

# **Pennsylvania Non-Formal Environmental Educator Certification**

**A report by**

**The Pennsylvania Association of Environmental Educators**

**&**

**The Pennsylvania Center for Environmental Education**



**Pennsylvania Association of  
Environmental Educators**



2011

## The Pennsylvania Association of Environmental Educators

The Pennsylvania Association of Environmental Educators (PAEE) is a non—profit organization charged with uniting, supporting, and empowering a community of environmental educators, throughout Pennsylvania. Founded in 1977 and now one of the oldest state EE groups, PAEE is also the official state affiliate of the North American Association for Environmental Education.



## The Pennsylvania Center for Environmental Education

The Pennsylvania Center for Environmental Education (PCEE) supports environmental education across the commonwealth, linking professionals and private citizens with the tools and information necessary to achieve a healthy environment and citizenry, sustainable communities, and a green and growing economy.

PCEE was created by Executive Order of the Governor in 1997 to “provide increased public and private access to quality environmental education,” and was established in statute by Act 71 of 2008. Administered by the PA State System of Higher Education, PCEE is housed at Slippery Rock University.



# Pennsylvania Non-formal Environmental Educator Certification

A project of PAEE & PCEE

2011

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## Executive Summary

**A**s national awareness of environmental education (EE) has grown over the past decade, efforts to raise the quantity and quality of EE programming have taken root across the country. Recent reports by the National Environmental Education Advisory Council and the Environmental Education and Training Partnership (EETAP) have focused these efforts on improving educator preparation as the most effective means of raising quality and expanding access to EE programming. At the national level, EETAP and the North American Association for Environmental Education (NAAEE) have begun developing the processes and guidelines to raise standards within the non-formal EE community. These efforts have led to national accreditation standards to guide the development of educator certification programs at the state and local level.

Though environmental education has been increasingly integrated into the formal K-12 education system in many states including Pennsylvania, non-formal educators who teach in settings outside the classroom have not had access to formalized professional credentialing programs until very recently. Due to Pennsylvania's present EE certification program for formal educators and the recent decision of the National Council for Accreditation of Teacher Education (NCATE) to include EE as an option for pre-service educator programs, the Pennsylvania EE community is now concentrating on what it perceives to be a gap in the certification process—certification of non-formal educators.

### Target Audience and Definitions

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One of the primary reasons for the following study was to determine how much consensus there was among various Pennsylvania stakeholder groups regarding certification as a way of standardizing and professionalizing the non-formal EE field. The Pennsylvania Center for Environmental Education (PCEE) and the Pennsylvania Association of Environmental Educators (PAEE), with support from the AmeriCorps VISTA program, undertook a feasibility study to measure support for non-formal EE certification among the following three stakeholder groups in Pennsylvania:

- Practicing non-formal environmental educators,
- Supervisors and employers of non-formal environmental educators, and
- University or college educators who are involved in the development and training of pre-

service environmental educators.

For the purposes of this study, *non-formal environmental educators* were defined as qualified educators who are not credentialed by the Pennsylvania Department of Education and who primarily teach “noncaptive” audiences in nature centers and other non-formal settings.

## Survey Design and Analysis

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An online survey tool was developed to question each of the three targeted stakeholder groups. The online survey was emailed to approximately 10,000 individuals from pre-developed email distribution lists composed of organizations and professional networks across the state.

- The study incorporated responses from nearly 800 individuals across Pennsylvania.
- Of those, over 470 members of the Pennsylvania non-formal EE community participated in the survey, representing a significant cross-section of the field.

Results from the 45-question survey were analyzed quantitatively to calculate rating averages, response counts, and percentages. Open-ended questions and narrative comments were analyzed qualitatively by categorizing responses based on content and then recording category frequencies. Both types of results are depicted graphically and narratively in the Results Summary found in this report.

## Conclusions

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Responses to the survey were generally quite supportive of non-formal EE certification among all three stakeholder groups in Pennsylvania, matching or exceeding levels of support from the larger EE community as measured by EETAP in their national study of non-formal EE certification. The following conclusions were gathered from a qualitative and quantitative analysis of the PCEE/PAEE survey results:

- **The Pennsylvania EE community is interested and engaged in the idea of certification.**
- **Non-formal EE practitioners see certification as important to their individual careers, but view it as even more important to the field as a whole.**
- **Employers and supervisors of non-formal EE practitioners support certification for**

**current employees, but a program must be rigorous, compatible with current hiring practices, and offer professional development opportunities for less experienced practitioners to be broadly relevant and valuable.**

- **College and university faculty and staff generally recognize the need for professional certification and a significant number have indicated interest in being involved in the planning, design and implementation of a certification program. They also cite significant institutional and financial barriers to their involvement.**

## **Next Steps**

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Based on the above conclusions and confidence that results from the survey are representative of Pennsylvania's non-formal EE community, PCEE and PAEE plan to continue the development process with a series of follow-up discussion groups. These regional focus groups will invite all members of the non-formal EE community to contribute further input into the design of a certification program and will begin to focus discussion on topics that arose from the survey study. The small group discussion format is an opportunity to further publicize results of this study and to record comments and ideas from the community on more substantive aspects of a certification program.

While results from this study will serve as a solid foundation for incorporating the input of the Pennsylvania EE community, many issues still warrant further investigation. Several important questions pertaining to the development and administration of a non-formal EE certification program have emerged from this study as well as prior research. For the development process to remain as inclusive and collaborative as possible, the following questions will be posed to the non-formal EE community for further input and to guide future decision-making on the content, design and implementation of a certification program:

- What organizations, partnerships and resources (including colleges and universities, environmental non-profits, state agencies and commissions, and other groups offering certifications) need to be developed to make non-formal EE certification sustainable, relevant and valuable?
- What does a certification program specifically need to ensure it is rigorous and valuable enough to gain the support of employers and potential applicants?

- How can a certification program achieve a critical mass of applicants to make the program viable and self-sustaining?
- How can a certification program be compatible with current hiring practices and employer needs?
- What proportion of a certification program should be professional development and on-the-job training (potentially more costly)? What proportion should be assessment of candidates' competency through tests and other assessments (potentially less costly)?
- What is the most effective and viable method of assessing candidates for certification?
- What minimum prerequisites should be necessary for admission into a non-formal certification program (education, experience, etc)? How should this be balanced to maintain rigor while still remaining relevant and accessible to new practitioners?

## Introduction

The field of environmental education (EE) has always had lofty goals: among others, to foster awareness of, and concern about, ecological interdependence among all citizens and to protect and improve the environment (UNESCO, 1978). Recent studies conducted by the National Environmental Education Advisory Council (NEEAC) and the Third Environmental Education and Training Partnership (EETAP3) have found that improved educator preparation and professional development is essential to raising the quality of environmental education in pursuit of those goals (NEEAC, 2005). EETAP in particular has concluded that professional certification, long used by many professions to ensure the quality of practitioners, is an important method of strengthening educator preparation (Rhoads, Sikes, & Heimowitz, 2009).

Over the past 11 years, efforts at the state and national levels to enhance the quantity and quality of EE programming have focused on the development of comprehensive environmental education certification programs. Several states, including Pennsylvania, have recently developed EE certifications for formal K-12 teachers; however, reports from EETAP and NEEAC have also highlighted the need to reach an even broader audience than is served by formal K-12 education. Based on guidelines and core competencies developed by the North American Association for Environmental Education (NAAEE), as many as 10 states have already developed and implemented a process to assess formal and non-formal educators against a set of competencies and issue a professional credential in environmental education (NAAEE, 2010).

Stated briefly, this report identifies *formal* educators as those certified by the Pennsylvania Department of Education in the K-12 educational system and who primarily teach “captive” learners in classroom settings. *Non-formal* educators are defined as qualified educators who are not credentialed by the Pennsylvania Department of Education and who primarily teach “noncaptive” learners in nature centers and other non-formal settings (Meredith, 2000).

The non-formal EE certification initiative has progressed significantly in recent months with the evolution of NAAEE’s Certification Advisory Council into an Accreditation Board.

This formal body was established to aid states in certification program development and to ensure that state certification programs meet rigorous quality standards. Accrediting state certification programs based on a national set of standards will further improve the credibility of state-led efforts and give states a successful framework for developing their own programs. Furthermore, an NAAEE-accredited professional certification will be recognized nationally, giving credentialed practitioners more flexibility and mobility to work where they choose. These various state certification programs are diverse in practice, but have all been developed through a collaborative process to collectively enhance the credibility of the EE field and establish a baseline set of skills and knowledge expected of all environmental educators.

Since 2008, representatives of the Pennsylvania Association of Environmental Educators (PAEE), the state NAAEE affiliate organization, have attended national workshops on EE certification. Following one such series of workshops at the 2009 NAAEE annual conference, PAEE received an NAAEE grant to begin exploring the development of a certification program in Pennsylvania. A further grant to continue exploration of a certification program was awarded to PAEE by NAAEE's Certification Advisory Council in 2010. As interest in certification increased at PAEE and other state-wide organizations, including the Pennsylvania Center for Environmental Education (PCEE), the two organizations decided to develop an informal partnership to further study certification. In December 2009, PCEE applied on behalf of both organizations to receive a VISTA member from the Corporation for National and Community Service, administrators of the AmeriCorps program. A VISTA was hired in August 2010 to begin researching the feasibility of a state-wide non-formal EE certification program for Pennsylvania.

The following report represents the second phase of this feasibility study, following the initial phase of research and background data collection. Building on a national survey and report issued by EETAP, PCEE and PAEE decided to conduct a similar survey of the Pennsylvania non-formal EE community. The EETAP report found that though a majority of respondents supported certification, support varied significantly among various stakeholder groups and was especially inconsistent among employers of non-formal environmental educators (Rhoads, Sikes, & Heimowitz, 2009). Six recommendations came out of EETAP's report, including calls to:

- "Continue and increase dialogue within the field regarding certification.
- Continue developing state certification programs that meet the accreditation requirements established by NAAEE.
- Increase dialogue with nonformal environmental education supervisors and employers.
- Increase awareness and knowledge about environmental education among college and university faculty members and administrators."

Based on these recommendations, PCEE and PAEE developed a survey to gauge support for certification among three particular stakeholder groups and continue capacity building efforts within the Pennsylvania non-formal EE community. The target audience of the survey included (1) practicing non-formal environmental educators, (2) employers and supervisors of non-formal environmental educators and (3) college and university educators involved in the training of environmental educators.

This survey's development was guided by the following goals, based in part on EETAP's recommendations:

- *Non-formal EE practitioners* - Measure interest in professional certification program; identify potential barriers to participation; identify which certification format is most popular; inform community of potential benefits of certification; and recruit interested individuals to the planning process.
- *Non-formal EE employers* - Measure perceived value of professional certification program; identify barriers and incentives for support; identify specific content/skills valued by employers; inform employers of potential benefits of program; and recruit interested individuals to the planning process.
- *University and college faculty* - Measure perceived value of certification program to pre-service training program faculty; identify potential partners; inform universities of development of non-formal certification program; and recruit interested individuals to the planning process.



## Methodology

### Target Audience and Definitions

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The survey was designed to elicit responses from three specific stakeholder groups:

- Practicing non-formal environmental educators,
- Supervisors and employers of non-formal environmental educators, and
- University or college educators who are involved in the development and training of pre-service environmental educators.

For the purposes of the study, *non-formal environmental educators* were defined as educators with a college degree who are not credentialed by the Pennsylvania Department of Education and who primarily teach in nature centers and other non-formal settings. *Formal educators* were defined as educators certified by the Pennsylvania Department of Education in the K-12 educational system and who primarily teach in classroom settings.

Based on feedback received during the pilot phase (see section below), two additional target groups were added to the survey so that respondents could most accurately identify themselves when accessing the survey. Thus categories for "formal educators and administrators" and "other" were used to identify these respondents and direct them to a separate page. As the stated aim of this study was to measure interest specifically among the non-formal EE community, it was decided that responses from formal educators would not be surveyed and included in the compiled data.

### Survey Instrument and Design

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The Pennsylvania non-formal environmental education community consists of a wide range of providers, from state agencies and nature centers to urban educational centers and watershed organizations. To reach a broad cross-section of this community most effectively, it was decided to use an online survey tool to collect responses. SurveyMonkey, one such online survey administrator, was selected based on the variety of question formatting and data analysis tools it provided. This allowed for a single survey instrument to be developed to reach all three of the

targeted stakeholder groups, making survey distribution and data collection much more efficient. Considering the possibility of many environmental educators identifying with more than one of the defined target groups, this also reduced multiple surveys being sent to the same person.

The survey consisted of 45 separate questions in a variety of formats, including open-ended responses, multiple choice and rating scale questions. All rating scale questions were measured on a 4-point scale (ex: 1 = Not Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important). With support from EETAP, the wording of some relevant questions was taken from EETAP's *Issues Associated with Nonformal EE Certification* survey, as prepared by the Environmental Education Association of Oregon (Rhoads, Sikes, & Heimowitz, 2009). Several questions and answer options were reused verbatim and others were slightly modified. The majority of questions in this survey were developed by this survey team, however.

Each target group section was designed to be roughly the same length and all respondents were asked the same 7 optional demographic questions at the close of the survey. At the end of each target group section, a routing question allowed respondents to identify as a different target group and be directed to that section of the survey as well:

**24. This completes the questions for non-formal EE practitioners. Please select an option below to continue:**

- I'm also a supervisor or employer of non-formal environmental educators
- I'm also a university or college educator
- Please take me to the final page of the survey

Before general distribution of the survey, a pilot version was tested among a small group of experienced professionals representing the three main target groups, as well as several representatives of formal education. Of the 16 participants invited to take part in the survey pilot, 9 completed the survey and provided valuable feedback on both the question content and survey instrument. Their feedback resulted in a revised final version of the survey that was ultimately distributed to the Pennsylvania EE community at-large.

## Sampling Design

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This study relied on a type of nonrandom sampling known as purposive sampling. Since the study was concerned with three specific target groups (non-formal EE practitioners, supervisors

and employers of EE practitioners, and college and university educators), members of these groups were specifically invited to participate in the survey. As the process of developing the survey sample was not done randomly, calculating the probability that this sample represents the entire population of Pennsylvania's non-formal EE community is not possible. However, as will be discussed below, the study utilized a comprehensive distribution list of Pennsylvania's EE community and thus the results can be considered fairly representative.

To reach as broad a spectrum of the non-formal EE community as possible, the study used several pre-developed email distribution lists from organizations and professional networks across the state. With the permission of these organizations and networks, an email notification was sent to members of all of these lists explaining the purpose of the forthcoming survey and giving individuals an opportunity to unsubscribe. Following the distribution of this pre-notification letter, a final distribution list was compiled and a survey invitation emailed to all members (see Appendix C).

This list was comprised of members of the Pennsylvania Association of Environmental Educators (PAEE), Pennsylvania Center for Environmental Education (PCEE), PCEE's Nature Center Directory, Green Education Movement (GEM), and Western Pennsylvania Nature Center Roundtable (WPNCR). Additionally, the survey invitation was sent to administrators of several organizations for internal distribution to their staff and colleagues, including the Pennsylvania Association of Conservation Districts (PACD), Department of Conservation and Natural Resources (DCNR), Pennsylvania Fish and Boat Commission, Department of Environmental Protection (DEP), Pennsylvania Game Commission, National Association for Interpretation (NAI) Environmental Education Section, and Association of Conservation Educators (ACEd). Finally, a comprehensive list of Pennsylvania's colleges and universities was compiled with the help of several university faculty.

## **Notes on Survey Methodology**

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It should be acknowledged that several aspects of the study design may have influenced results. Due to the method of electronic distribution and the reliance on particular organization administrators to distribute the survey to their colleagues and staff, an exact sample size cannot be determined. Though PCEE and PAEE directly sent a specific number of survey invitations (n

= 9958), an unknown number of these emails either bounced due to nonfunctional email addresses or were intercepted by spam filters. Without an accurate number of surveys received by potential respondents, it is impossible to calculate the survey response rate (number of surveys sent and received / number of survey responses). Response rates are useful in establishing the statistical degree of confidence that results represent the entire population.

Furthermore, some potential sampling bias must be acknowledged as well. It is unclear how the use of internet surveys affects sampling bias, though an increasing number of people use the internet frequently for work purposes. Internet surveys may not capture the entire population of environmental educators, but the affect is assumed to be small. The email distribution lists, as well as the location of this year's annual PAEE conference in western Pennsylvania, also has the potential to slightly skew results towards certain geographic regions of the state. Though every attempt was made to cover the entire state of Pennsylvania, outreach was heavier in the western region of the state where both PCEE and PAEE are primarily located. The PAEE conference, where discussion of EE certification and promotion of the online survey was prominent, generally attracted more participants from western and central Pennsylvania, though it was open to professionals from across the state.

Despite these potential threats, the overall number of respondents to the survey far exceeded expectations and are considered to be a fair and accurate representation of Pennsylvania's environmental education community. Given that the state association for environmental educators, PAEE, has a current membership of approximately 178, a survey response of nearly five times that number represents a very strong basis for extrapolating results to the larger community. The survey was clearly able to reach far beyond the limits of any one organization's membership, which should make the results of this survey highly relevant to future decision-makers.

## Data Analysis

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The online survey was available via SurveyMonkey for three weeks. Once the survey was closed to responses, results for each individual question were analyzed using online tools provided by SurveyMonkey. For rating scale questions, quantitative analysis was used to calculate the rating average (mean), response count (frequency), and percentage of responses to each answer option.



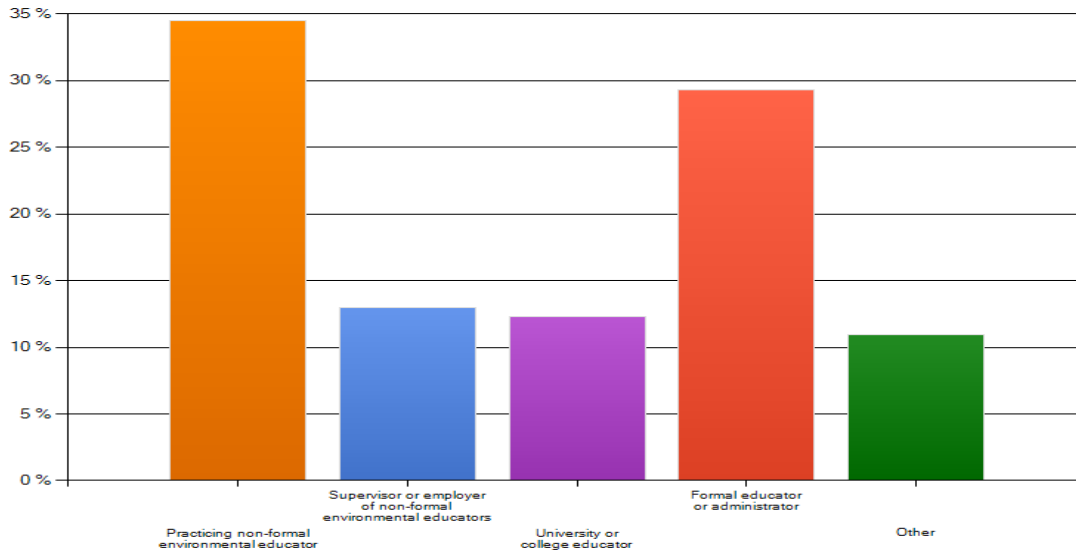
For multiple choice questions, a similar quantitative analysis calculated the response percent and response count (frequency) of each answer option. The rating averages and percentages for these types of questions are presented graphically in the Results Summary below. For questions with particularly long answer options, an additional chart is provided to make results more readable.

For open-ended questions and narrative responses, data was qualitatively analyzed by categorizing responses based on content and recording frequencies for each category. These narrative response frequencies are presented in chart form accompanying each question in the Results Summary. All narrative responses and comments are contained in full following this report (see Appendix A).

## Results Summary

### Question 1: Which of the following best describes your current job position/title?

$n = 788$  (where  $n = ##$  indicates the number of respondents to each question)



In order to most efficiently reach all of the targeted stakeholder groups without unnecessary redundancy, one survey instrument was designed for all respondents. The first question of the survey (above) allowed respondents to self-identify as one of five groups of professionals to initially begin the survey. Respondents were then directly routed to that particular section of the survey:

- Practicing non-formal environmental educators were directed to question 2
- Supervisors and employers were directed to question 15
- University and college educators were directed to question 27
- Formal educators and Others were directed to question 38

At the end of each of these sections (questions 14, 26 and 37 respectively), respondents were given the option to self-identify with any of the remaining target groups if they wanted to

complete another section of the survey. Once they had completed all relevant sections of the survey, respondents were directed to an optional demographics page before completing the survey.

Due to the routing system of the survey, it is important to note that the numbers represented in the above Q1 are not the total number of respondents for each section. For example, 272 respondents initially identified as practicing non-formal environmental educators in the first question. A total of 310 ultimately answered the first question of that section though, as respondents first identifying as either university educators or supervisors of non-formal environmental educators later identified as non-formal environmental educators following that section of the survey. The first question does, however, indicate the total number of people who responded to the survey (n = 788).

A more relevant number of respondents for the purposes of this survey is the total number of respondents identifying as one of the three target groups, not simply the total number of respondents to the survey. 471 respondents identified as a non-formal EE practitioner, a supervisor or employer of EE practitioners, or a university or college educator with experience in environment or education. This number represents the number of respondents that the survey was directly targeting and any conclusions about non-formal EE certification should be based on 471 respondents, as opposed to the 788 total survey responses.

The remaining 317 respondents identified themselves as “formal educators or administrators” or "Other" in question 1. These respondents were directed to an information page thanking them for their interest in EE certification and informing them that this particular survey was targeting the non-formal EE community only (see appendix D). Formal educators and others were encouraged to leave their contact information so that they could be contacted about future EE certification initiatives involving the entire EE community. Of 317 respondents identifying as formal educators or other, over 90 respondents entered contact information, indicating a certain level of interest in certification among the formal EE sector as well.

It should also be noted that many identifying as formal educators or others dropped out of the survey once they were directed to this page (i.e. did not click all the way through the survey and hit the "done" button to officially complete their participation). These respondents can

largely account for the 231 (29.3% of all respondents) who did not officially complete the survey. Other respondents answered most survey questions but failed to officially complete their participation by clicking "done" at the end of the survey, though their responses were still saved and included in the data when a majority of questions were answered. Given that most of the respondents who dropped out of the survey came from the "formal/other" group, the 29% drop-out rate is not cause for concern.

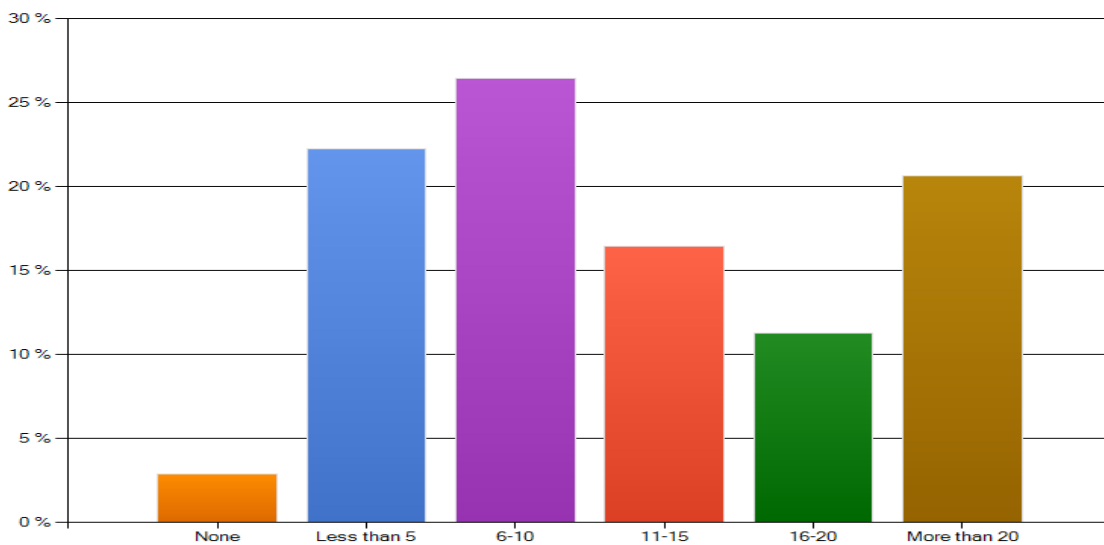
## Section I - Practicing Non-formal Environmental Educators

Questions 2 – 14 of the survey were specific to respondents identifying as practicing non-formal environmental educators. 310 out of a total 788 survey respondents indicated that they were practicing non-formal environmental educators, either initially in question 1 or following the completion of a different section of the survey. The following presents results from this section of the online survey.

Note that not all 310 respondents to question 2 fully completed this section of the survey. For a variety of reasons, a certain percentage of respondents will always drop out of a survey before completing it. In this section, 86% of respondents (n = 266) answered through to the end of the section.

### Question 2: How many years of professional experience and/or training do you have as a non-formal environmental educator?

