

AN EVALUATION OF THE WISCONSIN ENVIRONMENTAL EDUCATION BOARD'S GRANTS PROGRAM



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About the Wisconsin Environmental Education Board

Creation

The Wisconsin Environmental Education Board (WEEB) was created by 1989 Wisconsin Act 299. Originally, according to Act 299, WEEB membership included:

- 1) The state superintendent of public instruction (or designee)
- 2) The secretary of natural resources (or designee)
- 3) The president of the University of Wisconsin system (or designee)
- 4) The director of the vocational, technical and adult education system (or designee)
- 5) One majority and one minority party senator and one majority party and one minority party representative to the assembly
- 6) One member, appointed for a 3-year term by the state superintendent of public instruction, to represent each of the following:
 - a) Environmental Educators
 - b) Conservation and environmental organizations
 - c) Business and industry
 - d) Agriculture
 - e) Labor
 - f) Faculty of public and private institutions of higher education

1991 Act 39 amended #6a to read, Elementary and secondary environmental educators and added #6g which reads, Nature centers, zoos, museums and other non-formal environmental educational organizations. 1997 Act 27 amended #1 to read, The state superintendent of public instruction. There are currently 15 board members.

Originally attached to the Department of Instruction, WEEB was transferred to the University of Wisconsin System in 1997 (Wisconsin Act 27). The University of Wisconsin at Stevens Point (UWSP), more specifically the Wisconsin Center for Environmental Education, currently houses WEEB. UWSP began administering the program beginning with the 1997-98 grant cycle.

Mission and Goals

WEEB's mission is to "provide leadership in the development of learning opportunities that empower Wisconsin citizens with the knowledge and skills needed to make wise environmental decisions and take responsible actions in their personal lives, workplaces and communities" (WEEB, 1998).

WEEB identifies four central purposes which address its mission. They are:

- 1.) to provide positive leadership, advocacy and policy making in the comprehensive arena of environmental literacy and education;
- 2.) to support the development of local leaders and their fellow citizens to become environmentally aware and concerned enough to act on environmental issues;
- 3.) to advocate the development and implementation of interdisciplinary environmentally-based curricula at all levels of the educational system; and
- 4.) to support the continuing professional development of staff working at all levels of formal or informal education to enable them to accomplish needed environmental education goals (WEEB, 1998).

WEEB's grants program specifically addresses numbers two through four of these central purposes. The survey instrument used in this study is based upon these three priorities. WEEB addresses the first central purpose through other activities.

The WEEB Grants Program

According to 1989 Wisconsin Act 299, the board "shall award grants to corporations and public agencies for the development, dissemination and presentation of environmental education programs". While WEEB sets yearly priorities for grant proposals, all projects must show how they will help the target audience achieve one or more of the five subgoals of EE. Those five subgoals are perceptual awareness, knowledge, attitudes and environmental ethic,

citizen action skills, and citizen action experiences (Engleson and Yockers, 1994).

According to the WEEB Grants Program Application (1999), those eligible to receive grants include corporations (nonstock, nonprofit), public agencies (counties, cities, villages, towns, public inland lake protection and rehabilitation districts, school districts, and cooperative educational service agencies), state agencies, public colleges and universities, and private nonprofit colleges and universities (providing that the school is not pervasively sectarian).

The statute allocates \$200,000 a year to the grants program (1989 Wisconsin Act 299). In 1996 WEEB was given an additional \$65,000 from the settlement of a suit with Wisconsin oil companies (G. Carlton, personal communication, September, 1998). This money was earmarked for energy grants and was exhausted during the 1997-98 and 1998-99 grant cycles (G. Carlton, personal communication, September, 1998). In 1997 WEEB also began to receive a percentage (5% assessment) of the monies generated from state environmental levies and fines (G. Carlton, personal communication, September, 1998). Although

this is a continuing source of revenue, the amount WEEB receives varies from year to year. Finally, in 1997, WEEB began to receive money generated by the forestry mill tax (Wisconsin Act 237). This money is to be used for forestry and forestry education grants only. The amount of money available in this account is approximately \$200,000 a year (G. Carlton, personal communication, September, 1998). Forestry grants were first awarded during the 1998-99 grant cycle.

WEEB began awarding grants in 1990 and has administered 260 grants as of the end of the 1998-1999 grants cycle (WEEB Master Grants List, 1998). The program awards grants in two categories, small and large grants. Small grants are awarded in amounts up to \$5,000 and large grants are for amounts between \$5,001 - \$20,000.

