course Instructors</u> – Develop courses and assessments Advises on course related topics	<u>USEE Program Development Team</u> - Makes recommendations to USEE Board
	(c)		<u>USEE PAC</u> - Makes recommendations to USEE Program Development Team
	5. Program/Support Staff	2 permanent staff assigned to tasks as needed, 3 course instructors	4 (2 permanent staff, 2 Americorps staff) assigned to tasks as needed
	(a) Staff Professional Development	Certification program serves as KEEC staff development No professional development is necessary for the three course instructors. All three hold Ph.D.s and have over 70 years of combined experience in the EE field.	Professional development options available on-line; Mentors
	(b) Staff Formative Assessment	KEEC conducts a formative assessment	Pilot testing did not contain formative assessment; Mentor training will contain formative assessment; Self-assessment may be considered formative assessment
	(c) Staff Summative Assessment	No additional assessment above the certification program assessment is needed (refer to C.5.a)	Both mentor training and program participant summative assessment
	6. Sources of paid Program Staff	KEEC; Course instructors are contracted.	USEE
	7. Staff Orientation/Training	Staff go through certification program Program development Self-training	Staff goes through certification program Self-training Mentoring
	8. Staff Training Providers	Course instructors Drs. Joe Baust, Terry Wilson, Yvonne Meichtry; 1 President-elect NAAEE, 1 Past-NAAEE President, NAAEE member	Mentors Staff member (self training)
	9. Contacts for Applicants		
	(a) Procedures/Questions	KEEC staff Instructors Oversight Committee Task Force	Mentor USEE staff Development Team
	(b) Requests for Help/Support	Mentor committee (when enough participants are trained) Course Instructors (serve as mentors for first cadre)	Mentor USEE staff (if request occurs prior to mentor/applicant pairing)
	10. Providers of Program Evaluation	Participants Instructors NAAEE (certifying programs) EPA (grant proposal submitted to gain funds for assessment)	Participants Mentors NAAEE (certifying programs) EETAP
	11. Roles of Program Evaluators Relationship of Evaluators to Program		
	(a)	<u>Participants</u> - Program participants	<u>Participants</u> - Program participants
	(b)	<u>Course instructors</u> - Instructors of content courses Assessors of participant competency	<u>Mentors</u> - First line of contact for participants Mentor for program participants Past-participant of the certification program
	(c)	<u>Mentors</u> - First line of contact for participants Mentor for program participants Past participant of the certification program	<u>NAAEE</u> - Potential accreditation entity for EE certification programs
		<u>NAAEE</u> - Potential accreditation entity for EE certification programs	<u>EETAP</u> - Funding source
	(d)	<u>EPA</u> - Potential funding source	
D.	Competencies: Form & Substance		
	1. Format for Competencies	NAAEE's <i>Guidelines</i> , Utah's rubrics, authentic assessments and teachers accountability.	Utah's <i>Guidelines</i>

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	CHARACTERISTICS	KENTUCKY – June 2004	UTAH – June 2004
	(a) Broadest Statements are called...	Competencies	Competencies
	(b) Middle Statements are called...	Objectives	Objectives
	(c) Most Specific Statements are called...	Indicators	Indicators
	2. NAAEE/GIPEE Theme 1: Environmental Literacy	Competencies to address guidelines 1.1, 1.2, 1.3, and 1.4 (see Appendix B)	Competencies to address guidelines 1.1, 1.2, 1.3 and 1.4 (see Appendix D)
	3. NAAEE/GIPEE Theme 2: Foundations	Competencies to address guidelines 2.1, 2.2, and 2.3 (see Appendix B)	Competencies to address guidelines 2.1, 2.2, and 2.3 (see Appendix D)
	4. NAAEE/GIPEE Theme 3: Professional Responsibilities.	Competencies to address guidelines 3.1, 3.2, and 3.3 (see Appendix B)	Competencies to address guidelines 3.1, 3.2, and 3.3 (see Appendix D)
	5. NAAEE/GIPEE Theme 4: Planning / Implementation.	Competencies to address guidelines 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, and 4.7 (see Appendix B)	Competencies to address NAAEE Guidelines 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, and 4.7 (USEE Guidelines 4.1, 4.2, 4.5, 4.7, 4.8, 4.9, 4.10) (see Appendix D)
	6. NAAEE/GIPEE Theme 5: Foster Learning	Competencies to address guidelines 5.1, 5.2, and 5.3 (see Appendix B)	Competencies to address NAAEE Guidelines 5.1, 5.2, and 5.3 (USEE Guidelines 4.3, 4.4, 4.6) (see Appendix D)
	7. NAAEE/GIPEE Theme 6: Assessment and Evaluation.	Competencies to address guidelines 6.1, 6.2, and 6.3 (see Appendix B)	Competencies to address guidelines 6.1, 6.2, and 6.3 (USEE Guidelines 5.1, 5.2, 5.3)
	8. Other (Describe)	Utah's rubrics Kentucky's education assessment formats	Utah Guidelines for EE Providers
	9. Communication of Competencies	List Initial Prep Guidelines Told about requirements	Guidelines Rubrics Self-assessment
E.	Certification Process		
	1. Marketing	No marketing plan developed	Marketing plan developed
	(a) Targeted audiences	EE employers EE professionals Students General public Formal educators	EE employers EE professionals Students General public Formal educators
	(b) Marketing tools	Word of mouth/networking Newsletters (KAEE, KEEC) Website http://www.state.ky.us/agencies/envred/certification.htm Conferences (KAEE, NAAEE, KSTA) Meetings (forestry marketing meetings) Workshops (Projects WET, WILD, and Learning Tree) University courses	Website http://www.usee.org/capacity/certification.html USEE Annual Conference Regional conferences (5 regions) EE capacity-building workshops
	2. Application process	The first cadre nominated by variety of organizations representing diversity in EE field. In future, applicants nominate themselves. They must agree to serve as a mentor. Application and fee must be submitted.	Participants download information from the website and fax or send application and self-assessment into USEE. In the future, send in application fee. Applicants must be a member of USEE or their state affiliate association.
	3. Grandfathering	No grandfathering	Pilot Testers certified to provide program seed people. Some were certified via a weekend Summit. Pilot Test participants certified are subject to a shorter credential period.
	4. Ethical Standards Review	The action will be reported to KEEC. KEEC will contact the instructors and Oversight Board. Oversight Board will be asked to meet with the applicant. Applicants may contact Oversight Board but must contact KEEC first.	Not at this time, but code of ethics is in use
	5. Self-Assessment	No, but may be developed in the future	Yes
	6. Program Participant Professional Development	Third course/workshop on instructional strategies (will incorporate themes 3-6)	Program does not require professional development as a component

Table continued on next page

CHARACTERISTICS	KENTUCKY – June 2004	UTAH – June 2004
(a)	Instructors	Projects Learning Tree, WET and WILD; UW-SP online foundations course; Attendance at the annual conference; Attendance at regional workshops; Calendar of professional development events available online.
(b)	KUPEE instructor training not developed but expected.	
7. Ways to Document/Demonstrate Competence		
(a)	Theme 1: Environmental Literacy addressed in Course #1- objective test and debate	Demonstration is subject to agreement between applicant, mentor and USEE PAC Program Development Team.
(b)	Theme 2: Foundations of Environmental Education addressed in Course #2 – Open-response test	
(c)	Themes 3-6: addressed in an Instructional Strategies course - Annotated unit of study	
8. Who Assesses/Determines Competence		
(a)	Course instructors Drs. Joe Baust, Terry Wilson, Yvonne Meichtry. For the first cadre, scores averaged together, thereafter participants will pass or redo each assignment individually.	Mentor
(b)		USEE PAC Review Board (multi-tier assessment) made up of people from USEE PAC Development Team
9. Assessment Tools/Procedures		
(a)	Course 1 - Interaction of systems short answer exam. May require course/workshop attendance in the future.	Self-assessment,
(b)	Course 1 - Structured team debate covering civic responsibility and the environment	Rubrics,
(c)	Course 2 - Series of open response questions with one page answers	Competency worksheets
(d)	Course 3 - An annotated unit of study following the KY Department of Education guidelines	
10. Formative Review/Feedback Process	Comments directed to instructors and the Task Force for program change direction.	Pilot Testing evaluations sent to USEE and distributed to Development Team
11. Summative Review/Feedback Process		
(a) Initial	For the first cadre, program participants and instructors will be invited to a Task Force meeting to discuss strengths, weaknesses, and suggestions for the certification program. In the future, feedback will be distributed to instructors and Task Force.	Pilot Testing evaluations sent to USEE and distributed to Development Team.
(b) Subsequent	Summative review is planned. Additional funds requested from an EPA grant to conduct a one-year summative review.	Development planned for later this year.
12. Means to Address Identify Weaknesses	After weaknesses are identified, Task Force will implement changes.	After weaknesses are identified, USEE PAC Development Team will implement changes.
13. Grievance Process	Participant contacts Oversight Committee Representatives listed in program informative packet/binder	Participant must submit an appeal to the USEE PAC Review Board in writing. The Committee addresses the concern. If participant violates the code of ethics, the Review Board can choose not to renew the credential.
15. Marketing State Certified Participants	KAEE and KEEC will post names in newsletters. KEEC Executive Director hopes to post names on the Department of Education website.	USEE will post names in newsletter and on USEE website.
16. Continuing Professional Development Component/Credential Renewal	Considering a professional development component. Participants are not required to renew the credential	Summit pilot testing certification credential is valid for 2 years. Future certification credentials will be valid for 5 years

CHAPTER V – CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This is not an exhaustive examination of both state programs. Some elements present within a specific state (e.g., acceptance of EE within a state, impacts of an economic recession and budget reductions, group dynamics) can directly or indirectly impact the successful development and implementation of a certification program. For example, a state certifying organization that had previously established working relationships and rapport with state EE stakeholders will work more effectively with stakeholders. So the question becomes how much of a state certification program is unique and cannot be replicated and how much can be applied in another state seeking to develop a certification program? The researcher found that a program that will work successfully in one state may face an array of controversy in another state. The important lesson to be learned is that a development team must understand the status of EE in their respective state in order to craft and personalize the program to the EE community's needs and situation. If the needs and situation in Utah, Kentucky, Texas, and Georgia, were the same then all four states could successfully implement the same program. As it turns out, all four programs are distinctly unique. However, there were lessons learned from the interviews and questions raised that should be considered for the future.

For the overall understanding of this publication, the capitalized term “Certification States” or “States” refers only to the present competency-based certification states (Utah, Kentucky, Texas, and Georgia). The lower-case term “certification states” refers to states that are presently engaged in the development and implementation of a competency-based

certification program and any future certification states that will pursue program development. The term “study states” refers only to Kentucky and Utah.

This chapter is organized in the following manner:

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 - 1.1. Study State Certification Program Attributes/Components
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 - 1.1.2. Influence of External Organizations and EE Certification States’ Meetings
 - 1.1.3. Impacts of New Information on Certification Programs
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2. Implications
 - 2.1. Implications for Certification States’ Efforts
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 - 3.2.3. Future NAAEE Program
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 - 3.3.2. Position NAAEE to Administer a Certification Program
 - 3.3.3. Professional Certification Consultant

1. Conclusions and Inferences

1.1. Study State Certification Program Attributes/Components

By examining the element of change within the study states' program attributes and components, the answers to research questions (examining the "how" and "why") became clearer. The study states' program changes were primarily found in: continued development of program application materials, organization role clarification, and program content clarification.

A professional code of ethics, a self-assessment piece, and continual revisions of rubrics are some of the new program components that were developed and refined during 2003-2004 study period.

During the study period there was also clarification in organization/committee roles. In Kentucky, the administrative role of KEEC was cemented as KAEE's role decreased. USEE Review board duties were more clearly defined.

In addition, the program content in both study state programs was further clarified. Guidelines that were not being addressed in 2003 were part of the program assessments in 2004. In Kentucky, the professional development courses took shape. USEE's program had its first certification participants certified in the same manner that future participants would experience.

This section will examine variables that continue to shape the certification programs. These variables will influence the study states' and future certification states' programs,

1.1.1. Effects of Time on Certification Programs

- **Conclusion: Development Teams must have a procedure to keep certification up-to-date with current knowledge and skills.**

As time passes and society and the EE field changes, competencies and programs will also have to change. All certification programs must, at some point, be reevaluated to determine if the program is still addressing the needs of the EE field and is up-to-date with technology.

1.1.2. Influence of External Organizations and EE Certification States' Meetings

- **Conclusion: Seek funding beyond what the state and state agencies provide.**

Considering the financial challenges faced by KEEC since its 1990 inception, financial dependence solely on state and state agencies' funds may close down programs in times of state budget deficits. In the case of USEE, funding was entirely from external organizations. The researcher believes that Utah's situation will be repeated as other states will require financial assistance from external organizations to develop certification programs as well.

- **Conclusion: Collaborate with other certification states and share resources.**

Peer discussions and collaborations have dramatically advanced the certification progress in all Certification States. Examples of shared resources include the professional code of ethics, mentor program component, and the self-assessment component.

Certification State collaborations yielded program assessments that could be tailored to other certification state programs. Collaborating and sharing with other certification officers has improved each program individually.

1.1.3. Impacts of New Information on Certification Programs

- **Conclusion: Certification officers should keep in contact with NAAEE.**

Presently, NAAEE is pursuing a national program that resembles a state program “endorsement” or “accreditation.” When the details of NAAEE’s program become more concrete, current and future certification states will more than likely choose to pursue development of a program that follows the NAAEE standards for “endorsement.”

1.2. Conclusions from USEE Program Participants’ Interview Results

As additional participants progress through the certification program, results from demographic surveys will identify additional audiences, help certification officers better target the audiences they already have, and make future results more conducive to generalizations. Nonetheless, there were many useful points identified by the current program participants.

Participants felt program strengths included: the flexibility to demonstrate competencies, the mentor aspect, the program accessibility, the attainability of the process, and the competency-based component of the program. Suggestions for change included: improving the marketing, monitoring, and mentoring components; exploring ways to demonstrate specific competencies; sharpening the focus (to target both audiences); and considering a group or workshop discussion option. The following conclusions were drawn from information obtained through program participants’ interviews

- **Conclusion: Certification programs are more effective when they provide profession-specific incentives for all targeted audiences.**

Formal educators may in part be motivated by advancing on their salary, if credits are offered in conjunction with certification programs. Some non-formal educators may be more enticed by the professionalism that a credential title provides.

- **Conclusion: Understand and consider audience limitations.**

Although the creation of additional certification levels has the support of participants, time and future career plans appear to be limiting factors when participants are deciding to pursue additional levels of certification.

- **Conclusion: Use the development team members as motivators and marketers.**

Members of the development team can be helpful when marketing the program and encouraging applicants' participation. Program participants were enthusiastic about the personal effort that the staff and USEE PAC members contributed.

- **Conclusion: Market the certification program to employers.**

Employers have an impact on their employees' job training and professional development. Although the majority of the participants (3 of 4) indicated intent to remain in their present jobs, the researcher is uncertain if future program participants will have the same intent. Regardless, employers are directly linked to the supply (of applicants) and the demand (for quality instruction) and should be actively targeted through marketing.

- **Conclusion: Integrate a renewable credential requiring professional development into the program.**

Including a professional development requirement for credential renewal is one way to ensure the currency and credibility of the credential. Requiring professional development to renew a credential would also emphasize the importance of continued professional development and improve the networking of EE professionals within the state.

1.3. Cross-case Comparison Conclusions

Both study states' certification programs have evolved into distinctly different programs. Utah's program relies on mentors and applicants to agree on methods of competency demonstration. Kentucky's course-based program uses standardized authentic assessments to determine competency. Utah's program widely accepts both formal and non-formal audiences into their program. Kentucky officers chose to develop two programs to address the needs of formal and non-formal applicants. Despite their differences, both states' programs address the guidelines published in NAAEE's Guidelines for the Initial Preparation of Environmental Educators. Both programs are competency-based, and both require assessments to demonstrate competency.

- **Conclusion: Tailor the program to the state EE community.**

Each state development team has reasons for approaching various certification issues differently. However, as long as the EE community in each state accepts the reasoning and resulting decisions the programs address specific guidelines set by NAAEE then the differences aren't nearly as important. What is important is that although each program may differ, the programs have the acceptance of the EE community in each respective state.

2. Implications

2.1. Implications for Certification States' Efforts

This study examined the program evolution of two states' EE certification programs, and collected data to design recommendations for competency-based EE certification

programs in the future. This section specifically addresses how information obtained from data collection could impact the development of future certification programs.

2.1.1. Program Assessment and Evaluation

- **Implication: New developments in program assessment and evaluation will have wide-reaching implications for future EE certification programs.**

The program impacts brought about by the program assessment developed at the EE Certification States' meeting in Lexington, KY are not included in this publication. However, it would be very helpful for states developing certification programs to ascertain how the present Certification States have used and adjusted the assessments to fit the needs of their states' programs. In addition, the present Certification States will be developing program evaluation tools in the near future. Borrowing the experience gained through evaluations and even borrowing the evaluation tools themselves may save many hours for future certification officers. .

2.1.2. Funding

- **Implication: Certification officers must carefully examine funding options prior to developing a certification program.**

A funding source choice may impact the focus of the certification program. For example, Georgia's program is partially funded by grant monies received through solid waste disposal (tires) fees. As a result, the certification program incorporates solid waste disposal into its curriculum (R. Osorio, personal communication, March 30, 2004).

2.1.3. Formal and Non-formal Audiences

Implication: Certifying entities need to decide how best to encourage formal and non-formal educators to “work from the same page.”

Certification can be a way to bring both formal and non-formal educators together. As demonstrated by NAAEE’s recent participation in NCATE efforts, it is important to have both formal and non-formal educators “working from the same page.” This would require that formal educators understand what EE is and possess a degree of environmental literacy. On the other hand, non-formal educators need understand and be able to apply instructional strategies and educational standards, well enough to integrate EE into audience-specific programs. Future states will have to decide if this can best be accomplished through one certification program that includes both formal and non-formal participants (Utah), or two separate programs – one tailored specifically to formal educators and the other designed for non-formal educators (Kentucky.)

2.1.4. Collaboration is Key

Implication: New certification officers should contact certification officers in states with more established programs to discuss applying previously developed materials to the new state.

Clearly, collaborating with other certification officers has improved each individual program (in Utah, Kentucky, Texas, and Georgia.) In the future, discussing certification programs could easily and conveniently be accomplished at NAAEE annual conferences. The researcher is not certain that extra meetings (like those held in Denver, Columbus, Houston, and Lexington) would be necessary. Future certification states will already possess

tested results from competency-based programs in Utah, Kentucky, Texas, and Georgia as well as successful experience-based programs in North Carolina and Missouri.

2.1.5. Standardization and Reciprocity

Implication: Developing certification programs to NAAEE requirements will encourage standardization and simplify reciprocity issues.

NAAEE's program is still in an early development stage. Although presently the national certification components are not concrete, future state program participants may find credential reciprocity easier when programs are standardized to NAAEE requirements.

2.2. Implications for National Certification efforts

- **Implication: National certification "endorsement" program requirements must be realistically achievable by state certifying entities.**

State certification officers will be looking to NAAEE for guidance as they develop their own certification programs. The requirements NAAEE sets forth must be realistically attainable for states to use in their programs.

2.3. Implications for the EE Field

2.3.1. *Legitimacy and Accountability*

- **Implication: Certification provides incentive to encourage professional accountability.**

Certification programs have essentially “set the bar” for EE professionals providing a good model of EE, ensuring that participants meet a high standard, rallying excitement about professional development, and encouraging educators to follow NAAEE’s *Guidelines*. The credential *further* provides the opportunity for a certifying body to keep tabs on EE professionals and on the knowledge, skills, and abilities required in the EE field. In order to avoid situations where certified environmental educators poorly represent the ideals held by the EE field, oversight committees should be established. An oversight committee would have the authority to refuse a participant’s credential or its renewal or to remove a credential altogether, provided there is sufficient reason to do so. Since these are voluntary programs, the removal of a credential does not remove the participant from the profession. The credential does, however, provide the opportunity for a certifying body to keep tabs on EE professionals and the knowledge, skills, and abilities required in EE field.

2.3.2. *Certification and Formal Education*

- **Implication: Certification encourages positive relations between formal and non-formal educators and a standardized understanding of EE and instruction.**

As the EE field strives to play an active role in formal educator instruction (through partnerships with NCATE, among others), it is understood by many that both formal and non-formal educators must work together to work most effectively. With “No Child Left

Behind” legislative deadlines approaching there is more of a push to make every teachable moment count. Certification programs facilitate networking between formal and non-formal educators.

Certification programs can also provide a venue where formal and non-formal educators receive the same type of training. Certification can also bring a consistent understanding of the subject (with appropriateness to audience level), instructional methods, and student assessment to both formal and non-formal audiences.

3. Recommendations

3.1. Recommendations for Future Certification States

These recommendations are based on data taken from interviews with Utah and Kentucky certification officers and USEE certification program participants. Direct quotes from these interviews can be found in Appendix S: “Themes Identified Through Interviews.”

3.1.1. Build a Strong Development Team

A topic frequently addressed in the interviews was the development team. Certainly the make-up, size, and task distribution can drastically affect the resulting product.

- **Recommendation: The development team should be made up of diverse individuals representative of the EE community in the state.**

Just as a certification program should be tailored to the EE community within each state, it is recommended that the development team also be representative of the state EE

community geographically, professionally, academically, and ethnically. It is important that stakeholders accept the end result.

- **Recommendation: Divide and conquer tasks through small groups.**

Both study states found great success in using smaller groups to do much of the work, with the decisions left to the larger development team. Utah employed more of a hand-picked method of development team selection while Kentucky brought together interested EE employers on their Task Force.

- **Recommendation: Consider the importance of buy-in by the program development team.**

Initially, the program may grow through word of mouth. Having “cheerleaders” on the development team that are vested and knowledgeable can be extremely important. The development team may represent the greatest marketing asset for a program.

It is recommended that the development team be a vested, diverse group who accomplishes tasks in small achievable steps.

3.1.2. Plan for the Certification Program Development

Before program development can truly get underway, it is important for certification officers to plan for the program development. Planning includes: setting program goals, creating a clear focus for the program, setting the pace of program development, identifying limitations (e.g., time, money, and staff), gathering the staff and developers, and identifying a certifying organization.

- **Recommendation: Have a clear program focus, purpose, and core goals.**

Setting a clear focus, purpose, and list of goals provides direction and may quell controversy. A focus also provides a vision for the program and an endpoint for program development.

- **Recommendation: Make the certification program inclusive of all targeted audiences.**

Certification officers from both states felt that their programs should be “inclusive” of all audiences affected by EE. Those audiences include formal educators, non-formal educators, and students. They also include participants employed by government, private companies, industry and manufacturing, zoos and museums, among others.

- **Recommendation: Design a program that is open to change.**

Considering the amount of change that both study state programs have gone through, it is understandable that future certification programs, and their development teams, should be adaptable and receptive to change.

- **Recommendation: Set the pace of program development.**

Of necessity, the development process is very time-consuming and challenging. As a result, it is recommended that other states accomplish the development phase slowly, thoughtfully, and through a series of smaller steps.

- **Recommendation: Dedicate staff specifically to the program.**

Certification officers from both study states were not exclusively dedicated to developing a certification program. The certifying organizations had other responsibilities that required the officers’ time. It is recommended that, when possible, staff should be tasked exclusively to developing certification programs.

Having a clear direction and a plan for the program development will help maintain focused progress. Dedicating staff exclusively to the development of a program direction is suggested.

3.1.3. Use Supporters and Critics as a Resource

- **Recommendation: New certification programs should take ideas and suggestions from both supporters and critics to effectively address all aspects of the target audiences.**

Failing to do so invites the potential for controversy later. Using input and advice from stakeholders, critics, state and national (NAAEE) leaders, certification experts, and political representatives will yield a truly inclusive program.

- **Recommendation: Certification officers should not limit themselves to input from members of the EE field.**

Formal education professionals may provide valuable feedback and assistance on producing quality assessments. Political allies may be able to provide funding and networking assistance. Partnerships with universities and EE affiliates will secure additional buy-in and reach a broader audience (students and EE professionals). Partnerships may also reduce the workload for any one entity. Not all contacts and partnerships yield positive results, but they all help the development team produce the best product possible.

A program's biggest critic may be its best proponent when all areas are worked out. It's important to use all "people" resources available during program development and implementation.