*n = 310, multiple choice question*

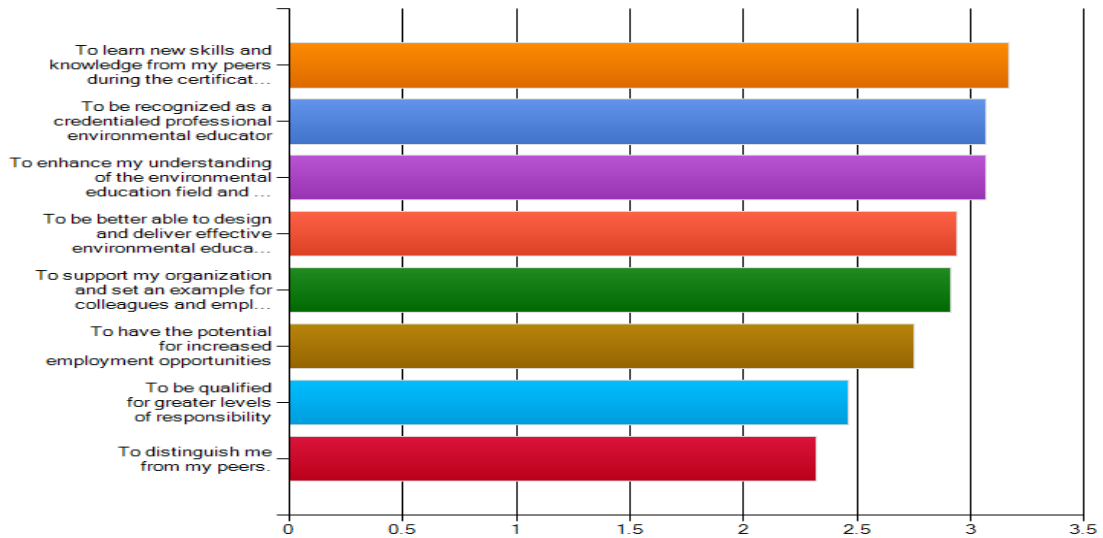


A full range of experience levels responded to this section of the survey. The most common response was 6-10 years of experience, and more than half of respondents (51.7%) had 10 years or less experience as a practicing non-formal environmental educator. On the other end, 20% of respondents have more than 20 years of experience.

**Question 3: Please indicate how important the following reasons for becoming certified would be for you.**

*n = 267; rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



Answer Options	Rating Average
To learn new skills and knowledge from my peers during the certification process/program	3.17
To be recognized as a credentialed professional environmental educator	3.07
To enhance my understanding of the environmental education field and gain new perspectives	3.07
To be better able to design and deliver effective environmental education programs	2.94
To support my organization and set an example for colleagues and employees	2.91
To have the potential for increased employment opportunities	2.75
To be qualified for greater levels of responsibility	2.46
To distinguish me from my peers.	2.32

Respondents seemed to place much more value on what could be learned through a certification program than what a certification might do for their careers. Learning new skills and knowledge, improving design and delivery of EE programs, as well as enhancing understanding of the EE field were among the most valued reasons for potentially becoming certified.

Though respondents placed much less importance on what a certification might do for their

career (being distinguished from peers, being qualified for greater levels of responsibility), respondents strongly valued being recognized as a credentialed professional.

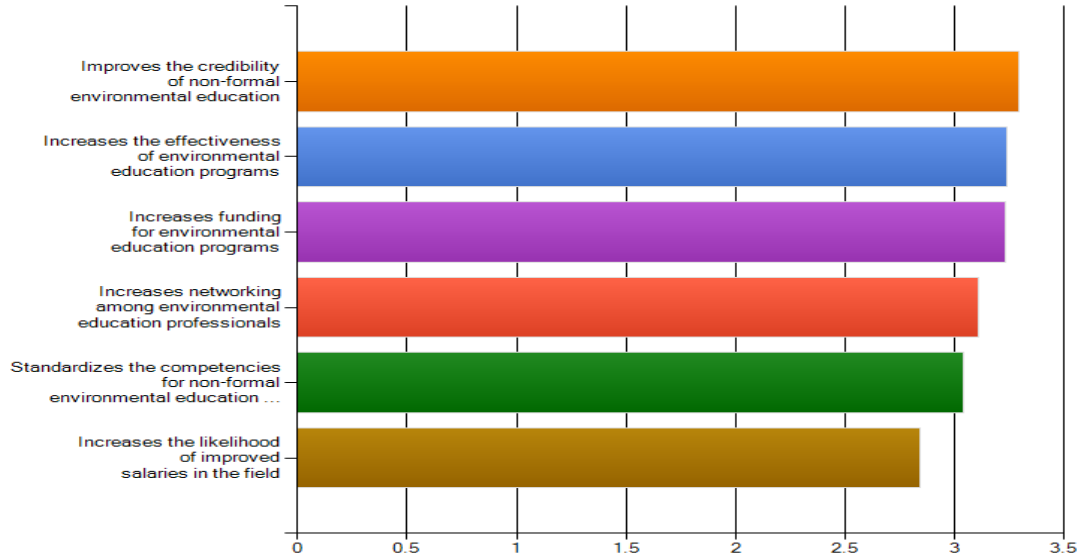
Narrative comments to this question (n = 29) tended to confirm support for a certification program/process or explain why certification was not personally relevant at this stage in their career. Several respondents also expanded on what they would like to see in a certification or elaborated on personal qualifications or certifications that they already possess.

Narrative Response Category	#
Confirms support for certification	6
Thoughts on content/process of certification	5
Certification not relevant at this point in career	5
Respondent already has other certifications or credentials	4
Elaborates on personal credentials or experience	4
Provides other reason to support certification or is considering certification	3
Unsure of certification's ability to fulfill answer options	2

**Question 4: For each of the following, please indicate how important becoming certified would be for the field of environmental education.**

*n = 266; rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



In general, respondents indicated that certification would be important or very important for the field as a whole. With the exception of certification increasing the likelihood of improved salaries, all of the ways that certification might benefit the EE field received an average response above 3.0, indicating very high importance.

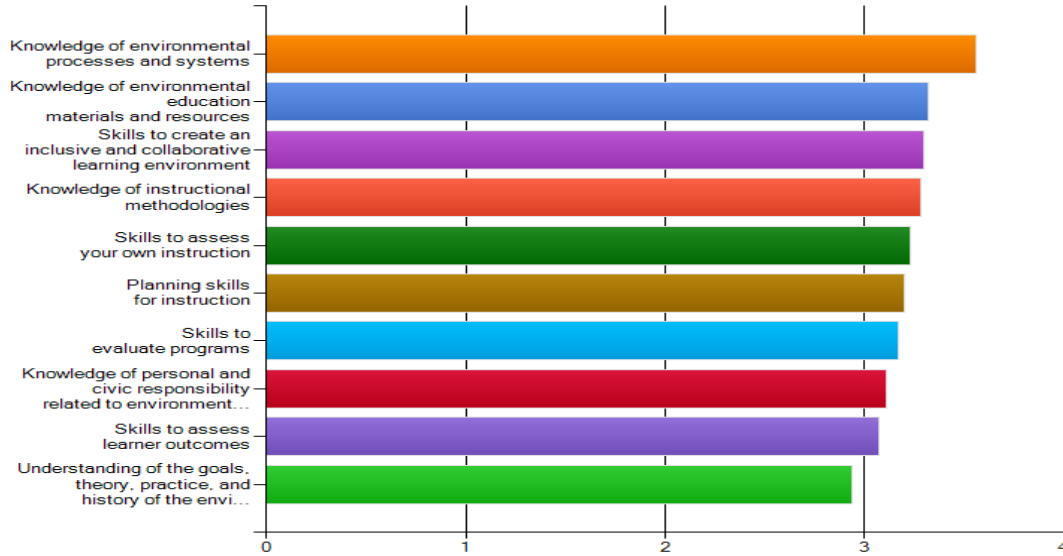
Comments tended to affirm respondents’ support for a certification effort or express concern about how certification might actually fulfill its goals. Specifically, there were multiple comments doubting whether certification would improve salaries for environmental educators.

Narrative Response Category	#
Unsure of certification’s ability to fulfill specific answer option	7
Affirms support for certification or elaborates on specific answer option	4
Support for certification depends on specific factors	1
Respondent questions the need for certification	1

**Question 5: How important should the following skills and/or knowledge be in qualifying a candidate for professional environmental education certification?**

*n = 265; rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



Answer Options	Rating Average
Knowledge of environmental processes and systems	3.56
Knowledge of environmental education materials and resources	3.32
Skills to create an inclusive and collaborative learning environment	3.30
Knowledge of instructional methodologies	3.28
Skills to assess your own instruction	3.23
Planning skills for instruction	3.20
Skills to evaluate programs	3.17
Knowledge of personal and civic responsibility related to environmental issues	3.11
Skills to assess learner outcomes	3.07
Understanding of the goals, theory, practice, and history of the environmental education field	2.94

All of the various skills and knowledge used to potentially assess a professional environmental educator were highly valued by respondents. All choices except one (understanding of goals and history of EE field) received an average rating above 3.0, and the vast majority of respondents (over 70%) rated even this choice as important or very important.

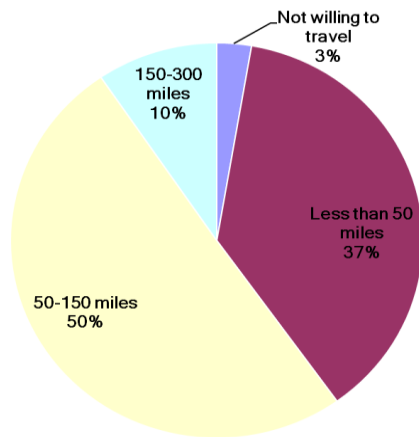
Narrative responses tended to elaborate on the value of specific skills/knowledge or suggested additional themes to focus on, such as tying environmental knowledge to broader historical and cultural issues.

Narrative Response Category	#
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Respondent affirms importance of a particular option(s)	6
Suggests other skills or knowledge to be included	4
Concern about relevance of particular option or certification’s ability to provide particular skill/knowledge	3
Other suggestions	2
Respondent discusses need for assessment to test these skills/knowledge	1
Respondent has experience in other state's certification program and confirms value of certification program	1

**Question 6: How far would you be willing to travel to attend a 1-day or 2-day workshop as part of EE certification?**

*n = 262, multiple choice question*



Respondents indicated a strong willingness to travel to attend workshops as part of a certification program or process. Based on narrative responses, this willingness often seemed to depend on the costs of traveling or attending the workshop, as well as how accessible the workshops were (i.e. proximity to public transportation to reduce travel footprint or access to affordable accommodations). Though over 50% of respondents indicated a willingness to travel 50-150 miles, many said they might be willing to travel further for a 2-day workshop (versus a one-day workshop).

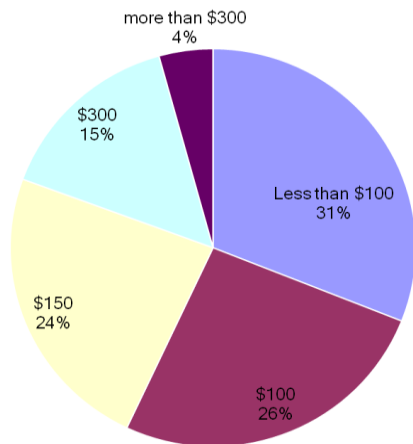
Narrative Response Category	#
Financial concerns	6
Respondent provides suggestion of where or how to host	4



Respondent is willing to travel farther for 2-day workshop	4
Concerns about methods of transportation and accessibility of workshops	4
Respondent would need accommodations provided	2
Time constraints may limit involvement	2
Participation depends on quality of program	1
Respondent provides more specific answer	1
Respondent is not interested in certification	1

**Question 7: How much would you be reasonably willing to pay for a certification program that was valued by you and the EE community (not including potentially related costs like travel)?**

*n = 258, multiple choice question*



Responses were much more varied to this question, but generally indicated that cost will be a significant barrier to many respondents above a certain threshold. Still, roughly 50% of respondents indicated a willingness to pay \$100-150 for a certification program, which is the general price range for many other state EE certification programs. Another 15% would pay up to \$300 and several respondents would pay even more than \$300. Overall, there was significant willingness to pay for a meaningful certification program. One respondent who is actually completing an EE certification in Ohio commented:

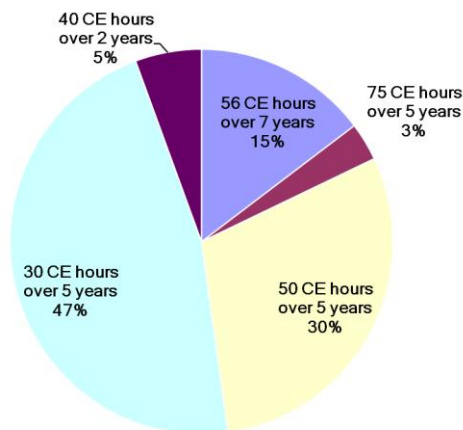
“The program I am enrolled in currently costs \$350 and is worth every bit of it.”

Many respondents indicated that their participation was dependent on their employer's ability to pay for the costs of the certification. Others commented that their participation really depended on the content and rigor of the program or how widely it was recognized.

Narrative Response Category	#
Willing to participate if employer covered costs	7
Depends on content/value of certification	6
Concern about costs being prohibitive	4
Respondent suggests how to calculate price	3
Concern about other costs associated with certification	3
Support depends on what costs cover	3
Respondent provides more specific amount they are willing to pay	2
Unwilling to pay any amount	2
Concern about motive for developing program	1
Respondent affirms value of similar program in Ohio	1

**Question 8: In addition to the one-time certification fee, most certification programs require a certain number of continuing education (CE) hours and a small fee for re-certification. Which of the following re-certification options would you prefer? (options based on other state EE certification programs)**

*n = 251, multiple choice question*

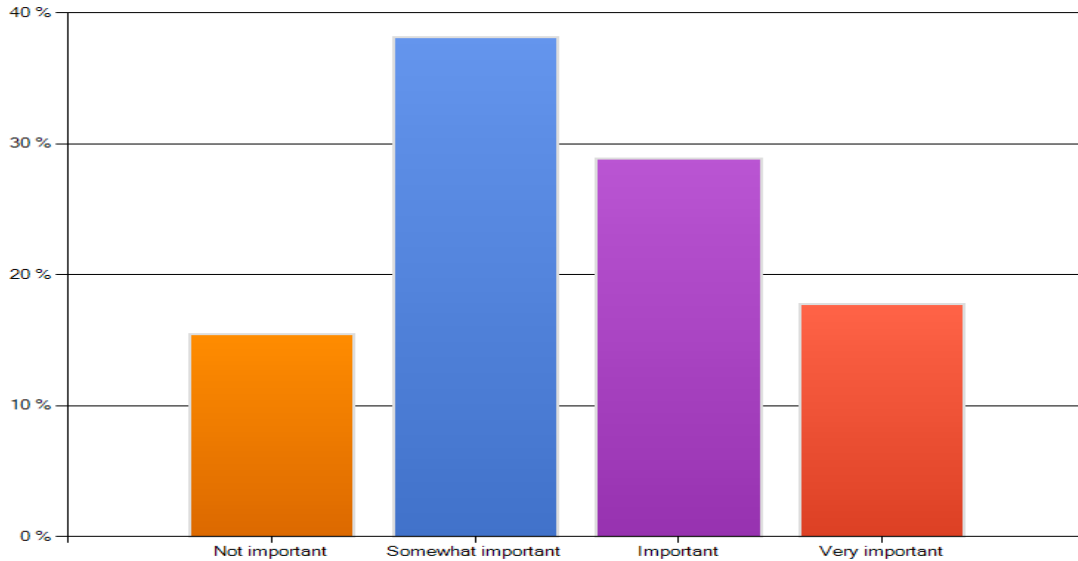


Generally, respondents preferred the least number of re-certification hours required as part of a certification program or process. Narrative responses often questioned what a CE hour would entail or suggested that CE hours for re-certification be compatible with other training or professional development programs, such as Master Naturalist programs. If CE hours were not seen as a burden, and were flexible enough to include already available training opportunities, respondents seemed more willing to participate.

Narrative Response Category	#
Depends on relationship to previous/current trainings offered through other organizations	7
Respondent suggests other option	7
Depends on what CE hour entails	6
Respondent expresses concern about cost of program	4
Concern about location/time constraints of CE courses	3
Concern about potentially negative effect of certification on field	2
Respondent explains answer further	2
Respondent sees re-certification as unnecessary	2
Respondent generally supports re-certification	1
Respondent has no preference	1

**Question 9: Some certification programs provide a certified member of the EE community to guide applicants through the process. How important would the support of an experienced mentor be as part of a certification program?**

*n = 260; multiple choice question*



Support for a mentoring component of the certification program was also mixed. The majority of respondents selected somewhat important or important, with relatively fewer respondents indicating a strong feeling on either extreme. Based on narrative responses as well as a disaggregated look at the data, support for a mentor seems to depend on the respondent’s career stage - younger environmental educators placed more value on a mentor relationship than mid-career environmental educators. As one respondent commented:

“This is relative to the individual's years in the field. As a new educator I found mentor's to be extremely valuable, and have been told that I have served in that role to others. I am not certain that mentor's would be as valuable or even available to educator's who have been practicing for years.”

Narrative Response Category	#
Respondent explains value of mentors	6
Depends on applicant’s career stage/experience	6
Depends on certification process itself	4
Question about who would serve as mentor	4

**Question 10: In your opinion, how valuable is becoming a certified non-formal environmental educator for you as an individual and for the EE community as a whole?**

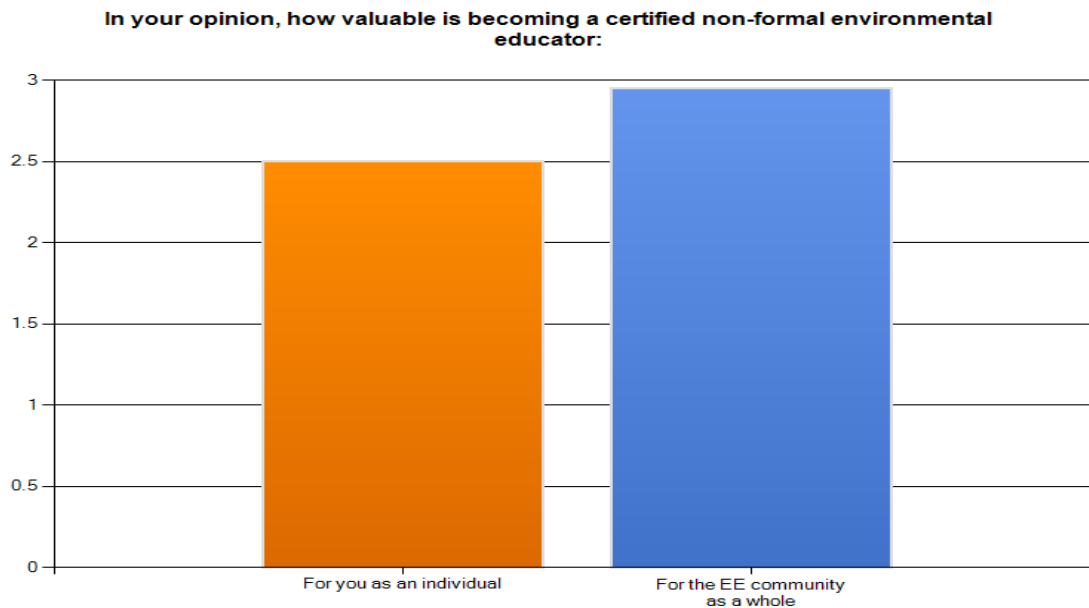


*n = 263, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*

Similar to responses to questions 3 and 4, respondents placed more importance on certification’s value to the EE community as a whole than to their individual careers. While 50% of respondents still rated the importance to their individual career as important or very important, there was broader support among mid-career practitioners (6-15 years of experience) than any other group. There was consistent support for certification’s value to the EE community as a whole among all experience groups, with 72% of respondents selecting important or very important. One respondent who found potential benefits to both individual careers and the field as a whole suggested:

“We really need the credibility - especially when dealing with schools. The teachers are required to be certified and I think if we expect them to view us as equals professionally, we need certification as well. “



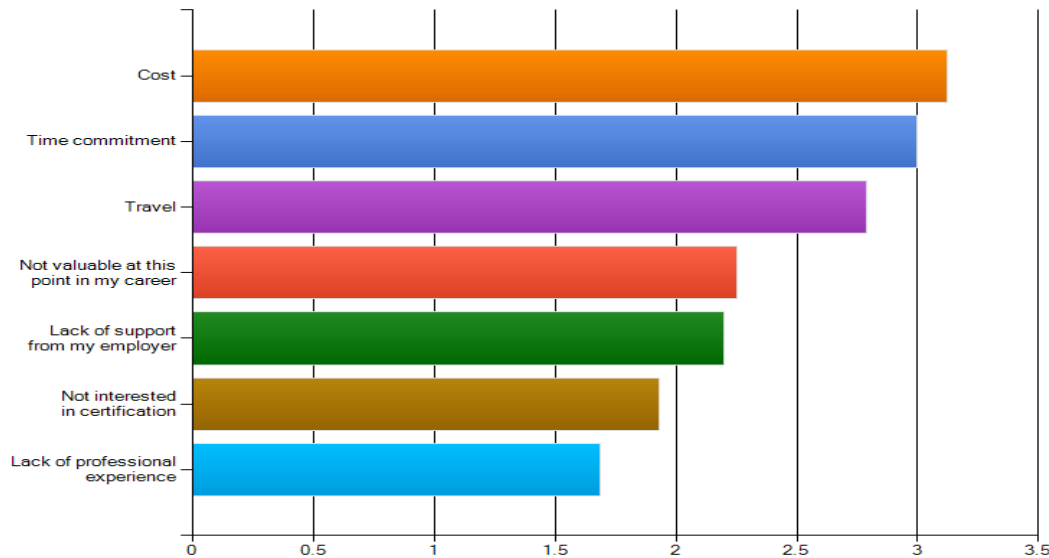
Narrative Response Category	#
Unsure how certification will improve field because of how broad it is	4
Depends on content of certification	4
Certification alone does not guarantee quality	3

Elaborates on personal circumstances	3
Must be rigorous to avoid duplicating other trainings	3
Certification would legitimize field	2
Concern about effects on hiring practices	2
Certification would help bring field together	1
Certification not as valuable to more experienced practitioners	1

**Question 11: Which of the following potential barriers to participating in a non-formal EE certification program are the most important to you?**

*n = 263, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



Cost and time commitment were by far the strongest barriers to participation in a certification program or process. Narrative responses confirmed that many respondents were concerned about how much time a certification program would involve and how they would schedule it into already busy schedules. Others mentioned that making time for a certification program might conflict with similar training or professional development opportunities already available and that a certification would have to be very valuable to make it a priority.

Narrative Response Category	#
Survey question wording is confusing	4

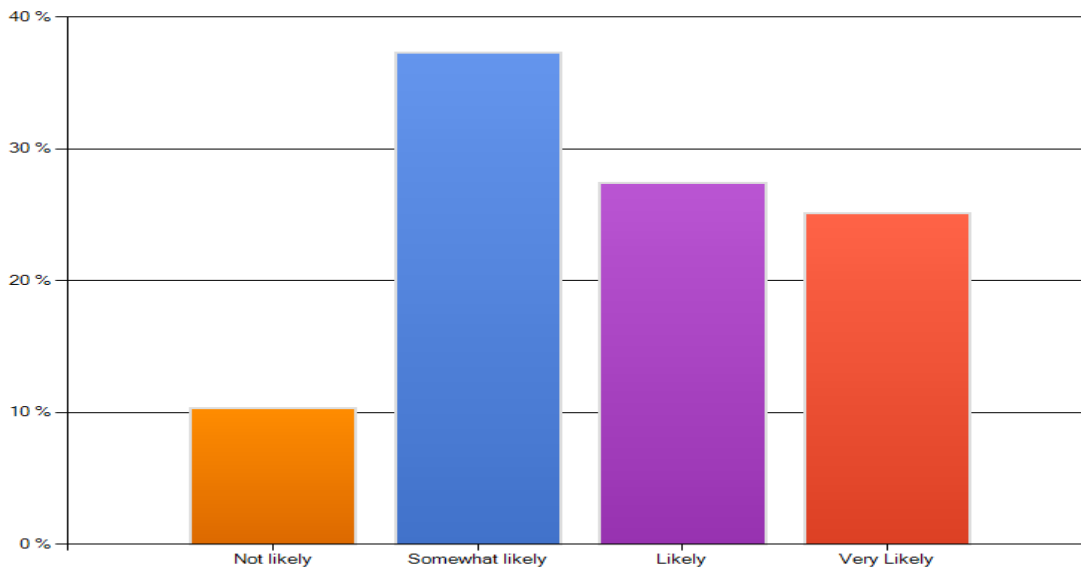


Time constraints are most important concern	3
Concern about lack of support from employer	3
Cost and time are equally important concerns	2
Respondent sees value in certification	2
Respondent doesn't see benefit at stage in career	2
Cost is most important concern	2
Other comment	2
Continuing Education requirements can be a burden	1

**Question 12: If a certification program that interested you were available in Pennsylvania, how likely would you be to seek certification?**

*n = 263, rating scale question*

*1 = Not Likely, 2 = Somewhat Likely, 3 = Likely, 4 = Very Likely*



Overall, there was moderate to strong support for a certification program among practicing non-formal environmental educators. While a plurality of respondents responded that they were somewhat likely to seek certification (37%), over 52% responded that they were likely or very likely to seek certification. Interestingly, practitioners with 6-10 years of experience were the most supportive experience group, with nearly 40% of respondents in this group answering they were very likely to seek certification.