Between 1990 and 1998, WEEB administered over two million dollars in grants (WEEB Master Grants List, 1998). Due to fluctuations in funding over the past decade, the total amount awarded each year varies. Table 1 summarizes the yearly amounts awarded since WEEB's inception in 1990.

Table 1. Summary of Amounts Awarded

Grant Year	Amount Awarded	Small Grant ≤\$5000	Large Grant >\$5000
1990	\$198,325	8	19
1991	\$199,598	9	19
1992	\$206,520	9	20
1993	\$200,000	4	17
1994	\$200,387	25	8
1995	\$251,824	17	14
1996	\$203,523	8	12
1997	\$273,619	11	15
1998	\$413,889	21	24
TOTAL	\$2,147,685	112	148

WEEB Grants Program Evaluation

Introduction

Evaluation must be seen as “providing information for which there is need and on which there is a possibility and a willingness to act” (Harlen, 1980). Since its establishment in 1990, the Wisconsin Environmental Education Board has not conducted any formal assessment of its grants program. Without an evaluation of the grants program, WEEB can neither speak definitively of its successes nor defend itself from critics. In 1997, Lt. Governor McCallum stated, “Without clearly established accountability measures, it will be difficult for WEEB and taxpayers to know if the board’s initiatives have been successful in maintaining ‘both the quality of life and the quality of the environment that the citizens of Wisconsin enjoy’” (p. 50).

This report summarizes a study that identifies and describes accomplishments of the grants program and identifies areas of strength and weakness. This report also makes recommendations to WEEB so they may in turn make the necessary changes to improve the effectiveness of the grants program.

Evaluation Design

Instrument Development

The instrument used in this study was developed after a meeting with WEEB in October 1998 and the Wisconsin Environmental Education Board’s Grants Evaluation Advisory Committee (WGEAC) in December 1998. WGEAC was formed to allow input from different members of the community. WGEAC members represented teachers, professional organizations, environmental education centers, businesses, agriculture, universities, public service organizations and state agencies.

WEEB was presented with potential categories to include in the evaluation and they in turn suggested other areas to include. The October WEEB meeting resulted in a total of eight evaluation categories. WGEAC helped to

focus the evaluation by ranking those eight categories. Four categories remained for inclusion in this study. Those categories were:

1. Descriptive Statistics (including grade level, age level, target audience, geographic location, CESA district, community size, number of people served, number of people affected, size of grant, type of institution funded, public vs. private, type of grant and type of issue).
2. Determining the extent that the WEEB grants program is supporting the development of local leaders and their fellow citizens to become environmentally active.
3. Determining the extent that the WEEB grants program is resulting in the development and implementation of interdisciplinary, environmentally-based curricula at all levels of the educational system.
4. Determining the extent that the WEEB grants program is supporting the continuing professional development of staff working at all levels of formal and non-formal education to enable them to accomplish needed environmental goals.

After a review of the literature did not uncover an appropriate model, an original research instrument was developed.

Survey Design

The survey instrument was based on three of the four categories WGEAC felt were important in determining the grants program’s effectiveness. The descriptive statistics were not gathered through the survey instrument, therefore, the instrument reflected the three other categories outlined under “Instrument Development”. These categories are identical to three of WEEB’s central purposes.

The survey instrument was divided into six parts. The first part asked grant recipients to

rate the extent to which they assigned each central purpose a priority. Parts two and three asked specific questions relating to the development of local leaders and local citizens respectively. Part four dealt with the development and implementation of curricula and part five dealt with professional development. Part six included two questions that sought additional information not addressed in parts one through five. One question asked if additional grants or funding was procured as a result of the WEEB grant or if there had been any "spin-off" projects. The final question asked for additional information about their project, the recipients' overall impression of the Grants Program and any concerns regarding the grant application, selection and distribution process.

The quantitative data were collected using Likert-type items. The response scale included, "not at all", "to a small extent", "to a moderate extent", "to a considerable extent", and "to a great extent".

The qualitative data in part six were collected through the use of open-ended questions. Grant recipients were asked to record all of their responses directly on the questionnaire.

Survey Administration

Data Collection

The data for this study include demographic data describing the population of past WEEB grant recipients as well as grant recipients' responses to the survey instrument.

The data identifying past WEEB grant recipients were obtained directly from the WEEB grants program database. This database was under the domain of Ginny Carlton, the administrative specialist to WEEB. Verbal permission was obtained from Ms. Carlton, and share file was created to facilitate access for the researcher. Demographic data also came from this database.