3.1.4. Draw Upon Positive Past Activities and Results of Other Organizations

Not every state is capable of creating a certification program and related materials independently. Each of the four Certification States looked at other certification programs, took materials from other disciplines or other states, and relied on EE stakeholders to efficiently develop an accepted certification program. Fortunately, there are more certification program resources available now than ever before. In addition, experienced certification officers understand that by paving the way in EE certification, they position themselves to serve as mentors to future certification officers.

- **Recommendation: Draw upon the volume of work completed by other organizations.**

Certification officers from both states support the recommendation that future development teams use the wealth of resources that have already been produced. Six states have six different certification programs. Program evaluations and evaluation tools from Utah, Kentucky, Texas and Georgia will be available shortly.

- **Recommendation: Use experiences and networking contacts gained through other EE cooperative efforts to develop your program.**

Both of the study states were fortunate to have positive past experiences (e.g., Kentucky Master Plan and Utah *Guidelines* development), that the state EE stakeholders collaborated on. Certification officers in the states found that past positive collaborative efforts with EE stakeholders helped the program development efforts. Collaborations not only drew the EE community closer together, but also produced results that everyone agreed with.

Borrowing resources and materials from other organizations is an efficient way to further the development process and benefit from others' experience. Using experience

gained through collaborative efforts will also make the development process more efficient. The preceding recommendations arise out subthemes 25-26 in Appendix S.

3.1.5. Plan for the Program Pilot Testing

Pilot testing is an important part of fine-tuning any program and identifying logistical problems. Pilot testing also builds enthusiasm for the program. Since word-of-mouth marketing goes on during pilot testing rounds, certification states should carefully plan their pilot testing.

- **Recommendation: Those who receive initial certification in a state should be certified by the same method as those who will be certified later.**

Certifying pilot test participants by the same method that future cadres will encounter may not be possible in some cases, but may be the best way to receive relevant program-related comments back from pilot testers. In addition, the certifying body would then feel that all certified participants are at the same achievement level.

- **Recommendation: Encourage diverse representation in the first cadre of certified participants.**

Diversity may come in many forms: ethnic, geographic, academic, and occupational. Since pilot tests are designed to not only test program components but also to build enthusiasm for the program, it is recommended that certification officers represent as many of the prospective target groups as possible.

Pilot testing is a method to gain valuable feedback. The most useful feedback comes from a diverse group of pilot testers going through the same program that future participants participate in.

3.1.6. Market the Program Through Many Avenues

- **Recommendation: Marketing may not be the first task tackled by the development team, but it should be thought of throughout the development phase.**

Appropriate marketing can build program enthusiasm, reduce potential opposition, inform the EE community of new program advances, and add cross-discipline credibility to your program. USEE regularly posted progress reports in their newsletters. KEEC staff spoke with people from other sectors (e.g., political, public, and education sectors). It is important for people to understand what the certification program “is” and also what the program is “not.”

Marketing should always be kept in mind when developing a certification program. Although the actual marketing campaign may not start during the development stage, identification of potential target audiences occurs at an early stage. .

3.2. Recommendations for Future Research

This thesis represents the tip of a much larger iceberg named “Environmental Educator Certification.” Many opportunities for additional research still exist. These areas include program evaluation, program comparisons, the national “endorsement” program, and changes reflected in the field as a result of certification. .

3.2.1. Program Evaluation

- **Recommendation: Program evaluation should incorporate periodic monitoring to ensure that: the program is adequately representing the knowledge, skills, and abilities reflected in the field; the certifying entity is able to handle the program efficiently; and the program impacts adequately reflect the goals of the program.**

Although all of the certification states have implemented a certification program, none of the certifying entities have started the challenging task of program evaluation. Some of the areas that should be evaluated are listed below.

1. Periodic Monitoring of Program Operations
 - 1.1. Program Administration/Oversight
 - 1.2. Personnel (Administration/Advisors/Staff)
 - 1.3. Personnel Orientation, Training & Oversight
 - 1.4. Competencies
 - 1.5. Application Materials/Process
 - 1.6. Program Development Support Materials/Process
 - 1.7. Design and Development Materials Process
 - 1.8. Process to Approve Materials
 - 1.9. Program Evaluation Materials Process
 - 1.10. Balance of Income and Expenses
 2. Periodic Monitoring of Program Impacts
 - 2.1. Longer-Term Statistics of Certified Persons
 - 2.2. Education Practices of Certified Persons
 - 2.3. EE Leadership by Certified Persons
 - 2.4. Hiring of Certified Persons
 - 2.5. Satisfaction of Employers
 - 2.6. Progress Toward Program Objectives
- (Marcinkowski, 2004)

3.2.2. Program Comparison

- **Recommendation: Continue to gather data (qualitative and quantitative) for comparison purposes.**

This study examined two states. Two other competency-based certification programs (those in Texas and Georgia) will shortly be in a position to be suitable for comparison.

Comparisons between competency-based and experience-based programs have also not been conducted. This recommendation will continue to expand with each additional EE certification program that is developed.

3.2.3. Future NAAEE Program

- **Recommendation: Future research should: document the NAAEE program development process, examine standards that will be used to evaluate the state certification programs, and investigate potential threats to a national certification program.**

With recent activity focusing on NAAEE's national "endorsement" program, further research should be conducted in this area. Possible threats to a national certification program may include lack of acceptance by EE professionals or other sectors and legal ramifications of certifying people who may later fail to represent ideals held by the EE field.

3.2.4. Changes in the Field As a Result of Certification

- **Recommendation: To prove certification programs directly cause desired results, a survey relating to the status of EE and EE professionals (in a county, state, region, or country) should be conducted to establish a baseline of environmental education practice.**

The program goal "to increase the professionalism and legitimacy of the EE field through certification" was mentioned by certification officers from both study states. If EE professionals wish to track the changes in the status of EE and other components, then a baseline study should be conducted at the front-end of the program implementation. Then,

future research studies may determine the impact of certification on the status of EE and on the knowledge, skills, and abilities of EE professionals in an area.

3.3. Recommendations for NAAEE

This research project was never intended to evaluate the national program. However, interviews conducted during the course of this study lead to the following recommendations for NAAEE's national certification program.

3.3.1. Monitor and Communicate With Certification States

- **Recommendation: NAAEE should monitor EE certification programs (and components) and actively communicate with certification officers.**

NAAEE is *the* EE discipline's professional organization in this country (and continent). However, since the States appear to be more active in the development and implementation of EE certification programs, it is important that NAAEE monitor the certification programs (and components) and maintain communication with state certification officers. Both state and national certification officers should ensure that whatever NAAEE agrees to do with regard to a national certification program, endorsement or acceptance program, it is able to be realistically implemented by certification states, and vice versa.

3.3.2. Position NAAEE to Administer a Certification Program

- **Recommendation: NAAEE should position itself so that it can administer a certification program in the near future.**

NAAEE has evolved as an organization over the past year, as evidenced by their need to reevaluate EEQA Initiative's *Phase One Progress Report*. It is clear that if NAAEE

intends to pursue certification, it should take steps to position itself so it can administer a certification program in the near future. Ideally, steps to identify and secure the necessary staff, facilities, database equipment and other necessary elements are already in the planning stage.

3.3.3. Professional Certification Consultant

- **Recommendation: NAAEE should consider bringing in a certification consultant to provide professional feedback on the processes and complexities of developing a national certification program.**

During one interview, a suggestion was made that a certification consultant should have been brought into the certification efforts up-front, to provide professional feedback and suggestions to NAAEE. The researcher chose to withhold the interviewee's name for the purpose of publication.

"We really do need someone with certification experience that works with organizations that are looking at this process as a means of professional development."

"Not anyone that I know of that works in the field...of EE has that background or experience."

"My fear, to be quite honest has been [*that*] there hasn't been a professional involved at any point that says 'Let's look at, regardless of whether you are certifying plumbers or realtors or environmental educators, this is the framework that we need to look at in terms of process and content.'"

Considering the complex nature of a national certification program and the wide range of existing state certification programs, an experienced certification consultant could contribute valuable insight and thus improve efficiency during the development period.

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APPENDICES

Appendix A – Abbreviations Used

ANSI – American National Standards Institute

DENR – Department of Environment and Natural Resources

EE – Environmental Education

EEA – Environmental Education Alliance of Georgia

EELE – Environmental Education Learning Experience

EETAP – Environmental Education and Training Partnership

EEQA Initiative – Environmental Education Quality Assurance Lead Team

EPA OEE – Environmental Protection Agency, Office of Environmental Education

GIPEE – Guidelines for the Initial Preparation of Environmental Educators

GPEEE – Georgia Project for Excellence in Environmental Education.

IRB – Institutional Review Board

KAEE – Kentucky Association for Environmental Education

KERA – Kentucky Education Reform Act

KEEC – Kentucky Environmental Education Council

KUPEE – Kentucky University Partnership for Environmental Education

NAAEE – North American Association for Environmental Education

NAI – National Association of Interpretation

NCATE – National Council for Accreditation of Teacher Education

NCCA – National Commission for Certifying Agencies

NEEAP – National Environmental Education Advancement Project

NEETF – National Environmental Education and Training Foundation

NPEEE – National Project for Excellence in Environmental Education

OSU – Ohio State University

USEE – Utah Society for Environmental Education

UGA – University of Georgia

USEE PAC – Utah Society for Environmental Education Program Advisory Council

UTOTES – Using the Outdoors to Teach Experiential Science

UW-SP – University of Wisconsin-Stevens Point

Appendix B – Outline of the Guidelines for the Initial Preparation of Environmental Educators

(NAAEE, 2000, pgs 5-6)

The Guidelines at a Glance

This list includes the six themes and general guidelines required for competency in environmental education.

Theme #1 – Environmental Literacy

- 1.1 Questioning and analysis skills
- 1.2 Knowledge of environmental processes and systems
- 1.3 Skills for understanding and addressing environmental issues
- 1.4 Personal and civic responsibility

Theme #2 – Foundations of Environmental Education

- 2.1 Fundamental characteristics and goals of environmental education
- 2.2 How environmental education is implemented
- 2.3 The evolution of the field

Theme #3 – Professional Responsibilities of the Environmental Educator

- 3.1 Exemplary environmental education practice
- 3.2 Emphasis on education, not advocacy
- 3.3 Ongoing learning and professional development

Theme #4 – Planning and Implementating Environmental Education Programs

- 4.1 Knowledge of learners
- 4.2 Knowledge of instructional methodologies
- 4.3 Planning for instruction
- 4.4 Knowledge of environmental education materials and resources
- 4.5 Technologies that assist learning
- 4.6 Settings for instruction
- 4.7 Curriculum planning

Theme #5 – Foster Learning

- 5.1 A climate for learning about and exploring the environment
- 5.2 An inclusive and collaborative learning environment
- 5.3 Flexible and responsive instruction

Theme #6 – Assessment and Evaluation

- 6.1 Learner outcomes
- 6.2 Assessment that is part of instruction
- 6.3 Improving instruction

Appendix C – Outline of the Guidelines for Environmental Education Providers in Utah

(USEE, 2001, p 2-11)

Theme #1 – Environmental Literacy

- 1.1 Questioning and analysis skills
- 1.2 Knowledge of environmental processes and systems
- 1.3 Skills for understanding and addressing environmental issues
- 1.4 Personal and civic responsibility

Theme #2 – Foundations of Environmental Education

- 2.1 Fundamental characteristics and goals of environmental education
- 2.2 How environmental education is implemented
- 2.3 The evolution of the field and goals of environmental education
- 2.4 The evolution of the field in Utah

Theme #3 – Professional Responsibilities of the Environmental Educator

- 3.1 Exemplary environmental education practice
- 3.2 Emphasis on education, not advocacy
- 3.3 Ongoing learning and professional development

Theme #4 – Planning and Implementing Environmental Education

- 4.1 Knowledge of learners and learning
- 4.2 Knowledge of various teaching methods
- 4.3 A climate for learning about and exploring the environment
- 4.4 An inclusive and collaborative learning environment
- 4.5 Planning for instruction
- 4.6 Flexible and responsive instruction
- 4.7 Knowledge of environmental education materials and resources
- 4.8 Technologies that assist learning
- 4.9 Settings for instruction
- 4.10 Curriculum planning
- 4.11 A climate for learning about and exploring the environment

Theme #5 – Assessment and Evaluation

- 5.1 Learner outcomes
- 5.2 Assessment that is part of instruction
- 5.3 Improving instruction

Appendix D – Comparison of NAAEE Guidelines for the Initial Preparation of Environmental Educators and USEE’s Guidelines for Environmental Education Providers in Utah

<i>Guidelines for the Initial Preparation of Environmental Educators</i>		<i>Guidelines for Environmental Education Providers in Utah</i>	
Themes	Guidelines	Themes	Guidelines
#1 – Environmental Literacy	1.1 Questioning and analysis skills	#1 – Environmental Literacy	1.1 Questioning and analysis skills
	1.2 Knowledge of environmental processes and systems		1.2 Knowledge of environmental processes and systems
	1.3 Skills for understanding and addressing environmental issues		1.3 Skills for understanding and addressing environmental issues
	1.4 Personal and civic responsibility		1.4 Personal and civic responsibility
#2 – Foundations of Environmental Education	2.1 Fundamental characteristics and goals of environmental education	#2 – Foundations of Environmental Education	2.1 Fundamental characteristics and goals of environmental education
	2.2 How environmental education is implemented		2.2 How environmental education is implemented
	2.3 The evolution of the field		2.3 The evolution of the field and goals of environmental education
			2.4 The evolution of the field in Utah
#3 – Professional Responsibilities of the Environmental Educator	3.1 Exemplary environmental education practice	#3 – Professional Responsibilities of the Environmental Educator	3.1 Exemplary environmental education practice
	3.2 Emphasis on education, not advocacy		3.2 Emphasis on education, not advocacy
	3.3 Ongoing learning and professional development		3.3 Ongoing learning and professional development

<i>Guidelines for the Initial Preparation of Environmental Educators</i>		<i>Guidelines for Environmental Education Providers in Utah</i>	
Themes	Guidelines	Themes	Guidelines
#4 – Planning and Implementing Environmental Education Programs	4.1 Knowledge of learners	#4 – Planning and Implementing Environmental Education	4.1 Knowledge of learners and learning
	4.2 Knowledge of instructional methodologies		4.2 Knowledge of various teaching methods
			4.3 A climate for learning about and exploring the environment
			4.4 An inclusive and collaborative learning environment
	4.3 Planning for instruction		4.5 Planning for instruction
			4.6 Flexible and responsive instruction
	4.4 Knowledge of environmental education materials and resources		4.7 Knowledge of environmental education materials and resources
	4.5 Technologies that assist learning		4.8 Technologies that assist learning
	4.6 Settings for instruction		4.9 Settings for instruction
	4.7 Curriculum planning		4.10 Curriculum planning
#5 – Foster Learning	5.1 A climate for learning about and exploring the environment	NAAEE Theme 5 Integrated into USEE's Theme #4	4.3 A climate for learning about and exploring the environment
	5.2 An inclusive and collaborative learning environment		4.4 An inclusive and collaborative learning environment
	5.3 Flexible and responsive instruction		4.6 Flexible and responsive instruction
#6 – Assessment and Evaluation	6.1 Learner outcomes	#5 – Assessment and Evaluation	5.1 Learner outcomes
	6.2 Assessment that is part of instruction		5.2 Assessment that is part of instruction
	6.3 Improving instruction		5.3 Improving instruction

Appendix E – Elective Workshops Approved for the North Carolina Department of Environment and Natural Resources (DENR) Environmental Educator Certification Program

A list of updated elective workshops is available on the Office of Environmental Education Certification workshops page, <http://www.ee.enr.state.nc.us/Certification/workshops.htm>

1. Air Quality for Elementary Educators, U.S. Environmental Protection Agency (Donna Rogers, 919-541-5478) <http://www.epa.gov/oar/oaqps/eog/teachert.html>
2. Air Quality for Middle Grade Educators, U.S. Environmental Protection Agency (Donna Rogers, 919-541-5478) <http://www.epa.gov/oar/oaqps/eog/teachert.html>
3. Air Quality for High School Educators, U.S. Environmental Protection Agency (Donna Rogers, 919-541-5478) <http://www.epa.gov/oar/oaqps/eog/teachert.html>
4. Basic NC WILD and Aquatic WILD combination workshop, Division of Conservation Education, NC Wildlife Resources Commission (919-733-7123) http://www.ncwildlife.org/fs_index_08_education.htm
5. Carnivores and Raptors: Preying for Survival, Carnivore Preservation Trust (919-542-4684)
6. Earth/Environmental Science Workshop, Pisgah Forest Institute (PFI staff, 828-884-8229) <http://www.brevard.edu/pfi>
7. Elementary Earth/Environmental Science Workshop, Pisgah Forest Institute (PFI staff, 828-884-8229) <http://www.brevard.edu/pfi>
8. Eco-Time, Duke Energy Corp. (Gene Vaughan, 704-875-5240)
9. EM*Power, Montreat College
10. Enviro-Scope - Grades 3-6 (Sally Dicharry, 706-782-2935)
11. Food, Land and People: DENR Division of Soil and Water Conservation (Cathy Akroyd 919-715-6680) <http://www.foodlandpeople.org/>
12. Growing Science Inquiry, UNC-CH Center for Mathematics and Science Education (Lin Frye, 919-733-7051 ext. 448)
13. Investigating Your Environment, DENR Division of Forest Resources Robin Carter, 919-733-2162 ext. 262) <http://www.dfr.state.nc.us/education/conserveedu.htm>
14. Leopold Education Project (Ed Pembleton, 877-773-2070)
15. People and Our Planet's Resources: Creating a Sustainable Future - Zero Population Growth, Inc. (Sheila Jones, 919-250-1065)

16. Project GLOBE: Global Learning and Observation to Benefit the Environment, UNC-CH (Patricia Bowers, 919-966-5922)
17. SCI LINK Goes to the Water's Edge, N.C. State University SCI LINK Program (Harriett Stubbs, 919-515-9483) <http://www.ncsu.edu/sci-link/>
18. SCI LINK Grandfather Mountain, N.C. State University SCI LINK Program (Harriett Stubbs, 919-515-9483) <http://www.ncsu.edu/sci-link/>
19. SCI LINK Goes to Camp Wannagoma, N.C. State University SCI LINK Program (Harriett Stubbs, 919-515-9483) <http://www.ncsu.edu/sci-link/>
20. SCI LINK Geographic Information Systems and Wetlands Environmental Education, N.C. State University SCI LINK Program (Harriett Stubbs, 919-515-9483) <http://www.ncsu.edu/sci-link/>
21. Spring Mountain Ecology Workshop, NC Museum of Natural Sciences (919-733-7450) <http://www.naturalsciences.org/education/index.html#teachers>
22. Summer Mountain Ecology Workshop, NC Museum of Natural Sciences (919-733-7450) <http://www.naturalsciences.org/education/index.html#teachers>
23. ToxRAP - Elementary School Module, US Environmental Protection Agency (Jan Cortelyou Lee, 919-541-5393)
24. ToxRAP- Middle School Module, US Environmental Protection Agency (Jan Cortelyou Lee, 919-541-5393)
25. Tropical Ecology Institute, NC Museum of Natural Sciences (919-733-7450) <http://www.naturalsciences.org/education/index.html#teachers>
26. Using the Outdoors to Teach Experiential Science (UTOTES), NC Museum of Natural Sciences (919-733-7450) <http://www.naturalsciences.org/>
27. Waste: A Hidden Resource; Keep America Beautiful, (Lois Nixon, KAB, 919-856-6779) <http://www.wakegov.com/directory/kab.htm>
28. Waste In Place (K-6); Keep America Beautiful, (Lois Nixon, KAB, 919-856-6779) <http://www.wakegov.com/directory/kab.htm>

To be added to the list of approved environmental education workshops and courses, programs must fulfill approval requirements, which include the definition of environmental education set forth in the **North Carolina Environmental Education Plan**. Emphasis should be placed on the Plan's stated principles of environmental education and characteristics of environmental understanding. Workshops that present opinions or issue advocacy should ensure a balanced presentation of alternative points of view that promote informed, objective decision-making.

Appendix F – Category I Workshops Approved for the Missouri Environmental Education Association Environmental Educator Certification Program

(MEEA, 2004)

A list of updated elective workshops is available on the Missouri Environmental Education Association Certification Program website <http://www.meea.org/workshops.html>.

The following list contains an inventory of the diversity and frequency of some instructional workshops presented in 2003 that would qualify for Category I Instructional Workshops

A complete listing of Missouri Department of Conservation sponsored Educator Workshops can be found at www.conservation.state.mo.us or by calling 573-751-4115.

January 25-26

Energy for Missouri - Today and Tomorrow

Contact Bryan Hopkins, Missouri Department of Natural Resources, 800/361-4827

February 22

Project Learning Tree for Formal and/or Non-formal Educators

Adair County Extension Center

Contact MDC Conservation Education Consultant Karen Armstrong, 660/785-2420

March 1

Project Learning Tree for Formal and/or Non-formal Educators

Missouri Department of Conservation Office, Hannibal

Contact MDC Conservation Education Consultant Karen Armstrong, 660/785-2420

March 1

Project Learning Tree

Castor River C.A.

Contact MDC Conservation Education Consultant Ben Russell, 573/290-5730

March 1

Project WET

Missouri Department of Conservation Regional Office, Cape Girardeau

Contact MDC Conservation Education Consultant Ben Russell, 573/290-5730

March 15

Project WET

Lone Star Elementary School, Doniphan

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

March 28-29

Earth Day Projects: Project Learning Tree and Project WET

Jerry J. Presley Education Center, near Eminence

Contact MDC Outdoor Skills Education Specialist Jean Mayer, 417/895-6880

March 28-29

Reading Nature to Children

Missouri Department of Conservation Regional Office, West Plains

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

March 29

Traditions of the Harvest – Leopold Education Project

Walter Woods C.A.

Contact MDC Conservation Education Consultant Jeff Cantrell, 417/451-4158

April 11-12

Nature of Math and Science

Missouri Department of Conservation Regional Office, West Plains

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

May 1-3

A Migration Sensation: Missouri Birds

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Steve Juhlin, 573/468-3335

May 2-3

The Project Three – WET, WILD and Learning Tree

Marshfield

Contact MDC Conservation Education Consultant Regina Knauer, 417/895-6880

May 30-31

Missouri Herbs and Wildflowers - Project Learning Tree

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

June 8-11

Forestry Institute for Teachers

Jerry J. Presley Education Center, near Eminence

Contact MDC Forestry Education Coordinator Bruce Palmer 573/751-4115

June 13-14

Pioneers, Prairies and Project Learning Tree

Walter Woods C.A.

Contact MDC Conservation Education Consultant Jeff Cantrell, 417/451-4158

June 17-19

Ecology of Missouri Plants and Animals

Rockwoods Reservation

Contact MDC Conservation Education Consultant David Bruns, 636/458-2236

July 8-9

The Life of Caves

Hannibal – La Grange College

Contact MDC Conservation Education Consultant Karen Armstrong, 660/785-2420

July 11-12

Awesome Amphibians and Radical Reptiles – Project WILD

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

July 15

Aquatics for Field and Classroom – Project WET

Walter Woods C.A.

Contact MDC Conservation Education Consultant Jeff Cantrell, 417/451-4158

July 15-17

Projects WET, WILD and Learning Tree

Powder Valley Conservation Nature Center

Contact MDC Education Program Coordinator Barb Sandhagen, 314/301-1500

July 22-24

Lewis and Clark and the Big River Confluence

Powder Valley Conservation Nature Center

Contact MDC Conservation Education Consultant David Bruns, 636/458-2236

July 23-25 and July 28-August 1

Forest of Learning – Forest Park Voyagers Teachers Academy

Forest Park in St. Louis City

Contact MDC Conservation Education Consultant Liz Lyons, 314/231-3803

July 31 - August 2

The Project Three – WET, WILD and Learning Tree

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Regina Knauer, 417/895-6880

August 2

Projects WILD and Learning Tree

Jerry Litton Agri-Science Learning Center, Chillicothe

Contact MDC Conservation Education Consultant Greg Collier, 660/646-6122

September 5-6

Mapping with Nature - Project WET

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

September 19-20

Monarch Butterflies – Teacher on the Wing - Project WILD

Walter Woods C.A.