Narrative responses often indicated that logistical concerns such as cost, time commitment and travel requirements would significantly affect one’s ability to participate:

“If my employer paid, and location and timing fit, I would seek certification.”

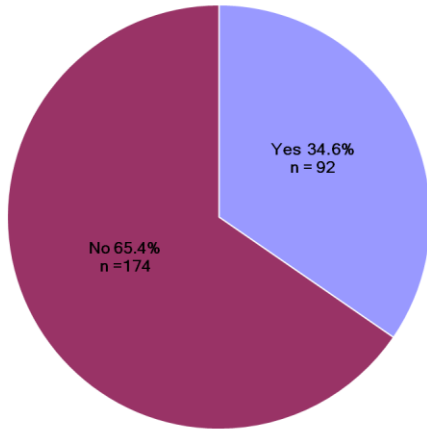
Many others responded that their participation was dependent on the content as well as the rigor of the program or process. A certification that was widely recognized or accredited by a national organization would seem to garner more support:

“One of the biggest determining factors is if the EE certification would be recognized and reputable nationwide...If an EE certification was only recognized in the state of Pennsylvania, I would put far less priority on becoming certified.”

Narrative Response Category	#
Respondent expresses logistical concerns (cost, time, travel)	11
Rigor/accreditation/recognition of program enhances value	9
Depends on content/process	7
Support depends on career stage	4
Respondent already taking other training/PD programs	1
Respondent explains personal circumstances	1
Respondent is uninterested	1

**Question 13: Would you like to participate in a collaborative working group to continue developing non-formal EE certification in PA?**

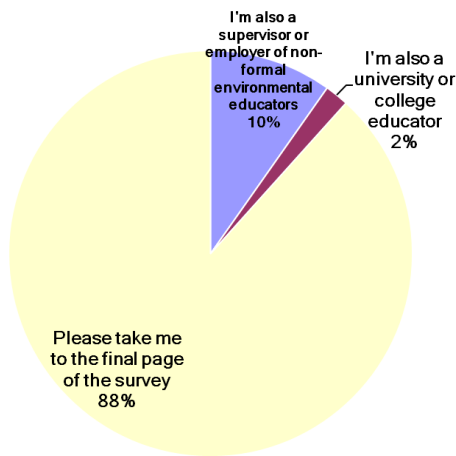
*n = 266, multiple choice question*



61 respondents left usable contact information, indicating a strong interest in further participating in non-formal EE certification development.

**Question 14: Section routing question**

*n = 266, multiple choice question*

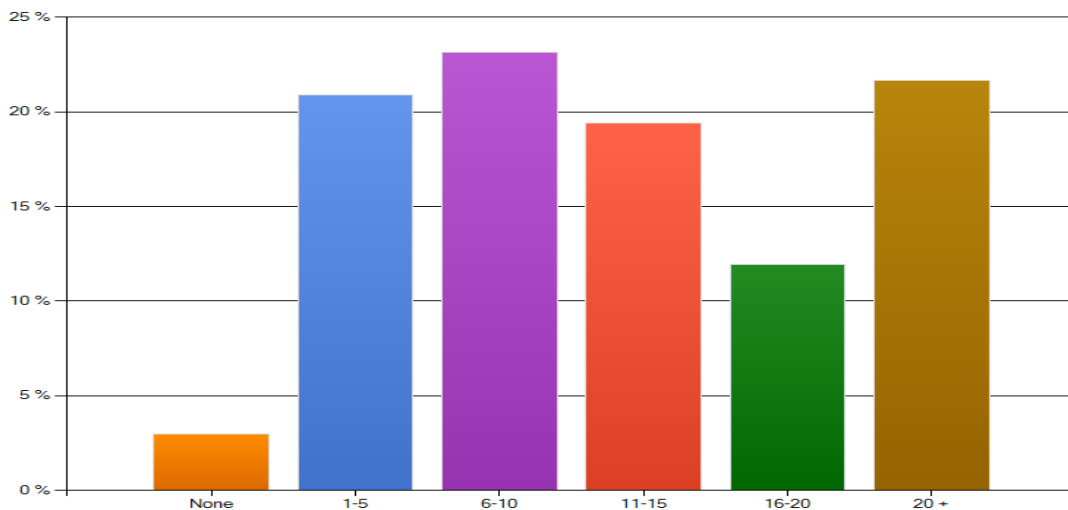


## **Section II - Supervisors and Employers of Non-formal EE Practitioners**

Questions 15 - 26 were designed for supervisors and employers of non-formal environmental educators. 102 respondents initially identified themselves as supervisors or employers, and an additional 32 respondents were directed to this section after first completing a different section of the survey. In total 134 respondents identified themselves as supervisors or employers of non-formal environmental educators.

### **Question 15: How many years of professional experience do you have working in a situation where you sometimes hire professionals as non-formal environmental educators?**

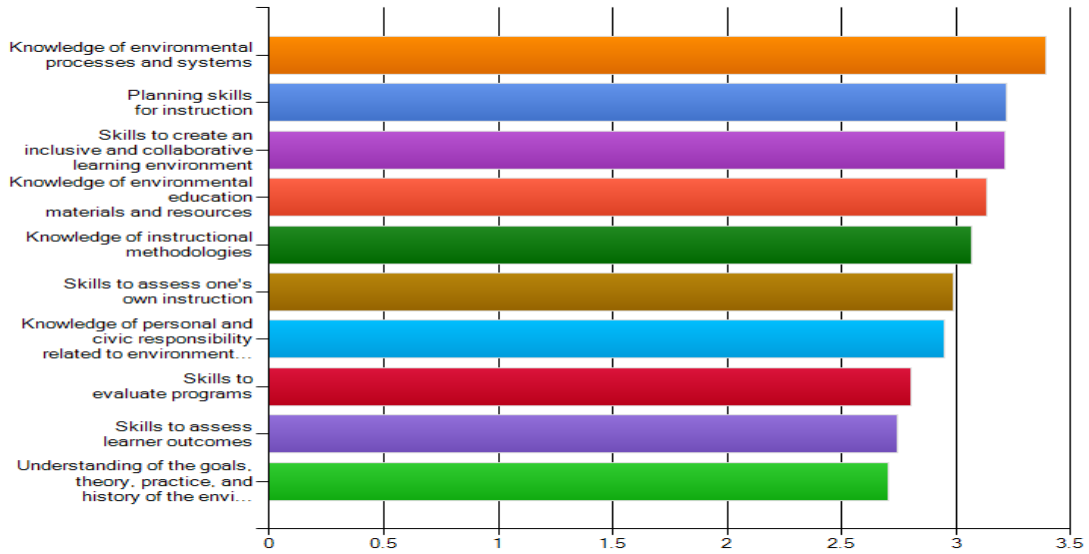
*n = 134, multiple choice question*



### **Question 16: How important do you consider the following skills and/or knowledge to be when weighing candidates for a position in your organization as a non-formal environmental educator?**

*n = 127, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



Answer Options	Rating Average
Knowledge of environmental processes and systems	3.39
Planning skills for instruction	3.22
Skills to create an inclusive and collaborative learning environment	3.21
Knowledge of environmental education materials and resources	3.13
Knowledge of instructional methodologies	3.07
Skills to assess one's own instruction	2.99
Knowledge of personal and civic responsibility related to environmental issues	2.95
Skills to evaluate programs	2.80
Skills to assess learner outcomes	2.74
Understanding of the goals, theory, practice, and history of the environmental education field	2.70

Nearly all the skills and knowledge options were valued by respondents, with 6 of 10 answer options receiving an average rating above 3.0. Knowledge of environmental processes and systems was rated as especially important, as were skills to create an inclusive and collaborative learning environment and planning skills for instruction.

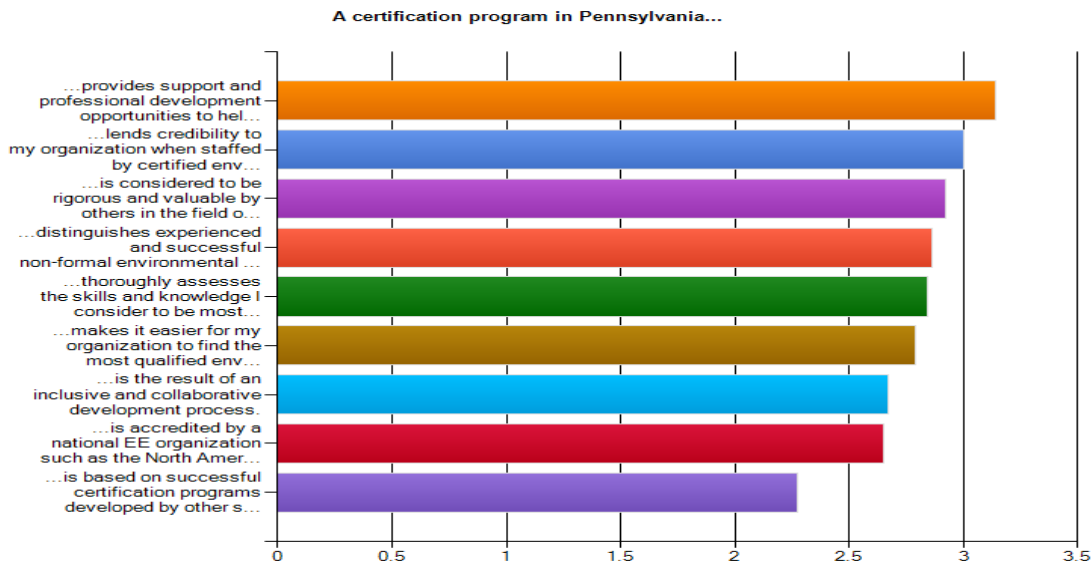
Several respondents commented that their organizations already provide training to new employees that cover all or some of these skills and that their responses reflected what they were not able to provide in their own training programs.

Narrative Response Category	#
Natural sciences, teaching skills and communication skills most important	4
Organization already has own training to cover these skills	3
Attitude of the candidate is more important	2
Respondent questions need to know goal, theory, practice and history of field	2
Recognizes that many people will not have all these skills or that it depends on level of position	2

**Question 17: How important would the following reasons be in convincing your organization to give preference to certified non-formal environmental educators during the hiring process?**

*n = 124, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



Answer Options: A certification program in Pennsylvania...	Rating Average
...provides support and professional development opportunities to help inexperienced environmental educators fill in the gaps in their professional experience and training.	3.14
...lends credibility to my organization when staffed by certified environmental educators.	3.00
...is considered to be rigorous and valuable by others in the field of EE.	2.92
...distinguishes experienced and successful non-formal environmental educators.	2.86
...thoroughly assesses the skills and knowledge I consider to be most relevant to my organization's mission.	2.84



...makes it easier for my organization to find the most qualified environmental educators.	2.79
...is the result of an inclusive and collaborative development process.	2.67
...is accredited by a national EE organization such as the North American Association of Environmental Educators (NAAEE).	2.65
...is based on successful certification programs developed by other states.	2.27

In general, employers and supervisors ascribed importance to most of the potential reasons for supporting a certification program. In particular, providing support and professional development opportunities to inexperienced environmental educators and lending credibility to organizations staffed by certified environmental educators were rated as the most important reasons.

Interestingly, basing a certification program in Pennsylvania on successful programs in other states was not considered that important relative to other answer options.

Several respondents mentioned that though they may value a professional credential, their hiring practices were dictated by Civil Service and changing these hiring requirements would be a long and difficult process. Thus, certification may have a limited impact on the hiring practices of state agencies without some discussion involving Civil Service:

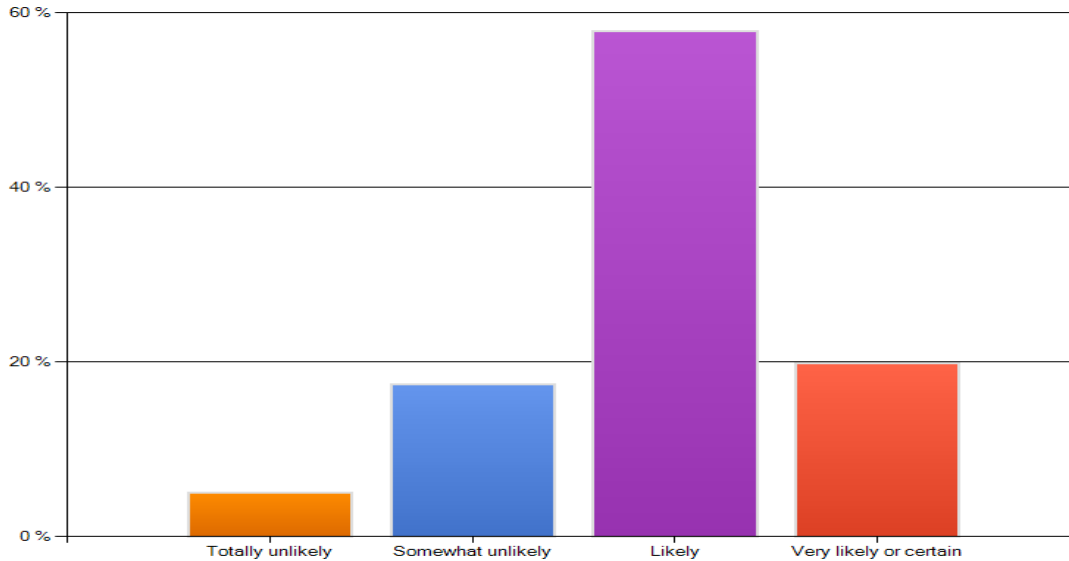
“I work for a state agency and changing the civil service requirements for an educator position would be difficult.”

Narrative Response Category	#
Details additional skills needed or other certifications/credentials they value	4
Cautions that certification does not determine quality of individual	2
Concern that certification would hurt uncertified applicants or is not necessary to the field	2
Civil Service requirements will make valuing certification difficult	2
Certification might only be useful for entry level positions	1
Answers would depend on content/process of program	1

**Question 18: If a certification program were available in Pennsylvania that effectively assessed candidates in the areas you indicated were important, how likely would you be to give preference to certified non-formal environmental educators in your hiring practices?**

*n = 121, multiple choice question*





Supervisors and employers of non-formal environmental educators indicated a strong likelihood of preferring certified environmental educators in their hiring practices. Nearly 80% of respondents said they would be likely or very likely to support a rigorous certification program, with a strong majority of respondents (58%) indicating likely support.

Again narrative comments expressed support for a certification program, but indicated they lacked full control over hiring practices due to Civil Service or other requirements. Additionally, others commented that preference for certified individuals would depend on the content of the certification program or process.

Narrative Response Category	#
Respondent lacks full control over hiring preferences due to Civil Service	5
Might not be relevant to certain (part-time/seasonal) positions	4
Depends on content of certification program or process	3
Respondent would consider certification among other factors in hiring process	3
Certification alone does not qualify a candidate	2
Concerns about negative effects of certification on field	1
Certification would make difference between two equal candidates	1

**Question 19: What needs to be included in a certification program for non-formal environmental educators to make it valuable and relevant to your organization?**

*n = 81, open-ended question*

Narrative Response Category	#
Certification should include a combination of teaching skills (planning, implementation, assessment, working with diverse audiences), local environmental/ecological knowledge, and/or make applicants aware of resources available across state (curriculums, programs, partner organizations)	27
A program should incorporate standards and/or build relationships with other credentials like PDE, NAAEE, Civil Service hiring practices, NAI, etc.	11
A program must teach how to work with diverse audiences, including different age groups and special needs students	10
Teaching methodology and communication skills are the most important (program development/delivery, public speaking skills, evaluation)	9
Skills and knowledge are important, but certification may not be best way to develop them	6
A program must be rigorous and balanced	5
Continuing education, re-certification and specific pre-requisites should be included	4
Respondent suggests offering multiple levels of certification - entry through professional	2
Organization already trains staff or employ seasonal workers who may not benefit from certification	2
Program must certify enough people to make it valuable and be broadly recognized across state/country	2
Should include some direct hands-on experience or service-learning component	2
A program should include outdoor education experience (group management, risk assessment, etc)	1
Must have clear standards that are broadly applicable so those without EE background can eventually earn certification	1

When given an open-ended opportunity to write what they wanted to see in a certification program, respondents most often indicated that it should include teaching skills and methodologies as well as knowledge of environmental science and ecology. Other aspects of a certification program or process that many indicated were important included introducing candidates to EE resources such as existing curriculum, programs and organizations working across the state, as well as assessing communication and public speaking skills.

In keeping with responses from previous questions, many respondents also commented that a strong program would build relationships with other credentials or professional organizations. For example, being accredited by NAAEE and incorporating standards established by the



Pennsylvania Department of Education (PDE) and Civil Service were all mentioned as important aspects of a non-formal certification program:

“Should be more of a collaborate certification - combining and building upon other existent certifications (environmental, educational and technical) ...”

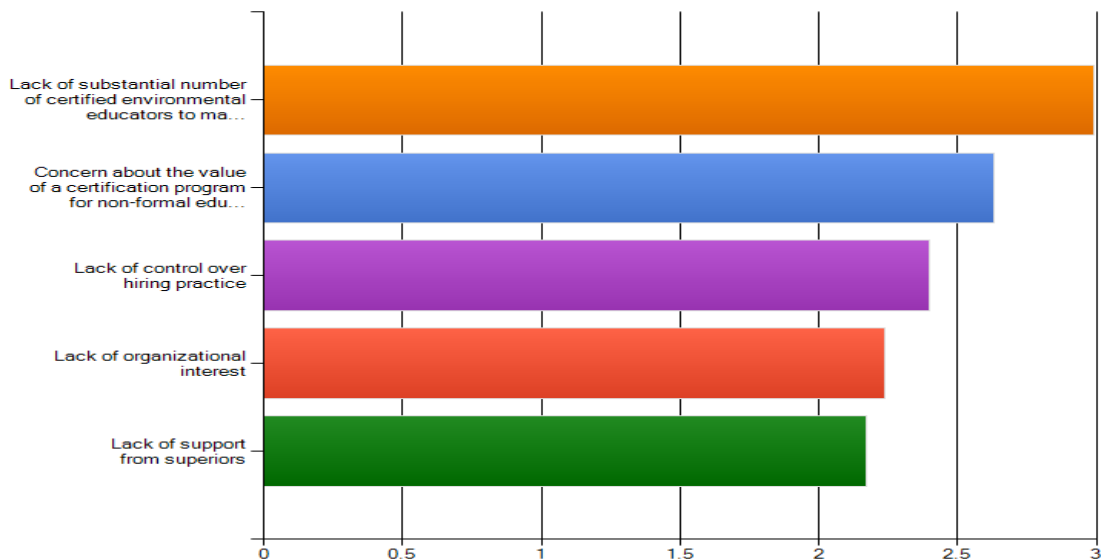
Furthermore, a significant number of respondents indicated that a certification program should either assess or teach candidates best practices for working with diverse audiences, including various age groups, cultures and special needs students:

“...participants [should] receive training working with diverse audiences -- young kids, high school/college students, adults, different minority groups, etc.”

**Question 20: Which of the following reasons would be most important in preventing your organization from giving preference to certified non-formal environmental educators in your hiring practices?**

*n = 118, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



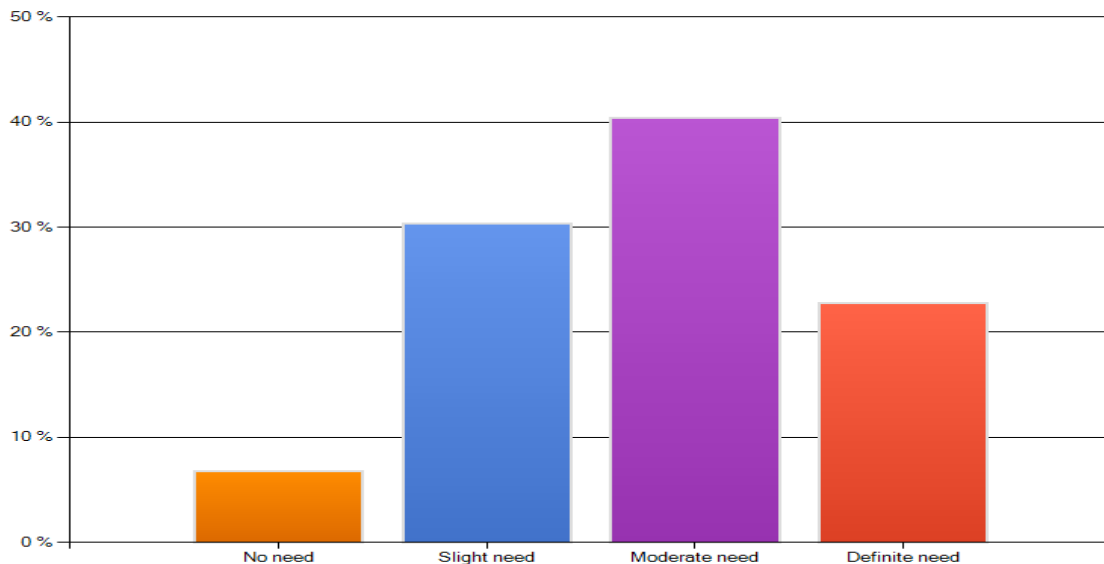
One of the biggest concerns for employers and supervisors of non-formal EE practitioners was the initial lack of a substantial pool of certified environmental educators needed to significantly influence hiring decisions. As in other questions, several respondents commented that a

certification program alone could not guarantee the quality of a candidate, but that possessing a certification could potentially make the difference between two otherwise equal candidates.

Narrative Response Category	#
Respondent explains other hiring constraints, including Civil Service requirements	4
Wording of survey question is unclear	4
Certification does not seem relevant to respondent's open positions	3
Certification would be just one factor considered in hiring, but might make the difference between two equal candidates	3
Concern about increased salary expectations resulting from certification	2
Program would need national support or have a large enough pool of certified individuals to be valuable	2
Respondent needs more convincing of benefits of certification	1

**Question 21: As an employer of non-formal environmental educators, do you feel there is a need for a professional certification program for non-formal environmental education practitioners?**

*n = 119, multiple choice question*



A strong majority of respondents (63%) felt there was a moderate or definite need for a certification program for non-formal environmental educators. While several respondents elaborated on how a certification program or process would improve the credibility of the field, a

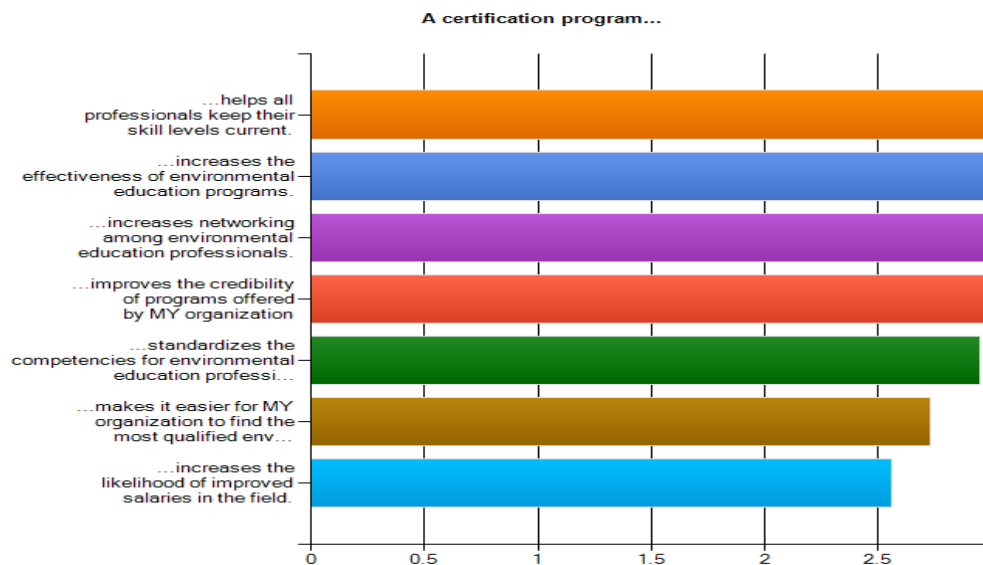
similar number suggested that a certification program might not be the most effective way for employers to find qualified candidates for non-formal EE positions. Thus, there seems to be strong support, but questions still remain for many employers about the value and content of a certification program.