The response data from past grant recipients were collected using a questionnaire mailed in April 1999. Questionnaires, along with instructions for completion, were mailed to the

listed project director at the address found on the WEEB grants database. Questionnaires were mailed to grant recipients from the 1990-1991 grant cycle through the 1997-1998 grant cycle. Recipients were given three weeks to complete and return their questionnaires.

Reminder postcards were mailed in early May to all recipients who had not yet returned their questionnaires. Beginning June 1st, follow-up phone calls were also made to those recipients who had not returned their questionnaires. Many of the phone calls led to dead ends as either the number had been disconnected or the project director was no longer with the organization. Oftentimes there was no longer anyone at the organization familiar with the project. While many project directors were personally reminded to return their questionnaires the vast majority of phone calls ended with messages being left.

Table 2 summarizes the number of completed questionnaires returned from each grant cycle. A total of 98 questionnaires were completed and returned. 117 questionnaires were not returned, with only 27 of those having an explanation. Several reasons were cited for not completing the questionnaire. They included death of the project director, the project director retiring or taking another job, having no one available who was familiar with the project and the project director feeling the questionnaire was not relevant to their grant or that the research instrument was too long and tedious.

Table 2. Summary of response rates of mailed questionnaires

Grant Cycle	Number grants awarded	Number completed surveys	Return rate
1990-1991	27	12	44.44%
1991-1992	28	12	42.86%
1992-1993	29	9	31.03%
1993-1994	21	11	52.38%
1994-1995	34	16	47.06%
1995-1996	30	15	50%
1996-1997	20	7	35%
1997-1998	26	16	61.54%
TOTALS	215	98	45.58%

Results

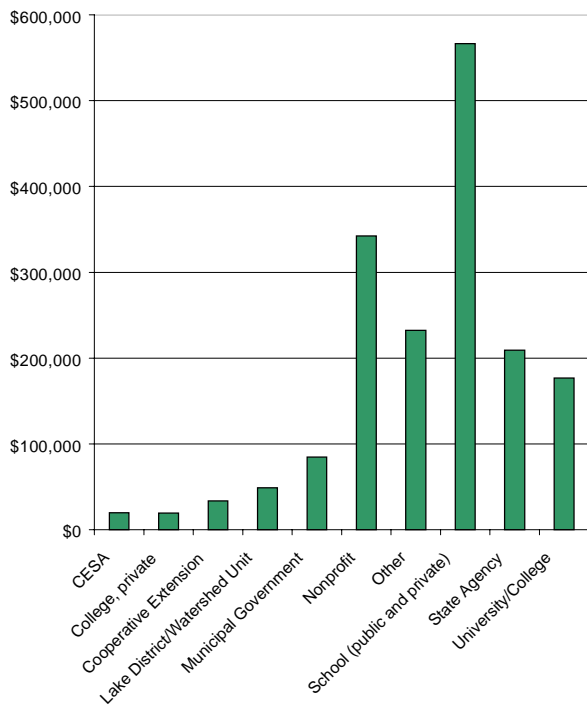
The results from this evaluation are presented in five parts. The first set of data deals with demographic statistics pertaining to grants and the grant recipient population. Parts two through five contain quantitative and qualitative data concerning the development of local leaders and citizens, the development and implementation of curricula, the support of professional development programs and additional comments, respectively. Appendix A contains a summary of the responses for all the quantitative data.

Part One: Demographic Data

Data for the demographic statistics were gathered from the WEEB Grants database. Only data from the 1990-1991 through 1997-1998 grant cycle is included in this report.