Contact MDC Conservation Education Consultant Regina Knauer, 417/895-6880

September 19-20

Out at Night

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

October 3-4

Missouri Mammals – Project WILD

Southwest Missouri State University, Springfield

Contact MDC Conservation Education Consultant Melanie Carden-Jessen, 417/256-7161

October 3-5

Cave Life for Teachers

Jerry J. Presley Education Center, near Eminence

Contact MDC Outdoor Skills Education Specialist Jean Mayer, 417/895-6880

October 16-18

Missouri's Woodland Environments

Jerry J. Presley Education Center, near Eminence

Contact MDC Conservation Education Consultant Steve Juhlin, 573/468-3335

Appendix G – Certification Officer Interview Objectives

Need-Purpose-Vision

1. Certification justification – why is certification needed?
2. Certification program justification – why is a certification program needed?
3. Future goals for the certification program

Organizational

4. Steps needed to acquire program development and implementation funds and establish a certifying body
5. The mission of the certifying body
6. Certification framework sources used in program development
7. Defining core competencies
8. Competency assessment
9. Levels of certification within the program

Program Support

10. Roles or support provided by private companies, organizations, and public agencies during and after program development and implementation
11. Program related legislation

Marketing

12. The program certification incentives
13. Present and future marketing/recruitment tactics used to attract certification participants

Implications, Controversy, Suggestions/Recommendations

14. Program-related controversy
15. Successful experiences/contacts/methods encountered when developing and implementing an environmental education certification program
16. Challenges encountered during certification program development and implementation
17. Suggestions for those other state organizations considering developing an EE certification program in the future

Appendix H – Questionnaire for Program Administrators and Certification Officers

These open-ended questions will be asked of state program coordinators/administrators and certification officers. Question themes are indicated as bold and underlined sections.

1. In return for this information, I can send you a summary report of my thesis when it is completed in 2004. Would you like one? If so, where would you like it sent?
2. The interview consists of approximately 30 open-ended questions. You have the option of remaining anonymous for the purpose of writing my thesis. Would you like to remain anonymous or may I use your name as a source for my thesis?
3. May I tape record your conversation in order to accurately capture your responses?

Need-purpose-vision (both groups contrast)

1. How and why did your state decide to offer a certification program? Development Team
2. What were the initial goals for this program? Development Team
3. Has the goal or mission of the certification program changed during the development of the program?
4. What goals do you have for the future of this certification program? Development Team

Organizational

5. Who administers the certification program...organization or agency? Development Team
6. What steps were taken to secure funding? Staff
7. What steps were taken to establish a managing organization? Staff/ Development Team
8. What is the mission of the managing organization? Staff/ Development Team
9. What existing programs or framework sources were used to develop the certification program (if any)? Staff/ Development Team
10. What process was followed in determining the specific competencies that would be evaluated? Development Team
11. How will the competencies be evaluated? Development Team
12. What training will the participants be expected to participate in to be certified? Everyone
13. Are there multiple levels of certification? Everyone
14. If so, what are they called and what is the purpose for multiple levels?...Utah Everyone
15. If not, was the idea of multiple levels of certification considered? What was the reason for discounting the multiple levels of certification...Kentucky

Support for program

16. Do you have the support of specific agencies, institutions, or organizations taking part in non-formal instruction? (If needed, mention National Park Service, US Forest Service, BLM, US Fish and Wildlife, NAAEE, tourist establishments, State Park employees, Department of Natural Resources, nature centers.) Initially, One time assistance? Staff/ Development Team
17. What type of support did/do they provide? (monetary, voluntary, employing certified participants). Staff/ Development Team
18. What, if any, legislation has been passed pertaining to the program or the need for the program? Staff

Marketing (both groups contrast)

19. Initially, how did you encourage participants to participate in the certification process? Everyone
20. In the future, do you intend to engage in recruitment or marketing techniques to attract people to apply for certification? Staff/ Development Team
21. If so, what types of techniques will you use and where will you advertise? Staff/ Development Team
22. Do you plan to market certification to employers of environmental educators? Staff/ Development Team

Implications, controversy, suggestions/recommendations

23. Has there been any controversy pertaining to the program? Development Team
 24. If yes, from whom? What was the controversy? Development Team
 25. What experiences/contacts/methods did you find especially successful or helpful when developing and implementing your certification program? Development Team
 26. What difficulties or unsuccessful experiences/contacts/methods did you encounter when developing and implementing your certification program? Development Team
 27. What suggestions would you offer other states considering the development of an EE certification program? Development Team
4. Is there anything else you'd like to say about the certification program?
 5. Do you have any questions?
 6. May I contact you again if I need some additional information?

Appendix I – Institutional Review Board Form Completed by State Certification Officers

CONSENT FORM FOR COORDINATORS AND ADMINISTRATORS

Explanation of Procedures: Julie McDonald, Graduate Student at the University of Wisconsin - Stevens Point, is conducting a study of the process of developing environmental education certification programs for non-formal environmental educators. We would appreciate your participation in this study, as it will help us in making recommendations to other organizations or agencies considering developing an environmental education certification program.

As part of this study, we would like you to participate in a personal interview, which will be used to determine the process of developing environmental education certification programs for non-formal environmental educators. Although you will have the opportunity to remain anonymous for the purpose of the study, we would like to cite interview comments in the thesis publication, journal publications and presentations. You will be provided a copy of the interview transcripts for edit and approval.

Risk: We don't believe there is any risk, physical or social, to you by participating in this interview. Interview participants who wish to be identified may be quoted in publications and presentations pertaining to the study.

Safeguards: Participants will be sent transcripts of interviews for review. We will not release any information that is not approved by you.

Freedom to withdraw: If you want to withdraw from the study at any time, you may do so without any penalty. The information obtained from you, up to that point, would be destroyed.

Offer to answer inquiries: Once the study is completed, we would be glad to give you the results. In the meantime, if you have any questions, please ask us or contact:

Julie McDonald
Graduate Student and Principal Researcher
(715) 346-2025
jmcdo092@uwsp.edu

or

Dan Sivek, Ph.D.
Faculty Advisor
(715) 346-2028
dsivek@uwsp.edu

College of Natural Resources
University of Wisconsin - Stevens Point
Stevens Point, WI 54481

Third party: If you have any complaints about your treatment as a participant in this study, please call or write:

Dr. Sandra Holmes, Chair
Institutional Review Board for the Protection of Human Subjects
Department of Psychology
University of Wisconsin - Stevens Point
Stevens Point, WI 54481
(715) 346-3952

Although Dr. Holmes will ask your name, all complaints are kept in confidence.

Please check one of the following:

- ☐ For the purpose of the study, I would like to remain anonymous.
- ☐ For the purpose of the study, I give permission for the researcher to identify me by my name and job title.

I have received a complete explanation of the study and agree to participate.

Print Name _____

Name _____ Date _____

This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects.

Appendix J – USEE Program Participant Interview Questions

Utah Society for Environmental Education Environmental Educator Certification Program Participant Questionnaire

1. What is your gender?
☐ Male ☐ Female
2. What is your age?
_____ years
3. Highest level of education: *Check one.*
☐ high school
☐ Associate degree
☐ Vocational/Technical school training
☐ Bachelor's degree
☐ Master's degree
☐ Doctoral degree
4. What was your major/specialization in your highest level of education?
_____ major
5. How long have you worked in the environmental education (EE) field?
☐ _____ years
☐ I have not worked in the EE field before.
6. What previous training beyond your formal education have you had in the past to prepare you for the environmental education field?

7. What job (or type of job) do you presently have? *Check one.*
☐ Director
☐ Manager
☐ Non-formal educator
☐ Formal educator Grade? _____ Subject? _____
If you are a formal educator, go to Question 10
☐ Student
☐ Other _____
8. What type of facility are you affiliated with? *Check one.*
☐ non-profit organization
☐ federal, state, or local government entity
☐ private company
☐ environmental / nature center
☐ residential environmental education center
☐ zoo or aquarium

☐ Other _____

9. Approximately how many people are served annually by your facility?

_____ number of people

10. What type of support, incentive, or reimbursement does your employer provide you to complete this environmental education (EE) certification program? *Check all that apply*

☐ None

☐ Release time

☐ Compensation (comp) time

☐ Program cost reimbursement

☐ Travel cost reimbursement

☐ Pay raise

☐ Other _____

11. To what extent do you agree or disagree with this statement: "My employer believes that EE certification is important to the organization"? *Check one.*

☐ Strongly Agree

☐ Somewhat Agree

☐ Neither Agree nor Disagree

☐ Somewhat Disagree

☐ Strongly Disagree

What evidence tells you that your organization does or does not value environmental education certification?

12. Which of the following was most influential in convincing you to pursue EE certification? *Check one.*

☐ Utah Society for Environmental Education (USEE) literature

☐ USEE staff or USEE Program Advisory Council (PAC) board member

☐ Friend

☐ Other EE literature (*please describe*) _____

☐ Website Which one? _____

☐ North American Association for Environmental Education (NAAEE)

☐ Place of employment or school

☐ Other _____

13. Why did you choose to become certified?

14. What factors influenced your decision to enter this certification program?

15. To what extent do you agree with this statement "Environmental education certification will better improve the quality of instruction I provide"?

☐ Strongly agree

☐ Somewhat agree

☐ Neither agree nor disagree

☐ Somewhat disagree

☐ Strongly disagree

16. Where do you see yourself professionally in 3 yrs?

17. In what ways do you believe that certification will help you achieve your present and future professional goals?

18. As a result of participation in this certification program are you pursuing or do you plan to pursue additional education or training in EE or an EE-related field?

☐ Yes ☐ No

If yes, what type of training? _____

19. Would you be interested in becoming certified at higher levels?

☐ Yes ☐ No

Why or why not?

20. What do you feel are the strengths of Utah's EE certification program?

21. How do you feel this certification program can be improved?

Thank you for taking time to respond to these questions. Please return the questionnaire and the attached Institutional Review Board release form in the enclosed envelope. If you have any questions or comments about any of the questions asked throughout the survey or the survey itself, please write them below.

Appendix K – Validity Panel Questionnaire Evaluation Form

Validity Panel Evaluation Form

Questionnaire for EE Certification Program Participants

Thank you for agreeing to evaluate my research questionnaire. This questionnaire will be distributed via mail to USEE environmental education certification program participants as soon as possible. The participants will complete the questionnaire and return the questionnaire in a self-addressed stamped envelope that will be provided with the packet. Also in the packet will be one of 3 letters. One letter is anticipatory - letting the participants know that the questionnaire will be arriving soon. The second letter will accompany the questionnaire and the third letter will be sent to participants from whom I have not received a completed questionnaire.

I would like you to judge if each of each questions effectively addresses the objectives. The questionnaire addresses the thesis subproblem #4 "Create a questionnaire instrument to obtain data about a program participant's demographics, career background, and motivations for pursuing certification."

Below you will see the 5 objectives for the questionnaire (bolded) followed by the interview questionnaire theme (underlined) that correlates to the questionnaire objective. For comparative purposes, let me know if you would like me to e-mail you a copy of the interview questions asked of program administrators.

Please answer the following questions pertaining to the questionnaire.

You may make corrections directly to the questionnaire electronic file and this comment file. Then, please-mail me back the questionnaire and your comments relating to the questions below. Throughout the questionnaire, feel free to add or remove any questions for greater clarity and usability.

Evaluate the importance of the value of each research question and indicate if you see any additional questions that you think should be asked or if any of the questions asked should be removed.

1. What is your opinion of the overall length?
2. Did you find the questionnaire easy to follow?
3. Is the purpose of the questionnaire effectively answered by the objectives?
4. Comments?
5. Are there other areas that you think need to be addressed?

Objective 1: Demographics—Questions pertaining to demographics of the participant

Correlates to Marketing objective in interview questions

Questions: 1-9 12, 16

Objective 2: Support for the program – Questions pertaining to demographics of the participant and organization the person represents

Correlates to Support for program objective in interviews

Questions: 10-11

Objective 3: Motivation for certification – Questions pertaining to why the participant is in the program

Correlates to Need-purpose-vision objective in interviews

Questions: 13-14, 18

Objective 4: Use of program. – Questions pertaining to how the program is used or will be used

Questions: 17, 19, 15

Objective 5: Questions pertaining to the Certification material. – Questions pertaining to comments on the EE certification program.

Correlates to Implications, controversy, suggestions/recommendations objective in interviews

Questions: 20-21

Appendix L – Program Participant Survey Objectives and Questions

Objectives:

- Demographics. Who is the participant?
- Motivation to become certified. Why?
- How will you use this program in your job/future job? How?
- How is the certification program perceived in the field? What?

Objective 1: Demographics—WHO QUESTION

Correlates to Marketing objective in interview

1. Gender
2. Age Group
3. If you are a formal educator, skip go to Question ____
4. Facility info, non-profit, public, school
5. Type of facility, zoo, aquarium, residential EE center, nonresidential Environmental/Nature Center,
6. Number of people served annually by facility
7. How long in the field?
8. How did you become aware of this state environmental educator certification program?
9. What job (or type of job) do you presently have (manager, director, front line educator)?
10. Where do you see yourself in 3 yrs (in 5 yrs)?
11. What have you had for training/preparation for this field?
12. Years of experience in environmental Ed. (Fill in blank)
13. Highest level of education: H.S., Associate, Bach. Masters, Vocational/Technical, PhD, (Check Box and have blank for Major / Specialization
14. What type of support did your employer or others provide? Organizations perceptions of the certification program (do they provide release time from work to attend workshops, do they reimburse for travel or cost of the program, compensation time?)

Objective 2: Motivation for certification. -- WHY QUESTION

Correlates to Need-purpose-vision objective in certification officer interviews

1. Why did you decide to become certified? Make this one better to differentiate from #2
2. What factors influenced your decision to enter this certification program?
3. Has participation in this certification program encouraged you to pursue continued education or training in EE or an EE-related field (Project WET, WILD, and PLT?) Are you considering enrolling in additional continuing education opportunities/programs as a result of participating in this certification program?

Objective 3: Use of program. – HOW QUESTION

1. Where do you see certification fitting into achieving your present and future goals?
2. Would you be interested in becoming certified at higher levels, and why?

Objective 4: Questions pertaining to the Certification material. – WHAT QUESTION

Correlates to Implications, controversy, suggestions/recommendations objective in interviews

1. What do you feel are the strengths of this certification program?
2. How do you feel this certification program can be improved?
3. Employer support re: reimbursement, comp time, etc.?

Appendix M – Initial Letter E-Mailed to Program Participants

University of Wisconsin – Stevens Point

College of Natural Resources

Stevens Point, WI 54481

715-346-4617

November 24, 2003

Participant
e-mail address
phone number

Dear Participant,

I am writing to ask your help in a study of the creation of state environmental education certification programs. Your experiences with the Utah Society for Environmental Education's (USEE) Environmental Educator Certification Program are extremely valuable to this study.

Within the next few days, I would like to call you to schedule a 20-minute interview with you based on your experience in the Utah Society for Environmental Education's (USEE) Environmental Educator Certification Program. I look forward to speaking with you.

I am writing in advance because we have found many people like to know ahead of time that they will be contacted. The responses you provide will be an important part of my research on the creation of state environmental education certification programs. The information gathered by the interview will assist Utah and other states as they develop and improve their environmental education certification programs.

Your responses will be completely confidential and will only be used as participant summaries. Your name will not be retained on any mailing lists. The interview is voluntary and participation in the study will not affect your certification program completion process. However, you can help us very much by taking 20 minutes to share your experiences and opinions about the USEE certification program.

I will be trying to call you at the phone number listed above. If you would prefer I contact you at a specific time, at another number, or by another method, please e-mail me back with that information.

Thank you for your time and consideration.

Sincerely,

Julie McDonald
Graduate Student
UWSP College of Natural Resources
Stevens Point, WI 54481
Julie.A.Mcdonald@uwsp.edu
(715) 342-0525

Appendix N – Letter Accompanying Participant Institutional Review Board Form

University of Wisconsin – Stevens Point

College of Natural Resources

Stevens Point, WI 54481

715-346-4617

December 8, 2003

Participant
Organization
Address
City, State zip code

Dear Participant,

I wanted to thank you for taking time out of your schedule to discuss your experiences with the Utah Society for Environmental Education's (USEE) certification program. Your insights and experiences with USEE's Environmental Educator Certification Program are extremely valuable to this study.

As a review, your responses are completely confidential and your name will not be retained on any mailing lists. Information gathered by the questionnaire will assist Utah and other states as they develop and improve their environmental education (EE) certification programs. By understanding participant opinions, program strengths and weaknesses we can better guide other states into the development of other EE certification programs.

Please complete and return the enclosed Institutional Review Board release form in the envelope provided. I have provided two copies of the release form so that you may retain one copy for your records. If you have questions or comments regarding this study, I would be happy to talk with you. You can contact me at the phone number, address, or e-mail address below.

Thank you very much for helping with this important study.

Sincerely,

Julie McDonald
Graduate Student
UWSP College of Natural Resources
Stevens Point, WI 54481
Julie.A.Mcdonald@uwsp.edu
(715) 342-0525

P.S. I have enclosed a small token of appreciation as a way of saying thanks for your help.

Enclosed: (2) Institutional Review Board release forms (one copy for your records)
Self-addressed stamped envelope
Letter

Appendix O – IRB Form Completed By USEE Certification Program Participants

CONSENT FORM FOR PROGRAM PARTICIPANTS

Explanation of Procedures: Julie McDonald, Graduate Student at the University of Wisconsin - Stevens Point, is conducting a study of the process of developing environmental education certification programs for non-formal environmental educators. We would appreciate your participation in this study, as it will help us in making recommendations to other organizations or agencies considering developing an environmental education certification program.

As part of this study, we would like you to participate in an interview questionnaire, which will be used to record opinions and suggestions for a competency-based certification program for environmental educators administered through the Utah Society for Environmental Education. Results from this study may be used in the thesis publication, journal publications and presentations.

Risk: We don't believe there is any risk to you by participating in this interview. Participants' identity will remain confidential.

Safeguards: Coded numbers will identify any specific comments used in publications or presentations.

Freedom to withdraw: If you want to withdraw from the study at any time, you may do so without any penalty. The information obtained from you, up to that point, would be destroyed.

Offer to answer inquiries: If you have any questions, please ask us or contact the following persons at the College of Natural Resources, University of Wisconsin-Stevens Point, Stevens Point, Wisconsin 54481:

Julie McDonald
Graduate Student and Principal Researcher
(715) 346-2025
jmcdo092@uwsp.edu

or Dan Sivek, Ph.D.
Faculty Advisor
(715) 346-2028
dsivek@uwsp.edu

Third party: If you have any complaints about your treatment as a participant in this study, please call or write:

Dr. Sandra Holmes, Chair
Institutional Review Board for the Protection of Human Subjects
Department of Psychology, University of Wisconsin - Stevens Point
Stevens Point, WI 54481
(715) 346-3952

Although Dr. Holmes will ask your name, all complaints are kept in confidence.

I have received a complete explanation of the study and agree to participate.

Print Name _____

Signature _____ Date _____

This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects.

Appendix P – Coding Categories Used to Index Data

General Category	Code Used	Colors Combinations Used	Subproblem / Interview survey objective addressed
Data pertaining to the creation of a state program timeline	Timeline	Black with white lettering	3.1
Needs - Purpose – Vision	N/P/V	red	
N/P/V: Why offer a certification program	N/P/V-why offer	red-yellow	
N/P/V: Initial goals for the program	N/P/V-init goals	red-green	
N/P/V: Have the goals changed	N/P/V-goal change	red-light blue	
N/P/V: Future goals for the program	N/P/V-future goals	red-pink	
Organizational	O	navy blue	
O: Program administrators (organization/agency)	O/who admin	navy blue/yellow	
O: Steps taken to acquire funding	O/funding	navy blue/green	
O: Steps taken to establish a managing organization	O/estab managing org	navy blue/light blue	
O: Mission of managing organization	O/mission managing org	navy blue/pink	
O: Framework sources used to develop the program	O/framework sources	navy blue/medium blue	
O: Process followed to determine competencies	O/what competencies	navy blue/red	
O: How will the competencies be evaluated	O/how eval	navy blue/navy blue	
O: What training will the participants participate in	O/training	navy blue/teal	
O: Multiple certification levels	O/mult levlis	navy blue/grey	
O/mult levlis: Purpose for the multiple levels	O/mult levlis/why	navy blue/grey/yellow	
O/mult levlis: Reasons for using only one level of certification	O/mult levlis/why not	navy blue/grey/green	
Support for the Program	S	burgundy	
S: What agencies, institutions and organizations support the program	S/agencies org	burgundy/yellow	
S: What type of support do you receive	S/what type	burgundy/green	
S: What type of legislative support have you received	S/legislation	burgundy/light blue	
Marketing	M	teal	
M: How did you initially encourage participants to go through program	M/initial encourage	teal/yellow	
M: How will future participants be encouraged to go through program	M/future recruit	teal/green	
M: What types of program marketing techniques will be used	M/advertise	teal/light blue	
M/advertise: How will the marketing techniques be used	M/advertise/how	teal/light blue/pink	
M/advertise: Where will the marketing techniques be used	M/advertise/where	teal/light blue/med. blue	
M/advertise: Will EE employers be targeted	M/advertise/who-employers	teal/light blue/red	
Implications, Controversy, Suggestions/Recommendations	I/C/S	grey	
I/C/S: Controversy related responses	I/C/S-Controv	grey/yellow	
I/C/S-Controv: From whom did the controversies come from	I/C/S-Controv-whom	grey/yellow/yellow	
I/C/S-Controv: What was the controversy	I/C/S-Controv-what	grey/yellow/green	
I/C/S: Successful or helpful related responses	I/C/S-success	grey/green	
I/C/S-success: Successful or helpful experiences encountered	I/C/S-success-exp	grey/green/yellow	
I/C/S-success: Successful or helpful contacts encountered	I/C/S-success-contacts	grey/green/green	
I/C/S-success: Successful or helpful methods encountered	I/C/S-success-methods	grey/green/blue	
I/C/S: Difficulties or unsuccessful related responses	I/C/S-difficult	grey/light blue	
I/C/S-difficult: Unsuccessful or difficult experiences encountered	I/C/S-difficult-exp	gray/light blue/yellow	
I/C/S-difficult: Unsuccessful or difficult contacts encountered	I/C/S-difficult-contacts	grey/light blue/green	
I/C/S-difficult: Unsuccessful or difficult methods encountered	I/C/S-difficult-methods	grey/light blue/light blue	
I/C/S: Suggestions for other states developing programs	I/C/S-suggestions	grey/pink	

Appendix Q – Contact Information for Certification Officers

Kentucky:

Jane Eller

Executive Director
Kentucky Environmental Council (KEEC)
2107 Capitol Plaza Tower
Frankfort, KY 40601
502-564-5937
jeller@kde.state.ky.us

Dr. Yvonne Meichtry

College of Education
BEP 251, Nunn Drive
Northern Kentucky University
Highland Heights, KY 41099
859-572-6380
meichtry@nku.edu

Dr. Joe Baust

Chairperson, Kentucky University Partnership for Environmental Education (KUPEE)
Director, Center for Environmental Education
Murray State University
321 Alexander Hall
Murray, KY 42071
270-762-2595
joe.baust@coe.murraystate.edu

Utah:

Tim Brown

Executive Director
Center for Green Space Design
801-483-2100 ext. 4
tim@greenspacedesign.org

Heather Scheel

Deputy Director
USEE
350 South 400 East, Ste G4
Salt Lake City, UT 84111
801-328-1549
hsheel@usee.org

Eric Chandler

USEE
350 S 400 E, G4
Salt Lake City, UT 84111
Ph: (801) 328-1549

Jennifer Tucker Visitation

Executive Director
USEE
350 S 400 E, G4
Salt Lake City, UT 84111
Ph: (801) 328-1549
jenv@usee.org

Adrienne Cachelin, Ph. D.