Narrative Response Category	#
Respondent indicates potential support for certification	5
Certification would improve credibility of non-formal field	5
Program might not meet needs of employers or is not the best way to find qualified individuals	5
Certification will help establish baseline set of skills and provide relevant training	3
Respondent sees benefits to certification, but not a strong need	2
Concern about lack of opportunities for people entering the field and lack of funding to hire them	2
Certification might encourage more diversity in field	1
Certification is not as relevant for seasonal employees	1

**Question 22: How important are each of the following reasons for supporting your current employees’ participation in a certification program if it assessed the skills/knowledge listed previously?**

*n = 119, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



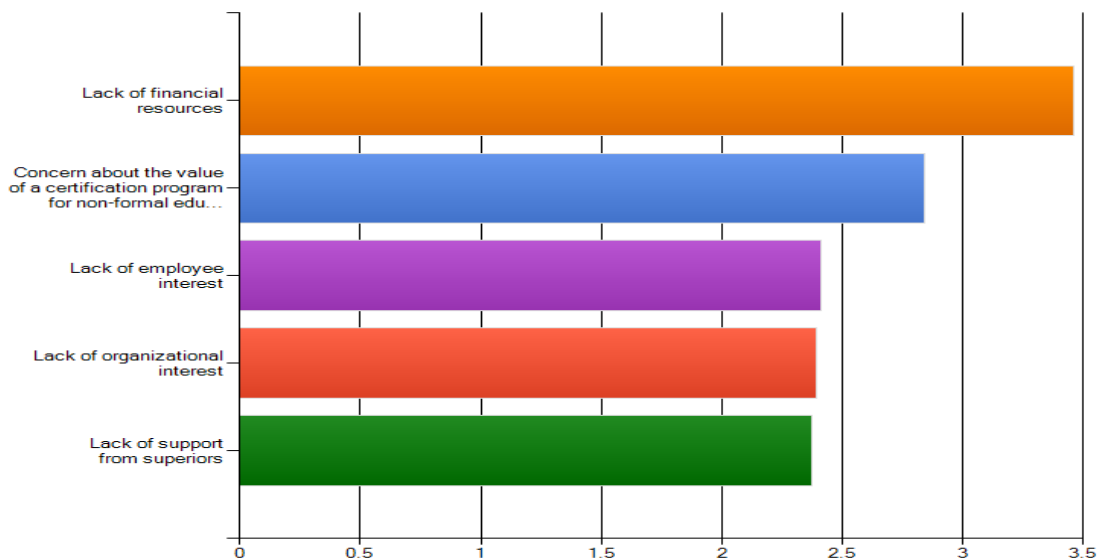
Beyond affecting hiring practices, supervisors and employers of non-formal EE practitioners saw a general benefit for supporting their current employees' participation in a certification program. Respondents believed that employing certified practitioners could increase the effectiveness of EE programs, improve the credibility of their organizations and expand networking opportunities for EE professionals. They also seemed to indicate that a certification program would help all professionals improve - not just new hires.

Narrative Response Category	#
Respondent doesn't feel that certification will affect salaries	3
Respondent is unsure of how certification will help them find candidates	3
Respondent doesn't feel that certification is best way to keep skills current	1
Certification is not relevant to current employees	1

**Question 23: How important are the following potential barriers to supporting your current employees' participation in a rigorous certification program?**

*n = 116, rating scale question*

*1 = Not important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*

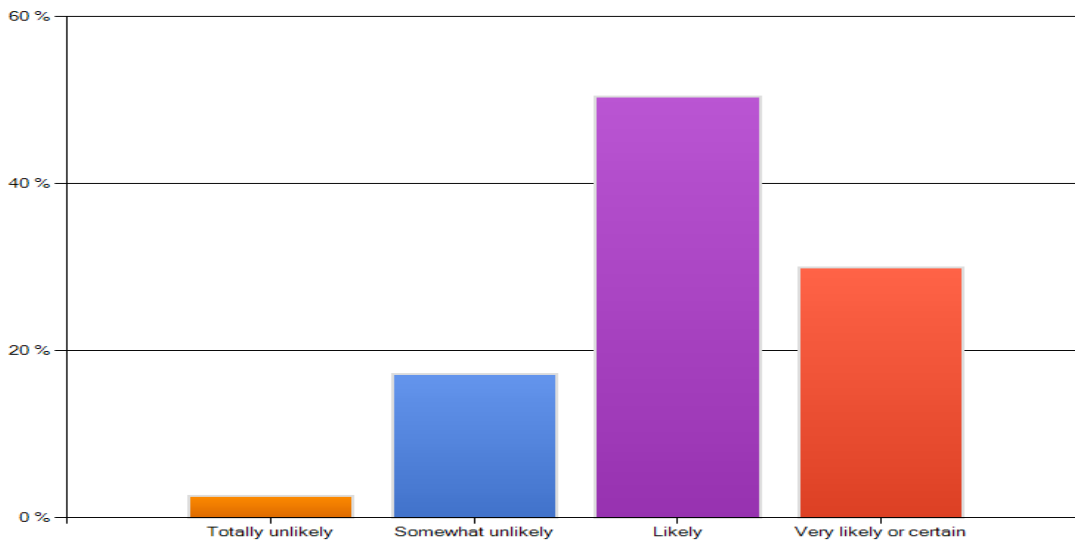


Lack of financial resources to support the participation of current employees was the most significant barrier indicated by respondents.

Narrative Response Category	#
Concerns about cost of program	3
Problem with question wording	1
Other	1

**Question 24: If a certification program were available in Pennsylvania that effectively assessed candidates in the areas you indicated were important, what is the likelihood that you would support your current employees’ participation in that program?**

*n = 117, multiple choice question*



An overwhelming majority of respondents (80%) suggested that they were likely, very likely or certain to support their current employees’ participation in a rigorous certification program. This question garnered the highest degree of support for a certification program of any question on the survey. While there was a very clear response to this question, narrative comments still indicated a concern about the financial burden of supporting employees’ participation in a certification program.

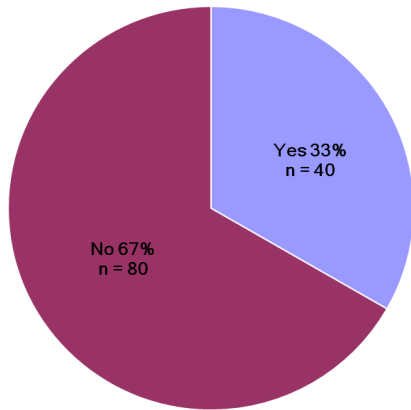
Narrative Response Category	#
Respondent would support certification but cannot cover costs	4
Depends on program criteria/cost	3
Might support a certification	2



Non-formal certification must compete with other PD opportunities	1
Non-formal certification not relevant to respondent	1

**Question 25: Would you like to participate in a collaborative working group to continue developing non-formal EE certification in PA?**

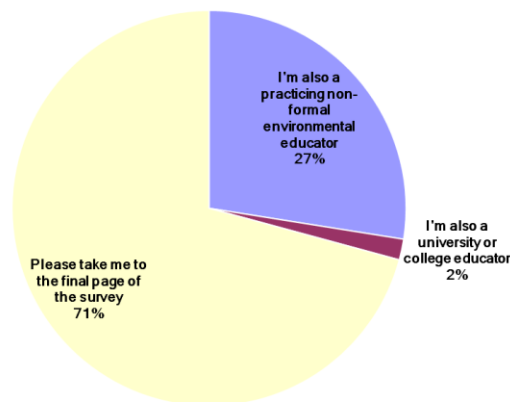
*n = 120, multiple choice question*



28 respondents left usable contact information, though this included some overlap with contact information left on question 13.

**Question 26: Section routing question**

*n = 120, multiple choice question*

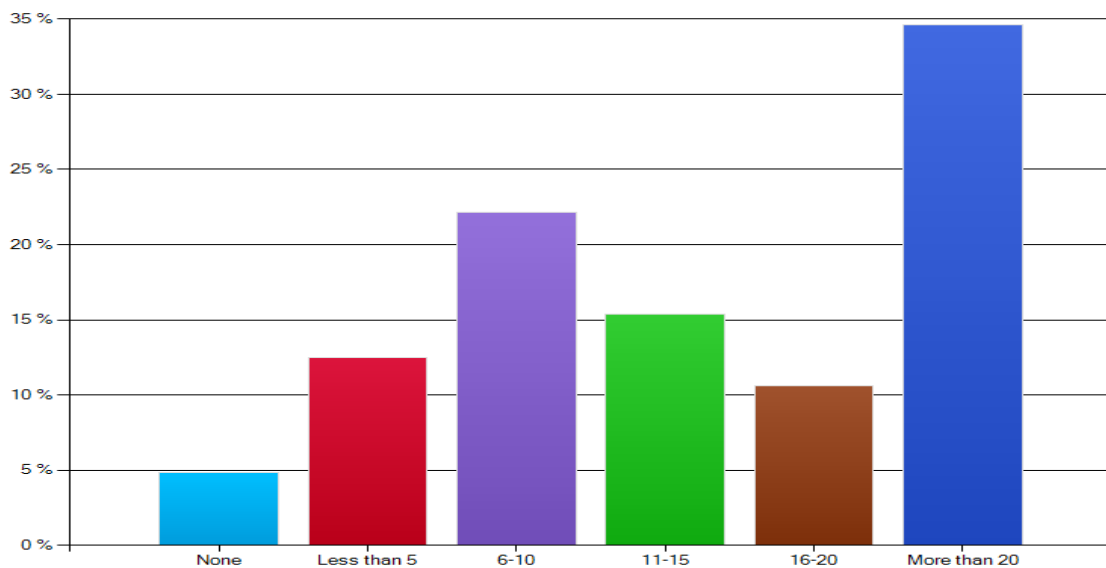


### Section III - University & College Educators

Questions 27 - 37 were specific to respondents identifying as university or college educators. 97 respondents initially identified as a university or college educator in question 1 of the survey and an additional 7 were directed to this section following the completion of a separate section. Ultimately, 104 total respondents answered questions from the perspective of university and college educators. The following presents results from this section of the online survey.

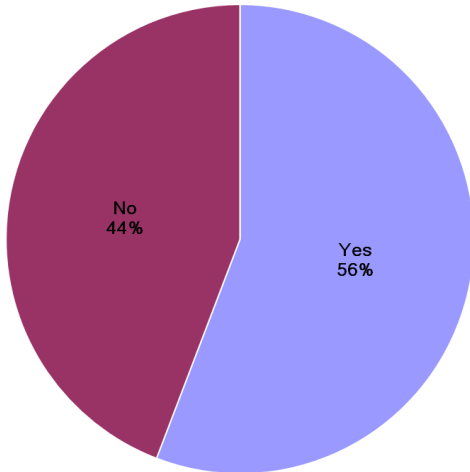
**Question 27: How many years of experience do you have as a higher education faculty or staff member in an environmental education-related subject?**

*n = 104, multiple choice question*



**Question 28: Does your university/college offer coursework and/or a degree in non-formal environmental education?**

*n = 104, multiple choice question*



Over 55% of respondents indicated that their university or college offered programs related to non-formal EE. Many commented that their schools had environmental science or environmental studies programs, but not necessarily an environmental education track or degree. To put these percentages in perspective, the survey was directly distributed to faculty and staff at approximately 60 colleges and universities across the state which offered departments or programs in education and the various sciences. It is likely that college and university faculty from schools not included in the direct outreach to higher education were reached through personal membership in other EE organizations on the survey distribution list. Therefore, this represents a broad cross-section of Pennsylvania’s accredited higher education institutions.

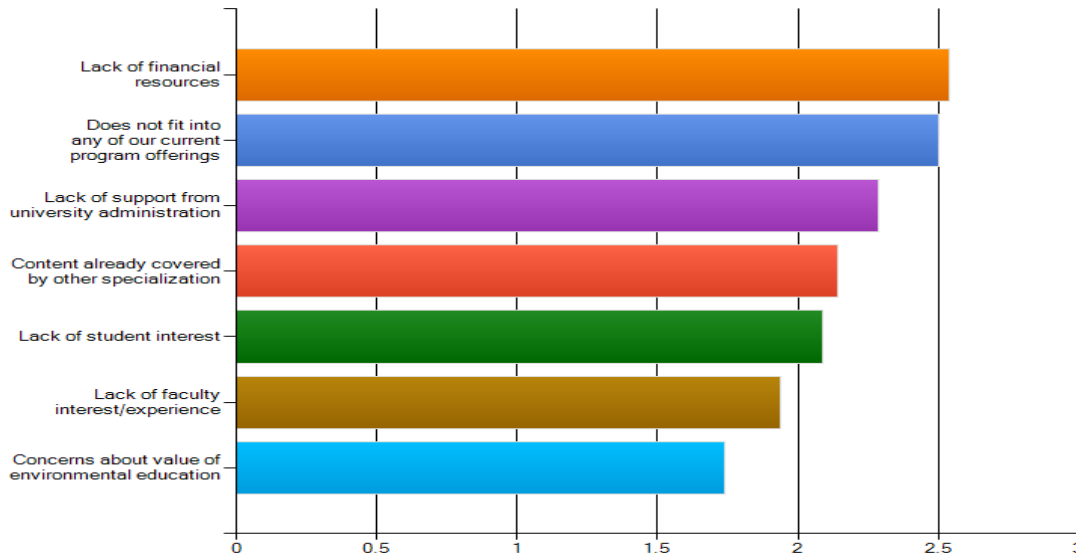
Respondents who answered "no" to this question were directed to question 29, while respondents answering "yes" to this question were directed to question 30. Regardless of their answer to question 28, all respondents in this section were eventually led to question 31.

Narrative Response Category	#
Environmental Science/Studies	7
Respondent does not have or doesn't know of a program currently being offered	5
Program or coursework is offered with a partner	3
Offers K-12 EE teacher certification	3
Does not offer online courses	2
Program is very new or currently in development	2
Occasionally offers program/courses	1

**Question 29: How important are the following barriers in preventing your university/college from offering coursework and/or a degree in environmental education?**

*n = 36, rating scale question*

*1 = Not Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



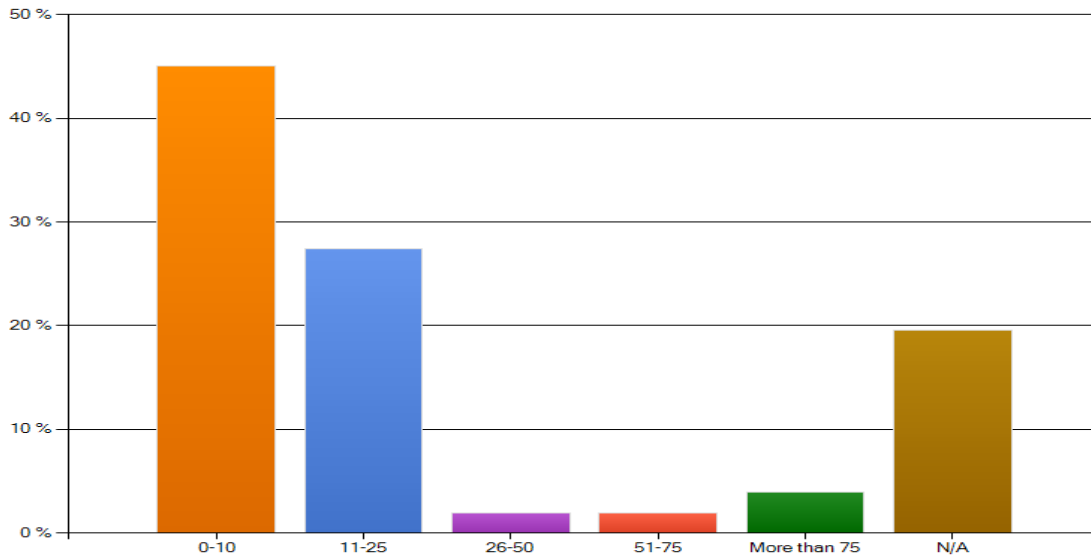
The most significant barriers identified by university and college educators whose schools did not currently offer coursework related to non-formal EE were lack of financial resources and issues related to finding a proper departmental home for such a program. Interestingly, lack of faculty interest and questions about the value of environmental education in general did not seem to play a significant role in a school's ability to offer non-formal EE coursework or degrees. This might indicate that many schools have the ability to offer courses in non-formal EE if it became financially feasible.

Narrative Response Category	#
Don't know	4
Concern about cost and/or potential lack of interest	2
Currently offer or have the capacity to offer a program/certification	2



**Question 30: Approximately how many students from your college/university complete a degree and/or concentration program in environmental education (or a related field) each year?**

*n = 51, multiple choice question*



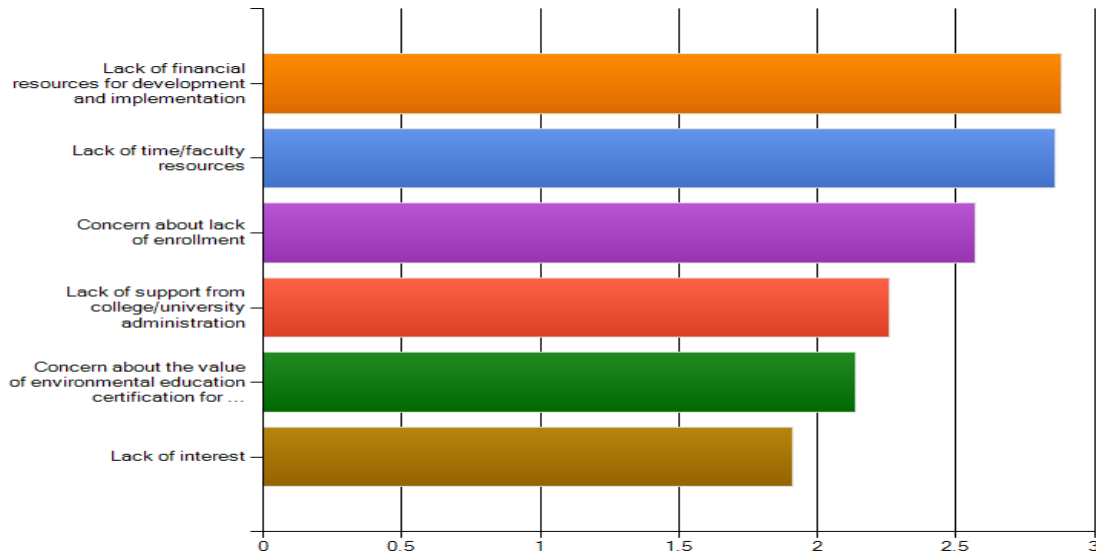
For respondents whose schools offered coursework or a certification in EE, programs tended to be quite small. Nearly 3/4 (73%) of programs or courses graduated 25 or fewer students. Many respondents indicated that their schools offered a minor or concentration in EE, but not a full degree program. Examples included summer workshops in environmental education, minors in sustainability studies, and K-12 EE certifications. Based on narrative comments, respondents selecting "N/A" most likely were not sure of the number of students currently enrolled in these courses or concentrations.

Narrative Response Category	#
Unsure/don't know	7
Offer minor/concentration/courses in EE-related subject, but not full program	4
Explains further details of programs offered	1
Sees potential for non-formal EE certification	1

**Question 31: At your college/university, how important are the following barriers to developing and implementing courses as part of a professional certification program for non-formal environmental educators?**

*n = 44, rating scale question*

*1 = Not Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important*



All respondents to this section were directed to this question, regardless of their current program offerings. Answers were similar to question 29 though, with respondents indicating that lack of financial and faculty resources were the biggest barriers to potentially offering courses as part of a non-formal EE certification program:

“A professional certification program would involve the creation of new courses and new faculty hires. This is unlikely to happen at our institution.”

A concern about lack of student interest and enrollment also was rated as relatively important by respondents (rating average = 2.6).

Narrative Response Category	#
Institutional/structural barriers exist to creating new program/certification	4
Clarifies what programs are offered	1
Supports development of non-formal certification	1



Respondent is currently re-evaluating program offerings	1
Unknown	1

**Question 32: If a rigorous certification program for non-formal environmental educators were being developed in Pennsylvania, might your school/department be interested in being involved? If so, in what capacity?**

*n = 33, open-ended question*

Narrative Response Category	#
Sees value in certification and is interested in being involved, especially through developing/offering courses	12
Interested in participating in program design and planning	8
Potentially interested in participating in development, but depends on other factors	7
Already offer certification or concentration in EE	2
Unlikely to support a certification program	2
Respondent personally supports this program, but cannot speak for program/department	1
Need more information about program/process to decide	1

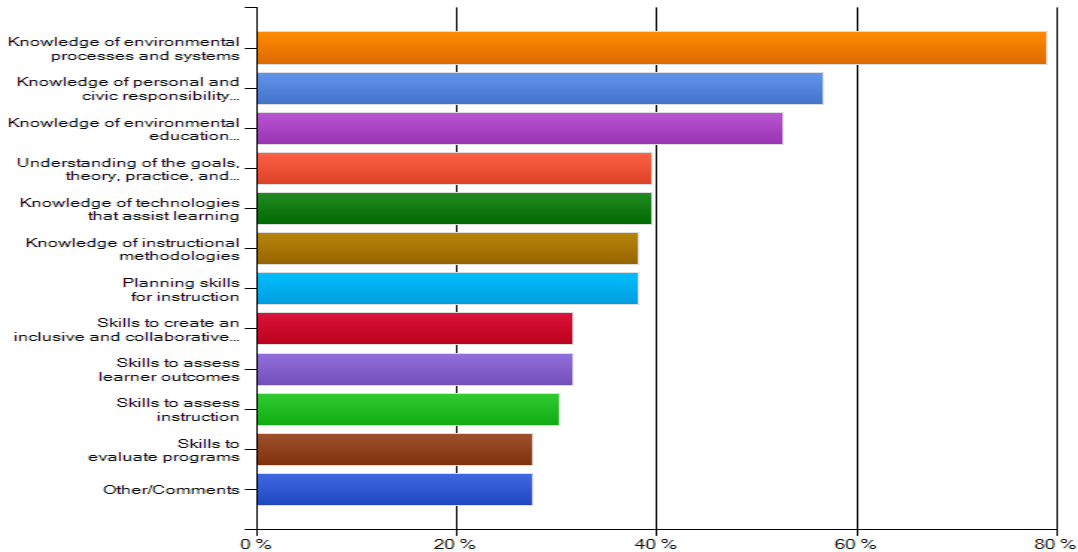
A significant number of narrative responses indicated interest in non-formal EE certification, either through involvement in the design and planning process or through offering courses at respondents' schools. Many respondents recognized the potential value of a certification program for non-formal environmental educators and seemed enthusiastic to be involved:

“I believe [we] would be interested in helping to identify appropriate criteria for certification, and appropriate university course work that could prepare an individual for that certification; and developing/offering specific courses in support of that goal.”

Others indicated conditional support, depending on factors such as the content and process of a certification program or their school's financial capacity to take on new projects.

**Question 33: Which of the following skills and knowledge for non-formal environmental educators are thoroughly taught as part of your program/department?**

n = 76, multiple choice question (select all that apply)



Answer Options	Response Percent
Knowledge of environmental processes and systems	78.9%
Knowledge of personal and civic responsibility related to environmental issues	56.6%
Knowledge of environmental education materials and resources	52.6%
Understanding of the goals, theory, practice, and history of the environmental education field	39.5%
Knowledge of technologies that assist learning	39.5%
Knowledge of instructional methodologies	38.2%
Planning skills for instruction	38.2%
Skills to create an inclusive and collaborative learning environment	31.6%
Skills to assess learner outcomes	31.6%
Skills to assess instruction	30.3%
Skills to evaluate programs	27.6%
Other/Comments	27.6%

Program offerings varied quite significantly in the range of skills and knowledge taught.

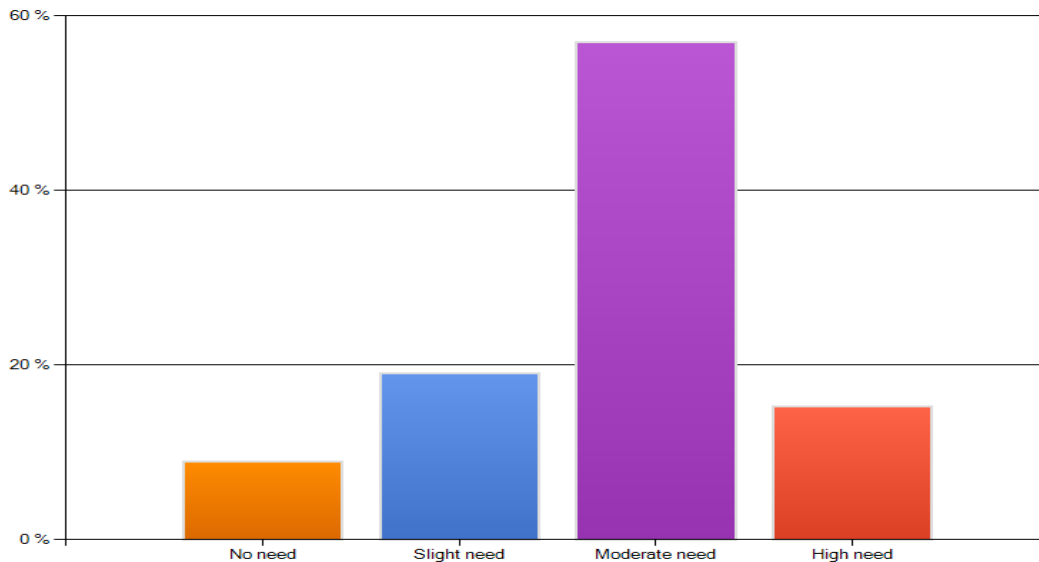
"Knowledge of environmental processes and systems" was the only answer option currently offered by a large number of programs, though "knowledge of environmental education materials and resources" and "knowledge of personal and civic responsibility related to environmental issues" were apparently taught in over half of respondents' programs or departments. Some

respondents commented that their programs included some or all of these skills and knowledge, but not in the context of non-formal EE. Other respondents commented that these skills and knowledge were addressed by multiple departments in their schools, but not necessarily as a comprehensive program offered in a single department. Thus, there might be room to develop a more concentrated program combining course offerings from multiple departments into a cohesive program.