Director of Education
Red Butte Gardens and Arboretum
USEE Board President, Past-chairperson of USEE PAC
Instructor of EE at University of Utah
285 Connor St, Bldg 66
Salt Lake City, UT 84113
801-581-4760
Adrienne.cachelin@m.cc.utah.edu

Appendix R – Certification Officer Questionnaire Response Summaries

Data were taken from interview transcripts conducted with the following persons on the following dates

Kentucky:

JE – Jane Eller, Executive Director of KEEC (August 4 and 9, 2003, and May 23, 2004)

YM – Dr. Yvonne Meichtry, Board member KEEC, KUPEE member, Co-developer of certification courses (August 4, 2003)

JB – Dr. Joe Baust, Chairperson of KUPEE, President-elect of NAAEE, Co-developer of certification courses (March 30, 2004)

Utah:

TB – Tim Brown, Past Executive Director of USEE (April 11, 2003)

EC – Eric Chandler, Past Executive Director of USEE (April 11, 2003)

HS – Heather Scheel, Deputy Director of USEE (April 11, 2003)

AC – Dr. Adrienne Cachelin, Ph. D., USEE Board Chairperson, Past Chairperson of USEE PAC (April 11, 2003 and May 23, 2003)

JV – Jennifer Visitacion, USEE Executive Director, (May 24, 2004)

Need Purpose Vision

1. How and why did your state decide to offer a certification program?

a. How

i. KY

1. JE (KY) – “KEEC (*board appointed by the governor*) was discussing the lack of validity, Jane spoke to Libby Wilcox, and Libby spoke to KEEC.”
2. JB (KY) – “The certification program is connected to the Kentucky Environmental Education Master Plan. The master plan was a function of many stakeholders coming together, formal and non-formal educators, and identifying some things that were needed in Environmental Education for the commonwealth of Kentucky. The function of that was that one standard talked about the certification of teachers and it was felt that not only, we not only needed to approach Environmental Education on the basis of teachers but for non-formal persons, sort of in tandem, that is a certification program and an endorsement or teachers certification program.”
3. JB (KY) – “The Kentucky Environmental Education Council under the, that works in the state government office responsible for Environmental Education devised the plan with stake holders from not only academia but actually fewer of them in fact a whole lot fewer of them than persons that came from agencies and organizations that represented non-formal educators.”
4. JB (KY) – “Jane Eller, the executive director, then brought together people to look at what they felt were necessary for non-formal educators to be better able to provide quality Environmental Education that was based on

scientific fact actually that could be the companion to the teachers certification piece.”

5. JB (KY) – “Let’s see here, these people met for well over a year. I cannot give you the exact numbers as far as how long I took to do this.”
 6. JB (KY) – “That’s the way we saw that falling out and that’s the way it was developed. Actually the stakeholders suggested formal and informal assessment strategies based upon the standards and what they considered were necessary for what they considered certification.”
- ii. UT
1. TB (UT) – “Bora and I had a great conversation driving up to the retreat that she facilitated. And there’s the EETAP grant and we were trying to figure what would we go for the EETAP grant and it made sense that if we were developing these Guidelines for Environmental Education Providers that the next step would put some teeth to those Guidelines, or what would complement the Guidelines and that would be actually be a certification program based on those Guidelines.”

b. Why

- i. People do not know what EE is
 1. JE (KY) – “People didn’t know what environmental education was.”
 2. JE (KY) – “...they called us tree-huggers.”
- ii. Lack of clear vision and definition prevented the field from receiving money.
 1. AC (UT) – “...money for EE got shunted somewhere else at the last minute, that was sort of public funds and it seemed all about not having a clear definition and not having a clear vision for what the field is so the certification really helps.”
- iii. EE field lacked legitimacy
 1. JE (KY) – “Well, I think it sort of started with the ‘we don’t get no respect’ feeling”
 2. JE (KY) – “...and we were looking for validity.”
 3. EC (UT) – “...we are literally trying to build a profession from the ground.”
 4. TB (UT) – “...to provide legitimacy and to improve the reputation.”
 5. HS (UT) - (*It brought*)”Legitimacy.”
 6. TB (UT) - (*goal*) “USEE PAC wanted us to legitimize EE.”
 7. AC (UT) - (*goal*) “...certificating the field a little more legitimacy.”
- iv. Each teaching moment must somehow contribute to students passing the test
 1. JE (KY) – “We’ve got to get all of our kids passing the test at the proficient level.”
 2. JE (KY) – “Schools feel that they don’t have to time to waste on having somebody come in that doesn’t know what they’re doing.”
 3. JB (KY) – “A lot of these non-formals work with schools, a lot of school systems do not want to work with people that do not understand the complexities of ‘Leave No Child Behind.’”
 4. JB (KY) – “These persons are increasingly becoming unwelcome because they don’t or are not able to make that connection. EE really has the ability

to make that connection. It's just that they didn't have the skills in order to be able to do that."

- v. Non-formal educators lack the training to efficiently contribute
 1. JE (KY) – "... not because they didn't have the best intentions but because they didn't have any training."
 2. JE (KY) – "We really felt that these non-formal folks needed to know about KERA."
 3. JB (KY) – "The certificate program in Kentucky is not for everyone, because there are some people that are just doing a very small amount of Environmental Education and they don't care."
- vi. Define who an environmental educator is
 1. TB (UT) – "...define who is an environmental educator and who is not."
 2. AC (UT) – "...they are doing environmental ed, know what environmental ed is."
 3. TB (UT) – (*goal*) "...put some definitions or parameters on who was an environmental educator because that was something we struggled with in this state and they could call themselves an environmental educator regardless of their experience, training or schooling."
 4. AC (UT) – (*goal*) "...and a little bit more definition."
- vii. Provide "teeth" to the Guidelines.
 1. TB (UT) – "If we were developing these Guidelines for Environmental Education Providers that the next step would put some teeth to those Guidelines, or what would complement the Guidelines and that would be actually be a certification program based on those Guidelines."

2. What were the initial goals for this program?

a. Goals for the program itself

- i. Implement an achievable program
 1. TB (UT) – "...not have standards that were so hard to achieve or so high that somebody out of school or somebody in their first EE job couldn't come close or couldn't humor themselves applying for certification."
 2. EC (UT) – "Something that people strive to achieve."
- ii. Certify as many people as possible
 1. JE (KY) – "Because the goal is to certify as many as you can."
 2. TB (UT) – "Goals for the program itself would be that at some point it has 100 environmental educators certified and after that there's 150 and then 200, so that it's also growing and it builds the EE community because it requires people to participate within the community attending conferences, being members of USEE or NAAEE, volunteering within the field, serving as mentors or on the USEE PAC Leadership Team or as a certification committee person. So those are some goals that are just certification programs."
 3. AC (UT) – (*future goal*) "...more and more people would buy into it and get certified."

- iii. Produce an inclusive program.
 - 1. JB (KY) – “The certificate program is a program that is supposed to be empowering as opposed to excluding.”
 - 2. TB (UT) – “...make this a very inclusive process.”
 - 3. EC (UT) – “...inclusive program all around the state.”
 - iv. Identify what was needed to train non-formal educators
 - 1. JB (KY) – “Get the stakeholders together and look at NAAEE standards and look at what was needed to train non-formal educators with regard to our commonwealth as well as the national standards.”
 - v. Nurture the program and help other states
 - 1. JB (KY) – “To nurture these programs and that those programs that are successful should clone themselves in other states as sort of giving them direction.”
 - 2. JB (KY) – “And at the same time there are certain things that we can help other states do without having to reinvent the wheel. And at the same time look at the bottom line being having competent and more skillful professionals in Environmental Education.”
- b. Program by-products goals
- i. Encourage cooperation between formal and non-formal educators through information exchange.
 - 1. JE (KY) – “We had been doing some workshops for non-formal environmental educators in cooperation with extension and we were surprised at how little they knew about KERA, which is the Kentucky Education Reform Act. KERA was the law that threw our old education system out and started a new one. It has been in place for like 10 years and yet a lot of these folks didn’t know about it. We really felt that these non-formal folks needed to know about KERA.”
 - 2. JE (KY) – “We wanted the non-formals to know what the teachers were doing and we wanted the teachers to know what the non-formals were doing. We wanted them to work together more effectively.”
 - 3. JE (KY) – “We really wanted you know the situation where the teacher who has never been trained how to teach about the environment calls up a non-formal educator who doesn’t know anything about instructional strategies and says ‘come into my classroom and do something environmental’ and they come in and they have a one hour dog and pony show that they do no matter what grade level they are in or what the topic is. We wanted that to stop.”
 - 4. JE (KY) – “The only way we could figure out how to do that was to train everybody. So that everybody knew what environmental education really was and everyone had some level of environmental literacy and everybody knew about some instructional strategies. So if everybody knew, then they could work together more effectively.”
 - ii. Recognized as a useful program
 - 1. EC (UT) – “...recognized as a useful program.”

- iii. Train environmental education professionals
 - 1. JB (KY) – “Initial goal was to get the stakeholders together and look at NAAEE standards and look at what was needed to train non-formals educators with regard to our commonwealth as well as the national standards.”
 - 2. EC (UT) – “Understanding their (*educators*) role within a larger context of EE....”
 - 3. TB (UT) – “...professional responsibilities of environmental educators.”
 - 4. AC (UT) – “I know Tim has been feeling that you (*educators*) should know who the founders of the program are and you should know what has happened in your state.”
- iv. Improve the field of EE
 - 1. JB (KY) – “The future goals are to provide those persons interested in working with others throughout the commonwealth in non-formal settings with the tools to do a better job than they have in the past that will also permit them to be in compliance with and understand the national standards for Environmental Education.”
 - 2. TB (UT) – “...by-products are just improving the field itself.”
- v. Encourage continual learning
 - 1. EC (UT) – “The ideal behind what we were trying to develop was to continually strive for lifelong learning 1) so that someone who gets certified right out of school or when they first enter the field doesn’t feel complacent that ‘Oh I’m Done’ that they still have something to strive for and also to recognize those people who do have that experience.”
- vi. Integrate certification into job descriptions
 - 1. AC (UT) – “Or maybe a goal for the program would be to have certification integrated into job bulletins or something like that.”
 - 2. EC (UT) – (*Future goal*) “All we can do is provide the service and hope that people see the benefit of somebody who is certified versus somebody who is not certified and that we have already had entities and organizations start to work towards that, they have started to say ‘certified preferred’ and we haven’t even launched the program yet.”

Organizational

3. **Has the goal or mission of the certification program changed during the development of the program?**
 - a. JE (KY) – “No.”
 - b. JB (KY) – “Changed? Well, I think it’s a dynamic program, in that nothing is static. Anything that has value if you look at an evaluation process, formative and summative evaluation, formatively speaking it has to change because it was developed in conjunction with the national standards and at the same time what was perceived as a need in the commonwealth to meet the needs of the formal educators.”
 - c. EC (UT) – “I don’t think this has changed.”
 - d. HS (UT) – “Not really, a lot has changed but the overall-reaching goal has not.”
 - e. AC (UT) – “I don’t think so.”

4. What goals do you have for the future of this certification program?

a. University partnerships

- i. JE (KY) – "...we want universities to be offering it. We want to have as many people trained as possible."
- ii. JE (KY) – "We want to get universities to start participating with us."
- iii. EC (UT) – "...possibly built into some of the university programs so that somebody graduating with a degree in environmental studies, cause there are no EE degrees (programs) in Utah, would have the option or the possibility of applying and being accepted. But it wouldn't guarantee them."

b. Initiate a plan or procedure change to get everyone going in the same direction

- i. JE (KY) – "We are trying in Kentucky to do systemic change. No more of this 'a little program here, a little program there.' We want everybody going in the same direction."
- ii. JE (KY) – "That's our goal; to all go in the same direction."

c. Possible Income for USEE

- i. AC (UT) – "...then this can be a worthwhile source of income for USEE and enable them to stop chasing their tail in terms of grants and take on programs that maybe they really don't need to take on except that there is financial incentive."
- ii. AC (UT) – "There needs to be a way for them to support themselves financially."

5. Who administers the certification program...organization or agency?

a. KY

- i. JE (KY) – "That's under the Logistics Committee. The Logistics Committee said there should be an Oversight Committee made up of people on the task force, members of KUPEE, business and industry, the Sierra Club, all those folks - anyone that has a stake in environmental education, and that is the certifying body. They will sort of be the ombudsmen, too. But they still have to be formed. They have outlined who should be on it and what it should do."
- ii. JE (KY) - (*administrative duties of program*) "We're still working on that. Maybe KAEE. That's part of the 3-K thing is that we are trying to divide up."
- iii. JB (KY) – "Kentucky Environmental Education Council."

b. UT

- i. EC (UT) – "Administers: we have both a governing body and an administration body. The administration body will be USEE. We will be the ones to collect the applications, make sure that they are complete, keep the files, and make sure dues are paid, etc., etc. The governing body is going to be the USEE Program Advisory Council (*PAC*) - individuals from all different agencies and organizations involved with EE from around the state. They will have a

committee selected from that group. So basically it is going to be a self-governing group. Because we don't have the ability to knight somebody and say you're in or you're out. The Utah EE community as a whole, which is represented as USEE PAC will."

- ii. AC (UT) – "Well, it's USEE PAC, which is that sort of loose group that met when you were here and USEE acts as the kind of secretary of that organization."

6. What steps were taken to secure funding?

a. KY

- i. JE (KY) – "So in 2002 there was a bill that said that we would put a half-cent tax on every soft drink cup sold in Kentucky or every soft drink container. It would generate, are you ready for this, 30 million dollars a year. And environmental education, or our council, would get a million and a half of that money. But when it actually got to the legislature, or the Senate, which is dominated by republicans, felt that that was a tax and they didn't want a tax. The industry people felt that they shouldn't be taxed for a societal problem. So they fought it and they won but they compromised with us and said what if we sell a bond issue instead. So they could have said 'no money,' but they said 'how about a bond issue.' So that's what this \$600,000 the universities will get in 2004. You sell a bond issue and we get the interest from it up to a million dollars."
- ii. JB (KY) – "Ms. Jane Eller, the Executive Director of the Kentucky Environmental Education Council, procured money through state government for this specific project. I think, she has, I mean this has been something on her mind for a while, but you know it was also part of the Master Plan. It becomes part of the Master Plan for EE as per what was developed by many stakeholders in this state for EE, for the commonwealth and was submitted and approved by the legislature. So, Ms. Eller was responsible for working within her cabinet with her oversight person in the cabinet she belongs. I think she came up with \$30,000 for the first class."
- iii. JE (KY) 5/23/04 – "We have, we wrote a proposal to EPA, I wrote it on behalf of KAEE which would give them money to send KAEE members through the next certification class but also to hire someone to do an evaluation of our certification program. We really hope we get that money because a majority of it, it's like a \$22,000 grant, and maybe \$7,000 of it is for KAEE members to go through and the other \$14,000 is to do this evaluation, and I think the evaluation would be very good for us and very good for you, and very good for Texas, and very good for everybody because it would be an outside person who would say ok I've interviewed people and we have them interviewing the participants and their supervisors and people who've not gone through the program and just to kind of see what we should be doing differently."
- iv. JE (KY) 5/23/04 – "Get a lot of people together. Get buy in early. Get money first."
- v. JE (KY) 5/23/04 – "State government itself is a challenge right now because of all the changes. They can't decide where to put us. Whether we should stay in

education or go over to natural resources or even exist. There's one bill right now that eliminates all agencies essentially eliminates all agencies under five people. So if you have less than five people they will review you to see if you should exist."

- vi. JE (KY) 5/23/04 - Because if the agency weren't here I don't know who would pick this up. So depending on whether that passes, we don't have a budget right now in the state. They can't agree on a budget. This is the second year in a row they've not been able to agree on a budget.
- vii. JB (KY) - "We have a network of state universities - all of the state universities in the state of Kentucky are part of the Kentucky University Partnership for Environmental Education. Which I chair, and we have had federal money to institute this. Which is also the institution of the Master Plan for Environmental Education, and we're waiting state monies for this kind of thing but we tried to kick it off sooner. [*Now, is that the tax, or the bonds? Was that the sale of the bonds or was that something else?*] JB: P 18/para 197 Yeah, that's the bonds that Jane's talking about but you see we haven't received one cent yet. So what money we've done comes from Rep. Whitfield, my first district representative from Congress and Senator Jim B who funded a large grant, about a third of which or so, was used to fund the centers across the state."
- viii. JB (KY) - "That I'm aware of, no (*grants that supplemented funding.*)"

b. UT

- i. EC (UT) - "And USEE would not have been able to tackle certification without a grant. USEE does not have the means or capabilities to have attempted something like this without the seed to get us started."
- ii. TB (UT) - "Unlike Kentucky, we don't have the state support. This entire effort has been volunteer and the little EETAP funding."
- iii. TB (UT) - "Just wrote an EETAP grant to start it and then I think that there has been a great effort to keep volunteers invested and the Development Team's run by volunteers, really."
- iv. HS (UT) - "We had to match the grant 100% by in-kind powers and we have probably tripled that at this point and we expect it's going to keep going and we're hoping that as far as covering administrative costs after the development is done that it will support itself through fees. I think USEE will always have to cover a little bit."
- v. EC (UT) - "For the long-term it's going to be run through volunteers, it's going to be run through the USEE PAC, which are volunteers that are not paid through USEE."
- vi. TB (UT) - "...EPA grant (*to fund the UT Guideline development.*)"
- vii. AC (UT) - "We have no secure funding, so I guess no steps were taken. I mean they went to...there was an EPA grant that kicked things off. So it just seems to be with every step of the process trying to get more money, but, as far as I know there's not a long-range financial plan for this."

7. What steps were taken to establish a managing organization?

a. KY

- i. JE (KY) – “One of the things that we’ve really tried to do over the last 10 years is to work collaboratively... collaboratively but really try to give people different roles to play. You know, I could have gone to the legislature. There were many opportunities that I had to say, ‘just give me the money.’ Our agency will use this money to do this, this and this. But it didn’t seem to us to be the appropriate thing. The appropriate thing to do was to have a lot of entities involved all over the state. Like our master plan, we could have gotten five experts together and read the master plan, but instead we got 200 people together. And worked until we had a plan and it was a consensus document. We never voted up or down on anything, we just kept working together until we had a consensus. Everybody from the coal industry to the Sierra Club had to agree and so we think we’re kind of good at it now.”
- ii. JE (KY) – “Well, we met a lot.”
- iii. JB (KY) – “Well, what she did was, she used KEEC because...their role is to improve EE in the commonwealth. Now, as a result of that, she enlisted several organizations that were constructed from stakeholders, which I previously talked about. She also developed the instructors that brought this all together as far as trying to actuate what the other stakeholders have said and be sure that the instruction is in line with the national standards. And then finally she put into place an ombudsmen organization that was for grievances related to licensure or the certificate itself. So, if there were any questions or any problems, improprieties, or concerns then they would go to the grievance organization.”
- iv. JB (KY) – “Well, no (*managing body not the task force*). The task is the one who provided all the, all of the concepts about what the non-formal educators needed based on the national standards. And they were passed along to the instructors, i.e. Wilson, Meichtry, Baust, Eller.”

b. UT

- i. HS (UT) – “USEE has been around since the 80’s with the Forest Service. They started an environmental education office, long story, but it’s been around.”
- ii. TB (UT) – “There’s going to be a certification committee made up of USEE PAC people and they’re the ones that will give the final yea or nay on who’s certified.”
- iii. HS (UT) - (*administration part*) “Well, that’s USEE and we’ve been around since the (*19*) 80’s.”
- iv. HS (UT) – “Nothing new was created. We are using whatever existing infrastructures were already in place.”
- v. EC (UT) – “And it wasn’t put into the care of USEE. We decided that as the statewide capacity-building organization in Utah, we took that on as our responsibility.”
- vi. TB (UT) – “And we made that decision that the USEE PAC was the governing body and that USEE is the Administrator.”

8. What is the mission

- a. JB (KY) – “The mission (*of KEEC*) is to prepare the citizenry of the commonwealth of Kentucky to be environmentally literate. I mean, in the broad brush that’s the role.”
- b. AC (UT) – “It’s also pretty broad. It’s about creating a network of environmental educators across the state. I can probably e-mail you the exact bullet points of what that is but off the top of my head I don’t have it.”
- c. *Guidelines for EE in Utah* – “To foster environmental knowledge, skills, attitudes, and actions through statewide leadership that serves to expand the quality, scope and effectiveness of Environmental education and to benefit society as a whole. Three areas of work: Capacity-building, Modeling Quality EE, and Pushing the EE envelope.”
- d. *Guidelines for EE in Utah* – “UEEC (*presently USEE PAC*) established a vision of ‘promoting and enhancing EE in UT.’”

9. What existing programs or framework sources were used to develop the certification program (if any)?

a. KY

- i. JE (KY) – “We used Utah’s performance objectives but we really changed them a bit but they really saved us a huge amount of time.”
- ii. JE (KY) – “Yeah, we looked at North Carolina’s and rejected that not because we don’t think it’s a good program but we just because our state is all about assessment. And of course I didn’t think we ought to be doing double work where we design a certification program for non-formals and then we had to start all over again for the teachers since we really wanted them to know the same thing.”
- iii. JB (KY) – “Jane looked at what the other organizations were doing in other states.”
- iv. JB (KY) – “I.e. Utah, Georgia, I think Texas. However what we decided, as a result of the task force and others that those programs are only assessment based and what we decided to do was to have an instructional-based program with an assessment.”

b. UT

- i. HS (UT) – “We had everybody bring in other organizations packets or processes so we probably had 8-10 or more packets such as the Society of Wetland Scientists, NAI (*National Association of Interpretation*), National Park Service.”
- ii. EC (UT) – “We looked to those programs just as what was out there but we really did do our own thing as far as developing the mentor system, the levels, we didn’t look to any other programs for that stuff that was through our own discussions and debates.”
- iii. AC (UT) – “All of Bora’s stuff.”
- iv. AC (UT) – “Somebody was involved in an architecture certification program and we talked about that a lot. We looked at certifications from other fields but in terms of environmental education it was pretty much Bora’s stuff. And than

looking at the state education guidelines and core curriculum requirements and all of that kind of stuff. There was someone researching NAI.”

10. What process was followed in determining the specific competencies that would be evaluated?

a. KY

- i. JE (KY) – “We took the Guidelines and tweaked them until they met what we were doing in Kentucky. So we essentially took themes 3-6 and scrunched them together and then took themes 1 and 2 as separate.”
- ii. JE (KY) – (*The subcommittees were responsible for looking at*) “...the different themes and the logistics.”
- iii. JE (KY) – (*The subcommittees evaluated the themes and how they applied to KY*) “Yeah, essentially, how could we teach these themes...”
- iv. JE (KY) – “One subcommittee took three (the first three), another subcommittee took the last three and one committee looked at how this could work logistically. How will this actually be implemented? And they drew up guidelines for that.”
- v. JE (KY) – (*The subcommittee came up with evaluations and brought it to the task force*) “Well they (*task force*) looked at it and made suggestions. They sent it back to the subcommittee once and then they met again and they accepted it.”
- vi. JB (KY) – “...stakeholders were brought together in a task force. The task force determined what are the national standards and needs of Kentucky based on education reform and good pedagogy. An assessment, and they were put together and provided to the team that Jane selected for the instruction and from there the instructors put together a package of three classes that were sequenced by environmental literacy first; second, a readings class, which is basically an introduction to environmental education with an historical antecedence of EE; and the third, of course, was the techniques, strategies and techniques which come later.”

b. UT

- i. TB (UT) – “It works in tandem with the Guidelines for EE Providers (*Utah Guidelines*) because that presents the areas that you should be competent.”
- ii. TB (UT) – “We looked at the Guidelines for Environmental Education Providers in Utah and then the Development Team used those Guidelines and tried to identify the competencies that those were asking for.”
- iii. HS (UT) – “That’s probably the most debated point we’ve had so far.”
- iv. EC (UT) – “...based on a demonstration of the competencies for us. On the rubrics we’ve recently developed indicators which are examples. Not the only ways that people can demonstrate, but what we would expect them to know for each competency.”
- v. HS (UT) – “Initially, we didn’t want to put in indicators in there. We wanted to leave it open so that people could run with it. (*At Summit*) we realized people wanted more structure so we added the indicators into the rubrics.”

- vi. TB (UT) – “We originally were going to involve Environmental Justice audiences but we recognized we took a huge bite at the buffet and we are going to just manage what is on our plate instead of start going up for more.”
- vii. AC (UT) – “I missed the first Development Team meeting which was when that happened but my understanding is that largely we went from the national EE standards and competencies and developed from that.”