Narrative Response Category	#
Provides specific example of other skills taught in program	6
Teach some/all of these skills, but not in context of non-formal EE	6
Skills and knowledge taught through several different programs and departments	4
College doesn't currently have a program to teach these skills/knowledge	2
There is room to offer skills/knowledge not currently being taught	2
Respondent doesn't teach any courses, but practices EE in university setting	1

**Question 34: In your opinion, how much need is there for a professional certification program for non-formal environmental education practitioners?**

*n = 79, multiple choice question*



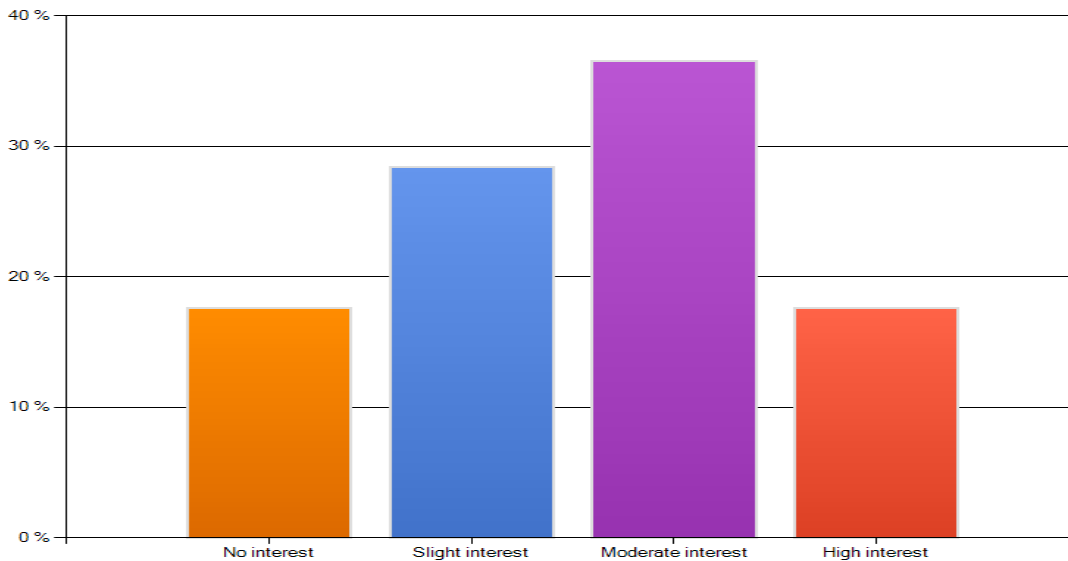
Nearly three quarters of respondents (72%) thought there was a moderate or high need for a professional non-formal EE certification program. Multiple comments elaborated on how a

certification program might help establish needed standards and best practices in the non-formal field, and several respondents commented that a certification program may improve employment opportunities for certified educators. Others however, expressed concern about the demand and financial resources needed to develop such a program in a rigorous and worthwhile manner.

Narrative Response Category	#
Certification would help establish standards and best practices in non-formal field	4
Depends on recognition and rigor of the program/process	2
Might improve professional and employment opportunities	2
Concern that there is not enough demand or funding for program	2
Worried about experienced practitioners having to complete a certification to remain competitive	1
Supports as long as it remains outside control of PDE	1
Does not support or understand reasons for certification	1

**Question 35: How much interest would your department/college have in developing and implementing courses as part of a professional certification program for non-formal environmental educators?**

*n = 74, multiple choice question*



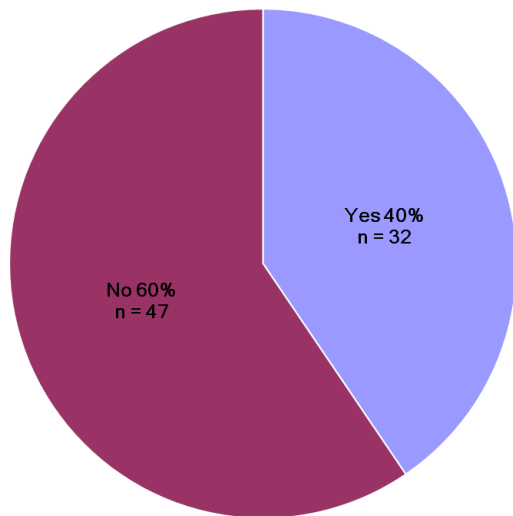
There was slightly less interest among college and university educators in actually offering coursework related to non-formal EE certification, though over half (54%) indicated moderate or

high interest. Multiple respondents commented that though they were potentially interested, their ability to offer courses depended on factors such as funding and student interest.

Narrative Response Category	#
Participation contingent on factors such as student interest or available funding	5
Respondent cannot speak for entire department or school, but indicates personal interest	5
Indicates definite or likely interest	3
Would probably be offered by a different department	2
Offers specific resource or suggestion relevant to developing certification program	2
Participation depends on who is administering program or goals of the program/organization	2
Unable to answer	2

**Question 36: Would you personally like to participate in a collaborative working group to continue developing non-formal EE certification in PA?**

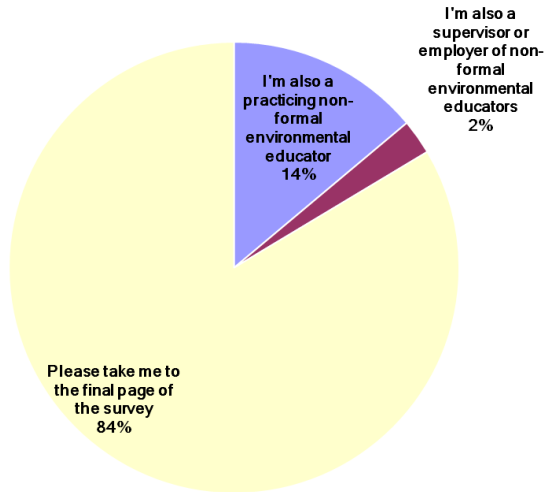
*n = 79, multiple choice question*



23 respondents left usable contact information, indicating a strong interest in further participation.

**Question 37: Section routing question**

*n = 79, multiple choice question*



## **Section IV - Formal Educators and Others**

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Those who identified as formal educators and administrators, as well as those selecting “other” on question 1, were directed to question 38. This page of the survey explained that though their interest in EE certification was appreciated, the survey was intended only for people involved in non-formal environmental education. Question 38 allowed interested respondents to leave information so that they could be contacted if future initiatives involving formal environmental educators arose (see Appendix D).

Given that the distribution list consisted largely of professional non-formal EE networks and organizations, there were a surprising number of formal educators and administrators who responded to the survey. 231 respondents self-identified as “formal educator or administrator” and a further 86 identified as “other.” Of those 317 respondents, 96 left contact information, indicating interest in the development of an EE certification program. Based on this high level of response, it is possible that designing a certification program that is relevant to both formal and non-formal EE practitioners would garner more widespread support from the Pennsylvania EE community. Without specific or detailed responses from this group though, it is difficult to draw any solid conclusions from the number of formal education respondents.

## Conclusions

In general, responses were quite positive from all three target groups and the level of potential support for a non-formal EE certification program exceeded the expectations of the survey team. The high number of respondents to this survey alone was a very encouraging sign that people are interested and already engaged with the issue. This study was not intended to be a definitive quantitative analysis of Pennsylvania’s non-formal EE community; instead it was intended to look for indicators to guide further development of a non-formal EE certification program. From both a quantitative and qualitative perspective, however, the generally positive response from all target groups justifies the continued development of a non-formal EE certification program. The following conclusions can be used to inform decision-making as development of a certification program moves forward.

- **The Pennsylvania EE community is interested and engaged in the idea of certification.**
- **Non-formal EE practitioners see certification as important to their individual careers, but view it as even more important to the field as a whole.**
- **Employers and supervisors of non-formal EE practitioners support certification for current employees, but a program must be rigorous, compatible with current hiring practices, and offer professional development opportunities for less experienced practitioners to be broadly relevant and valuable.**
- **College and university faculty and staff generally recognize the need for a professional certification and a significant number have indicated interest in being involved in the planning, design and implementation of a certification program. They also cite significant institutional and financial barriers to their involvement.**

## **Practicing Non-formal Environmental Educators**

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**Non-formal EE practitioners generally thought that certification could be valuable to them as individuals**, with over 50% indicating that becoming certified was important or very important to their individual careers. Younger professionals tended to view certification as important to their careers more often than older professionals. Practitioners with 10 years or less experience especially found certification to be valuable as a means to learn new skills, further develop their abilities to design and deliver programs and gain new perspectives on the field of EE.

**There was even stronger and more wide-spread support for how certification might benefit the field as a whole.** While younger professionals still placed higher importance on the benefits of certification to the field than did more experienced practitioners, support was broad-based among all experience levels. Thus, having a program that appeals both to practitioners' personal career goals *and* their sense of elevating the entire field will likely garner the most support. Regardless, a relatively high degree of support for certification already exists in Pennsylvania. Interestingly, results from Pennsylvania are extremely consistent with results of a national survey conducted by EETAP. Pennsylvania non-formal EE practitioners had levels of support for a certification program within +/- 2 percentage points of non-certified environmental educators across the nation as measured by EETAP on several indicators of interest (EETAP, 2009).

**Practitioners in Pennsylvania were generally willing to travel and pay for a certification program that they thought was valuable.** Cost and travel requirements were the biggest expected barriers based on informal discussions and previous studies of certification, so the fact that many indicated a willingness to pay and travel even without much information is very encouraging. Practitioners still indicated that cost and time are significant barriers, but nearly half of all practitioners indicated a willingness to pay \$100-150 for certification. If employers are willing to cover the costs of certification for some of their employees - and this still represents a barrier for many employers - even more practitioners would be willing to seek

it. Making potential certification courses or workshops accessible through online and distance learning formats also represents a potential way of overcoming some of these barriers. However, the ultimate cost of a certification program to applicants will also be determined by factors such as operating and administrative costs which are still largely unknown. It is worth acknowledging that the rigor and quality demanded by most respondents will heavily affect the program's cost.

## **Supervisors and Employers of Non-formal EE Practitioners**

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**In general, there was a very high level of support for certification from employers and supervisors, particularly for current employees' participation in a certification program.**

Though there were some questions as to how much a certification would help employers find the most qualified candidates when looking to hire *new* environmental educators, employers were more receptive to supporting their *current* employees in seeking certification. Developing a dialogue with Civil Service to recognize non-formal EE certification in new EE job descriptions represents a potential leverage point. This was identified as a significant barrier by many respondents and if addressed, could potentially increase the relevance of non-formal EE certification for a large number of employers.

Nearly 80% of employers indicated some willingness to give preference to certified environmental educators when hiring or to support current employees' participation in certification. This number far exceeded expectations and should be seen as a strong indicator that a certification program is worth developing in Pennsylvania. Furthermore, support among Pennsylvania employers and supervisors exceeded that of a national audience by nearly 10 percentage points, with just over 70% expressing support for employees' participation in EETAP's national survey compared to Pennsylvanian's 80% support.

63% of Pennsylvania employers and supervisors felt there was a moderate or high need for certification, yet nearly 80% indicated that they were likely or very likely to support a program. This might imply that there is room to further increase employer support for a certification program if outreach and collaboration with employers were able to convince more of the need for a certification program. The fact that a significant number of employers and

supervisors indicated a willingness to support a program without believing there to be a very high need for it merits further investigation.

**To gain the support of more EE employers, a certification program must be rigorous, offer professional development opportunities for less experienced educators, and be compatible with organizations' existing hiring practices and on-the-job training.** Making a certification program or process congruent with organizations' hiring practices/needs and recognizing already existing training courses offered by employers might address several stated barriers. Specifically, working with Civil Service to recognize non-formal EE certification in job requirements could make certification much more relevant and valuable to large employers such as state natural resource agencies.

Many organizations that rely on seasonal employees recognized that a professional certification would not be relevant to these hires, especially as certification was widely seen as worthwhile only if it were rigorous and comprehensive. Still, employers and supervisors highly valued a certification program's potential to provide support and professional development opportunities to inexperienced educators and to lend credibility to their organizations. Thus, employers and supervisors recognized and acknowledged one of the benefits of certification as potentially raising the credibility of the field. Finding the proper balance between maintaining rigorous professional standards and making certification accessible to inexperienced practitioners presents a challenge that warrants further discussion.

**Similar to responses from non-formal EE practitioners, financial resources were a major concern for many employers.** Making certification part of already existing on-the-job trainings, offering through universities, or developing partnerships with other professional development/certification programs has the potential to significantly shorten development time and take advantage of the credibility of other programs. Finding ways to reduce the upfront cost to both practitioners and employers would likely increase participation, but administrative costs to the certifying agency must also be kept in mind when deciding how to charge for a certification program or process.

## University and College Educators

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**Many university and college educators expressed an interest in being involved at some stage of the certification process - from the design and planning of the certification program to implementation and offering associated courses and workshops.** Significantly, more than half of respondents indicated moderate or high interest in developing or implementing courses for a non-formal certification program.

Though there were several significant barriers identified by many respondents, such as lack of financial and faculty resources (time, number of faculty members, departmental structure, etc.), more than 70% of university and college faculty respondents believed there was a moderate or high need for a certification program for non-formal environmental educators. Such a high level of recognition among institutions involved in the development and training of formal and non-formal environmental educators is cause for optimism that a rigorous certification program would be supported by the academic community.

**Though a few colleges and universities already offer coursework or teacher certification in environmental education, these programs tend to be small and student interest may be inconsistent from year to year.** This fact, combined with the number of respondents indicating that their participation in a certification program or process depended on factors such as available funding and expected enrollment in such a program, potentially signals that a concerted marketing campaign to increase awareness of non-formal EE certification may be needed to create enough support at the college level.

**Of schools not currently offering coursework or teacher certification in environmental education, many indicated that capacity existed to offer courses or potentially develop programs.** This may be a matter of combining already existing education and environmental science programs, now taught in separate departments, to create concentrated EE programs. Given the high degree of recognition that more professional development and/or credentialing opportunities are needed, the high level of interest in participating in some stage of

the certification development process, and the faculty expertise that already exists in separate departments, college and university support for non-formal EE certification may be a significant factor in future development.

## Questions for Further Investigation

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Based on the largely positive response to the online survey and the conclusions drawn above, PCEE and PAEE will be undertaking several next steps to further explore non-formal EE certification. The most immediate next step is a series of regional discussion groups to give members of the non-formal EE community the opportunity to engage with several topics in more detail. These small group discussions will be opportunities to share results of this study and have the EE community contribute more input on several key aspects of a future program.

While this study has provided some very meaningful insight into the Pennsylvania non-formal EE community's thoughts on certification, it has pointed out several themes that need further investigation. The following questions are among those that will be posed to members of the non-formal EE community at upcoming regional discussion groups. They are meant to spark further discussion and contribute to the overall body of knowledge concerning EE certification in Pennsylvania through focused community dialogue:

- What organizations, partnerships and resources (including colleges and universities, environmental non-profits, state agencies and commissions, and other groups offering certifications) need to be developed to make non-formal EE certification sustainable, relevant and valuable?
- What does a certification program specifically need to ensure it is rigorous and valuable enough to gain the support of employers and potential applicants?
- How can a certification program achieve a critical mass of applicants to make the program viable and self-sustaining?
- How can a certification program be compatible with current hiring practices and employer needs?

- What proportion of a certification program should be professional development and on-the-job training (potentially more costly)? What proportion should be assessment of candidates' competency through tests and other assessments (potentially less costly)?
- What is the most effective and viable method of assessing candidates for certification?
- What minimum prerequisites should be necessary for admission into a non-formal certification program (education, experience, etc)? How should this be balanced to maintain rigor while still remaining relevant and accessible to new practitioners?

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## Appendices

### Appendix A: Narrative Responses

Narrative responses are included exactly as entered by respondents on the survey. They have been categorized based on qualitative analysis and presented below according to categories found in the Results Summary section of this report.

#### Question 3.

##### Confirm support for certification:

Yes, I would benefit greatly from a certification program.

For me, certification would be a way of quickly proving to someone else that I am a quality educator.

My NI selections are things I have already gained with my K-12 Cert and I'm already a manager. I feel I always can improve and learn and I love adding to my resume.

I am also a certified biology teacher with 40 years experience in the environmental education field. I could take the formal certification and am planning on doing that. But, I think that certification is important to show that we are professionals. I often hear the teachers that bring their students say, "pay attention to our tour guide". I am not a tour guide.

Other professions, such as accounting and teacher, require certification. It is time that we professionalize our field.

I think it would be great for professional development and finding jobs. Its very tough to find jobs in the EE field. I think this would help.

##### Thoughts on content/process of certification:

I am a licensed professional. To me, the focus is to take technical material and present it to various individuals or groups (including K-12) in a format that is conceptual in base and appropriate for the audience and their level of understanding.

As an Ohio Licensed teacher teaching non-formal environmental education I value methods, perspectives and knowledge of a certification program.

Political education is also important. We must reach our elected officials to get anything done.

To more effectively evaluate the effectiveness of our educational programs

Certification, and other pieces of paper, don't make one a good educator. There has to be a certain amount of natural ability. But ours is a world that relies on paper proof. It would be hard to have done a job for 20 years and have a 5 year trainer tell them they need a certification. So maybe there should be levels to your certification program.

##### Certification not relevant at this point in career:

Wouldn't get certified now as near retirement.

After so many years practicing in the field, importance of many of these diminish. I've already found/made my place in my field. Certification process will be more important to new educators who have not sought/found their education elsewhere.

The two that I said no about is because of how old I am , i think it is important for the field if the certification is a well-thought out process

I have so many years of env ed under my belt that some of the above goals would be redundant

These would be important for me if I was primarily employed in this area but I am primarily employed as a College Professor and do my informal ed as a volunteer through the local school district and the Boy Scouts.

**Respondent already has other certifications or credentials:**

I do not quite fit the survey. I work in a non-formal setting, but carry several certifications already.

I am a certified (K-6) PA Teacher, but choose to use that degree to work in an Environmental Education Center. I believe that I can become "officially" certified in EE by taking an additional praxis exam. I've several years of experience/training in the EE field, in addition to the classroom training/experience.

I am a permanently certified secondary education biology/general science/ environmental educator teaching outside of the classroom. I work for Montgomery County.

I however do not at this time have any interest in becoming certified. I have a chem cert, and went back for physics and currently have no interest in adding another certification.

**Elaborates on personal credentials or experience:**

I have now an associate degree from a community college.

I initiated Farm Based Environmental Education at Villa Maria Farm in 1999 where I was Director of Land Management for over thirty five years.

I am a retiree. I was both a univeristy-level teacher and an environmental professional.

I am a resident of Delaware.

**Provides other reason to support certification or is considering certification:**

My degree from Warren Wilson College in environmental studies with a concentration in education over 20 years ago led me to work within the ee/oe field for several years but then my path took me in a different direction for more than a decade. Experiential ed nonetheless, but not ee. Now I am developing farm education programs that we take to schools as well as based on the farm with after school and summer camp programs as well. I have been pondering a masters in experientail ed recently, so this survey is well timed.

For me the value would be in being distinguished not among my peers in the environmetnal field as much as being recognized in the 'formal' educational field which is where we non-formals provide much needed support.

Other nations, plus California and some few states in the U.S., are far more aware and proactive than most consumers here, with regulations on corporate and individual pollution, structures in place for recycling and reusing, and so on, rather than feeling entitled to throw out everything and just buy more of the latest for profit and pleasure instead of considering our future.

**Unsure of certification's ability to fulfill answer options:**

IMO, not sure that certification can be used to determine or improve an individual's ability to design and deliver effective EE programs.

I do not see this type of certification as doing anything but creating jobs for the certifying agency. It will not increase the pool of money available to pay into salaries. I have degrees in Biology and Education and I have drawn heavily on those as experiences. I have also learned a lot from my employer. I have attended training outside of the sphere and walked away with little given the time and money spent. I don't see how requiring more of those useless experiences will enhance anything.



**Question 4.**

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**Unsure of certification’s ability to fulfill specific answer option:**

may be pessimistic, but I don't think more money would be directed to this profession due to certification.

Regarding funding - I listed as less important because I am not convinced it's true.

I don't know that certification would improve credibility as I believe Environmental Educators respected and revered as such by the on-the-job training. I'm not too clear on how EE certification would create the above. They are all important, but I'm not clear on how it would make the above happen.

I don't see the monetary increase that we hope would come actually coming.

As compared to what? What would be the rubric for competence. Our organization has a reputation for quality education. That in itself is difficult to maintain. The money is what the money is. Waving a certification wand is not going to expand the money pool.

I have concerns that certification would not actually do any of these things - not certain how to answer.

have a real question if the certification would actually realize all the claims of improvement made in this question

**Affirms support for certification or elaborates on specific answer option:**

I only see positives for certification!

there is a definite need to 'raise the bar' concerning public opinion on both the education of ee professionals and the mastery of interpretation

Many non-formal environmental educators have little or no knowledge of real-world environmental issues and teach only based on established programs (WET, Wild, etc.) and their beliefs. I am often surprised/disappointed seeing educators providing a certain viewpoint during presentations.

Even mechanics are certified. This initiative would lend credibility especially during these contentious statewide political times.

**Support for certification depends on specific factors:**

Depending on the audience; if the audience is K-12, programs should be tied into educational standards, set by the state or school district. Standards for programs geared towards municipal and social groups infers some degree of competency by the program leader or organization. It is important that audiences receive accurate, up-to-date, science-based information.

**Respondent questions the need for certification:**

anything standardized does not give people the chance to be creative, unique, and adjusted to their work site. There is already networking opportunities within the field. Funding should depend on the need for a program by the population being served, not based on the credentials of the employee.

**Question 5.**

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**Respondent affirms importance of a particular option(s):**

I have "voted" heavy on knowledge because many non-formal educators have not worked in the environmental field and have no practical knowledge of environmental issues beyond what they have read.

I am a PA certified teacher but not yet in EE. As a certified teacher I know formal instructional methodologies would be extremely helpful to my non-certified EE colleagues.

I think you should have asked this question as a ranking question, i.e. rank the skills/knowledge from most important to least important. I think all of these things are quite important, but some are higher priority than others!

These tools are crucial!

Knowing how to take scientific knowledge, demystify and/or interpret it through a variety of learning modalities is critical. It goes hand in hand with knowing your learner.

I feel the most important thing would be to focus on what makes a good EE program and how to deliver that. I have seen many educators full of knowledge but have their program fall flat. I would focus less on the content and more on the how-to present.

**Suggests other skills or knowledge to be included:**

Allowances should be made to include practitioners that meld environmental issues and themes with historical and cultural themes rather than just strictly EE.

need to address issue-specific knowledge that must be focused on something other than general env knowledge  
Natural History knowledge is also important.

The instructor also needs to be infectiously passionate about the importance of protecting our earth, as our living space. They must convince audiences, both by using logic, and by awaking sympathy to plights of those affected by pollution (animal and human habitants, and understanding the nature of plant ecosystems' relationship to the well-being of fauna). We must increase awareness of the impending likelihood of similar disasters happening to us as a chain reaction of global events. Too many people are comfortable not responding when they think it might not impact them anytime soon. They need to know of the dangers involved, and how irreversible some effects can be for years or centuries.

This is important in order to increase the value listeners place on being proactive immediately.

**Concern about relevance of particular option or certification’s ability to provide particular skill/knowledge:**

all of the above are important but I'm not convinced that certification is needed to obtain these skills.

the skills to assess and the skills to evaluate-- it depends as to what level you are referring to. Evaluating an entire program is something a person relatively new to the field would not need. So some of these need to be in steps or graduated---

-#4 above. Advocacy--you give the answer. Education is about the knowledge and tools for someone to figure their own answer. Is this to be an education certification or an advocacy certification.

Last item. I am a hard science person. Show me proof. My goals as an educator are to feed into the natural inquisitiveness of students and to help develop critical thinkers. We can't possibly know what world we will have 20 years down the road so to feed answers to students is to do a disservice. They need to learn how to figure answers for themselves.

**Other suggestions:**

try not to get too polical

The natural environment and its enduring cycles is what needs to be used. Artificial environments distract from the effectiveness of EE. For example, the hundreds of birdsong media available to learner's still doesn't replace seeing that common yellowthroat sing from the bush. A climate controlled, carpeted indoor area with all kinds of electronic media, replaces the "real" of the environment, the flies, the intensity of an August sun, and the color of real scat can't be created - it already has been.



**Respondent discusses need for assessment to test these skills/knowledge:**

Typically, skills evolve over time through repetition. Some type of assessment would provide the necessary feedback to see if the programs are achieving the intended goals. The last item is important to those starting out on the path but is not critical to achieving quality candidates.

**Respondent has experience in other state's certification program and confirms value of certification program:**

I am currently participating in an Ohio environmental education certification program which includes the above items and have found them all extremely helpful and valuable.

**Question 6.**

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**Financial concerns:**

Would request scholarship assistance if available  
 Travel may be influenced by budget restrictions (e.g., transportation, lodging, meals)  
 It would be nice if we had mileage paid if this is something required in our jobs. And - I think certification is really important so I would be inclined to travel to attain it. If we as practitioners pay - please keep costs down (and lodging/meals modest) - PAEE is prohibitive at my income level.  
 It is unlikely in today's economic environment that overnight travel would be approved for these types of activities. For me this training would be self-funded, therefore it is important to minimize travel time and costs. I am familiar with North Carolina's EE Cert program and the few cross-state travels to diversify knowledge base and exposure to a variety of ecoregions, were appropriate and well worth the travel costs. These accounted for approx. <15-20% of workshops attended.  
 these days it is hard to come up with the money for registration for workshops and conferences while working for a non-profit. Transportation and time out of the workplace are difficult to come by.