11. How will the competencies be evaluated?

a. KY

- i. JE (KY) – “With authentic assessments.”
- ii. JE (KY) – “In environmental literacy under the systems, you know ecological and socioeconomic systems, that will be a paper and pencil test with some portfolio pieces or some open response questions. The section on dealing with environmental issues will be done through giving people an environmental issue. They’ll have to study it. They’ll have to debate with each other and come up with a common solution. There is a section in the national guidelines on how to take action on environmental issues. We dropped that. We thought it was too hot for Kentucky.”
- iii. JE (KY) – “And then there’s that whole section on foundation and philosophy, which will be assessed, with portfolio pieces including each person doing a history of environmental education in their particular agency or organization and some other portfolio pieces. And the last four themes on environmental educational program, materials, and instructional strategies will be assessed with the creation of an annotated unit of study and we’ve really outlined what has to be in that unit of study.”
- iv. JE (KY) – “It (*the annotated unit of study*) can be anything they choose but they have to choose a particular age group. It can be adults and what they do is they have to choose the standards they’re going to teach, they’re going to have to choose the activities that will teach those standards, they’ll have to choose the assessment techniques, they’ll have to choose the technology.”
- v. JE (KY) – “...that everybody that has been in on the design of this has really felt strongly that this should be a rigorous, difficult, serious program.”
- vi. JE (KY) – “We’re going to make people create massive portfolios and take pencil and paper tests and create units of study and debate each other.”
- vii. JB (KY) – “In a number of different ways. So you’re looking at persons being able to demonstrate skills through portfolio entries, written examinations, skill tests, and rubrics that have not been constructed yet, but will be constructed to assess a person’s ability to articulate, communicate, and demonstrate the skills that were identified by the task force.”
- viii. JB (KY) – “We choose them (*the readings*). And some of it is based on, keep in mind, there are a number of us have been teaching Introduction to Environmental Education. So there are some seminal pieces, like the Hug article of the Two Hats. You talk about the Tbilisi. There are a number of just absolute readings that everybody would agree - Rick Wilke would agree, and

Harold Hungerford, and Trudy Volk and so on. We all would agree that these are really essential readings....”

- ix. JB (KY) – “The class this weekend was about the Environmental Literacy component. We meet again in April for the culmination of that and some of the assessment. We also introduced to them, what we call the Readiness class, which is basically an introduction type of class with some bells and whistles. And, that was also introduced and they’re going to be doing companion reading with the support of the Environmental Literacy and subsequent class that will take place in the fall.”

b. UT

- i. TB (UT) – “The only thing attending a workshop would help you achieve in the competency would be a networking component which is in “professional responsibilities” or something like that that you need to know who other EE providers in the state are.”
- ii. AC (UT) – “There is going to be a mentor working with everyone that wants to be certified. And the Development Team...hopefully everyone has just completed the survey asking with each specific competency...how would you show this so that somebody who is going to be certified can look at how other people and a variety of other people have shown their competencies? So you may want to get your hands on that document and you can do that through Heather.”

12. What training will the participants be expected to participate in to become certified?

a. KY

- i. JE (KY) – “There will be the three courses workshops but they don’t have to do that. If they can pass the assessment without going through the courses they can do that.”
- ii. JE (KY) - If they felt they could do all that (*debate and portfolio*) without taking the coursework and their committee (everybody has a committee), and their committee judged that that was appropriate and their assessment was satisfactory; they could do that.”
- iii. JE (KY) – (*course content*) “Social systems. It’s natural and social systems. So an ecology professor might be able to bypass the natural systems portions of the test but not the social systems.”
- iv. JB (KY) – “Well, here is the person’s, the first class is being asked to attend four weekends plus an out-of-class and a readings kind of thing that is a companion to the other two components. The other two components are getting back to the environmental literacy and the strategies and techniques class.”
- v. JB (KY) – “They are expected to attend a, really, a hands on approach to teaching and learning.”
- vi. JB (KY) – “An experiential approach, however people are not required to be there. However, they are all required to take the assessments. So, some people might decide they don’t want to attend and they have the skills and concepts to

achieve on the assessment pieces. In which case, that's fine. There's also a mentoring program that is a part of this, and so a number of persons in this initial class are going to be mentored by one of the instructors. So, in other words, we'll split the class up into three and each one of us will take a certain number of persons to mentor them, to sort of help them with portfolio things and questions as it relates to them. The idea being that in the future we may use those persons as instructors."

- vii. JB (KY) – "Yes (*use certified participants as*), instructors and/or mentors or both."
- viii. JB (KY) – "The class this weekend was about the Environmental Literacy component. We meet again in April for the culmination of that and some of the assessment. We also introduced to them the, what we call the Readings class, which is basically an introduction type of class with some bells and whistles. And, that was also introduced and they're going to be doing companion reading with the support of the Environmental Literacy and subsequent class that will take place in the fall." [*Did you choose to provide the readings or was this something where you gave them a list of, an annotated bibliography*] JB (KY) – "No, we choose them. And some of it is based on, keep in mind, there are a number of us have been teaching introduction to Environmental Education. So there are some seminal pieces, like the Hug article of the Two Hats. You talk about the Tbilisi. There are a number of just absolute readings that everybody would agree - Rick Wilke would agree, and Harold Hungerford, and Trudy Volk, and so on. We all would agree that these are really essential readings...."
- ix. JB (KY) – "If you want to change values and you want to change behaviors and if you want to change teaching behaviors you have to mirror and model those behaviors to those persons you want to do that with. So, the construction of the classes is ostensibly hands-on Environmental Education where people are practicing and interacting and asking questions and getting feedback. So there's a feedback loop in there for them as well."

b. UT

- i. EC (UT) – "None."
- ii. HS (UT) – "We are considering it."
- iii. EC (UT) – "There will be workshops that will be available but they will not be expected to participate."
- iv. AC (UT) – "...we will try to organize it so that at the USEE conferences there will be certain tracts that will help you get towards certification, but we are hoping that it will never be something where you take Training X and you can check off this certification."

13. Are there multiple levels of certification? If so, what are they called and what is the purpose for multiple levels? *Note: Since this interview was conducted, Utah adopted only one level of certification.*

- a. Recognize a difference in the field between a founder in the field and someone in it for a short period of time
 - i. EC (UT) – "...to be able to recognize that there is a difference between somebody who has been in the field for one year that maybe has a degree and understands it, but hasn't experienced it a lot, versus somebody who has been in the field for 30 years and has been a founder."
- b. Encourage professional development (continual learning)
 - i. EC (UT) – "The ideal behind what we were trying to develop was to continually strive for lifelong learning."
 - ii. AC (UT) – "I think there is definitely a professional development theme underlying, you know, a professional development mission underlying. The multiple levels are to keep people involved and keep people growing professionally."
 - iii. AC (UT) – "I think initially just feeling like people would be at different levels and to keep people involved in the process so that once you got the first thing going you could go also get to a second level."
- c. Levels of certification
 - i. EC (UT) – "There were three levels. Recently the Development Team has decided to cut back to two levels. With the possibility of a third down the road. The first level is just going to be Certified and the second level, the title really hasn't been completely decided, but maybe Certified Advanced."
 - ii. AC (UT) – "Initially we had three (*levels*) now we're down to two."

Program Support

14. If you state does no presently have multiple certification levels, was the idea of multiple levels of certification considered? What was the reason for discounting the multiple levels of certification? *Asked to Kentucky officers only as Utah officers were planning multiple levels at this point.*

- a. Source used for the certification level
 - i. JE (KY) – (*Only one level of certification*) "Yes, that's what the task force decided and they chose the proficient level of Utah's standards (*Utah's second of three levels*)."
- b. Wanted everyone at a high level
 - i. JE (KY) – "Well, you really want everybody at a high level and so why not just get them at a high level."
 - ii. JE (KY) – "There was a lot of discussion on that. We talked about you can go through the courses and not take the assessment and get a provisional certification. We thought, 'What was the point'? We just didn't see the point. They just decided that it was hard enough to implement and if the goal was higher competency, why not just make it higher competency."

- iii. JB (KY) – “What we saw with regard to the certification process is to provide those persons with a vehicle to improve their professional skills so that it’s in line with national standards to improve what they do, so in turn they can provide quality environmental education, so that their constituents or those persons they work with are afforded a better, more comprehensive EE that does meet national standards.”
- c. Having multiple levels divides educators into categories
 - i. JB (KY) – “We thought it divisive. Because at this point it just tends to make people look different and the idea behind certification in our estimation was to make people more competent.”
 - ii. JB (KY) – “I think it’s divisive. I think it’s like narrowed pay. It’s just enough to make people madder than the next person.”

15. Do you have the support of specific agencies, institutions, or organizations taking part in non-formal instruction?

- a. KY
 - i. JE (KY) – “Fish and Wildlife Service, Cooperative Extension, all the natural resource environmental protective agencies, the privates like the zoo, the federals like Mammoth Cave (*NPS*) and the Daniel Boone National Forest (*USFS*), the power companies, Associated Industries, Sierra Club, there’s like 35 or 40 of them.”
 - ii. JE (KY) – “...when they feel like they designed it, then they are bought into it, so when we did the little survey, we sent it through the people on the task force.”
 - iii. JE (KY) – “Well some of them, like the (*Louisville*) Zoo and the Louisville Science Center, are 100% behind us, but the really small ones that kind of operate on a shoestring letting someone go.”
 - iv. JB (KY) - (*Support from other agencies and organizations*) “Too numerous to share, to list, the list is long. However, for instance, one of the persons who attended the first class is the person responsible for an interagency organization that deals with government - the commonwealth’s programs in EE, Ken Shanks. We have persons from Fish and Wildlife, we have persons from the zoo, Louisville Zoo, we have people from the Department of Agriculture, we have persons from Division of Water in Kentucky, we have persons from East Kentucky Power that provide EE; and by the way, they provided their own overnight stay, so they’re providing all that from their own organization, so it doesn’t come out of the public dough. We have people that are in federal programs called Pride East Kentucky Prime Bluegrass Pride? That is funded through federal grants and they provide a lot of EE and they are involved. Cooperative Extension. We have two or three or four persons from universities who, actually, one, two directors of centers for EE that actually are new, one has a doctorate, one does not have a doctorate, but they don’t have any EE experience and so they felt that this would be a good way of getting it. It’s very broad.”

b. UT

i. Support

1. TB (UT) – “We have talked with key people with state office of education, Forest Service and state Department of Natural Resources, so we’ve let them know it’s coming. But that gets into a whole different thesis on Utah’s political reality on the environment. I think we have been pretty wise on where we have gone for support. The state Office of Education will tell us they are behind us, they support it. They’ll never provide legislative support. They won’t go in front of the legislature saying, ‘you have got to do this or we will boycott or walk out.’ I think we’ve received letters from the Forest Service and the state office.”
2. TB (UT) – “There are some key partners, but they weren’t state or federal agencies. Jeff is State-Southern Utah University.”
3. EC (UT) – “Adrienne is University of Utah.”
4. EC (UT) – “I would say that we have the support of individuals within each of those areas. We have the support of individuals within the National Park Service, Forest Service, BLM universities, state employees, state DNR, and nature centers, but I would not say the whole Forest Service supports it.”
5. AC (UT) – “Well, in terms of those people participating in the USEE PAC, Yes. Those people are, in a sense, part of the managing part. No one on the Development Team is from any of those agencies.”
6. AC (UT) – “I didn’t think there was anyone on the Development Team from any [organizations] on the list except NAAEE.”

ii. Why not more support?

1. EC (UT) – “My hypothesis is that as the certification program grows and it starts to stand on its own two feet, we will start to see more of the agency support. There is interest drumming, but it is kind of, “Oh this is interesting, we should talk about this later; we are not ready to talk about that right now.” We need to get the program up and running and then we can go after some of these other agencies for agency-wide support. At this point, if we had the individual support, that is all we are looking for.”

16. What type of support did/do they provide? (monetary, voluntary, employing certified participants).

a. KY

- i. JE (KY) – “They’ve agreed to send their people through it.”
- ii. JB (KY) – “Some of these agencies are just selecting persons that they think would benefit from these experiences and so consequently they’re sending them. I guess the support is letting them off to do it.”

b. UT

- i. HS (UT) – “The Development Team was made up of the key stakeholders and so that was a lot of donated hours.”
- ii. TB (UT) – “There are different levels of involvement. We had a summit where we had a lot of them. The Forest Service, National Park Service.”

- iii. EC (UT) – “It has been individual support.”
- iv. EC (UT) – “And all of that has been through donation of time. No monetary support.”
- v. AC (UT) – (*voluntary support mainly that was offered...people taking their time out to do this?*) “Yes”
- vi. AC (UT) – (*on USEE PAC*) “People from DWR. There are people from State parks. There were lots of people from Forest Service.”
- vii. AC (UT) - Bora helped a lot with that and Joe Heimlich came for the big certification summit and Mike Way, and come to think of it a guy - Ron Houseftrid - is from the NAAEE Board and is a part of USEE PAC. He was at that meeting, but hasn't been very involved in the development.”

17. What, if any, legislation has been passed pertaining to the program or the need for the program?

a. KY

- i. JE (KY) – “I have board members who feel that would be a mistake.”
- ii. JE (KY) – “Yeah, because it's like drawing a bull's-eye on your chest. It's Greg that said ‘You never want to draw a bull's-eye on your chest, avoid doing that. Hide under your desk when legislature is in session.’ Sometimes it's good to be there and trying to get money and sometimes it's not.”
- iii. JE (KY) – “Well, the legislation that established our agency said that we would create centers for environmental education at all the universities, but it was an unfunded mandate. No money. It's a law but no money.”
- iv. JE (KY) – “In 2002 there was a bill that said that would put a half-cent tax on every soft drink cups sold in Kentucky or every soft drink container. It would generate 30 million dollars a year. And our council would get a million and a half of that money. But when it actually got to the legislature, or the Senate, which is dominated by republicans, they felt that that was a tax and they didn't want a tax.”
- v. JB (KY) – “Yes, the master plan for EE which is the, which was the seminal piece of legislation, that was a function of the stakeholders. They put together the document from throughout the state. In other words, the Kentucky Environmental Education Council Master Plan. That master plan was the seminal piece that started all of this off.”

b. UT

- i. EC (UT) – “We can sum this up in one word...HA!”
- ii. HS (UT) – “In Utah, No.”
- iii. HS (UT) – “We've had EE in the legislation, in the limelight once in 1998. Right? TB (UT) - It was anti-EE though.”
- iv. AC (UT) – “No (*legislation passed*).”

18. Marketing

19. Initially, how did you encourage participants to participate in the certification process?

a. KY

i. Survey of EE providers and supervisors

1. JE (KY) – “We did a survey of EE providers and another survey of their supervisors. At the same time we were gathering information, we were telling them about it. This is coming, this is what we’re planning, what do you think of it? We sent them the guidelines. ‘Will you participate, are you willing to pay anything, how many days will you give to this.’ We just wanted to know what they thought. We found out a lot of good things. They were for the most part interested in it. They were willing to spend time. They didn’t want to do it in the summer.”

ii. First Certification cadre

1. JE (KY) – “The Logistics committee wanted this first cadre to be nominated by their agencies or organizations, so we would contact the natural resources, Division of Water, Fish and Wildlife, KAEE, the Louisville zoo, lots and lots of organizations and say nominate someone. First of all, we get more committed people at the beginning who are willing to sort of jumpstart it, but we also feel strongly that we don’t want 30 Fish and Wildlife people to go through or 30 people from the Division of Water. We want there to be this mix.”
2. JB (KY) – “I think the class we have now, since they’re a part of a lot of different agencies, if they feel its successful, I think it’ll market itself.”

iii. Networking contacts

1. JB (KY) – “The Kentucky Environmental Education Council sent out to all the agencies that had EE communications and also through their interagency. They have an interagency committee. The Kentucky Association for Environmental Education, the affiliate of NAAEE, and all those persons that she felt might be interested or who provide EE even outside that venue. And, this occurred in writing, internet, it took a lot of different twists.”
2. JB (KY) – “Probably last year (2003). Keep in mind, a lot of persons who were stakeholders in the task force also helped with this because they knew it was coming down the line; they knew about the certificate program.”

iv. Certification officers were contacted by interested parties

1. JB (KY) – “There were a number of teachers that have said that they wanted to be involved with this but we encouraged them, if they were interested in doing that, to get an endorsement on their teaching certificate. Because you know this certificate is really based directed toward non-formals, though as I told you, there were three or four teacher educators who are working with teachers at higher education institutions who are taking the certification as well.”

b. UT

- i. HS (UT) – “Talked it up.”

- ii. EC (UT) – “We didn’t really have to do too much encouraging. People were interested. They see the need and wanted to participate. We made the offer and they took us up on it.”
- iii. HS (UT) – “We identified the initial group of people we wanted to send through the process and we invited 40. Of those 40, 30 were able to make it.”

20. In the future, who do you intend to recruit or market and what techniques do you intend to use to attract people to apply for certification?

a. Meetings and conferences

- i. JE (KY) – “Although we will be going to KSTA and forestry marketing meetings and that sort of thing and doing some marketing, we want to get through this initial training thing first.”
- ii. TB (UT) – “And then at the conference and USEE PAC meetings.”
- iii. EC (UT) – “NAAEE conference as well.”

b. Word of mouth

- i. JE (KY) – “And then after that, they’ll (*participants from first class*) go back to their respective organizations and talk about what they did and hopefully it will be word of mouth then.”
- ii. JB (KY) – “I think that if we are successful in producing people who feel affirmed, who feel that they have gained both in concepts and skills, and professionally that they have developed as professionals, I think it will sell itself.”
- iii. JB (KY) – “Probably last year (2003). Keep in mind a lot of persons who were stakeholders in the task force also helped with this because they knew it was coming down the line; they knew about the certificate program.”
- iv. JB (KY) – “...initial class will be the best selling marketing tool, but if indeed we are successful in increasing the competencies of these persons, these non-formal educators, their employers are going to see the value of it and that too will be a boon to the certification program in the state.”
- v. EC (UT) – “It has been primarily through contact that we’ve had word of mouth.”
- vi. JE (KY) – “We’ve had eight teachers contact us.”
- vii. JB (KY) – “There were a number of teachers that have said that they wanted to be involved with this. But we encouraged them, if they were interested in doing that, to get an endorsement on their teaching certificate.”
- viii. JE (KY) – “And we’ve had a lot of non-formals that have contacted us on this. We have a list of about 30 people.”
- ix. EC (UT) – “They’re putting it out, they’re telling their colleagues, they’re telling their employees and everybody else, their cohorts.”

c. The development team/development task force

- i. JE (KY) – “The fact is that the whole Development Team has completely bought into the concept and the idea and what we’re doing, so that we haven’t had to worry about internal fights within the Development Team.”

- ii. JE (KY) – “They’ve all agreed to at least have some of their people become trained so at first I think that will be our marketing tool call the task force together and say “we’re ready for more people.” I’m not really comfortable with marketing until we really have it (*program*) settled.”
- iii. JB (KY) – “The Kentucky Environmental Education Council sent out to all the agencies that had EE communications and also through their interagency. (They have an interagency committee.) The Kentucky Association for Environmental Education, the affiliate of NAAEE, and all those persons that she felt might be interested or who provide EE even outside that venue. And, this occurred in writing, internet.”
- iv. JB (KY) – “Probably last year (2003). Keep in mind a lot of persons who were stakeholders in the task force also helped with this because they knew it was coming down the line; they knew about the certificate program.”
- d. Newsletter
 - i. EC (UT) – “We’ve put articles in our quarterly newsletter. So we keep putting updates in there - as far as where we are in the process.”
 - ii. JB (KY) – “Print through the affiliate organization Kentucky Association for Environmental Education, and through agencies of the government that use EE currently, as well as organizations that provide EE, such as zoos, parks, etc.”
- e. Website
 - i. HS (UT) – “And on the website.”
 - ii. EC (UT) – “Well, the website is kind of hidden though. But, we are starting to get interest now from the articles on the web and our newsletter saying ‘Hey, I’ve heard about your certification program, can you give me more information.’”
- f. Job announcements
 - i. AC (UT) – “Well, putting it in the Job Announcements which is just on the University of Utah Human Resources website as well as the Salt Lake Tribune. Again it was only with one specific job saying it was a requirement, as opposed to advertising it as a program. And I think the best way to advertise once we get this thing up and running is partially, that is, partially using it as a criteria by which to hire.”
 - ii. AC (UT) – “I feel we have already started on the marketing techniques to make sure we put it in our job announcement.”
 - iii. AC (UT) – “Yes, I think that has already begun. In terms of letting people who work with EE become aware of the program and say we should we put it into job ads.”
 - iv. AC (UT) – “But I put that into an ad to hire people and that deals more with marketing than anything else, at this point.”
- g. Need a marketing plan developed
 - i. JE (KY) – “We haven’t thought that far ahead.”
 - ii. JE (KY) – “When we really get started, I think we will need a marketing program. There’s going to be groups like the Sierra Club and the power companies and industries that do some sort of environmental education; those folks that are not in the mainstream community, but who we very much want to reach.”

- iii. HS (UT) – “When we launch the program later this summer we will have a pretty big effort going on. We haven’t put together a marketing team yet, but we have brainstormed about it so we’ll get back with you on that.”
- h. Employers
 - i. JE (KY) – “You can market it to providers but if the employers don’t buy into it because they’re not going to let them go for two weeks or pay their expenses or whatever it requires. By the way, we’ve talked to a lot of directors and what they’re saying at least at this point is that they’re very supportive of the program but they’re not thinking, at this point, that they need to train all of their people.”
 - ii. JB (KY) – “...through agencies of the government that use EE currently as well as organizations that provide EE such as zoos, parks, etc.”
 - iii. JB (KY) – “I think if this first foray is successful and I don’t see why it wouldn’t be, because this past weekend the people were saying how much they learned. I think they’re going to see a better connection; these persons are going to better able to connect to their constituents.”
 - iv. EC and HS (UT) – “Yes.”

21. Has there been any controversy pertaining to the program? If yes, from whom?

- a. Controversy about starting a certification program
 - i. JE (KY) – “...the council met again and we had a discussion about this. And some of our members were very reticent. They felt like it was very controversial and it was hard to do. Somebody had to be on record as certifying these people and they had a lot of concerns about it and I would say half of them really didn’t think it was a good idea.”
 - ii. JE (KY) – “I had board members who were very reticent about this. They felt like it was opening up a can of worms. Some of them still feel that way. It was one of the very few things that I can remember in our board where it wasn’t a consensus decision. There was a vote.”
 - iii. JB (KY) – “Controversy being, one, do we need it (*certification*)?”
- b. Concern that certification would divide the EE field.
 - i. JB (KY) – “And then again, you get to the notion of tearing these things which actually exacerbates the notion that yes, that there would be a difference like you would have in the service, you know the armed services. Those persons who are commissioned officers don’t talk to noncommissioned officers. Would that help, would that hinder?”
 - ii. JB (KY) – “...is this an exclusionary type of thing? If a person takes it, will they be thought of as better?”
 - iii. JB (KY) – “Well, is this going to be a way of excluding me?”
- c. Concern that an educator lacking certification would be put out of business by certified persons
 - i. JE (KY) – “A couple of people come to one of the task force meetings who weren’t part of the original task force who felt that we were...and they were people from private nature centers and they felt like what was going to happen

- was we were going to certify people, and then there were going to be school districts who wouldn't let people come into their classrooms unless they were certified."
- ii. JE (KY) – "And that they (*nature centers*) couldn't really justify having all their people certified and yet they felt like they were going to be shut out of the schools."
 - iii. JB (KY) – "Well, the non-formal educators that are fearful for their jobs."
 - d. Exclusion of people or topics due to standardization
 - i. HS (UT) – "People were worried that we would be excluding people and excluding certain concepts from environmental education by standardizing it."
 - e. Controversy from those not involved in the program development.
 - i. JE (KY) – "The people who we've had the controversy from are people who we should have involved and we didn't. It was our fault. People from the private, the Cave and Karst Museum and those folks that we didn't involve from the beginning and we should have. We involved the zoo and some of the nature centers but we didn't involve all of the nature centers."
 - f. Certification should be granted based on results from a test
 - i. TB (UT) – "I think there were some people who wanted a test. They didn't want it to be competency-based. They felt much better about seat time type of certification which we all laughed at because we felt they are not confident in their skills. We kind of dismissed that."
 - ii. JB (KY) – "I think any time you have a certificate program there's a genuine fear of the assessment. Is the assessment going to be fair? What is it going to measure? What is the value of the assessment? Should you have assessment at all? Is it going to be a test?"
 - g. Concern for how certification is implemented
 - i. EC (UT) – "Just concern over when it gets implemented and how it gets implemented and the implications of implementation and some of that; and that has been more from people outside of the Development Team."
 - h. Level of difficulty to acquire certification
 - i. JE (KY) – "Often I was the one saying, 'Gee, do you really think we ought to make it that tough? I mean we really want people to do this.'"
 - i. Define environmental literacy
 - i. JE (KY) – "There has been a lot of argument on how are we going to define environmental literacy."
 - j. Grandfathering of participants in certification program
 - i. JE (KY) – "And the whole thing about grandfathering..."
 - ii. JB (KY) – "Should anybody be grandfathered?"
 - k. Who will be the instructors
 - i. JB (KY) – "Some of the controversy was who should be the trainers. There was some question about higher education people at all having to do with this."
 - l. Concerns about certification assessment
 - i. JE (KY) – "...and how are people going to pass the assessments without taking the courses?"