**Respondent provides suggestion of where or how to host:**

i think this could be hosted through some colleges/universities and other institutions. this wouldnt be proprietary would it?  
 PA is a very large state. I think that Certification courses should be offered in Western, Central, and Eastern PA  
 Please NOT in Harrisburg It's a 3 hour commute on the worst highways for traffic  
 Budgets are extremely stressed technology could possibly address the travel expenses allowing individuals to remain in the offices to receive training.

**Respondent is willing to travel farther for 2-day workshop:**

50 miles for one day, additional miles for a 2-day workshop  
 More for a 2 day than a 1 day.  
 Would be willing to travel more than 150 miles if the workshop lasts longer than 2 days.  
 Once in a while a longer travel time would be fine, along the lines of NSTA national gatherings

**Concerns about methods of transportation and accessibility of workshops:**

As a practitioner of environmental sustainability, I do not own a car.  
 Public transportation! Some of us in the field work in URBAN areas and don't have cars. Forcing everyone into cars sends a horrible message.

trying to keep carbon footprint low! :)  
 How big of a footprint should I leave?

**Respondent would need accommodations provided:**

If this program was offered any where in PA I would be willing to travel to it. Be sure that rooms are available if it is a two day event.  
 If overnight accommodations were available for longer travel distance

**Time constraints may limit involvement:**

I don't have time to travel.  
 Be wary of when this is offered. March through October are very busy times.

**Participation depends on quality of program:**

Really depends on the quality and acceptance of the certification.

**Respondent provides more specific answer:**

I would say 50-100 miles.

**Respondent is not interested in certification:**

Again, sorry. No interest.

**Question 7.**

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**Willing to participate if employer covered costs:**

would expect my employer organization to pay for this  
 Depends on How MUCH my employer is willing to pay!  
 My agency pays for certification programs. I'm not sure how much they are willing to pay. I'm basing my answer on if I had to pay out of pocket.  
 Depends on if my employer (DCNR State Parks) would be willing to pay for it.  
 As much as my employer would be willing.  
 Many non-formal EE personnel are seasonal employees and may not be able to afford more. Employers should be encouraged to pick up the fee even if they have a service requirement.  
 Should be option to have agency pay for cert.

**Depends on content/value of certification:**

More if it was accredited.  
 Although this depends greatly on how robust the program will be.  
 This would depend upon the content of the program.  
 This depends on factors such as ability to pay in the first place, and on the impact it would have on earning potential.  
 I would need to feel like it would make a difference. Currently, I am not sure that getting certified would make any difference to clients, my non-profit, and/or would produce any salary benefits.  
 Depends on how good the facilitators are

**Concern about costs being prohibitive:**



The EE field is not necessarily a financially lucrative field. As sole proprietor of my EE business, offering my services contractually, I generally cannot afford to attend EE conferences, including those held in PA. So a certification program that was much more than \$300.00 (approaching the cost of a conference) could be prohibitive. My concern would be that not having certification in the EE field could become a liability for those who cannot afford certification, despite the fact the EE presenter may be perfectly capable and skilled in his/her vocation.

Training doesn't have to cost a lot to be effective.

Again, the current economic climate is somewhat less than opportune for new certifications programs as I have had to allow other credentials to lapse due to inability to justify costs and inability to be re-imbursed.

I would pay more if I could, but I can't.

**Respondent suggests how to calculate price:**

Base the fee on the number of CEU's earned in each workshop or seminar. Example - \$10 per hour or \$40 for a 4 hour class.

Pricing could be similar to teacher certification or Praxis exams.

Keeping it somewhat affordable garners more candidates for certification. But, you do not want to make it too cheap. Value!!

**Concern about other costs associated with certification:**

This would not include books, or other items which would be the learners responsibility to acquire.

How long would it take? A weekend? A week?

Travel budgets have been cut severely. This would definitely impact what I would be able to attend.

**Support depends on what costs cover:**

If this was an actual course (could be online) that covered all the topics previously mentioned, I would pay up to \$500. I can't afford more than that and I doubt my employer would pay anything.

That is a difficult question. I guess it would depend on what the dollars are going to pay for. Materials, certification, what I get to take home to use, etc.

Assuming that this includes all courses and workshops for certification

**Respondent provides more specific amount they are willing to pay:**

\$200 would seem fair for a good program

Not enough information to answer. I am confused as to what type of certification "program" is being considered. Although I (and most others I know in this field) would be unable to pay >\$300 upfront for a cert. program that included x-number of hours of training in several specific categories, I probably invested close to that amount in the individual workshop/training registrations completed over the course of 3 years for the NCEEC (and therefore consider that amount well worth the benefits). However, if this is a cost for a certification exam evaluating what I already know or an application process then \$100 or less (\$75) would be maximum afforded.

**Unwilling to pay any amount:**

Try \$0. I am paid far below a public school teacher. I am not sharing a penny.

Nothing

**Concern about motive for developing program:**



Sometimes these certifications are just a moneymaker for certain organizations - it can get out of control.

**Respondent affirms value of similar program in Ohio:**

The program I am enrolled in currently costs \$350. and is worth every bit of it.

**Question 8.**

**Depends on relationship to previous/current trainings offered through other organizations:**

Working for DCNR we do attend regular trainings and workshops. I feel that recertification is not necessary.

These can become a burden if too restrictive. For example, if it is too hard to get on the job training recognized. Must be simple.

If one is already needing to accumulate continuing education hours, additional efforts for a certification may become a challenge logistically (and financially?).

I am a PA certified Master Naturalist, if the CE would count for both I would be more likely to get the EE certification. I only have so much time available to me.

If conferences like PAEE, American Camp Association Tri-State, PA Science Teachers' Association counted for CE hrs. If they don't and it is limited to strictly college courses, etc. then 50 over 5 yrs.

Some of us also have act 48 hours to reach as well. Would these overlap or have to be accumulated seperately? That would change the answer.

this depends on what counts as credits. If continuing education are only offered by 1 agency and cost a great deal, this would be a significant barrier. Especially for those with multiple certifications, continuing education is best when it applies to many certificates.

**Depends on what CE hour entails:**

will there be an exam for certification as in other certification programs?

no idea what would constitute a CE hour. would it be on-line classes? college courses? both? other?

It would be important for me to know where and how these CE credits were obtained. Online CE courses?

It depends how you structure the meaning of one CE hour

It depends on what counts as continuing education.

Once I was aware of what was necessary to take (e.g. # of courses, type) I would be better able to contribute to this question. I would not want to have to go through recertification.

**Respondent suggests other option:**

Organizations I am involved with have a one year( 20 hour) and/or a 3 year certification (6 hour) period

the minimum choice average is 6 credit hours per year. That's equal to two, full courses per year and I think that a lot to ask. More reasonable would be an average of 3 credits per year.

I think 10 hours per year is reasonable.

Again, this reflects upon ability to afford CEs - and presumably many of these CEs would be co-incident with other required CEs. Personal preference is for a 4 year cycle (not 2 or 5) and ~12 to 15 CEs / year (fewer if unique and more if general in nature).

7 years is way too long. Was 40 or 50 CE hours over 3 years considered?

Should be based on career goals and position.

I think 5 years is too long - we should be required to stay current on shorter intervals - maybe more like 3 years.

**Respondent expresses concern about cost of program:**

This is difficult to answer not knowing what the cost of the CE hours would be.

Due to budget cuts, in-service training budgets have been cut. We need to attend less programs and the programs chosen need to really fit our needs.

If employers were willing to pay normal salary for the hours spent in CE, more would be acceptable.

Most folks in the field are horribly underpaid and wouldn't be able to afford many CE workshops over a few years. I would prefer 25 hours over 2 years.

**Concern about location/time constraints of CE courses:**

The question is where these certification programs would occur.

Pennsylvania is a very large state, traveling for 3 + hours one way take the excitement out of what you are going to do.

I am a seasonal employee and have an extremely busy schedule. Although I attend as much training as I can, it is not always easy to schedule it.

**Concern about potentially negative affect of certification on field:**

Some people are certified experts and still aren't good educators.

The major problem would be the reduction in the number of certified practioners.

**Respondent explains answer further:**

That's not much and there are plenty of options available...many are free.

This is one day-long workshop a year.

**Respondent sees re-certification as unnecessary:**

once certified, should not have to be forced to re-certify, having to "re-certify" is more of a money scheme than it has to do with keeping educators abreast of so-called "new techniques"

None.

**Respondent generally supports re-certification:**

I enjoy attending trainings and getting new ideas!

**Respondent has no preference:**

Don't have a huge preference on this

**Question 9.**

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**Respondent explains value of mentors:**

It would be nice to have a selected person who any questions could be directed towards.

good idea..mentoring is important

A mentor would be very valuable addition to the whole process. Many nonformal educators have no idea how much they know. The mentor would enable them to learn a lot about themselves

Seasoned mentors mean a lot. They were there for me many years ago!



I find mentoring in general to often be critical to my success.  
I'd love to expand my skills and am interested in a constructive mentor relationship. The quality of the experience is of great importance.

**Depends on applicants career stage/experience:**

This is relative to the individual's years in the field. As a new educator I found mentor's to be extremely valuable, and have been told that I have served in that role to others. I am not certain that mentor's would be as valuable or even available to educator's who have been practicing for years.

Again, it may be pertinent for those starting on the path to learn from a mentoring program.

Only for someone quite new to the field.

Again, personal opinion as a long time practitioner.

I've been in the field for some time, so not important to me personally; but can see how this would be valuable to someone starting out. I do believe in mentoring and would be willing to act as a mentor to colleagues newer to EE

Depends on the needs of the individual

**Depends on certification process itself:**

Difficult to answer without having knowledge of the certification process, in terms of complexity and difficulty.

Not sure. It depends on how difficult or intuitive the process is.

Again, depends on type of program. Although a mentor may be nice, probably not necessary.

I checked not important, because it is not clear to me what this mentor would do nor how it would be intergrated into the certification process. If for the sake of certification you would need a certain number of programs observed then yes I think a mentor would be a good idea, for feedback purposes. But if its to have someone to ask questions to about the certification, eh, we're smart people we can figure that out.

**Question about who would serve as mentor:**

So who is certified now?

Since this is a new process, it may be challenging to provide this in the inaugural year.

Wouldn't the instructors serve as mentors?

Depending on how it was set up, this could be very helpful. It would seem that a screening process or certification process would need to be set up for individuals to become mentors.

**Question 10.**

**Unsure how certification will improve field because of how broad it is:**

EE is so broad, I am not sure how beneficial a certification would be for me or for a lot of people... I guess it elevates the career, but you would have to have so many different tracts for this--naturalist, childhood educators, adult educators, nature centers, etc..

really hard to say. my first reaction is that certification will not improve environmental education. my experience is that most people do this profession because they are passionate about it. have never run in to someone with an EE job that was just doing it to make money.

There is such a wide range of non-formal ee opprotunities and venues that I feel there are certain educators that do fine without certification. The higher salary, more influence and more recognition you want, the more training/certification you need.



I have a masters degree in ee and stopped there as looking to further formal education would not pay for itself. I agree that we need to continue our education, supplementing with workshops and conferences, however the current salary scales, and perspectives on educators lead one to believe we would need a union to make much progress on these fronts. I am not at all sure that ee certification will do this for us.

**Depends on content of certification:**

It seems like a good all around idea to make sure people are trained thoroughly and continue to have access to resources through the years. It would all depend on what the certification process entailed as to its value. There are different teaching philosophies and methods and there would need to be room for that breadth within the process.

It is the training and knowledge I would like to acquire. The "certification" doesn't really matter for my job at this point.

Because of the lag time of scientific findings reaching educational institutes and the current rate of change of the environment, I have a concern about what would be taught. It is extremely important to me to learn the most current information, best practices, and recommendations.

It really comes down to money (how much more marketable my services would be if I was certified) and the degree to which being certified would increase my skills and effectiveness as an EE provider.

**Certification alone does not guarantee quality:**

Being a self-taught naturalist and teaching children well (according to my peers), a certificate or degree does NOT guarantee quality.

Although I value any type of training that would help me with my job I do not believe that just because you are a certified environmental educator does not mean that you WILL or ARE better than En. ed people with out that certification.

I believe in passion and experience for learning and obtaining environmental knowledge and skills.

**Elaborates on personal circumstances:**

I teach what few teachers teach in our region on local environmental issues surrounding watersheds and abandoned mine impacts that few are knowledgeable about and already seek my assistance in learning more about the subject

I have moved on from my position, but this sounds like a good opportunity for those still practicing

Again, your survey doesn't quite apply to me because I am already a certified science teacher.

**Must be rigorous to avoid duplicating other trainings:**

Thank you for requesting my opinion. This is a valuable survey and process. Currently, Pennsylvania does not adequate capacity to meet these requirements. With so few current opportunities for employment in the field of environmental education in PA, there are many qualified and over qualified educators nearly all of which have an EE or similar undergraduate or graduate degree and/or are a K-12 certified classroom teacher. The Environmental Education Certification process would need to be very extensive to sincerely bolster PA's outstanding EE community of professionals. I've been in the field for 13 years and have not observed the need for a formal EE certification program in PA. A myriad of excellent training opportunities are in place for educators. Creating a PA EE Certification would duplicate some of these programs. Programs already established include NAI; a multitude of excellent conferences; as well as workshops and one day trainings.



What would be the difference between this program and having a Bachelor's degree in Environmental Science?  
If I weren't already a certified teacher I would answer higher for individual.

**Certification would legitimize field:**

I do EE as outreach for my organization, but it is not my "real" job. I think the certification would provide some value for folks who do this for a living. It would also help legitimize EE as many schools do programs as an afterthought and probably would not pay much for services.

We really need the credibility - especially when dealing with schools. The teachers are required to be certified and I think if we expect them to view us as equals professionally, we need certification as well.

**Concern about effects on hiring practices:**

as you know, I have serious reservations about all of this

If we were required to use non-formal educator certified employees, I think it would diminish our applicant pool.

**Certification not as valuable to more experienced practitioners:**

While this is (and would have been) very important early on in my career - having almost 20-years of experience and credentials does somewhat obviate the level of personal importance.

**Certification would help bring field together:**

Environmental Education has many different branches of specialties. Bringing in those specialties from those of us who are not in the EE field on a daily basis helps bring those branches together.

**Question 11.**

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**Survey question wording is confusing:**

Careful on using negatives in the list (e.g., "Not interested in certification". This gets awkward when using the "Not important" response (translates into, It is not important to not be interested in certification.)

confusing questions

I don't quite understand the question, I think you are asking how each item would affect my desire to be certified; that's how I answered the question anyways.

these questions include negatives and the responses may not reflect the actual view.

**Time constraints are most important concern:**

Need to be aware of family and work commitments when setting up a course for educators already working. i.e. I would not be willing to take a week-long course away from home, but would take a series of 2-3 day courses.

It is my hope that these sessions would occur during November to March. Otherwise, my schedule is booked. realistically, Env Educators are some of the most over-committed people that I know. It would be helpful if the program were partially on-line and flexible so they could work it around work, volunteer duties. This would also reduce the "carbon footprint" of the program

**Concern about lack of support from employer:**



I am interested in EE Certification. However, DCNR just paid for me to go to training & become a Certified Interpretive Guide (CIG) through NAI. This training includes EE principles. DCNR would most likely NOT pay for another Certification. Also, other DCNR staff has gained even higher levels of NAI certification. It is an excellent program.

Lack of support/interest/encouragement/caring from the boss and the accompanying likely lack of any financial support for pursuing certification. At this point in my career, I feel this is REALLY important. I wish to remain a professional in this field and this could help me increase income and more up/on with more responsibility. I have no idea what my employer's level of support is.

**Cost and time are equally important concerns:**

Personal barriers at this time for me are the cost, if my employer would reimburse me for out of pocket expenses, and time (over the summer would be a great time for most current educators) many trainings available, so time, travel and cost are highly important

**Respondent sees value in certification:**

I did not answer two questions because I wanted to answer in the positive-yes, I would be interested and yes, this would be valuable currently- I guess N/A would be appropriate  
I believe the benefits would much outweigh the challenges.

**Respondent doesn't see benefit at stage in career:**

After being in the field for many years, I don't see as much benefit for me in certification.  
This is a very awkwardly worded question. My intent is to convey that I have lots of experience, I don't need the certification, my employer would support this, and since I don't need the training, the time commitment would be a choice that I would not make.

**Cost is most important concern:**

Cost would be most important.  
cost in relation to payback is important

**Other comment:**

I have been an environmental educator for many years. I am not certified as such in Pennsylvania  
I don't even know what I could do with certification, myself. However, communities as a whole must be more protective of our earth and resources. Immediate profit is not a sufficient reason for destroying our world.

**Continuing Education requirements can be a burden:**

continuing certification credits can be a burden.

**Question 12.**

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**Respondent expresses logistical concerns (cost, time, travel):**

Scheduling would be key.  
Would depend primarily on cost and commitment of time involved.  
If my employer paid, and location and timing fit, I would seek certification.  
Likely if it was in Pittsburgh or online. Not likely if it required much travel.



depends on location and length of stay
Would depend on the time and travel commitments necessary for it.
If my schedule and pocketbook allow it, I would be more likely to certify.
depends on cost and if it is distance learning
Depends on where it is being held.
over 2 hours travel makes things difficult
Depends upon WHERE and how far and the time commitment.

**Rigor/accreditation/recognition of program enhances value:**

I would be more interesred in a nationally recognized certification, similar to the interpretive certifications offered by the National Association for Interpretation.
I live out of state but a successful program could spread nationwide!
It is is widely recognized through PA and blessed by the DOE, I WILL DO IT. I want it.
One of the biggest determining factors is if the EE certification would be recognized and reputable nationwide. I already have Certified Interpretive Guide certification from the National Association for Interpretation, which is recognized and highly respected nation and worldwide. If an EE certification was only recognized in the state of Pennsylvania, I would put far less priority on becoming certified.
Would totally depend on the quality of the program.
Again, depending on cost and if my employer would support it & recognize it.
Veracity, cost and ability to "sell" the value to employer will be key - gotta sell me first though !
It depends. NAI is the standard. I'd rather have that certification above a state-specific certification.
I would certainly take a look at the requirements and what was offered. There is a good chance that I would pass it over if I felt that it were the same old, same old.
I am totally uninterested.

**Depends on content/process:**

I would need details. It may not be a good fit because I do farm and nutrition education which are totally hands-on, nature-based and stewardship grounded, but not traditional ee.
Really depends on the program.
I would need more information. What does it mean to be certified? By whom is that certification recognized? What kind of information is being taught? It would be important to me for the community cohesion (networking and collaboration) opportunities.
Depending on how well the program is thought out and who is doing the certification
Depends on the topic offered
depends on who is teaching it and what is being taught
I'd like to know how certification could benefit me and our community.

**Support depends on career stage:**

I dont think it is necessary at this point in my career.
My official job functions have changed and I no longer have time to do much EE. It would be unlikely that I would pursue at this time.
At this time in my life I am not at all sure I want to worry about certification again
Not at this point in my career. Earlier would have.

**Respondent already taking other training/PD programs:**

If I were not currently enrolled in a program I would be signing up today!
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**Respondent explains personal circumstances:**

I would be most likely to become certified if we are offering such a program in conjunction with our college in the future. I would be more interested in becoming certified as a master or trainer of informal educators.

**Respondent is uninterested:**

I am totally uninterested.

**Question 16.**

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**Natural sciences, teaching skills and communication skills most important:**

Strong natural sciences and / or engineering background with field experience absolutely required.  
Good candidates come to the position with a strong educational background. They can learn most environmental content/topics on the job.  
While all these qualities are important, some are harder / take longer to provide OJT and peer tutoring. The other 3 are pretty much deal-breakers.  
  
We hire instructors for a variety of courses through the adult education department of our Botanical Gardens. The teachers knowledge of their subject is very important, but their ability to engage, inspire, and share their knowledge is equally important. We provide opportunities for student assessment at the end of each course, and use that to help teachers improve their presentations. Linking coursework to broader civic responsibilities is something we'd like to see all of our teachers do, but the experience of the student is most affected by the knowledge level of the instructor and the dynamism of their presentation style.

**Organization already has own training to cover these skills:**

As part of an internship, the organization's orientation and training can address some of these skills, and/or make up for the lack of skill (i.e. evaluation tools already in place).  
Anything that I clicked as SI, or I, I provide in a two week training on top of the classes that we train the instructors to teach.  
  
Because I work along with the people I hire, I can do the things that I have marked as somewhat or not important.

**Attitude of the candidate is more important:**

Commitment to our mission and demonstration that the candidate has the right attitude are our most important criteria  
Although the knowledge and skill bases are important a good candidate should be able to learn everything needed to be effective.

**Respondent questions need to know goal, theory, practice and history of field:**

Understanding the history of EE is important but not as important and the goals, theory and practice.  
  
the last question is a tough one b/c we as environmental educators to this day cannot agree on what is EE

**Recognizes that many people will not have all these skills or that it depends on level of position:**



I realize that people new to the field may be lacking in experience in some of these areas, but if they have it, it is a plus.

These answers depend on the level of the position. If it is an entry level educator position and will have a mentor than some of these are less important because they will shadow senior educators.

**Question 17.**

**Details additional skills needed or other certifications/credentials they value:**

We pull teachers from a variety of places to instruct our classes based on their specialized knowledge of a topic. We are less interested in teachers who have broad knowledge, because it MAY be harder for them to teach a specialized class well. Students get broad understandings of topics through taking a variety of our courses, or working through our different certificate programs. However, providing instructional support for teachers, to ensure that they are improving their teaching abilities, finding ways to engage the class, and learning how to tie broader environmental concepts into their work could be very useful in helping us identify good teachers.

I currently give preference to EE K-12 certs, as well as the Interp Cert. In addition, universities and colleges that I know have solid programs.

Environmental education is a portion of what our non-formal educators job duties entail. Any ee certification that did not have extensions or components related to experiential ed, outdoor recreation, and/or teambuilding/group process would not be enough to make a potential employee a clear boost in the hiring process. I believe many outdoor and environmental education programs are in a similar position.

While all these things would speak some to the hiring process, most important to me is the individual's energy level, ability to be a team player, enthusiasm for working with students, flexible problem-solving skills and they must have some background in natural history and/or related sciences.

**Cautions that certification does not determine quality of individual:**

A certification does not distinguish between a successful educator and one who is not as successful. Performance on the job is the true test. However proper education and training is certainly an asset and does aid in improving ones skills.

Even a person who is a poor candidate can pass atest. Book smart peoplke dumb,

**Concern that certification would hurt uncertified applicants or is not necessary to the field:**

If college education is required to fill position a certification seems more like a way to make money by the certification provider than a way to determine certified non formal educators.

While certification can be useful and important, I wouldn't want to exclude someone that meets other qualifications but hasn't been certified yet.

**Civil Service requirements will make valuing certification difficult:**

I work for a state agency and changing the civil service requirements for an educator position would be difficult.

All State Parks positions are Civil Service, and it won't be an option for us to offer hiring preference for certification. It's a long, involved process to change job specifications and even if we could start the process, I don't believe that Civil Service will include certifications not required by law (such as licenses). Certification won't influence hiring in our agency, but might be a 'nice-to-have' for the individual in other hiring situations.

**Certification might only be useful for entry level positions:**



Voluntary certification programs are nice and tend to separate the wheat from the chaff but tend to set the low bar for entry into a field. Not real useful for other than entry level or seasonal positions.

**Answers would depend on content/process of program:**

difficult to answer the final question without seeing what skills and knowledge are being assessed?

**Question 18.**

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**Respondent lacks full control over hiring preferences due to Civil Service:**

I would like to say "certain" but because of other restrictions on hiring teachers in my profession/center, I often have to prioritize other certifications over this possibility. However, I would certainly use this as a means to identifying support staff or a curriculum coordinator in the area of environmental education.

BUT our EE personnel like most employees are hired through the civil service process. That would not guarantee a certified person being hired unless coordinated with Civil Service Commission.

Breaches current Civil Service rules.

With the constraints of PA Civil Service, I am uncertain if I would have the opportunity to give preference to the certified individual. I would look at the overall person and make a hiring decision; the certification would represent a low percentage of my decision criteria.

See previous comments

**Might not be relevant to certain (part-time/seasonal) positions:**

We promote from within the organization. We may use it for summer or temp positions require some outreach work.

Certification would be a plus, but not likely a critical determinant because EE is usually a part-time duty of our employees. We do not employ full-time, dedicated EE specialists.

IMO the certification is of greater benefit to the audience and the instructor.

We do not hire full-time instructors. We just hire on a course by course basis.

**Depends on content of certification program or process:**

See comment on last question. If those additional components were included or were available as add-ons or extensions to the certification then it would increase to "certain".

of course much of this depends on what the educator has to do and the course work he/she would have to complete

Would depend on what the requirements are in the job description as far as certification.

**Respondent would consider certification among other factors in hiring process:**

Maybe not preference exactly, but I would certainly give them a second look based on the information they provided.

They still need to be able to present themselves and the message.

Somewhat likely

**Certification alone does not qualify a candidate:**



You can have a very qualified environmental educator that has the necessary skills but not the certificate just as you can have a certified environmental educator that has mediocre skills. An educator also has to understand cognitive levels, relate well to all ages, and be a good presenter.

while any certification is valuable, it's not a given that certificate holder is most qualified candidate. that is, it's not a given that the certificate holder would get hired based only on certificate.