- ii. JB (KY) – “I think any time you have a certificate program there’s a genuine fear of the assessment. Is the assessment going to be fair? What is it going to measure? What is the value of the assessment? Should you have assessment at all? Is it going to be a test?”
- m. How will participants demonstrate competency
 - i. HS (UT) – “That’s probably the most debated point we’ve had so far.”
- n. The detail of indicators provided to participants
 - i. HS (UT) – “At our certification Summit, we realized people wanted more structure so we added the indicators into the rubrics.”
 - ii. AC (UT) – “...we were talking about the founders of environmental ed and how that all...should we develop a specific list and how should we make sure it’s an open process while giving guidelines that people can follow. So I think we have been at a loss for how to make it a useable document without telling people exactly what to do, what to write, who to talk about, who to think about. That’s probably our biggest challenge.”
- o. The initial cadre of participants be paid
 - i. JB (KY) – “...but there were some people that said, ‘We’re not happy that those persons (*participants*) doing this training were going to be paid.’”
 - ii. JB (KY) – “There’s some question about whether a person who did attend these training sessions should be able to just take an assessment. And if they took the assessment and passed it without taking these let’s address the veracity of the certification program. In other words, if you can just take it and pass it, then does it have value?”
- p. Overall fearfulness
 - i. JB (KY) – “And anything new of course. There’s fearfulness and concern.”

Implications, Controversy, Suggestions/Recommendations,

22. What experiences/contacts/methods did you find especially successful or helpful when developing and implementing your certification program?

- a. Experiences
 - i. Access to a body of work already accomplished
 - 1. JE (KY) – “Eric had sent me those and they were just terrifically helpful to share.”
 - 2. JE (KY) – “And of course the Utah Guidelines! What would we have done? It cut our time in half or 2/3. We didn’t use them word for word, but they just cut our time that we would have had to develop performance objectives. They were great.”
 - 3. JE (KY) – “And of course having the (*NAAEE*) Guidelines. Now there was just an awful lot of work done already. We would not probably have done this had we not had the Guidelines from NAAEE. Cause where would we have started? People could have said, ‘Who are you to do this? What do you know about what we should know?’ But, we got the guidelines and we say, ‘experts did this.’”

4. EC (UT) – “We based off of NAAEE Guidelines and then they were modified for Utah specifics.”
5. TB (UT) – “I think that looking at what everybody else has done is key, and getting a functional team and setting realistic goals.”
6. EC (UT) – “Don’t reinvent the wheel. There are two states that have certification programs and four states that are working on programs and you need to make it work for your state and to at least look at those models. We looked at other models before working on our model, but those weren’t in EE. Now there are models for EE, so use those. And the other thing that will be going on now is the national certification movement and looking on what is going to happen with that.”
7. JB (KY) – “It has to be based on an organization such as the NAAEE that has looked at those skills and concepts that are essential for persons providing Environmental Education. And, you know, when you look at the criticisms in Environmental Education over the years it’s based upon the fact that persons did not were not connected in any way to any national standards; they were doing their own thing. So, this sort of a badge saying, that says, well, certification is going to be a process that those persons taking it are at least going to be connected to something bigger than them.”
- ii. Experience gained through the development of a prior cooperative effort
 1. JE (KY) – “And having the background of doing the master plan really helped because the coal industry trusted us, the Sierra Club trusted us. When I say, ‘trusted us’ I mean everyone trusted each other in this process.”
 2. JE (KY) – “Our Master Plan process really brought us to this.”
 3. JE (KY) – “That Master Plan process and this. You take the people from Associated Industries and the Sierra Club working together and the coal industry who come and sit there and look there at you and say, ‘OK, it’s OK.’ It’s good for them.”
- iii. Backing by an EE-centered organization
 1. JE (KY) – “It’s not me, it’s the entity, having an organization, an agency whose only goal it is to move environmental education forward whether it’s me or somebody else. That’s my only job. I don’t have another job. I don’t have to go out and run a camp and do this and that and then do environmental education. That really helps, and not every state has that.”
- iv. Group Dynamics of program development body
 1. HS (UT) – “Everyone is really comfortable with each other and it was always open discussion and no one got offended and everyone listened to what you had to say and it was a really good environment.”
 2. TB (UT) – (*Really good*) “...group dynamics”
 3. TB (UT) – “We haven’t been intimidated and we’ve been this happy-go-lucky group.”
- v. Technology
 1. HS (UT) – “And without e-mail we would have been lost.”
- vi. Potential EE program evaluation benefit

1. TB (UT) – “Through this process (*certification*) we should be able to figure who provides the best (*training workshops*) in this area (*discipline or subject area*).”
- b. Contacts
- i. Persons from other states developing or implementing EE certification programs
 1. JE (KY) – “The contacts would be people from other states, NC, GA, UT, TX. And constantly talking to them about what they’re doing.”
 2. JE (KY) – “Tim Brown from Utah; and they not only had been using the Guidelines but had put the performance indicators together.”
 - ii. The make-up of a successful subcommittee
 1. JE (KY) – “That committee was all women. It got its work done very quickly. It really did. It was really funny. Most of them as it turned out they were mainly agency directors from mostly the Frankfort and they just cut out the crap.”
 - iii. Leaders from within the state
 1. JE (KY) – “It really helps in KY, we’ve got so much leadership here. We’ve got Terry Wilson, Joe Baust, Yvonne, David Wicks, I could go on and on.”
 2. JE (KY) – “And people who don’t necessarily work at the national level but who are incredible people in this state, knowledgably, hard working, smart. We’re lucky we have a lot of talent.”
 3. JE (KY) – “Kathy Neely who was from the East Kentucky...she read everything. She was giving me feedback; she was my conscience. She was Jiminy Cricket.”
 4. JE (KY) – “The Department of Education people were terrific in helping us think about assessment, which we wouldn’t have necessarily thought of ourselves.”
 5. JE (KY) – “Through the year for me personally, SEER. I’m on the State Environmental Education Roundtable.”
 6. JE (KY) – “And I think that talent (from within KY) synergizes itself.”
 - iv. Persons active in national organizations
 1. JE (KY) – “NEEAC, the National Environmental Education Advisory Council, NEEAP. We were involved in that and so all of that together has brought me personally.”
 2. JE (KY) – “You know Richard (*Osorio*) came to KY and came to a couple of meetings. Richard freed me from thinking that we had to design a one-week course that taught people to be environmentally literate. We were all just weighted down by that. And he just said “No, No, what we’re doing is we’re sort of helping people understand what they don’t know and how to learn it.”
 3. JE (KY) – “...and Bora of course. Thank goodness for Bora. Bora was telling us what other states were doing.”
 4. EC (UT) – “What was really helpful was having Bora come for those initial meetings and the Summit but initially making us ask the right questions instead of spinning our wheels. And from the different questions and

experiences that she had, we were then able to tackle the hard questions up front, and I think that that got us going in the right direction...all of us going in the right direction. So having maybe not just Bora but having an outside person to help facilitate some initial discussion, and for us Bora was extremely helpful. It could give perspective and it was an outside entity that brought up questions.”

5. AC (UT) – “...the help from the folks from the affiliate folks like Mike Way and Bora Simmons and some of the people who nationally were giving us a hand and giving us some thoughts: Susan Toth and Bora Simmons, and Joe Heimlich.”

v. Critics

1. JE (KY) – “...somebody who is skeptical, or has not bought into the concept of certification and they have been some of the biggest proponents outside of the Development Team’s meetings.”

c. Methods

- i. JE (KY) – “...to work collaboratively, really work collaboratively. Not just say we’re going to work collaboratively and then get a bunch of people together and say we’re working collaboratively, but really try to give people different roles to play.”

ii. Involve many stakeholders

1. JE (KY) – “The appropriate thing to do was to have a lot of entities involved all over the state.”
2. EC (UT) – “There was a group of 30 or 40 individuals, entities from around the state government, federal, state, non-profit, schools, lots of different places came together and worked on putting out the guidelines (*Utah Guidelines*) together.”
3. EC (UT) – “And we targeted universities, non-profits, and government. We didn’t get all of those in the Development Team and some couldn’t participate, but we at least made the effort.”

iii. Make certification program inclusive

1. JB (KY) – “Because at this point it (*multiple levels of certification*) just tends to make people look different and the idea behind certification in our estimation was to make people more competent.”
2. JB (KY) – “The certificate program is a program that is supposed to be empowering as opposed to excluding. And we would feel very very, we would say one of the assessments of this first class, that if we had failures which the mentoring is supposed to help reduce, or just eliminate, then what had happened is the instruction did not meet the needs of the persons or was not successful in that regard. So, this certificate program is about improving, this certificate is not about excluding.”
3. TB (UT) – “...having some really core goals like being mindful that it should be an inclusive program and it should be for that graduate student or that first year person. That has helped keep us focused.”
4. TB (UT) – “...make this a very inclusive process.”
5. EC (UT) – “...inclusive program all around the state.”

- iv. Strong underlying organization presence
 - 1. JE (KY) – “You need an entity that’s organizing it. We’re lucky in KY to have that entity.”
 - 2. JE (KY) - Well, we met a lot. I think the council (*KEEC*) having the state agency to pay for the meetings and pay for the lunches helps, and organize it. We would take the notes and send them out to everybody and people would respond to us and say that we ought to change this, this and this. So we were keeping the records of what was going on. It was very important to have that entity that was keeping a record of what was being decided. So that was real important to have.”
 - 3. EC (UT) – “So in groups of 2 or 3 and filtered those back to USEE. USEE would put that together disseminate the information, make corrections, bring it back together and after we had done that a couple of times then we’d bring the whole group back together.”
- v. Survey of EE providers
 - 1. JE (KY) – “We did a survey of EE providers and another survey of their supervisors. At the same time we were gathering information, obviously we were telling them about it. But a lot of people had questions. They wanted to know more about it, but the response from the directors was very positive, more positive than we anticipated in these very tough budget times.”
- vi. Make-up of participants in first cadre
 - 1. JE (KY) – “...but we also feel strongly that we don’t want 30 Fish and Wildlife people to go through or 30 people from the Division of Water. We want there to be this mix. And then after that, they’ll go back to their respective organizations and talk about what they did and hopefully it will be word of mouth then.”
- vii. Market to employers
 - 1. JE (KY) – “You can market it to providers but if the employers don’t buy into it because they’re not going to let them go for two weeks or pay their expenses or whatever it requires.”
- viii. Divide and conquer
 - 1. JE (KY) – “Having the three committees that were working and reporting back to the task force. That was really helpful. So they weren’t all working on the same thing.”
 - 2. EC (UT) – “We’ve been very careful when we’ve gotten together, and really made sure to hit key points, divided the workload and then separated, done the meat of the work independently in small groups.”
 - 3. EC (UT) – “We were able to just do some work and bring it together. I think that has really helped the process speed along.”
 - 4. TB (UT) – “...acknowledging that this is a really huge task. It is intimidating but we’ve taken small chunks.”
- ix. Identification of the need for legitimacy
 - 1. EC (UT) – “The other thing that I think helped develop the certification program which kind of led to the Guidelines was the USEE *PAC* asking

USEE to help legitimize the field of Environmental Education and they didn't know what or how but they knew that that was something the field in Utah needed."

- x. Not overusing the development team
 - 1. TB (UT) – "I think also with the Development Team itself, a successful strategy has been to put blinders on them and not use them for everything now that they have committed to be more involved with USEE and EE; we'll get them to help with the benefit bash and the newsletter. I think we've basically said, 'you have one task and that's all we want you to do.'"
- xi. Program open to interested parties
 - 1. TB (UT) – "The process has been really transparent and organic. From that I mean that we really haven't hidden anything from anybody and I think we've made great efforts to announce things in the newsletter or at meetings."
 - 2. JB (KY) – "So, this certificate program is about improving, this certificate is not about excluding."
- xii. Program open to change
 - 1. TB (UT) – "We really didn't come into it with that many preconceived notions and we've dropped some of those, things like the three levels and the reaching so high, including the Environmental Justice people."
 - 2. EC (UT) – "We've gone in with open minds and so whatever we get out of it we take, rejoice, and move on."
- xiii. Buy-in by program development body
 - 1. EC (UT) – "...fact that the whole Development Team has completely bought into the concept and the idea and what we're doing so that we haven't had to worry about internal fights within the Development Team."
 - 2. EC (UT) – "Because they have been so bought into the process and philosophy of certification, it is really drumming up interest from all of the EE providers."
- xiv. Encourage suggestions and critiques
 - 1. JB (KY) – "So, this certificate program is about improving, this certificate is not about excluding."
 - 2. HS (UT) – "But that doesn't mean that we haven't had critiques of the process. People have been able to objectively critique how we are coming up with it."
 - 3. EC (UT) – "And we've been open. If somebody has critiqued us we have invited them to meetings, we've invited them to participate and join on and we haven't had anyone take us up on that."
 - 4. EC (UT) – "They (*critics*) appreciate the efforts and then we solicit their information and their input on stuff and so it has been easier to combat their concerns when we say, 'Good point, give us your comments and we'll feed it back in.'"
 - 5. EC (UT) – "...lot of that (*critiques*) came out of the Summit from all of the comments we received. From that, we've rewritten the rubrics for a third or fourth time and dramatically changed it because of the Utah communities' input and concerns."

6. TB (UT) – “And then we’ve also thrown things out there for people to comment on, so there’s been at least three levels of involvement that most uninvolved would be the people who have responded to e-mails or just read the materials and offered feedback. The next level would be participation at the summit. The next level would be involvement with the Development Team.”
7. TB (UT) – “...what we’re doing and that we are open to suggestions.”
- xv. Have a clear focus.
 1. TB (UT) – “...having some really core goals like being mindful that it should be an inclusive program and it should be for that graduate student or that first year person. That has helped keep us focused.”
- xvi. Developing the UT Guidelines early on
 1. EC (UT) – “And I think how we approached it that we would not be anywhere had we not had the Utah guidelines.”
 2. EC (UT) – “...it was essential to have that (*Utah Guidelines developed first*) and we took it one step at a time the first thing we did is talk about the rubrics and we developed the rubrics. Once we felt OK with that, we started to talk about some process.”
 3. TB (UT) – “They (*USEE PAC*) wanted the Guidelines to help legitimize the field and build the field and they specifically mentioned having guidelines or standards.”
- xvii. Tackle the task with a series of steps
 1. EC (UT) – “We didn’t just jump into the nitty gritty and try to worry about that before we had our rubrics; we took it piece by piece and built on it.”
- xviii. Program development team make-up
 1. JE (KY) – “That’s why you invite all the people to be on the task force, because when they feel like they designed it, then they are bought into it.”
 2. HS (UT) – “...when we put the team together we chose people from around the state because we are a really diverse wide state geographically and there are certain population centers spread out. So we made sure that we had key contacts in those centers, so that we could promote it and implement it all over the state, and then everyone on the team has totally different experiences and strengths.”
 3. EC (UT) – “And we targeted universities, non-profits, and government. We didn’t get all of those in the Development Team and some couldn’t participate, but we at least made the effort.”
 4. EC (UT) – “It was a small team. I think that was key. We had 7 and now have 7 we’ve just had one change.”
- xix. Scheduling meetings around other gatherings
 1. AC (UT) – “We usually planned it when there was something else happening, so it was piggybacked on something else, and there was a big social element to it. So it was kind of fun.”

- xx. Using networking potential of program development team
 - 1. JE (KY) – "...so when we did the little survey, we sent it through the people on the task force. That's why we got such a good return rate; and they all said, 'Sure we'll do it.'"
- xxi. Using people with varied backgrounds and experience in discipline fields
 - 1. AC (UT) – "We had a bunch of people with different backgrounds working on it. We had a PhD in Biology who teaches mostly Biology courses. We had myself with my degrees in Education, we had Tim with his background in Leadership, and Eric coming from a totally different place, and Heather who has a little less in education but a lot more enthusiasm, and Bridget who also is multi-degreed in Environmental Education so we sort of have had a lot of different backgrounds. We sort of have had a lot of different backgrounds coming together, which I think EE should be."

23. What difficulties or unsuccessful experiences/contacts/methods did you encounter when developing and implementing your certification program?

a. Experiences

- i. Lack of other EE education options
 - 1. EC (UT) – "...because there is no EE degrees (*programs*) in Utah."
- ii. Need for easy link to website
 - 1. EC (UT) – "Well, the website is kind of hidden, though."
- iii. Developing a competency EE program that has not been done elsewhere before
 - 1. TB (UT) – "And the whole thing is difficult."
 - 2. TB (UT) – "There hasn't been anything that hasn't been difficult."
 - 3. EC (UT) – "I mean we are literally trying to build a profession from the ground. The organization of the profession has been there for a long time, but build it from an organizational standpoint...a standards standpoint."

b. Contacts

- i. Deal with a lack of state support
 - 1. TB (UT) – "The state Office of Education says they will tell us they are behind us, they support it. They'll never provide legislative support."
 - 2. TB (UT) – "We'd probably be making more consistent progress right if we had state-level support or some other support - if we had somebody that could be dedicated to this project and just be working on it."
 - 3. EC (UT) – "And us being a small non-profit, we have a good reputation but we're not a state entity, we're not a government entity. So we are realistic in the fact that we know that we aren't going to get some of that now."

c. Methods

- i. Development team should have been more inclusive
 1. JE (KY) – “We should have put more people on the task force. We put that together too quickly and we should have been more inclusive. We should have had 80 people instead of 45 people. But we did it a little too quickly. We won’t make that mistake with the final task force. We’ll use our database. We didn’t do that, we should have.”
- ii. Challenges have improved the program
 1. AC (UT) – “Everything has been a learning experience so the difficulties or challenges we have had have been successes, because they have improved the process.”
- iii. Lack of participant numbers for the first round of pilot testing
 1. EC (UT) – “We may have liked to have gotten more responses out of our first pilot test round, but what we got we took, we used, we modified, and made it better.”
- iv. Pilot testing
 1. HS (UT) – “...when we had people for the Summit sign up for certain parts and one of those assignments was to choose a person or a document to talk about foundation of EE. And a lot of people chose people that weren’t specifically EE and we were wondering how they were going to tie those into EE.”
 2. HS (UT) – “The first round of pilot testing because it wasn’t fully developed yet.”
 3. AC (UT) – “And when (*developing a program to guarantee a professional program*) doing that it became a multi-tiered and fairly difficult product and so the first time we sent it out a lot of people were completely overwhelmed by having to do, having to look at it and having to do anything about it.”
 4. AC (UT) – “I’m sure Eric gave you the numbers of how many people we sent it out to versus how many people actually sent it back but it was pretty small.”
- v. Results due to the limited volunteer time on the part of development team
 1. AC (UT) – “Well limited time on the parts of all of the Development Team so we ended up doing a lot with e-mail.”
 2. AC (UT) – “And actually not all of the development team went through the process of doing it. We just looked at it and thought about how we could do it but we didn’t go through the process ourselves. So, that gets back to the limited time thing.”
- vi. Use of technology would not allow for face-to-face group interaction
 1. AC (UT) – “...and that’s great but you don’t always get the tone so that’s sometimes difficult.”
- vii. Certifying pilot test participants by a different method than the program materials mention
 1. AC (UT) – “I actually still have some serious misgivings about the fact that we certified 20 some people, 40 some people in this last certification process (*Summit in January 2003*). And we did it to seed the pot and build

enthusiasm for the project and a week later one of the people we certified was in the paper and he was talking about something that was clearly advocacy and he is trying to both be an advocate in one realm and an environmental educator in another. And it was just too close for comfort.”

2. AC (UT) – “I didn’t feel like we made enough of a distinction during the training (*Summit in January, 2003*) between advocacy and education, and I think, well it’s clear to all of the development team that we’ve talked about it a lot that was probably the one big hole in our training.”

24. What suggestions would you offer other states considering the development of an EE certification program?

- a. Contact key legislators
 - i. JE (KY) – “I’ve already let key legislators know because I didn’t want them blindsided by this. The last thing I want is for them to be surprised by it.”
- b. Spell out the expectations and rules for the participants
 - i. JE (KY) – “Oh, you’ve got to make sure that your guidelines are very spelled out and that the rules are very spelled out, because people will come back and question you and say, ‘You turned me down and you better tell me why.’”
- c. Involve as many stakeholders as possible
 - i. JE (KY) – “NEEAP we decided that the best thing we could do was to get together as many people as we could and to get as many people involved as we could to get as many ideas and viewpoints and to use that same design, which makes it much harder to do; it takes longer but you get a better product in my opinion and you get it by them. Because they worked on it and they know what we’re doing and they’re not suspicious.”
 - ii. JE (KY) – “We will invite every organization we can think of.”
 - iii. JE (KY) – “Just involve as many people as you can from the beginning so you have a lot of buy-in and you have a lot of ideas ‘cause people who are outside the current community have a lot of really good ideas and we have a lot of those ideas in this program.”
- d. Take your time developing the program
 - i. JE (KY) – “Take your time. Don’t rush it. It’s going to take us a full 2-2 ½ years to get this on the ground and that’s with a lot of help of other states.”
- e. Use the resources already developed
 - i. JE (KY) – “Borrow from other states. Don’t reinvent the wheel and really use the Guidelines.”
- f. Try to fund someone to work on the certification full-time
 - i. JE (KY) – “So, maybe getting a grant where one person could do that full-time for a year or so. That’s what Richard does. He has a grant to let him do this full-time.”
- g. Keep group dynamics in mind when putting the development team together
 - i. HS (UT) – “When we put the team together we kept that in mind.”

- h. Keep the development team small
 - i. EC (UT) – “It was a small team. I think that was key, that we had 7 and now have 7. We’ve just had one change.”
- i. Use the development team’s time efficiently
 - i. TB (UT) – “A successful strategy has been to put blinders on them and not use them (development team) for everything, now that they have committed to be more involved with USEE and EE.”
- j. Divide and conquer
 - i. EC (UT) – “...divided the workload and then separated, did the meat of the work independently in small groups.”
- k. Keep stakeholders in the loop
 - i. EC (UT) – “We’re talking about individuals that would have concerns about things. We’ve kept them in the loop. We haven’t hidden things.”
- l. Have a clear focus and core goals
 - i. TB (UT) – “It helped us when people talked about ‘oh we just want a test that you take after attending a few workshops.’ We were able to go back to those core goals that have been with us since we started this and say, ‘This is what the larger community wanted and this is why we are doing it.’”
- m. Choose diverse representatives from around the state to participate
 - i. HS (UT) – “We chose people from around the state because we are a really diverse wide state geographically and there are certain population centers spread out so we made sure that we had key contacts in those centers so that we could promote it and implement it all over the state.”
 - ii. HS (UT) – “Everyone on the team has totally different experiences and strengths and I think that helped as far as background.”
 - iii. EC (UT) – “We targeted universities, non-profits, and government.”
 - iv. AC (UT) – “We had a bunch of people with different backgrounds working on it. We had a Ph.D. in Biology who teaches mostly Biology courses. We had myself with my degrees in Education, we had Tim with his background in Leadership, and Eric coming from a totally different place, and Heather who has a little less in education but a lot more enthusiasm, and Bridget who also is multi-degreed in Environmental Education. So we sort of have had a lot of different backgrounds coming together which I think EE should be. So I think all of our backgrounds helped.”

Appendix S – Themes Identified Through Interviews

Kentucky:

JE – Jane Eller, Executive Director of KEEC, (August 4 and 9, 2003, and May 23, 2004)

YM – Dr. Yvonne Meichtry, Board member KEEC, KUPÉE member, Co-developer of certification courses, (August 4, 2003)

JB – Dr. Joe Baust, Chairperson of KUPÉE, President-elect of NAAEE, Co-developer of certification courses, (March 30, 2004)

Utah:

TB – Tim Brown, Past Executive Director of USEE, (April 11, 2003)

EC – Eric Chandler, Past Executive Director of USEE, (April 11, 2003)

HS – Heather Scheel, Deputy Director of USEE, (April 11, 2003)

AC – Dr. Adrienne Cachelin, USEE Board Chairperson, Past Chairperson of USEE PAC, (April 11, 2003 and May 23, 2003)

JV – Jennifer Visitacion, USEE Executive Director, (May 24, 2004)

Build a Strong Development Team

1. Divide and conquer tasks through small groups

- a. JE (KY) – “Having the three committees that were working and reporting back to the task force. That was really helpful. So they weren’t all working on the same thing.”
- b. EC (UT) – “We’ve been very careful when we’ve gotten together, and really made sure to hit key points, divided the workload and then separated, did the meat of the work independently in small groups.”
- c. EC (UT) – “We were able to just do some work and bring it together. I think that has really helped the process speed along.”
- d. TB (UT) – “Acknowledging that this is a really huge task. It is intimidating, but we’ve taken small chunks.”

2. Use the development team’s time efficiently

- a. TB (UT) – “A successful strategy has been to put blinders on them and not use them (*development team*) for everything now that they have committed to be more involved with USEE and EE. We’ll get them to help with the benefit bash and the newsletter. I think we’ve basically said, ‘You have one task and that’s all we want you to do. We don’t want you to go to some leadership clinic in Missouri. We don’t want you to do these other things. We just want you to do this one specific thing and that’s where we ask you to put your energy into.’”
- b. JE (KY) – “That (*sub*)committee was all women. It got its work done very quickly. It really did. It was really funny. Most of them, as it turned out, were mainly agency directors from mostly Frankfort and they just cut out the crap.”
- c. Be aware of the development team’s limited volunteer time.
 - i. TB (UT) – “There has been a great effort to keep volunteers invested, and the Development Team’s run by volunteers, really.”

- ii. AC (UT) – “Well, limited time on the parts of all of the Development Team; so we ended up doing a lot with e-mail.”
- iii. AC (UT) – “And actually not all of the development team went through the process of doing it. We just looked at it and thought about how we could do it, but we didn’t go through the process ourselves. So, that gets back to the limited time thing.”

3. Emphasize Development Team Communication

- a. AC (UT) – “...and that’s great but you don’t always get the (*vocal*) tone (*through e-mail*) so that’s sometimes difficult.”
- b. AC (UT) – “Well, limited time on the parts of all of the Development Team, so we ended up doing a lot with e-mail.”
- c. HS (UT) – “And without e-mail we would have been lost.”

4. Consider size and make-up of the development team/task force and subcommittees

a. Size of development team/task force

- i. JE (KY) – “We decided that the best thing we could do was to get together as many people as we could and to get as many people involved as we could to get as many ideas and viewpoints and to use that same design, which makes it much harder to do. It takes longer, but you get a better product in my opinion and you get it by them. Because they worked on it and they know what we’re doing and they’re not suspicious.”
- ii. JE (KY) – “We should have put more people on the task force. We put that together too quickly and we should have been more inclusive. We should have had 80 people instead of 45 people. But we did it a little too quickly. We won’t make that mistake with the final task force. We’ll use our database. We didn’t do that, we should have. We will invite every organization we can think of.”
- iii. JB (KY) – “You know there are three of us doing this program (*developing the courses for the program*) and we have two of us much more inquiry-based and we have another person who can be a bit didactic. Now, that is strength and that is a weakness. Now, the beauty of it is that we compensate for one another and so we can sort of smooth out the rough edges.”
- iv. EC (UT) – “It (*development team*) was a small team. I think that was key, that we had 7 and now have 7. We’ve just had one change.”

b. The personal, professional and geographic make-up of the development team/task force

- i. JE (KY) – “That’s why you invite all the people to be on the task force because when they feel like they designed it, then they are bought into it.”
- ii. JE (KY) – “Just involve as many people as you can from the beginning so you have a lot of buy-in and you have a lot of ideas, because people who are outside the current community have a lot of really good ideas, and we have a lot of those ideas in this.”

- iii. JB (KY) – “Keep in mind a lot of persons who were stakeholders in the task force also helped with this (*marketing*) because they knew it was coming down the line, they knew about the certificate program.”
 - iv. JE (KY) – “That (*sub*)committee was all women. It got its work done very quickly. It really did. It was really funny. Most of them as it turned out were mainly agency directors from mostly Frankfort and they just cut out the crap.”
 - v. JB (KY) – “I think having as many stakeholders in the process of developing the task force as possible, I think it makes it. First of all, if you have many people involved then there’s very little room for criticism. Because everything is articulated, or as many things as possible are articulated that say this is how we see it, and then you compromise around those things that are heard and said and you try to address those. As a result you have a stronger, in other words, the greater the diversity in bringing the stakeholders to the table, the greater the possibility that your outcome and your process will meet needs and the outcomes will be positive.
 - vi. HS (UT) – “When we put the team together we chose people from around the state because we are a really diverse wide state geographically, and there are certain population centers spread out. So we made sure that we had key contacts in those centers, so that we could promote it and implement it all over the state. Then everyone on the team has totally different experiences and strengths.”
 - vii. HS (UT) – “The Development Team was made up of the key stakeholders and so that was a lot of donated hours.”
 - viii. EC (UT) – “And we targeted universities, non-profits, and government. We didn’t get all of those in the Development Team and some couldn’t participate, but we at least made the effort.”
 - ix. HS (UT) – “Everyone on the team has totally different experiences and strengths and I think that helped as far as background.”
 - x. AC (UT) - I would tell them that the development team should comprised of people with different skill sets, and you want to have people different geographically so they have different networks and so that you are hitting the whole state.
 - xi. AC (UT) – “We had a bunch of people with different backgrounds working on it (*certification program development team*). We had a Ph.D. in Biology who teaches mostly Biology courses. We had me with my degrees in Education, we had Tim with his background in Leadership, and Eric coming from a totally different place, and Heather who is has a little less in education but has a lot more enthusiasm, and Bridget who also is multi-degreed in Environmental Education. We sort of have had a lot of different backgrounds coming together, which I think EE should be.”
- c. Group dynamics of program development body
- i. JB (KY) – “You know there are three of us doing this program (*developing the courses for the program*) and we have two of us are much more inquiry-based and we have another person who can be a bit didactic. Now, that is strength and that is a weakness. Now, the beauty of it is that we compensate for one another and so we can sort of smooth out the rough edges.”

- ii. HS (UT) – “Everyone is really comfortable with each other and it was always open discussion and no one got offended and everyone listened to what you had to say and it was a really good environment.”
- iii. TB (UT) – (*Really good*) “Group dynamics.”
- iv. HS (UT) – “When we put the team together we kept that (*group dynamics*) in mind.”
- v. TB (UT) – “We haven’t been intimidated and we’ve been this happy-go-lucky group.”

5. Determine role of the development team

- a. JE (KY) – “...to work collaboratively, really work collaboratively. Not just say we’re going to work collaboratively and then get a bunch of people together and say we’re working collaboratively, but really try to give people different roles to play.”
- b. JB (KY) – “Work together. And work with the national organization. I think NAAEE is there. We recognize as a national organization that we have to work together and I think the national standards make us stronger.”
- c. TB (UT) – “I think also with the Development Team itself, a successful strategy has been to put blinders on them and not use them for everything now that they have committed to be more involved with USEE and EE. We’ll get them to help with the benefit bash and the newsletter. I think we’ve basically said, ‘You have one task and that’s all we want you to do.’”

6. Consider the importance of buy-in by program development body

- a. JE (KY) – “They’ve all (*development task force*) agreed to at least have some of their people become trained so at first I think that will be our marketing tool; call the task force together and say, ‘we’re ready for more people.’ I’m not really comfortable with marketing until we really have it (*program*) settled.”
- b. JE (KY) – “We decided that the best thing we could do was to get together as many people as we could and to get as many people involved as we could to get as many ideas and viewpoints and to use that same design, which makes it much harder to do. It takes longer, but you get a better product in my opinion and you get it by them. Because they worked on it and they know what we’re doing and they’re not suspicious.”
- c. JE (KY) – “Just involve as many people as you can from the beginning so you have a lot of buy-in and you have a lot of ideas, because people who are outside the current community have a lot of really good ideas and we have a lot of those ideas in this program.”
- d. JE (KY) – “They’ve (*development task force*) agreed to send their people through it.”
- e. JE (KY) 5/23/04 – “Get a lot of people together. Get buy in early. Get money first. I would advice people to go around, we did a survey of agencies, I would advise people to go around to some of the bigger agencies and talk with the heads of the agencies.”
- f. EC (UT) – “The fact that the whole Development Team has completely bought into the concept and the idea and what we’re doing so that we haven’t had to worry about internal fights within the Development Team.”

- g. EC (UT) – “Because they have been so bought into the process and philosophy of certification it is really drumming up interest from all of the EE providers.”
7. Create a strong underlying organization presence (certifying organization)
- a. JE (KY) – “You need an entity that’s organizing it. We’re lucky in KY to have that entity.”
 - b. JE (KY) – “I think the council (*KEEC (UT)*) having the state agency to pay for the meetings and pay for the lunches helps, and to organize it. We (*KEEC (UT)*) would take the notes and send them out to everybody and people would respond to us and say that we ought to change this, this and this. So we were keeping the records of what was going on. It was very important to have that entity that was keeping a record of what was being decided. So that was real important to have.”
 - c. JB (KY) – “I think the agency being in the state government that is responsible, I mean in 1991-1992 the legislature made an unfunded mandate for the Kentucky Environmental Education Council. As a function of having the agency there representing Environmental Education is, I mean, is in itself the hub of the wheel with other organizations that are connected in the state government. So the idea behind Environmental Education and the Environmental Education Council was to be that hub and so as a consequence over the years that has developed, including connections into Kentucky Department of Education and things like Fish and Wildlife, etc.”
 - d. EC (UT) – “So (*tasks were accomplished*) in groups of 2 or 3 and filtered those back to USEE. USEE would put that together, disseminate the information, make corrections, bring it back together, and after we had done that a couple of times, then we’d bring the whole group back together.”
8. Plan for development team meetings
- a. JE (KY) – “You know Kentucky is a very sort of a personal touch state. People want to get together, they want to communicate with each other, there’s that feeling of wanting to have personal contact.”
 - b. JE (KY) – “Well, we met a lot.”
 - c. AC (UT) – “We usually planned it (*meetings*) when there was something else was happening, so it was piggybacked on something else, and there was a big social element to it. So it was kind of fun.”
 - d. AC (UT) – “And I would tell people to make sure there is a social element because that ends up being really important and I think that the reason that the meeting today that you’re coming to is going to have as many people as it does is because we advertised the social aspect.”

Plan for the Certification Program Development

9. Have a clear program focus, purpose, and core goals

- a. TB (UT) – “...having some really core goals like being mindful that it should be an inclusive program and it should be for that graduate student or that first year person. That has helped keep us focused.”
- b. TB (UT) – “It helped us when people talked about ‘oh we just want a test that you take after attending a few workshops.’ We were able to go back to those core goals that have been with us since we started this and say, ‘this is what the larger community wanted and this is why we are doing it.’”
- c. EC (UT) – “The other thing that I think helped develop the certification program, which kind of led to the Guidelines, was the USEE PAC (*Utah Society for Environmental Education Program Advisory Council*) asking USEE to help legitimize the field of Environmental Education and they didn’t know what or how, but they knew that that was something the field in Utah needed.”
- d. EC (UT) – “I mean we are literally trying to build a profession from the ground. The organization of the profession has been there for a long time, but build it from an organizational standpoint...a standards standpoint.”

10. Make certification program inclusive

- a. JB (KY) – “Because at this point it (*multiple levels of certification*) just tends to make people look different, and the idea behind certification in our estimation was to make people more competent.”
- b. JB (KY) – “The certificate program is a program that is supposed to be empowering as opposed to excluding. And we would say one of the assessments of this first class, that if we had failures which the mentoring is supposed to help reduce, or just eliminate, then what had happened is the instruction did not meet the needs of the persons, or was not successful in that regard. So, this certificate program is about improving, this certificate is not about excluding.”
- c. JB (KY) – “Anytime you have a certificate program it tends to separate people; it has the potential to separate people. Those who have and those that do not have. And so, I think initially this has been a big question. And any time you have a certificate program you have to figure out who is going to teach it and who is going to assess it and then you have to figure out who that is going to be and you say well why is it, who is it, if those persons are chosen are they going to be exclusionary? As I explained to you earlier, this is not about exclusion this is about inclusion.”
- d. TB (UT) – “Having some really core goals like being mindful that it should be an inclusive program and it should be for that graduate student or that first year person. That has helped keep us focused.”
- e. TB (UT) – “Make this a very inclusive process.”
- f. EC (UT) – “...inclusive program all around the state.”

11. Design a program that is open to change

- a. TB (UT) – “We really didn’t come into it with that many preconceived notions and we’ve dropped some of those, things like the three levels and the reaching so high, including the Environmental Justice people.”
- b. EC (UT) – “We’ve gone in with open minds and so whatever we get out of it we take, rejoice and move on.”
- c. JB (KY) – “Well, I think it’s a dynamic program, in that nothing is static. Anything that has value if you look at an evaluation process, formative and summative evaluation; formatively speaking, it has to change because it was developed in conjunction with the national standards; and at the same time what was perceived as a need in the commonwealth to meet the needs of the formal educators.”

12. Set the Pace of program development

- a. JE (KY) – “Take your time. Don’t rush it. It’s going to take us a full 2-2 ½ years to get this on the ground and that’s with a lot of help from other states.”
- b. JE (KY) 5/23/04 – “The development...we did it too fast. Because we got the money from the governor and we had to implement it. We had to use that money by June 30 of this year (2004). It was just real fast. We didn’t have enough time to think it through.”
- c. JE (KY) 5/23/04 – “I feel like I’ve got this giant house that I’m carrying around. I need to set it down but there’s no place to set it. Nobody to take care of it once it’s there, and I need all this money to build a foundation. There’s no foundation and I’m really tired. And if I drop it it’s all going to fall apart. You know, that’s how I feel right now.”

13. Tackle the task with a series of steps

- a. EC (UT) – “We didn’t just jump into the nitty gritty and try to worry about that before we had our rubrics; we took it piece by piece and built on it.”

14. Dedicate staff specifically to the program

- a. JE (KY) – “Try to fund someone to work on the certification full-time.”
- b. JE (KY) – “So, maybe getting a grant where one person could do that full-time for a year or so. That’s what Richard (*Osorio*) does. He has a grant to let him do this full-time. I think it’s EPA (*grant*).”
- c. EC (UT) – “It will be interesting, come September or October first (2003), when the EETAP grant runs out. The amount of time we are able to put into this will obviously change. We hope there will be an extension, that we will keep putting a concerted effort into it. Otherwise reality calls and it will be put on the back burner a little bit.”

15. Establish backing by an EE-centered organization

- a. JE (KY) – “It’s not me; it’s the entity, having an organization, an agency whose only goal it is to move environmental education forward, whether it’s me or somebody else. That’s my only job. I don’t have another job. I don’t have to go out and run a

- camp and do this and that and then do environmental education. That really helps and not every state has that.”
- b. TB (UT) – “Unlike Kentucky, we don’t have the state support. This entire effort has been volunteer and the little EETAP funding.”

Use Everyone as a Resource

16. Actively involve critics and stakeholders

- a. Involve critics
- i. JE (KY) – “...somebody who is skeptical, or has not bought into the concept of certification, and they have been some of the biggest proponents outside of the Development Team’s meetings.”
 - ii. EC (UT) – “Everything has been a learning experience so the difficulties or challenges we have had have been successes, because they have improved the process.”
- b. Involve stakeholders in decision making
- i. JE (KY) – “We decided that the best thing we could do was to get together as many people as we could and to get as many people involved as we could, to get as many ideas and viewpoints and to use that same design, which makes it much harder to do; it takes longer, but you get a better product in my opinion and you get it by them. Because they worked on it and they know what we’re doing and they’re not suspicious.”
 - ii. JE (KY) – “We will invite every organization we can think of.”
 - iii. JE (KY) – “Just involve as many people as you can from the beginning so you have a lot of buy-in and you have a lot of ideas, because people who are outside the current community have a lot of really good ideas and we have a lot of those ideas in this program.”
 - iv. JE (KY) 5/23/04 – “The biggest thing we do in Kentucky that gives us the most success is bring in everybody at the beginning. We bring in everybody at the beginning and it’s always this long involved process where people work on things and develop things together and it’s time consuming and painstaking but you get by them and it’s so much easier to sit in an office and do it by yourself, but we work by consensus and that’s the most important thing to do. We did it with the Master Plan. We’ve done it with the certification. We’ve done on it a number of other projects that we’ve worked on and it just works for us.”
 - v. JE (KY) 5/23/04 – “Get a lot of people together. Get buy in early. Get money first. I would advice people to go around, we did a survey of agencies, I would advise people to go around to some of the bigger agencies and talk with the heads of the agencies.”
 - vi. JE (KY) – “The appropriate thing to do was to have a lot of entities involved all over the state.”
 - vii. JB (KY) – “Keep in mind a lot of persons who were stakeholders in the task force also helped with this (*marketing*) because they knew it was coming down the line; they knew about the certificate program.”

- viii. JB (KY) – “I think having as many stakeholders in the process of developing the task force as possible. So I think it makes it, first of all, if you have many people involved, then there’s very little room for criticism. Because everything is articulated, or as many things as possible are articulated that say this is how we see it. And then you compromise around those things that are heard and said and you try to address those. As a result you have a stronger, in other words, the greater the diversity in bringing the stakeholders to the table, the greater the possibility that your outcome and your process will meet needs and the outcomes will be positive.”
 - ix. EC (UT) – “There was a group of 30 or 40 individuals, entities from around the state government, federal, state, non-profit, schools, lots of different places came together and worked on putting out the guidelines (*Utah Guidelines*) together.”
 - x. EC (UT) – “And we targeted universities, non-profits, and government. We didn’t get all of those in the Development Team and some couldn’t participate, but we at least made the effort.”
 - xi. AC (UT) – “We had a bunch of people with different backgrounds working on it (*certification program development team*). We had a Ph.D. in Biology who teaches mostly Biology courses. We had myself with my degrees in Education, we had Tim with his background in Leadership, and Eric coming from a totally different place, and Heather who has a little less in education but a lot more enthusiasm, and Bridget who also is multi-degreed in Environmental Education. So we sort of have had a lot of different backgrounds coming together, which I think EE should be.”
 - xii. Participant #4 – “It seems like it has pretty good support. Many especially non-profit and even some government organizations support the idea and think it’s a good idea.”
- c. Keep stakeholders informed
- i. JE (KY) – “I’ve already let key legislators know because I didn’t want them blindsided by this. The last thing I want is for them to be surprised by it.
 - ii. JE (KY) 5/23/04 - If they (*an unnamed organization*) decided not to go through it (*certification program*) that’d just be a huge loss to the program. I think that their reasoning is not sound, but anyway that’s my responsibility to communicate better to them. I obviously did not communicate well enough to them. That’s a challenge.”
 - iii. JE (KY) 5/23/04 – “I would advice people to go around, we did a survey of agencies, I would advise people to go around to some of the bigger agencies and talk with the heads of the agencies.”
 - iv. EC (UT) – “We’re talking about individuals that would have concerns about things. We’ve kept them in the loop. We haven’t hidden things.”
 - v. TB (UT) – “The process has been really transparent and organic. From that I mean that we really haven’t hidden anything from anybody and I think we’ve made great efforts to announce things in the newsletter or at meetings.”

17. Encourage suggestions and critiques

- a. HS (UT) – “But that doesn’t mean that we haven’t had critiques of the process. People have been able to objectively critique how we are coming up with it.”
- b. EC (UT) – “And we’ve been open. If somebody has critiqued us we have invited them to meetings, we’ve invited them to participate and join on and we haven’t had anyone take us up on that.”
- c. EC (UT) – “They (*critics*) appreciate the efforts and then we solicit their information and their input on stuff, and so it has been easier to combat their concerns when we say ‘good point, give us your comments and we’ll feed it back in.’”
- d. EC (UT) – “A lot of that (*critiques*) came out of the Summit from all of the comments we received. From that, we’ve rewritten the rubrics for a third or fourth time and dramatically changed it because of the Utah communities input and concerns.”
- e. TB (UT) – “And then we’ve also thrown things out there for people to comment on. So there’s been at least three levels of involvement. The most uninvolved would be the people who have responded to e-mails or just read the materials and offered feedback. The next level would be participation at the summit. The next level would be involvement with the Development Team.”

18. Form contacts within the state and network with other certification experts

- a. Contacts with persons from other states developing or implementing EE certification programs.
 - i. JE (KY) – “The contacts would be people from other states - NC, GA, UT, TX - and constantly talking to them about what they’re doing.”
 - ii. JE (KY) – “Tim Brown from Utah, and they not only had been using the Guidelines but had put the performance indicators together.”
 - iii. JB (KY) – “States who are being successful ought to work with other states to help them get through it. In my mind there is not one way of doing this; there are many ways of doing it.”

19. Work with leaders from within the state

- a. JE (KY) – “It really helps in KY we’ve got so much leadership here. We’ve got Terry Wilson, Joe Baust, Yvonne (*Meichtry*), David Wicks. I could go on and on.”
- b. JE (KY) – “And people who don’t necessarily work at the national level but who are incredible people in this state, knowledgeable, hard-working, smart. We’re lucky we have a lot of talent.”
- c. JE (KY) – “Kathy Neely who was from the East Kentucky...she read everything. She was giving me feedback; she was my conscience. She was Jiminy Cricket.”
- d. JE (KY) – “The Department of Education people were terrific in helping us think about assessment, which we wouldn’t have necessarily thought of ourselves.”
- e. JE (KY) – “Through the year for me personally, SEER. I’m on the State Environmental Education Roundtable.”
- f. JE (KY) – “And I think that talent (*from within KY*) synergizes itself.”
- g. JE (KY) 5/23/04 – “We have all this talent, people always say, ‘Wow,’ but no it’s kind of a no-brainer really. We just have a lot of concentrated talent and not just in

environmental education either. Kentucky has a lot of education talent. Like our education professional standards board, they have some special relationship with NCATE that they get to pilot things all the time.”

- h. JB (KY) – “Off the top of my head, other than the fact that it’s also a function of working with EETAP and the broader context of NAAEE; and actually we have three (*NAAEE*) presidents in the state of Kentucky: David Wicks, NAAEE, Terry Wilson, and myself.”
- i. JB (KY) – “You know there are three of us doing this program and we have two of us are much more inquiry-based and we have another person who can be a bit didactic. Now, that is strength and that is a weakness. Now, the beauty of it is, that we compensate for one another and so we can sort of smooth out the rough edges.”

20. Engage persons active in national organizations

- a. JE (KY) – “NEEAC, the National Environmental Education Advisory Council, NEEAP. We were involved in that and so all of that together has brought me personally.”
- b. JE (KY) – “You know Richard (*Osorio*) came to KY and came to a couple of meetings. Richard freed me from thinking that we had to design a one-week course that taught people to be environmentally literate. We were all just weighted down by that. And he just said ‘No, No, what we’re doing is we’re sort of helping people understand what they don’t know and how to learn it.’”
- c. JE (KY) – “...and Bora, of course. Thank goodness for Bora. Bora was telling us what other states were doing.”
- d. JB (KY) – “Off the top of my head, other than the fact that it’s also a function of working with EETAP and the broader context of NAAEE; and actually we have three (*NAAEE*) presidents in the state of Kentucky: David Wicks, NAAEE, Terry Wilson, and myself.
- e. JB (KY) – “I was mentioning the notion that NAAEE needs to support the affiliates in the process of cloning a certificate program that is successful and giving a certificate of approval from the national organization showing that states are doing these kinds of things; and in turn, states who are being successful ought to work with other states to help them get through it. In my mind there is not one way of doing this, there are many ways of doing it.”
- f. EC (UT) – “...was really helpful was having Bora come for those initial meetings and the Summit but initially making us ask the right questions instead of spinning our wheels. From the different questions and experiences that she had we were then able to tackle the hard questions up front, and I think that that got us going in the right direction...all of us going in the right direction. So having maybe not just Bora, but having an outside person to help facilitate some initial discussion, and for us Bora was extremely helpful. It could give perspective and it was an outside entity that brought up questions.”
- g. AC (UT) – “The help from the folks from the affiliate, folks like Mike Way and Bora Simmons and some of the people who nationally were giving us a hand and giving us some thoughts: Susan Toth and Bora Simmons, and Joe Heimlich.”

21. Deal with a lack of state support

- a. TB (UT) – “The state Office of Education says it will tell us they are behind us, they support it. They’ll never provide legislative support.”
- b. TB (UT) – “We’d probably be making more consistent progress right if we had state-level support or some other support, if we had somebody that could be dedicated to this project and just be working on it.”
- c. EC (UT) – “And us being a small non-profit, we have a good reputation, but we’re not a state entity; we’re not a government entity. So we are realistic in the fact that we know that we aren’t going to get some of that now.”