**Concerns about negative effects of certification on field:**

I have worked with several professionals that do not have a teaching and/or environmental background that turn out to be excellent non-formal environmental educators. I think that there are too many ramifications to the field if a certification is introduced. Look at what formal certification has done to complicate jobs in the school system.

**Certification would make difference between two equal candidates:**

This would be the icing on the cake. The person would still need to have professional experience and have the right personality. If two candidates had the same level of experience than the certification would make that person preferred.

**Question 19.**

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**Certification should include a combination of teaching skills (planning, implementation, assessment, working with diverse audiences), local environmental/ecological knowledge, and/or make applicants aware of resources available across state (curriculums, programs, partner organizations):**

Broad current knowledge of the subject  
 Great understanding of the regional issues  
 Proven capacity to present the materials in a stimulating and engaging manner  
 Evaluation of education, experience, basic knowledge of natural systems, sustainability, teaching and planning methodology, working knowledge & understanding of EE standards, evaluation of programs trained in - PLT, WILD, etc...

A strong background in and knowledge of ecological processes. An understanding of determining audiences and most appropriate techniques to use for those audiences. A desire for and a skill set for teaching outdoors - program offerings should take advantage of the resources that are outside in the environment (parks and forests).

Programming that focuses both on knowledge/skills AND developing civic engagement among citizens.  
 combination of EE certification/content knowledge and strong base in pedagogy and instructional/assessment techniques

Content knowledge and areas of expertise, Program and curriculum development, Leadership development, Assessment of Skill Level of Educators (are they good teachers)

These are not necessarily ranked in order of priority:  
 - a mentoring program  
 - training program, participatory as in hands-on and modular that can be obtained on line.  
 -testing (of course).  
 -appropriate experience

Program development and facilitation skills and experience.  
 Field identification skills; making it relevant to the audience we serve, which is primarily junior high; giving them tools they need to take our established curriculum and make it their own.



<p>understanding of wildlife and natural resources</p> <p>Proven in field teaching experiences.</p> <p>Pedagogy</p> <p>Scientific Content</p>
<p>strategies for implementing hands-on activities with two dozen kids at a time, collaborative learning strategies, effective management of centers/stations</p> <p>Instruction in methods of hands-on teaching.</p>
<p>successful teaching styles, ee background, natural history knowledge, up to date issue facing PA and globally</p>
<p>Cutting edge interpretive skills, e.g. using technology in the field - gps units as a bridge between students 'indoor life' and outdoor investigations.</p> <p>Creative/fresh approaches to demystifying information. Quick hits as well as those which require more process.</p> <p>Looking at learners and how they interpret the information they receive from us.</p> <p>Additional natural history skill and information building.</p>
<p>Assess personal interest</p>
<ul style="list-style-type: none"> <li>-broad-based to include a variety of environmental aspects.</li> <li>-basic understanding of the Pennsylvania Commonwealth government structure and how it impacts programs and implementation at the municipal, county, and state levels.</li> <li>-basic elements of education for non-formal educators, particularly for those whose jobs only include a small percentage of education time.</li> </ul>
<p>creek study (project wet</p> <p>solar energy</p> <p>project wild</p>
<p>A broad-based overview of environmental science, program planning and available resources would make this certification program most valuable to our organization.</p>
<p>Issues of conservation and sustainability are part of the program.</p>
<p>Although I do look for people who are knowledgeable about what we are teaching, I tend to have the most success with people who are genuinely enthusiastic about working with children and being outdoors. If they have this passion then they are willing to learn what I need them to know. I would think that this program should include a really clear understanding of why ee is important, as well as give the participants skills in how to be a leader in the field. Also, as someone who has worked their way up from a season educator, I think it would be important to include information about the types of organizations where they can work, including schools, non-profits, municipalities, etc.</p>
<ul style="list-style-type: none"> <li>-knowledge of source materials such as the Project curricula, 4H extension lesson plans, Game Commission materials, etc.</li> <li>-experience teaching various ages (pre-K to adults)</li> <li>-experience correlating lesson plans to PA state standards</li> <li>-knowledge of the variety of types of outdoor education programs (including but not limited to environmental education) available in PA (and perhaps how to integrate env. ed. into recreational programming or combine the two)</li> <li>-theory and practice for group management/behavior management at various developmental stages</li> <li>-how to plan developmentally appropriate lessons for Pre-K through adults</li> <li>-how to facilitate learning for groups with special needs (ESL, physical, etc.)</li> </ul>



<p>Deep understanding of evaluation processes that assess learning, as well as participant intent in follow up to the learning experience.                  Development of broad resource knowledge.                  Knowledge of funding sources for EE program as they will most certainly be asked to bring this with them into any working environment.                  Comprehensive knowledge about learning styles and differing needs of adult vs child</p>
<p>Know the differences between OE vs EE, know the goals and objectives of EE (i.e. Tbilisi), sound foundation in ecology principles, teaching theories and methods, adapting for special needs, and various ages.</p>
<p>Understanding of natural processes                  Understanding of learning styles                  Curriculum development                  Effectiveness measures for individuals and program                  Related skills (budgeting, non profit 101, etc.)</p>
<p>Natural History Background                  How to work with groups/various ages/teaching techniques                  Lesson plan writing skills</p>
<p>Presentations on how to reach Schools on allowing programs to be developed within the School Curriculum that meets State PDE Standards; Schools should be made aware of who are certified non-formal EE educators that have credibility within the State; Assistance with Clearances to work in the schools over more than 1 year at a time; Including specific local watershed issues that are relevant to our region in the certification process (AMD-abandoned mine drainage); Utilizing existing AMD Curriculum and Programs that are in use by many of the non-traditional EE educators in the field/classroom already; Idenifiable seal or logo that can be put on our brochures or website indicating our certification; Being included in a State-wide database as a resource provider of EE programs in the non-formal setting that can be obtained publicly by teachers, camp directors, nature camps, environmental camps, educators, etc.; Grant sources and funding possibilities</p>

**A program should incorporate standards and/or build relationships with other credentials like PDE, NAAEE, Civil Service hiring practices, NAI, etc.:**

<p>should be more of a collaborate certification - combining and building upon other existant certifications (environmental, educational and technical) and/or recognized and applicable to same.                  should be subjective, not objective.</p>
<p>Meets key guidelines from NAAEE</p>
<p>I think looking at requirements in the formal educators EE certification should be looked at as well to see if there is anything that should be added to the non-formal educators certification.</p>
<p>Prefer programs such as CIG certification for env. educators in my organization</p>
<p>LEED certification</p>
<p>peer review</p>
<p>PA DCNR Bureau specific certifications, both on the statewide and national levels</p>
<p>DPE standards for Ecology and Environment, fundamentals of group dynamics/ group management,                  Would need to be made a pre-requisite for the civil service test</p>
<p>There would have to be a change in Civil Service requirements for hiring preference. Otherwise, the main benefit for us would be 'bragging rights' with an increased perception of professionalism for our staff and program. The certification would likely duplicate some of the training we currently do.</p>
<p>An evaluation of their skills of these individuals that is rigorous enough to be respected by those in formal education--- that will help EE be further accepted and integrated more easily into schools, colleges, use at DOD installations, etc.</p>



**A program must teach how to work with diverse audiences, including different age groups and special needs students:**

Teaching skills at different age levels and learning styles Knowledge of locally relevant ecology and environmental science topics
An early childhood component as well as a component to consider the supervision of undergraduate students in this area who might be placed in an Arboretum/Children's Garden and/or an early care and learning facility.
Constructivist and discovery-based pedagogy. It's vital for educators to learn how to engage children in authentic activities and to learn how to follow their children's lead when appropriate. Too many young educators are so tied to their lesson plan they can't improvise when necessary.
Teaching strategies for a variety of age groups.
Teaching methods for reaching a variety of student abilities
Dynamic teaching styles can go a long way towards helping teachers build a following amongst our regular students. Teaching them to effectively use presentation materials like powerpoint, and also helping them think about how to incorporate hands-on activities into their presentation would be great.
ability to relate to many different ages and audiences, ability to offer practical take-aways to audiences
These are in addition to topics already identified in survey: - Working with diverse audiences (program attendance) - Ability to generate profile of local communities - residents, natural/ecosystems and sustainability issues - Needs and interests of members as well as community residents being served.
That participants would receive training working with diverse audiences -- young kids, high school/college students, adults, different minority groups, etc.
How to teach - skills, strategies, techniques of working with children and adults Understanding of ecological principles of how life works on planet earth Program Development Significant contributions to the field and the environmental movement - John Muir, Aldo, Rachel Carson, and on and on. Knowledge of environmental impact on the earth Knowledge of agencies and NGO's devoted to EE

**Teaching methodology and communication skills are the most important (program development/delivery, public speaking skills, evaluation):**

The ability to create curriculum that is specifically tailored to location of employment. Education theory coursework, practicum or "student-teaching" experience, coursework in program planning and evaluation
the ability to teach beyond just putting a powerpoint slide and rereading what the power point slide is saying
I think that instructional strategies and basic understanding of child development and educational pedagogy are the two biggest areas for improvement among non-formal environmental educators.
Successful individuals in our field are able to provide meaningful information in a very community based level, relating actual environmental topics with visual and written examples. They must also be able to adapt to the changing priorities of state leadership as they view the significance of environmental education and its place in our state park system.
Good people skills. Good public speaking skills.
techniques for content delivery and group management.



Test of public speaking ability
practical experience in public speaking, presenting, and program planning; proof of advanced education in environmental fields

**Skills and knowledge are important, but certification may not be best way to develop them:**

I don't look for the certification. I look for the skills and teaching success.
The only problem I have with the whole survey was in the beginning when you did not include NON-college graduates as possible candidates. We run a wildlife rehabilitation center and present wildlife programs to schools, scouts as well as other organizations and the public. Many in this field have gained knowledge and experience through years of self study and practical application without formal education. It would be a shame to see this valuable group be neglected, or worse... excluded.
Presentation skills and cognitive levels. However I have seen some educators who just didn't have the skills to be a teacher in a classroom or in the environmental field. Some skills just can't be taught.
I don't believe in such credentials as a true measure of an applicant's ability. Just because they pass a course at some point doesn't mean they have a grasp of the skills needed to be a successful educator.
It is important to me that a person have many relevant experiences immersed in the natural world. Do they hunt, fish, backpack, camp, hike, engage in bird watching, gardening, etc? Real experiences lead to authentic storytelling and teaching.
I do not feel that a certification is necessary. Anyone can become certified, but it does not qualify them to be a good instructor. I actually think offering a certification would have a negative impact on qualified candidates that are NOT certified. I for one look at the big picture when hiring. I am not looking for fancy degrees, etc. I look for a genuine personality and a willingness for lifetime learning and sharing of that knowledge.

**A program must be rigorous and balanced:**

A balanced view
Evidence that candidates holding this certificate really have the skills and experience we need
Given that I don't know the credibility of the accrediting organization I have no way to know whether to give it weight or not so I don't. I have found that many accrediting programs are more about making money for the accrediting institution than quality education.
I have little knowledge of what is currently included in the program to respond to this question; but, I trust and support the opinion of the field educators.
Emphasis must be placed on presenting material in non-biased, balanced manner.

**Continuing education, re-certification and specific pre-requisites should be included:**

continuing education requirements to maintain certification ample training opportunities, including an annual conference collaboration opportunities with other EE organizations/entities and with formal education institutions State recognition and support
In order to receive certification, the individual needs to present a program in writing form as well as a "live" presentation that is rated and reviewed.
A continuing education component.

**Respondent suggests offering multiple levels of certification - entry through professional:**

Have levels of certification from entry to expert.
--



Multiple levels from very basic to advanced.

**Organization already trains staff or employ seasonal workers who may not benefit from certification:**

At the end of 2009, we had to abolish our Environmental Educator's position due to insufficient funding for the position. In order to ever think that we'd ever get the position back, we'd have to have sufficient financial support to sustain the position. In today's economy, we don't feel like the school districts or others that we provided programs and services for have the resources to pay us for our environmental education services. The County, in today's economy can also not afford to pick up the tab.

Hard to answer this. On one hand, we are a training site that takes the time to make sure our educators have the skills to be successful, and that training would still likely take place regardless of someone's certification. On the other hand, the ability for us to deliver the certification is what probably makes this more valuable to a university nature center. If our staffing pattern was to change and move away from using seasonal interns as front line educators, I could see a certification playing more of a role in our hiring.

**Program must certify enough people to make it valuable and be broadly recognized across state/country:**

Enough local educators certified to have a list to choose from.  
recognized state wide as the best training a person can get in ee

**Should include some direct hands-on experience or service-learning component:**

Hands-on experience of some sort (work or volunteering)

The ability to implement service learning programs around environmental issues. I live in an urban area and it is critical for students to know the issues and to implement environmental projects in communities.

**A program should include outdoor education experience (group management, risk assessment, etc):**

group management training, risk assessment skills for taking groups outside, basic nature education (ex. knows something about common local flora/fauna), background clearances, 1st aid/cpr certifications

**Must have clear standards that are broadly applicable so those without EE background can eventually earn certification:**

Certification program should have clear, reasonably achievable standards that a non EE specialist can meet with a little effort and development. E.g., a biologist who does 90% field research, but occasionally gives a public EE program, should be able to qualify.

**Question 20.**

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**Respondent explains other hiring constraints, including Civil Service requirements:**

Prefer to hire locally as much as possible.  
Again, without sustainable funding for an EE position, this question becomes moot.  
Civil Service must be in the loop.  
How would accrediting be handled by civil service? The more requirements that civil service puts out the fewer candidates we get.



**Wording of survey question is unclear:**

this question makes no sense
This question was a bit difficult to answer ...wording was somewhat unclear for me.
can't understand the question so not sure answers are good
This is a confusing question.

**Certification does not seem relevant to respondent's open positions:**

Our EE positions are not entry level, we promote experienced environmental professionals that have shown the ability and desire to teach others into EE. We do not hire EE we promote experienced environmental professionals who are natural teachers.
Lack of applicability of certification to all parts of our non-formal educators' job duties (see previous comments) our environmental education is specialized around food and agriculture. it is possible that the certification could be largely irrelevant to the staffing needs we have.

**Certification would be just one factor considered in hiring, but might make the difference between two equal candidates:**

If all things were equal between two candidates, I would give preference to someone who had sought out further instructional education. However, I would not choose an EE certified instructor who did not specialize in a field, over someone who had a lot of experience.
I would see certification as just one extra factor in hiring, equal to education, other experiences and personal factors. Hiring is all about the individuals.
Not very important o the hire process but may be used as professional training tool. If the standards are high.

**Concern about increased salary expectations resulting from certification:**

Another concern would be cost. People certified may expect more pay.
hourly rate of trained educators over ones that our trained by our organization

**Program would need national support or have a large enough pool of certified individuals to be valuable:**

I think it might take a short time for others, not inthe field to "catch on"---- but that can be overcome with help from proper positioning/marketing campaign from national ( NAAEE).
This process will take a while to get up and running and a lot of people through the process, so until then, there would be only a few certified people to pick from, so for some time we would have to use experience as a factor rather than certification.

**Respondent needs more convincing of benefits of certification:**

The board and executive staff would need to be informed about the process of certification and how that would benefit them.
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**Question 21.**

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**Respondent indicates potential support for certification:**

again hard to answer. I don't think it would matter much from a hiring/training perspective (we will continue to train regardless, however there is so much to learn that the emphasis of our training could change as interns come to us with a more advanced skill set), but as a potential program delivery place, it would matter.
--



If it also includes individuals I mentioned in the comment section of number 19.

Each year we seem to get more candidates that are not outdoor oriented or possess the skills to educate others in the importance of the environment and our connection to it. (Its hard for candidates to be a dedicated outdoor professional if they are not interested in being in the outdoors!)

I think this is an area that will be up and coming in the early childhood profession as well as for nature centers and other environments that are supporting ecological literacy as early as possible in the lives of young children. I also think there should be a program, certification or at least a course in environmental ed required for teacher certification in PA!

We straddle the two professions of EE and interpretation in State Parks, and the interpretive training and certification has been more applicable to the majority of our staff. The EE certification could be helpful as well, but I think some of it would overlap the interpretive certification. I do think some of our staff would be more interested in the EE certification though.

**Certification would improve credibility of non-formal field:**

We want the credibility with the teachers, some of which are just out of college, who do not have nearly as many years experience in the field or classroom setting as some of the non-traditional educators that are successfully reaching students in many ways through our outdoor education hands-on programs

Yes only because it may raise the bar across the the field

It will help show that staff are not just "docents" doing this as a hobby but rather trained individuals/ professionals.

We need to continue to work toward professionalizing this field and a certification program helps.

Only said moderate because people do not realize it is necessary. Don't think the general public , some organizations, may see it. there is a "learning curve"--- but it is GOOD to be ahead of that curve. That will ensure EE will survive and continue to be taken seriously.

**Program might not meet needs of employers or is not the best way to find qualified individuals:**

Normally, when we post a position related, we have no problem finding pool of qualified applicants.

I see the needs as being for the practitioners themselves not the organizations. It is often hard to gain experience in ee and this is the type of thing that could help young committed people have more opportunities in the field.

Frankly there are a lot of mediocre EE programs and instructors. There are a few really good ones who seem to have found quality EE professionals without a certification program.

With the proper education, training and the skills you can't teach, I feel you can find very qualified individuals.

I think there is a need for greater professional development not necessarily a standard professional certification.

**Certification will help establish baseline set of skills and provide relevant training:**

It would be great to have some way of identifying knowledge and skill base in an individual that is as reliable as master gardeners certification.

I go back and forth between moderate and definite. Training of any kind only goes so forth. There is nothing like on-the-job training and experience.

I feel that it will bring more uniformity to our field in meeting the goals and objectives of EE, and offer marketability for job candidates to give them an edge. I love scooping up K-12 EE cert'd candidates here.



**Respondent sees benefits to certification, but not a strong need:**

I see a benefit but not strong need.

It would definitely be a plus, but on the job training seems to have been working all these years.

**Concern about lack of opportunities for people entering the field and lack of funding to hire them:**

Need funding!

I can't say no need - never say never. But until something can be done about the salary situation, I am not sure where we are going to go with this. I do recognize that the certification process is an attempt to justify an increase in salary as you would potentially be hiring a person who could be a 'cut above'. I fear that so many of these current positions are being lost and the training for those who will 'follow in our footsteps' will not be worth the degrees necessary to slip into these positions. Is there any current program out there (bachelors) that produces an environmental educator? Everyone I have hired in the past has come through several side doors of education. My own background includes a B.S. in Elementary Education and a M.Ed. in Environmental Education. Pretty expensive for the salary. Had I stayed with teaching in the schools, my salary would be double what it is now.

**Certification might encourage more diversity in field:**

It may be the first step of minorities and people of color obtaining certification in EE that would encourage them to move into a university program.

**Certification is not as relevant for seasonal employees:**

Most of our employees work for very short periods of time, usually 3-4 months of the year and highly qualified candidates often seek positions with longer periods of employment.

**Question 22.**

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**Respondent doesn't feel that certification will affect salaries:**

I like that one about salaries... but really... you can't squeeze water from a rock. I just interviewed people with masters degrees and even a Ph.D. candidate for an entry level Teacher/Naturalist position that pays in the low 20s. Gack.

Our instructors are not employed full time, and so no one makes a living being employed by us. Further, our instructors fees are set across the board, which means it would be hard for us to offer an EE certified teacher more than our other teachers. IN our case, EE certification would not increase salary - although we would be more likley to schedule an effective teacher more often.

Again with the salary, your hiring pool will reflect a distance that can be traveled. Certification would need to be rampant to make a difference in giving someone an edge.

**Respondent is unsure of how certification will help them find candidates:**

The salaries are what they are in this field. I do pay a K-12 cert as much as someone with their masters. I wait to see how someone performs with an Interp Cert however. Unless if there is a job search site specific to EE certs for me to post on I do not feel that it will be easier to find these ppl.

Would make it harder to find candidates. Higher salaries would be a negative from my perspective.



Certification doesn't guarantee that an individual can relate to students and adults on a personal level.

**Respondent doesn't feel that certification is best way to keep skills current:**

I don't feel a certification program keeps ones skill levels current. This is done by on-going training and workshops.

**Certification is not relevant to current employees:**

our environmental educators are drawn from a pool of Americorps members. They are on our staff for only one to two years at a time.

**Question 23.**

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**Concerns about cost of program:**

We are a not-for-profit and our instructional staff are generally poor due to college loans. We would not be able to pay for our staff for the cert and I am not optimistic that staff will run out and get it. It needs to be available in colleges and universities or perhaps through internships through approved centers.

Because we employ many different eachers on a very part-time basis, it would be difficult for us to improve our programming by just sending one or two people. Sending all of our enviornemtnally related teachers would be cost prohibitive.

Financial will be biggest issues... Perhaps a govt or nonprofit rate

**Problem with question wording:**

Again, it is difficult to respond to a question about barriers when applied to the "importance" of an issue.

**Other:**

We will become recertified and certify others

**Question 24.**

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**Respondent would support certification but cannot cover costs:**

Most of my employees are part-time and I know many would like to find full-time positions that are not possible here. So I think it would be helpful to them to have this opportunity. However, we would not be able to financially assist them in this.

Our organization could not financially support them, but I would encourage them to seek certification and provide means for them to do that.

See comment above.

Although it would be a struggle to find money to assist them in taking any courses

**Depends on program criteria/cost:**



I'm on the fence. I would like to see the criteria that is used for the certification before I would comment on it.  
 It depends on costs and curriculum. Would not make sense for 10 month seasonal instructors, as we do our own in-house training each year.  
 I would need more information to provide a valid answer to this question.

**Might support a certification:**

Maybe  
 No educator currently on staff. In the process of hiring.

**Non-formal certification must compete with other PD opportunities:**

All of our staff are required to participate in professional development programs each year. It would have to be as or more valuable to them than other opportunities.

**Non-formal certification not relevant to respondent:**

Do not travel out of state, located in Delaware

**Question 28.**

**Environmental Science/Studies:**

It does have environmental sciences and env studies majors and minors.  
 Minor in Sustainability and Environmental Studies  
 We have a biology major in biology with a specialization in environmental science. We have courses such as Botany, Ecology, etc.  
 We offer course work and the students can earn a degree in environmental science or environmental studies. In addition, the students can also do a minor in education. We also offer an education certification in environmental education.  
 We have a B.S. in Conservation Biology and a number of our alums have gone on to these professions.  
 As such that any natural resource field requires communication with the public (clientele) regarding the environment and its issues.  
 Environmental Science BS

**Respondent does not have or doesn't know of a program currently being offered:**

Not that I am currently aware of.  
 I don't know  
 I have 20 years experience in higher education, but do not teach in an EE-related field (though that will change in the Fall when I teach an adjunct course at a different university).  
 I am not sure what you mean by non-formal EE?  
 I do not understand the designation of "non-formal."

**Program or coursework is offered with a partner:**

In collaboration with a local nature center  
 We offer Docent opportunities through the Oakes Museum of Natural History that includes a lot of environmental education as well as an Environmental Education Practicum (3cr.)



Master Gardener training includes some environmental education

**Offers K-12 EE teacher certification:**

PA teacher Certification in EE  
We have the K-12 PA EE certification at our program and offer an environmental education course that focuses on environmental issues each year.  
I teach for Arcadia University. Arcadia offers a M.A. in Education, with a concentration in Environmental Education.

**Does not offer online courses:**

not online  
not distance learning

**Program is very new or currently in development:**

We are a two year college, we could easily provide an ee certificate. I am now developing an ecological sustainability degree.  
program just began 2010-11 school year

**Occasionally offers program/courses:**

occasionally courses are offered--but not every year

**Question 29.**

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**Don't know:**

I am only adjunct and do not really know  
really needed an option to check "do not know"--all the ones I left blank would fall under that category  
I don't feel I can comment on this. It would just be my opinion.  
not sure about this one

**Concern about cost and/or potential lack of interest:**

We tried to offer a Master of Science Ed Degree but could not find enough interested educators to enroll.  
We are in the process of designing an environmental track. The greatest concern expressed by the administration is the cost both in terms of materials and faculty, as well as interest of students and their employability in this field.

**Currently offer or have the capacity to offer a program/certification:**

We currently have the capacity and the support to offer this certification.  
We do offer a certification in EE

**Question 30.**

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**Unsure/don't know:**



I'm not really sure.
unknown
not sure
I am answering this question not understanding what the difference between "formal" and non-formal" would be.
I am an extension educator in the field and do not teach formalized for credit classes. Question does not apply in my case
not sure
Not sure

**Offer minor/concentration/courses in EE-related subject, but not full program:**

We have an environmental studies program and a science ed program but not a specific environmental ed one. We offer continuing ed hour workshops in environmental ed in summer and public programming for a variety of age groups
We have a new sustainability studies minor program, and there are currently about 10 students who've added it to their major.
We have some courses, and students may concentrate with the Environmental Science +/- Studies degree with a focus in Env Ed. Others choose to take courses, not concentrate in this area, but go on to be informal env ed professionals. We also have students take courses to fulfill Ed requirements with a concentration in Env. Some of these students become formal primary +/- secondary certified educators who have a focus in env.
Most Earth and Space certification students pick up the additional K-12 EE certification. It only involves taking one addition course.