22. Deal with a lack of other EE education options

- a. EC (UT) – “because there are no EE degrees (*university degree programs offered*) in Utah.”

23. Form partnerships

- a. JE (KY) – “We want universities to be offering it. We want to have as many people trained as possible.”
- b. JB (KY) – Well, of course, Kentucky Association for Environmental Education too. I mean the affiliate was involved in this process; but you know, interestingly enough or not interestingly enough, the notion is that the affiliate has a lot of non-formals. In fact, what I am told, and I don’t ever look at the role and roster, even when I was president of the organization, I kept on hearing that non-formals are a larger portion of the affiliate. The fact that the affiliate is involved is a strength, because it coalesces things.
- c. EC (UT) – “We want to get universities to start participating with us possibly built into some of the university programs so that somebody graduating with a degree in environmental studies...would have the option or the possibility of applying and being accepted. But it wouldn’t guarantee them.”

24. Prepare for challenges relating to contacts and partners

- a. JE (KY) 5/23/04 - They (*an unnamed organization*) say they’re not going to send their people through because they can’t be involved in an elite programs. If they decided not to go through it (*certification program*) that’d just be a huge loss to the program. I think that their reasoning is not sound, but anyway that’s my responsibility to communicate better to them. I obviously did not communicate well enough to them. That’s a challenge.”
- b. JE (KY) 5/23/04 – “State government itself is a challenge right now because of all the changes. They can’t decide where to put us. Whether we should stay in education or go over to natural resources or even exist. There’s one bill right now that essentially eliminates all agencies under five people. So, if you have less than five people they will review you to see if you should exist. If the agency weren’t here I don’t know who would pick this (*certification program*) up. So, depending on whether that passes, we don’t have a budget right now in the state. They can’t agree on a budget. This is the second year in a row they’ve not been able to agree on a budget.”

Draw upon positive past activities and results of organizations

25. Volume of work done by other organizations that can be used to draw upon.

a. *Utah Guidelines for EE Providers*

- i. JE (KY) – “Eric had sent me those (*Utah Guidelines*) and they were just terrifically helpful to share.”
- ii. JE (KY) – “And of course without the Utah Guidelines what would we have done? It cut our time in half or 2/3, We didn’t use them word for word, but they just cut our time that we would have had to develop performance objectives. They were great.”
- iii. EC (UT) – “And I think how we approached it that we would not be anywhere had we not had the Utah guidelines.”
- iv. EC (UT) – “It was essential to have that (*Utah Guidelines developed first*) and we took it one step at a time. The first thing we did is talk about the rubrics and we developed the rubrics, and once we felt OK with that, we started to talk about some process.”
- v. TB (UT) – “They (*USEE PAC*) wanted the Guidelines to help legitimize the field and build the field and they specifically mentioned having guidelines or standards.”

b. *NAAEE Guidelines for the Initial Preparation of Environmental Educators*

- i. JE (KY) – “And of course having the (*NAAEE*) Guidelines. Now there was just an awful lot of work done already. We would probably not have done this had we not had the Guidelines from NAAEE. Cause where would we have started? People could have said, ‘Who are you to do this? What do you know about what we should know?’ But, we got the guidelines and we say, ‘Experts did this.’”
- ii. JE (KY) – “Borrow from other states. Don’t reinvent the wheel and really use the (*NAAEE*) Guidelines.”
- iii. JB (KY) – “Now, the certification program, of course, is based upon the *Initial Preparation* document from the NAAEE and the guidelines, two documents that were provided by NAAEE; and we used that as the national standards, as it were.
- iv. JB (KY) – “Work together. And work with the national organization. I think NAAEE is there; we recognize as a national organization that we have to work together and I think the national standards make us stronger.”
- v. EC (UT) – “We based off of NAAEE Guidelines and then they were modified for Utah specifics.”
- vi. JB (KY) – “...it has to be based on an organization such as the NAAEE that has looked at those skills and concepts that are essential for persons providing Environmental Education. And, you know, when you look at the criticisms in Environmental Education over the years, it’s based upon the fact that persons were not connected in any way to any national standards, they were doing their own thing. So, this is sort of a badge that says, “Well certification is going to be a process that insures those persons taking it are at least going to be connected to something bigger than them.””

c. Other states developing or implementing certification programs

- i. JE (KY) – “Borrow from other states. Don’t reinvent the wheel and really use the (*NAAEE*) Guidelines.”
- ii. JB (KY) – “Jane looked at what the other organizations were doing in other states. Utah, Georgia, I think Texas. However, what we decided, as a result of the task force and others, that those programs are only assessment-based and what we decided to do was to have an instructional-based program with an assessment.”
- iii. JB (KY) – “Work together. And work with the national organization.”
- iv. JB (KY) – “And at the same time there are certain things that we can help other states do without having to reinvent the wheel. And at the same time look at the bottom line being having competent and more skillful professionals in Environmental Education.”
- v. TB (UT) – “I think that looking at what everybody else has done is key, and getting a functional team and setting realistic goals.”
- vi. EC (UT) – “Don’t reinvent the wheel. There are two states that have certification programs (*North Carolina and Missouri*) and four states that are working on programs (*Utah, Kentucky, Georgia, and Texas*) and you need to make it work for your state and to at least look at those models. We looked at other models before working on our model but those weren’t in EE. Now there are models for EE, so use those. And the other thing that will be going on now is the national certification movement and looking on what is going to happen with that.”

26. Use experience gained through the development of a prior cooperative effort

a. Kentucky Environmental Education Master Plan development

- i. JE (KY) – “And having the background of doing the Master Plan really helped because the coal industry trusted us, the Sierra Club trusted us. When I say, ‘trusted us,’ I mean everyone trusted each other in this process.”
- ii. JE (KY) – “Our Master Plan process really brought us to this.”
- iii. JE (KY) – “That Master Plan process and this. You take the people from Associated Industries and the Sierra Club working together and the coal industry who come and sit there and look at you and say, ‘OK, it’s OK.’ It’s good for them.”
- iv. JE (KY) 5/23/04 – “The biggest thing we do in Kentucky that gives us the most success is bring in everybody at the beginning. We bring in everybody at the beginning and it’s always this long involved process where people work on things and develop things together and it’s time consuming and painstaking but you get buy-in and it’s so much easier than to sit in an office and do it by yourself, but we work by consensus and that’s the most important thing to do. We did it with the master plan, we’ve done it with the certification, we’ve done on it a number of other projects we’ve worked on and it just works for us.”
- v. JB (KY) – “The certification program is connected to the Kentucky Environmental Education Master Plan. The master plan was a function of many stakeholders coming together, formal and non-formal educators, and identifying some things that were needed in Environmental Education for the

commonwealth of Kentucky. The function of that was that one standard talked about the certification of teachers and it was felt that we not only needed to approach Environmental Education on the basis of teachers, but for non-formal persons, sort of in tandem; that is a certification program and an endorsement or teachers certification program.”

- vi. JB (KY) – “Yes, the Master Plan for EE which was the seminal piece of legislation that was a function of the stakeholders that put together the document from throughout the state. In other words, the Kentucky Environmental Education Council Master Plan. That Master Plan was the seminal piece that started all of this off.”

b. Development of Utah Guidelines for EE Providers

- i. EC (UT) – “And I think how we approached it that we would not be anywhere had we not had the Utah guidelines.”
- ii. EC (UT) – “It was essential to have that (*Utah Guidelines developed first*) and we took it one step at a time. The first thing we did is talk about the rubrics and we developed the rubrics, and once we felt OK with that, we started to talk about some process.”
- iii. TB (UT) – “They (*USEE PAC*) wanted the Guidelines to help legitimize the field and build the field and they specifically mentioned having guidelines or standards.”

Plan for the program pilot testing

27. Contributing factors and results for low first round pilot testing participant numbers

- a. HS (UT) – “The first round of (*rubrics*) pilot testing (*was challenging*) because it wasn’t fully developed yet.”
- b. EC (UT) – “We may have liked to have gotten more responses out of our first pilot test round, but what we got we took, we used, we modified, and made it better.”
- c. AC (UT) – “And when (*developing a program to guarantee a professional program*) doing that it became a multi-tiered and fairly difficult product and so the first time we sent it out a lot of people were completely overwhelmed by having to do, having to look at it and having to do anything about it.”
- d. AC (UT) – “The way we sent things out to people in our first round, we sort of all picked folks that were interested in getting certified. We sent the certification stuff out and from that point left it up to Eric and maybe Tim at that point to call people and follow up so instead of me calling a friend or someone I had worked with in the past saying, ‘How’s that going? How can I help you?’ Eric was doing it and I think that it’s easier working with someone you know than someone you don’t know so potentially in the future we would do that differently.”
- e. AC (UT) – “Had I been responsible for the people that I had suggested we give it to and each development person be responsible for their own contacts throughout the process we may have gotten better results. I’m a big fan of the personal contact thing.”

28. Certifying pilot test participants by a different method than future participants will be certified.

- a. AC (UT) – “I actually still have some serious misgivings about the fact that we certified 20 some people, 40 some people in this last certification process (*Summit in January 2003*). We did it to seed the pot and build enthusiasm for the project, and a week later one of the people we certified was in the paper and he was talking about something that was clearly advocacy. He is trying to both be an advocate in one realm and an environmental educator in another. And it was just too close for comfort.”
- b. AC (UT) - “I didn’t feel like we made enough of a distinction during the training (*Summit in January, 2003*) between advocacy and education, and I think, well it’s clear to all of the development team that we’ve talked about it a lot. That was probably the one big hole in our training.
- c. HS (UT) – “When we had people for the Summit sign up for certain parts and one of those assignments was to choose a person or a document to talk about the foundation of EE, and a lot of people chose people that weren’t specifically EE; and we were wondering how they were going to tie those into EE.”

29. Diverse representation in first cadre of certified participants

- a. JE (KY) – “The Logistics committee wanted this first cadre to be nominated by their agencies or organizations; so we would contact the natural resources, Division of Water, Fish and Wildlife, KAEE, the Louisville Zoo, lots and lots of organizations, and say nominate someone. First of all, we get more committed people at the beginning who are willing to sort of jumpstart it, but we also feel strongly that we don’t want 30 Fish and Wildlife people to go through or 30 people from the Division of Water. We want there to be this mix. And then after that, they’ll go back to their respective organizations and talk about what they did and hopefully it will be word of mouth then.”
- b. AC (UT) – “I think Eric sent out a lot of information to people who we wanted to target, so everyone from the development team as I recall, thought of 5 or 6 people that they thought would be good pilots, cause in some ways we haven’t really launched the program. We are still pilot phase so the pilot testers were pretty much hand selected, and then we mailed out information to them and talked about it.”

30. Spell out the expectations and rules for the participants

- a. JE (KY) – “Oh, you’ve got to make sure that your guidelines are very spelled out and that the rules are very spelled out, because people will come back and question you and say, ‘You turned me down and you better tell me why.’”
- b. Participant #4 – “I really like the flexibility of the certification process in terms of how I could personalize my attainment of the rubrics.”

31. Pilot testing as a marketing tool

- a. JE (KY) – “And then after that, they’ll (*participants from first class*) go back to their respective organizations and talk about what they did, and hopefully it will be word of mouth then.”

- b. JB (KY) – “I think that if we are successful in producing people who feel affirmed, who feel that they have gained both in concepts and skills, and professionally they have developed as professionals, I think it will sell itself.”

Market program through many avenues

32. Use surveys of EE providers and supervisors as a marketing tool

- a. JE (KY) – “We did a survey of EE providers and another survey of their supervisors. At the same time we were gathering information, obviously we were telling them about it. But a lot of people had questions. They wanted to know more about it but the response from the directors was very positive, more positive than we anticipated in these very tough budget times.”

33. Network through the development team

- a. JE (KY) – “So when we did the little survey, we sent it through the people on the task force. That’s why we got such a good return rate, and they all said, ‘Sure we’ll do it.’”
- b. JB (KY) – “Keep in mind a lot of persons who were stakeholders in the task force also helped with this because they knew it was coming down the line, they knew about the certificate program.”
- c. AC (UT) – “I think Eric sent out a lot of information to people who we wanted to target, so everyone from the development team, as I recall, thought of 5 or 6 people that they thought would be good pilots, cause in some ways we haven’t really launched the program. We are still pilot phase, so the pilot testers were pretty much hand-selected and then we mailed out information to them and talked about it.”
- d. AC (UT) – “Well, the way we sent things out to people in our first round we sort of all picked folks that were interested in getting certified. We sent the certification stuff out and from that point left it up to Eric, and maybe Tim at that point, to call people and follow up. So instead of me calling a friend or someone I had worked with in the past and saying, ‘Hey, how’s that going? How can I help you?’ Eric was doing it, and I think that it’s easier working with someone you know than someone you don’t know. So potentially, in the future, we would do that differently.”
- e. AC (UT) – “Had I been responsible for the people that I had suggested we give it to and each development person be responsible for their own contacts throughout the process, we may have gotten better results. I’m a big fan of the personal contact thing.”
- f. All four program participants surveyed attribute positive contact with the USEE staff and the USEE PAC with their decision to pursue certification. However, two of the four participants attributed USEE staff or USEE PAC members as the most influential factor in pursuing certification.
 - i. Participant #3 - “I think we have some really great cheerleaders like Adrienne who is definitely a real inspiration and helped me believe in it.”
 - ii. Participant #4 - “A lot of the reason why I’m personally doing it is because I know the people. And so I support the people and what they have going on.”
 - iii. Participant #2 - “Hearing about it through USEE that helps motivate as well.”
 - iv. Participant #4 - “I think the support of USEE.”

- v. Participant #4 - "Relationship with USEE. That's the main one. I guess the meat of the question is, I'm not sure that I would feel influenced or motivated if I didn't have a working relationship with the people that were doing it."
- vi. Participant #3 - "Because USEE was really supportive of me being certified."

34. Market to EE employers

- a. JE (KY) - "You can market it to providers but if the employers don't buy into it because they're not going to let them go for two weeks or pay their expenses or whatever it requires."
- b. JB (KY) - (*market program*) "...through agencies of the government that use EE currently as well as organizations that provide EE such as zoos, parks, etc."
- c. JB (KY) - I think if this first foray is successful and I don't see why it wouldn't because this past weekend the people were saying how much they learned. I think they're going to see a better connection; these persons are going to be better able to connect to their constituents."
- d. EC (UT) and HS (UT) - "Yes (*marketing through employers is planned*)."
- e. AC (UT) - "Yes, I think that has already begun. In terms of letting people who work with EE become aware of the program and say we should we put it into job ads."
- f. All of the program participants surveyed said they received job training to prepare them for EE field - Leave No Trace master educator - 1, Americorps volunteer training - 2, river guide interpretation training - 1, ski naturalist training - 1.
- g. Two of program participants surveyed identified themselves as "Directors".
- h. Two of the program participants surveyed said they received some support from their employer to pursue certification - "Compensation (comp) time" - 1 person, "Program cost reimbursement" - 1 person, "Travel cost reimbursement" - 1 person.
- i. Two of the program participants surveyed said they received no support from their employers to pursue certification.
- j. Two of the four program participants surveyed said that they somewhat disagreed with the statement "My employer believes that EE certification is important to the organization" (avg. 3.5/5).
 - i. Participant #3 - "It's not like they would be opposed to certification. They don't really know much about it."
 - ii. Participant #2 - "But they didn't even try to get an environmental educator for the position."
- k. Two of the four program participants surveyed said that they strongly agreed with the statement "My employer believes that EE certification is important to the organization" (avg. 3.5/5). Those respondents claimed they believed this statement because environmental education is a part of the organizations' mission or goals.
 - i. Participant #4 - "Well, one of our main goals of our programs is to connect young people to nature and their local environment through EE programs, recreation programs and service projects and also part of our mission is to encourage environmental stewardship."
 - ii. Participant #1 - "It is (*name of employer removed*) mission."

- l. One of the four participants surveyed claimed that their employer was the most influential factor in his/her decision to pursue certification.
- m. Two of the four program participants surveyed said that in 3 years, they plan on continuing to maintain the Director position and three of the four program participants surveyed say in three years they see themselves remaining in their present job/career.
- n. Program participants comments pertaining to certification and employment
 - i. Participant #2 - "I'm hoping that just the fact that I put down that I'm a certified environmental educator may help me get more money."
 - ii. Participant #2 - "If they see that maybe they will hire me."
 - iii. Participant #2 - "I think it makes me more marketable in looking for a job."
- o. One of the four program participants surveyed said that their decision to pursue higher levels of education hinges on future employment opportunities.
 - i. Participant #2 - "If I were just an environmental educator than I would say yes (*would pursue higher levels of certification*)...;but otherwise I don't see any reason why I would need to go, if it's not for some specific career.

35. Promote through word of mouth

- a. JE (KY) - "And then after that, they'll (*participants from first class*) go back to their respective organizations and talk about what they did, and hopefully it will be word of mouth then."
- b. JB (KY) - "I think that if we are successful in producing people who feel affirmed, who feel that they have gained both in concepts and skills, and professionally they have developed as professionals, I think it will sell itself."
- c. JB (KY) - "Keep in mind a lot of persons who were stakeholders in the task force also helped with this (*marketing*), because they knew it was coming down the line; they knew about the certificate program."
- d. JB (KY) - (*The*) "...initial class will be the best selling marketing tool, but if indeed we are successful in increasing the competencies of these persons, these non-formal educators, their employers are going to see the value of it and that too will be a boon to certification program in the state."
- e. JE (KY) - "We've had eight teachers contact us."
- f. JE (KY) - "And we've had a lot of non-formals that have contacted us on this. We have a list of about 30 people."
- g. EC (UT) - "They're putting it out, they're telling their colleagues, they're telling their employees and everybody else, their cohorts."
- h. EC (UT) - "It has primarily been through contact that we've had word of mouth."
- i. HS (UT) - "We chose people from around the state because we are a really diverse wide state geographically and there are certain population centers spread out. So we made sure that we had key contacts in those centers, so that we could promote it and implement it all over the state."

36. Promote through meetings, conferences, and workshops

- a. JE (KY) – “We will be going to KSTA and forestry marketing meetings and that sort of thing and doing some marketing, but we want to get through this initial training thing first.”
- b. TB (UT) – “And then at the conference and USEE PAC meetings.”
- c. EC (UT) – “NAAEE conference as well.”
- d. One of the four program participants surveyed said they received training to prepare for the EE field through specific conferences. “Association for Experiential Education”, “National Association for Interpretation (NAI)”
- e. Workshops – three of the four program participants surveyed said they received training to prepare for EE field through workshops. –“ PLT”, “Project WET”, “Project WILD”, “Naturalist Tri-County workshop”, “Harper Tate workshop”
- f. Three of the four program participants surveyed plan on pursuing additional EE – related training after certification. Two of the four program participants attribute this pursuit for additional training as a result of the certification program.
 - i. Participant #1 - “I’m going to take another Foundations of Environmental Education course and I will be focusing when I go to specific workshops on specific categories within the certification process.”
 - ii. Participant #2 - “The next thing I hope to do is get trained in the Leopold Education Project but that’s not because of the certification.”
 - iii. Participant #4 - “Maybe curriculum specific training (*Interviewer: Like Projects WET, WILD, and Learning Tree?*) Yeah, if you wanted to do something from Project WILD, you’ll have to go through their training to get the book and know how to do it.”

37. Promote through a newsletters

- a. EC (UT) – “We’ve put articles in our quarterly newsletter. So we keep putting updates in there as far as where we are in the process.”
- b. EC (UT) – “But, we are starting to get interest now from the articles on the web and our newsletter saying, ‘Hey, I’ve heard about your certification program. Can you give me more information?’”
- c. JB (KY) – “Print, through the affiliate organization Kentucky Association for Environmental Education, and through agencies of the government that use EE currently as well as organizations that provide EE such as zoos, parks, etc.”
- d. One of the four program participants surveyed plans on volunteering to write for the USEE Newsletter to become more educated in a subject.
 - i. Participant #2 - “It gets me an opportunity to have a deadline and have a purpose and because of that the next thing to do is to do an article on the history of EE, so I can educate myself on that. But it’s not through any specific workshop.”

38. Promote through a website

- a. HS (UT) – “And (*promote*) on the website.”
- b. EC (UT) – “Well, the website is kind of hidden though. But, we are starting to get interest now from the articles on the web and our newsletter saying, ‘Hey, I’ve heard about your certification program. Can you give me more information?’”

39. Promote through job announcements

- a. AC (UT) – “Well, putting it in the Job Announcements, which is just on the University of Utah Human Resources website, as well as the Salt Lake Tribune. Again, it was only with one specific job saying it was a requirement, as opposed to advertising it as a program; and I think the best way to advertise once we get this thing up and running is partially using it as a criteria by which to hire.”
- b. AC (UT) – “I feel we have already started on the marketing techniques to make sure we put it in our job announcement.”
- c. AC (UT) – “Yes, I think that has already begun. In terms of letting people who work with EE become aware of the program and say, ‘We should we put it into job ads.’”
- d. AC (UT) - But I put that into an ad to hire people and that deals more with marketing than anything else, at this point.”

40. Promote through university courses

- a. AC (UT) – “Personally, I mentioned it in the Environmental Ed class I teach. And that got a few people excited about doing it.”
- b. Two of the four program participants surveyed said they received training to prepare them for EE field through courses (*not always university-sponsored*) – “Fundamentals of Environmental Education,” “Biology Prep course,” “Northwest Earth Institute adult discussion course,” “Wilderness First Responder.”
- c. Two of the four program participants surveyed plan to pursue additional university coursework.
- d. All four of the program participants surveyed claim that their highest level of education is a Bachelor’s degree.
- e. One of the four program participants surveyed claimed ‘certification as a means to acquire an employment edge as a factor in deciding to pursue the certification program.’ Participant #2 - “It’s something where that may give me a little bit of an (*employment*) edge because I don’t have a master’s degree.”

41. Address weaknesses in marketing

- a. Additional marketing could make program more external or profession-driven and less internal or individual-driven
 - i. Participant #4 - “Definitely some PR; possibly out like at education conventions, maybe trying to get information out into government and non-profit newsletters about this process and what it means. So that hopefully down the road teachers might be interested in doing it.”
 - ii. Participant #4 - “I don’t know if that’s a PR thing because it seems like now it’s kind of an internal motivation, ‘Oh wow do I want to be certified, I think that would be cool’ rather than, ‘Wow, I really need to be certified if I’m going to be doing....’ Not just for myself, but I think that would help the certification process overall if people really felt a need to do it or were required to have it.”
- b. Marketing to the general public
 - i. Participant #4 – “Just the certification program so that teachers know if they are going for a curriculum or general awareness in the community and is it really going to give an application for an environmental education program credibility

so that people are aware of it and say, 'Oh wow, this program is certified. This is one that we want to go with.'"

c. General concern that lack of marketing will lead to less credibility.

- i. Participant #4 - "I'm not so sure that it has the credibility that everybody is hoping that it will have. Teachers and others that may utilize your program may not give a lot of weight to whether or not someone is certified as an environmental educator; so maybe some more outreach to the general community as to what that means."

Appendix T – Interviews Conducted

Baust, Joseph, March 30, 2004
Brown, Tim, April 11, 2004
Cachelin, Adrienne, April 11, 2003
Cachelin, Adrienne, May 14, 2003
Chandler, Eric, July 20, 2002
Chandler, Eric, April 11, 2003
Eller, Jane, July 20, 2002,
Eller, Jane, August 4, 2003
Eller, Jane, August 9, 2003
Eller, Jane, May 24, 2004
Fitzpatrick, Scott, June, 15 2004
Heimlich, Joseph, September 26, 2002
Marcinkowski, Tom, April 7, 2004
Osorio, Richard, March 30, 2004
Scheel, Heather, April 11, 2004
Scheel, Heather, May 24, 2004
Simmons, Deborah, September 20, 2002
Simmons, Deborah, March 2004
Stanco, Cheryl, March 30, 2004
Visitacion, Jennifer, May 24, 2004
Visitacion, Jennifer, July 6, 2004
Way, Mike, June 14, 2004
Weiser, Brenda, May 22, 2004,
Weiser, Brenda, June 7, 2004
Wilcox, Libby, March 29, 2004
Wilcox, Libby, May 23, 2004
Wilke, Richard, June 11, 2004