**Explains further details of programs offered:**

We are a young program! only in our 6th year, so only a few grads each year
---

**Sees potential for non-formal EE certification:**

if we offered more of an informal certification we would have more takers
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**Question 31.**

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**Institutional/structural barriers exist to creating new program/certification:**

A professional certification program would involve the creation of new courses and new faculty hires. This is unlikely to happen at our institution.
We have been instructed not to develop any more courses that do not fit under the College's strategic plan. And they are wanting to cancel any course/major that has low enrollment. Difficult atmosphere to start or build upon anything!
We have solid, rigorous ES programs, but no minor or other programs in EE. The demand is too great, faculty too limited (not enough of us)
There are barriers; these just aren't the ones. The barriers are more structural: faculty are tied to the traditional disciplines in which they are trained and in which they must get tenure.

**Clarifies what programs are offered:**

We offer both Environmental Science and Environmental Studies degrees, but I do not think we offer Environmental Educator certification.
--



**Supports development of non-formal certification:**

The wording was difficult for these questions. I was trying to figure out what you were asking, so to clarify - we would be in support of developing a more "refined" options for our students who are more interested in the informal process. I work with them too and they would be the ones doing minors in education because they see the value of having a bit more background.

**Respondent is currently re-evaluating program offerings:**

with current budget cuts this is all being re-evaluated.

**Unknown:**

unknown

**Question 32.**

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**Sees value in certification and is interested in being involved, especially through developing/offering courses:**

Yes, we would be anxious to be involved based on many years in PA State certification, while also recognizing and finding ways to help Environmental Science majors prepare to work in informal settings. We would be willing to work on defining the guidelines, course content, field experiences, etc.

Our biological sciences department, environmental studies program and education department collaboratively might be very interested. This is an incredibly important area.

Yes, I would be happy to offer courses or have my students participate in the courses themselves.

Yes. I believe they would be interested in helping to identify appropriate criteria for certification, and appropriate university course work that could prepare an individual for that certification; and developing/offering specific courses in support of that goal.

Coursework and on-site instruction

We would certainly be interested in offering coursework/experiences that could help in certification. I feel this would be a real service to our community.

Yes, we would be interested in knowing what it entails so that we could review how well it fits with the courses we currently offer - how many/if any new ones would need to be developed.

We might be interested in developing a certificate program or major

I think Arcadia would like to be involved, perhaps in the capacity of helping to develop a program. We could certainly offer courses in our program toward a statewide certification in EE.

yes; teaching environmental science field and lab skills

We would like to be able to offer courses in or outside of a degree program.

Offering certification through a Masters in Science Education may be possible

**Interested in participating in program design and planning:**

yes, and we would be interested in development and delivery of the certification program.

To insure that the best practices that we have developed are reflected in what is happening in the certification process.

assist in developing program

Absolutely -- we would be interested in creating it and being involved in the decision making process.

Yes, the university would be interested in the structure and design of the certification program. Workshops designed to orient faculty to the program would also be helpful.



We could be involved in an advisory capacity.  
 yes, in design, review etc.  
 Yes, putting together a statewide strategic plan

**Potentially interested in participating in development, but depends on other factors:**

I believe my school (or certain faculty and administrators within it) would be interested in participating in the development of this program. It's difficult for me to say in what capacity, however, since I don't know at this time what would be involved in the program's development.  
 Yes but everything depends on the university's financial situation.  
 Possibly. As a liberal arts college, we don't currently offer ANY certification programs. That may change, if the situation were right.  
 Yes, but it depends upon what the program looked like.  
 See comment above for question 5. Yes, they would love it but would not have support.  
 I would need to know what "non-formal" meant. We do have a rigorous program for educating people in environmental science, policy, and analysis.  
 Possibly

**Already offer certification or concentration in EE:**

We already offer the PDE k-12 Environmental Education certification to our biology majors. Many of these choose to enter formal and non-formal education settings.  
 I am not sure. Instead of certification, we offer a 24-credit "minor" in both Environmental Science and Environmental Studies.

**Unlikely to support a certification program:**

We are not a state school. so this seems unlikely.  
  
 Probably not very interested unless it were offered by a unit that has a clear distinct land grant extension mission because the credibility and unbiased impartiality of the institution and its instructors would be open for discussion. As a cooperative extension unit our credibility and skepticism of any for profit teaching curriculum and who and what its funding source is could be an issue.

**Respondent personally supports this program, but cannot speak for program/department:**

I don't know. As an environmental instructor I would be interested in promoting it but I can't speak for the Executive Council.

**Need more information about program/process to decide:**

Not sure at this time - would need more info about the program.

**Question 33.**

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**Provides specific example of other skills taught in program:**

The college operates an environmental institute which offers K-12 non formal ee. Many resources are available with lots of staff expertise.  
 Engaging in environmentally-based research including citizen science  
 We have been involving students in solar energy research.  
 I teach science/



The students who take the MA program in EE or who take EE courses to get a teaching certificate would get all of these things in Arcadia's Edu. 556 Course: Strategies and Curriculum in EE.

science basis decision making and separating demonstrable fact from opinions is our strongest methodology

**Teach some/all of these skills, but not in context of non-formal EE:**

NOT AS PART OF ENV ED, BUT ENV STUDIES MAJOR AND MINOR.

Unsure if this applies-- have taught an Env Sci course for teachers before that mixed methods and content for teaching.

We only address this formally

As indicated on a previous page, we have a sustainability studies minor, which teaches some of the above--but not in the direction of preparing students to become environmental educators.

our program is for certified formal educators

Our institution offers a degree in education for K-12. At this time there is no specific environmental program, although one is currently being planned. As such our programs are for formal educators.

**Skills and knowledge taught through several different programs and departments:**

My university has an Environmental Studies program that provides a strong background in environmental issues, and a Biology/Secondary education program that includes all of the educational skills you asked about. It seems feasible to set up an environmental educators track within the environ studies program that would include some of the education courses along with the science background. None of our current programs specifically combines these.

Some of the ed based skills MAY be taught here. While we do not have a formal major in early childhood/elementary/or secondary ed, we do have student complete the necessary requirements to enter MA or MEd programs. I do not know the full range of course work that they must take or whether these other skills are presented to them in specific classes here on campus. I \*presume\* so, but don't know for sure (hence I did not select them). I am located in an ES department and I know for certain that we offer certain things, which I have selected above. You would have to contact others here at the Collge to ascertain whether or not these other offerings are available...

It all depends on what the student would choose to take -- if they are doing a monor in ed - the above areas would be covered.

The above checked are thouroughly covered in the EE course and in our TLT Masters degree and teacher certification program of study. Our EES department offers courses in environmental processes and systems.

**College doesn't currently have a program to teach these skills/knowledge:**

There is no current program for early childhood non formal environmenta education in our department or college. We don't have a program

**There is room to offer skills/knowledge not currently being taught:**

I think we could teach the other things, we just aren't currently doing that "thoroughly"

We prepare our students with a strong biological and cultural/political background set of courses, we would need help in developing more traditional education skills courses - sometimes the Education department at our school is very caught up in keeping up with demands of PDE, thus if we could do it within our courses, it would be easier - or if we could work with Education, if it did not require too much of their time, that would be okay.



**Respondent doesn't teach any courses, but practices EE in university setting:**

I don't formally teach about non-formal education. I practice non-formal education in a university environment.

**Question 34.**

---

**Certification would help establish standards and best practices in non-formal field:**

It would be nice if these folks were "up" on best practices in instruction, PA Standards, etc so when they assist teachers and work with students it can be as meaningful as possible.

I think certification gives some credence to programs/people that can then indicate they have passed some measure of knowledge/skills.

Recent studies shows that non-formal EE do not have a good sense of how learning technologies can be integrated into outdoor experiential learning and many are not well knowledge on teaching diverse learners or integrating inclusion practices.

It would add legitimacy especially for those who enter the EE field from other fields.

**Depends on recognition and rigor of the program/process:**

Really depends on what organizations recognize the certification (and to what extent the general public recognizes the certification).

If the employers support it

**Might improve professional and employment opportunities:**

Folks who are doing EE already believe in the message. This may help them by increasing employment opportunities.

Would be a useful credential

**Concern that there is not enough demand or funding for program:**

There doesn't seem to be a demand for it.

duplication tight budget times of extisiting programs

**Worried about experienced practitioners having to complete a certification to remain competitive:**

I would be worried about mandating a certification program that puts \*qualified\* adult professionals who have been in the field for years out of jobs or having to go back to school at great financial risk in poor economic times simply to meet new certification standards. However, I do think that the large number of "EE" docents, etc that are completely unqualified suggest that there may be a real benefit to such a certification.

**Supports as long as it remains outside control of PDE:**

I think it would be a very popular option as long as we are not being dictated to by the PA Dept of Education (and I don't mean people like Patti Vathis - she is excellent -- i am talking about people that do NOT understand educational systems but are put into positions of power at PDE)

**Does not support or understand reasons for certification:**

this makes no sense - a formal evaluation program for non-formal practitioners???

**Question 35.**

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**Participation contingent on factors such as student interest or available funding:**

If we could get enough interest to make it happen  
 I do not know - with funding cuts now - likely no interest  
 no courses taught on regular basis, so until that happens, I would not be able to participate  
 faculty time is a premium. We would need to look at our Practicum course offering and museum work for modifications first as ways to accomplish this. Or offer a workshop in coordination with the Soil Conservation District perhaps.  
 not sure depends on funding

**Respondent cannot speak for entire department or school, but indicates personal interest:**

As an adjunct, I would not be the best person to answer this question.  
 I can't speak for everyone in the minor (much less at my school), but I am personally interested, and I believe others would be as well.  
 Not up to me.  
 I think the interest might be developed but, at the moment, the interest would not be as likely from my particular department.  
 Maybe high, depending upon the need to collaborate with the Education department and what college administrators thought. As faculty we are interested.

**Indicates definite or likely interest:**

My department would be interested, to be sure!  
 I think this would complement our existing offerings, and there are a number of hot topics that could be explored, including Marcellus shale drilling, abandoned mine drainage, etc.  
 it would need to be proposed but likely

**Would probably be offered by a different department:**

Don't really know. The School of Education would be more likely to offer this certification, not the Biology or Environmental Science Departments.  
 Not as a major but maybe through continuing education or workforce development

**Offers specific resource or suggestion relevant to developing certification program:**

Our hybrid Web-based, EE course meets this need.  
 See:  
<http://www.lehigh.edu/~amb4/courses/tlt367.pdf> for syllabus and  
 Bodzin, A. (2010). Integrating Web-based activities and field-based experiences to investigate environmental issues. In Bodzin, Klein, & Weaver (Eds.) The Inclusion of Environmental Education in Science Teacher Education (pp 323-336). Dordrecht, Netherlands: Springer.  
 Perhaps it would best be under Continuing Education format so there would be flexible times to accommodate working schedules.

**Participation depends on who is administering program or goals of the program/organization:**

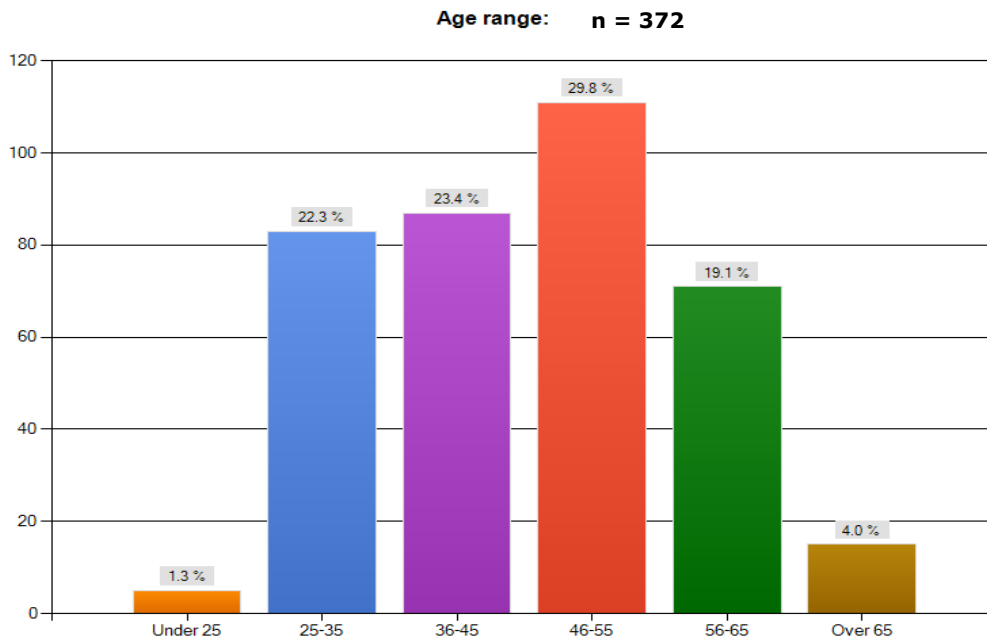
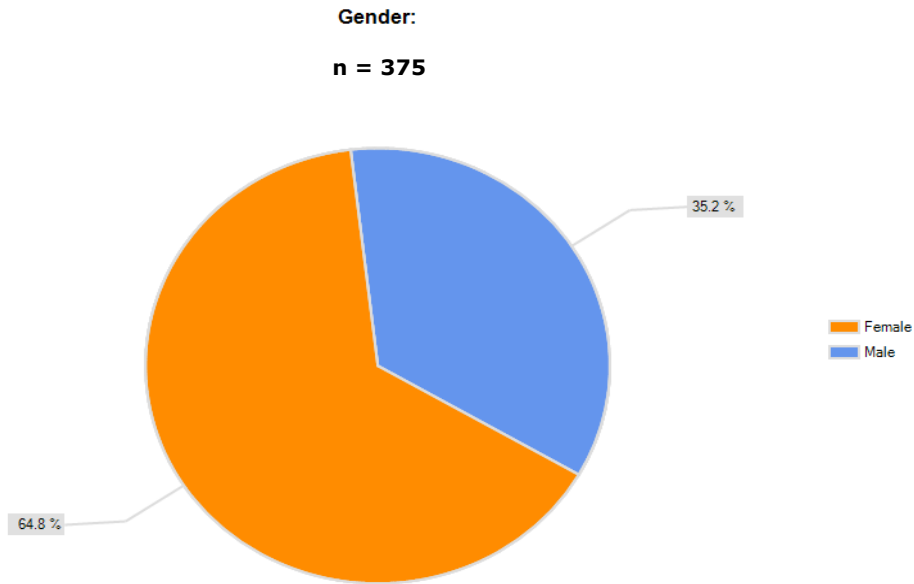
I would need to understand both what "non-formal" environmental education was, and also what a certification program would accomplish.  
 we would have to review curriculum and instructors and the mission of the institution conducting the training before we would commit

**Unable to answer:**

Don't know.  
 unknown

## Appendix B: Demographic information

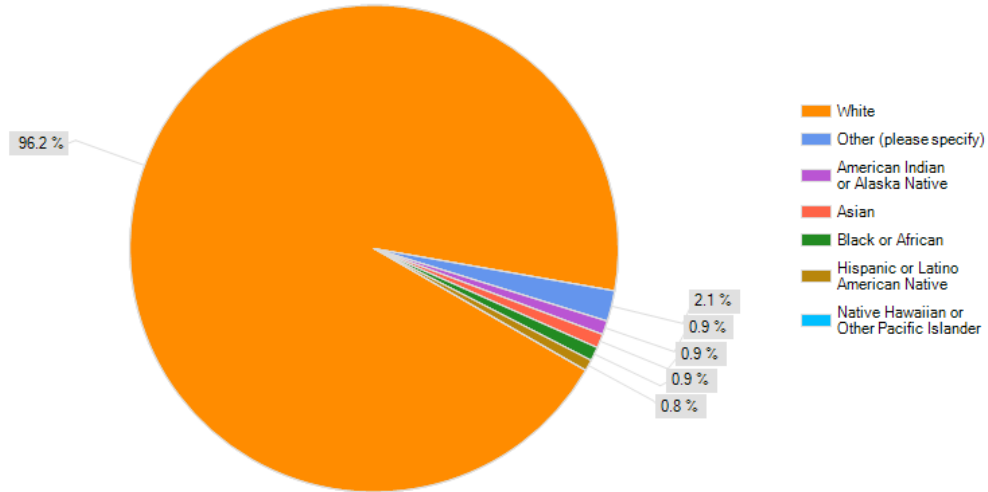
Demographic information entered voluntarily by the 471 respondents identifying as non-formal EE practitioners, employers and supervisors of EE practitioners, and/or university and college educators.



# Pennsylvania Non-formal EE Certification

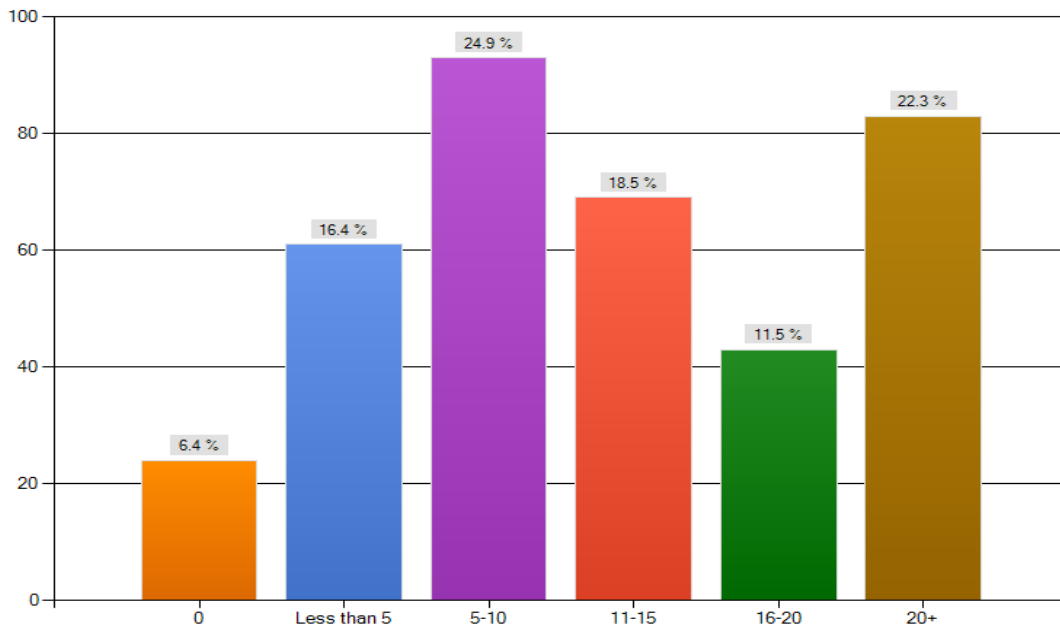
Ethnicity:

n = 372



Total years of professional experience in EE field

n = 373



Education Level	Response Percent	Response Count
College Degree	98.0%	337
Advanced Degree	57.6%	198
Other	13.4%	46

n = 366

General Academic Field (College & Advanced Degrees)	Frequency
Science	146
Science & Education	74
Education	45
Liberal Arts/Other	42
Parks & Recreation	30
Unspecified	6

## Appendix C: Survey invitation emails

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Subject: Non-formal EE certification survey from PCEE & PAEE

Dear Colleague:

In the next week, you will be receiving a brief electronic survey on certification for professional non-formal environmental educators. This is part of an ongoing study sponsored by the Pennsylvania Center for Environmental Education (PCEE) and the Pennsylvania Association of Environmental Educators (PAEE). As a valued member of the environmental education community, we would greatly appreciate your support in completing this survey so that we may include your input in our decision-making process.

EE certification programs are being developed around the country as part of NAAEE's initiative to further increase the quality of the EE field. Certification is a potentially significant way of improving standards, raising credibility, and offering rigorous and meaningful professional development to practitioners in the field. As Pennsylvania considers EE certification, we want this process to be as inclusive and collaborative as possible so that a rigorous and worthwhile program is designed with the benefit of all in mind.

We've identified three specific target groups to receive this initial survey. If you consider yourself one of the following, we hope you will take a moment to complete our survey when you receive it next week:

- Non-formal EE practitioners,
- Employers of non-formal practitioners, and
- University educators who prepare non-formal EE practitioners for their careers.

For completing this 5 minute survey, you will be entered into a drawing to receive a \$50 gift certificate from Randy's Books, "the best books on nature and the environment!" In addition, all respondents will be notified of the results of this survey once they have been collected and analyzed.

Further information on non-formal EE certification, along with preliminary results of this survey, will be presented at the upcoming 2011 PAEE conference at Antiochian Village from March 17-19 ([www.paee.net](http://www.paee.net)). You are warmly welcomed to attend the annual conference and participate in further discussion about EE certification in Pennsylvania.

Please keep an eye out for our survey to be emailed in the next week. If you have questions or comments, please contact Chris Tittle at [chris.tittle@pcee.org](mailto:chris.tittle@pcee.org), the AmeriCorps VISTA member coordinating this project on behalf of PCEE and PAEE. We appreciate your support and look forward to your response.

Sincerely,

Kathleen Paul, Director, PCEE



Ruth Roperti, President, PAEE



Subject: EE Certification Survey Invitation from PCEE and PAEE

Dear Colleague:

As part of a nation-wide effort to further improve the quality of non-formal environmental education, the Pennsylvania Center for Environmental Education (PCEE) and the Pennsylvania Association of Environmental Educators (PAEE) are conducting a study on the feasibility of developing a certification program for non-formal EE practitioners. The following survey is an integral part of this study, as the success and rigor of such a program depends on support and input from the entire community.

Certification, long used by many other industries to ensure the quality of its practitioners, is gaining increasing support within the national EE community. The aim of a certification program is to professionalize the EE field, broaden and strengthen an interconnected network of EE practitioners, and improve access to quality professional development opportunities for non-formal educators. As certification has the potential to significantly influence the field of EE, the input of practitioners, employers and others involved in the field is particularly important to understanding how a certification program will best meet the needs of the entire Pennsylvania EE community.

As a valued member of the Pennsylvania EE community, we are requesting your participation. Please take 5-10 minutes of your time to complete the following electronic survey by clicking the link below. We would greatly appreciate a prompt reply. As we are striving to include as much of the EE community as possible, please feel free to forward this link to interested colleagues and/or employees.

<https://www.surveymonkey.com/s/eecertificationsurvey>

If you have questions about whether you fall within one of our three target stakeholder groups, please click the above link for further details and clarifications.

For your participation, you will be entered into a random drawing to receive a \$50 gift certificate to [Randy's Books](#), "the best books on nature & the environment." Final results of the survey will also be made available to all respondents so that we continue to share information and resources within the EE community. Further information on non-formal EE certification will be presented at the 2011 PAEE conference ([www.paee.net](http://www.paee.net)). We would be delighted to have you attend the conference and continue participating in the collaborative process to develop a non-formal certification program.

If you have questions or comments, please feel free to contact Chris Tittle ([chris.tittle@pcee.org](mailto:chris.tittle@pcee.org)), project coordinator on behalf of PAEE and PCEE, at any time. We greatly appreciate your support and thank you in advance for your participation.

Sincerely,

Kathleen Paul, Director, PCEE & Ruth Roperti, President, PAEE



## Appendix D: "Formal Educator, Administrator or Other" survey page



### PA Non-formal EE Certification Survey

Thank you very much for your interest in our survey. At this time, we are just surveying members of the non-formal EE community, but we look forward to engaging the rest of the EE community in future initiatives to develop EE certification.

Please feel free to contact us with any questions or comments you may have on EE certification at [chris.tittle@pcee.org](mailto:chris.tittle@pcee.org).

\*If you think you were directed to this page by mistake, please click the 'Prev' button to return to the previous page.

**2. If you would like to leave us with more information, we will contact you about future developments as we continue working to create a rigorous and valuable non-formal EE certification program.**

Name:

Organization:

City/Town:

State:

Email Address:

Powered by **SurveyMonkey**  
Create your own [free online survey](#) now!



## Acknowledgments

This report represents a partnership between two environmental education organizations. As such, the staff and board members at both PAEE and PCEE deserve credit for supporting and contributing to this ongoing project.

Many others members of the EE community contributed to this study, as well. Special thanks to participants in the pilot version of the online survey, who provided meaningful feedback and helped create a more usable and relevant survey. These include:

- Mike Weilbacher - Director, Briar Bush Nature Center
- Tom Mastrilli, Ph.D. - Professor, West Chester University of Pennsylvania
- Ed McCrea – President, Environmental Education & Conservation Global
- Martha Moore - Youth Education Coordinator, Tyler Arboretum
- Gail Hill - Environmental Education Director, Peace Valley Nature Center
- Ellen Will - Program Director, Shaver’s Creek Environmental Center
- Jean Wallace – CEO, Green Woods Charter School
- Melissa Reynolds – Educational Programs Coordinator, PCEE

Alec M. Bodzin, Ph.D., Associate Professor at Lehigh University, offered valuable assistance in developing a comprehensive list of Pennsylvania’s institutes of higher education. Additional expert advice and review of the final report was provided by Ed McCrea, Mike Weilbacher, and Tom Mastrilli.

The team behind EETAP’s *Issues Associated with Nonformal EE Certification*, including Augusto Medina, Ph.D. and Lyn Fleming, Ph.D., were extremely helpful in allowing the adaptation and use of parts of their survey and report.

The NAAEE Affiliate Network contributed invaluable support and information about EE certification in other states, as did the NAAEE Certification Advisory Council.

Finally, U.S. EPA must be acknowledged for their continued support of EE capacity building efforts in Pennsylvania and around the country through grant assistance and partnerships with organizations such as NAAEE and EETAP.