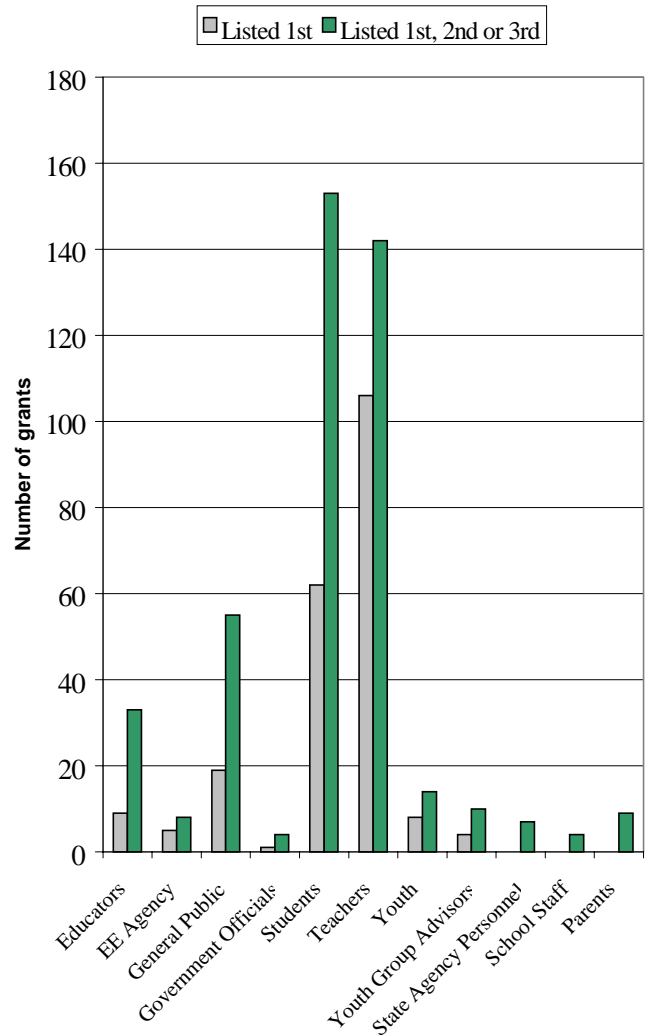
Type Agency: The types of agencies receiving funds were divided into ten categories. Schools led the field with over \$500,000 in grants. Non-profit organizations have received the most money after schools, with almost \$350,000 in grants. The “other” category and state agencies came in a close third and fourth, respectively. CESA districts and private colleges have received the least amount of WEEB funds (Figure 1).

Figure 1. Type of Agency Receiving Funds



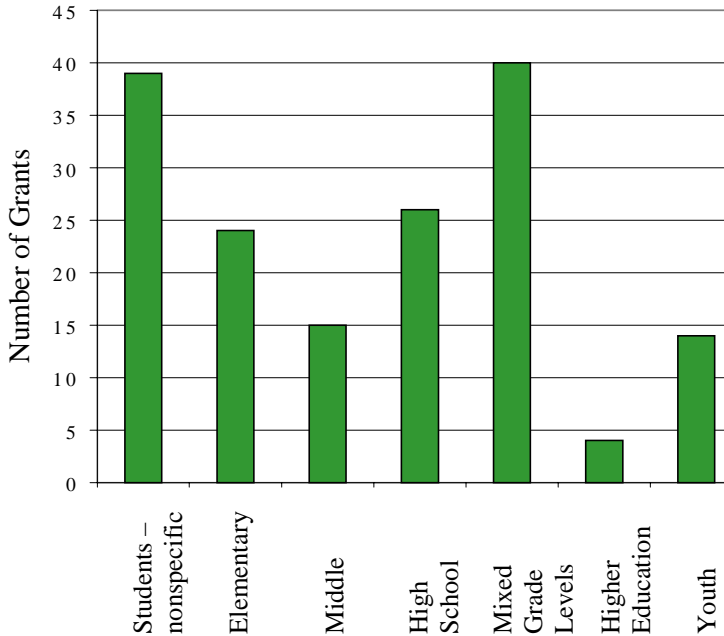
Target Population: Database entries for target audience often contained more than one response (Figure 2). The light colored bars represent the target audience listed first in the database. The darker bars include all of the target audiences identified by the project director. Students and teachers are the two target audiences identified most often. This comes as little surprise as two of WEEB’s central purposes target students and teachers almost exclusively.

Figure 2. Population Targeted by Grant



Grade Level: By looking at the sub-populations of the student category, we can see that students of higher education are targeted less often than those in the K-12 system (Figure 3). This may be due to the fact that more K-12 teachers may apply for grants to develop curricula or institute professional development programs than do professionals in the field of higher education.

Figure 3. Grade Levels Receiving Grants



CESA District: By looking at Figure 4, which outlines the amount of money awarded to each Cooperative Educational Service Agency (CESA) district, and by referring to the map of Wisconsin in Figure 5, it is easy to see where the money is being awarded throughout the state. It's clear that CESA districts one, two and five have received the most funding. This is most likely due to the fact that they are high population density areas or areas with a high concentration of environmental education related organizations. CESA district one includes Milwaukee, district two includes Madison, and district five includes Portage county, home to the University of Wisconsin at

Stevens Point, the Wisconsin Center for Environmental Education, the Wisconsin Association for Environmental Education and other environmentally related programs.

Figure 4. CESA District Receiving Funds

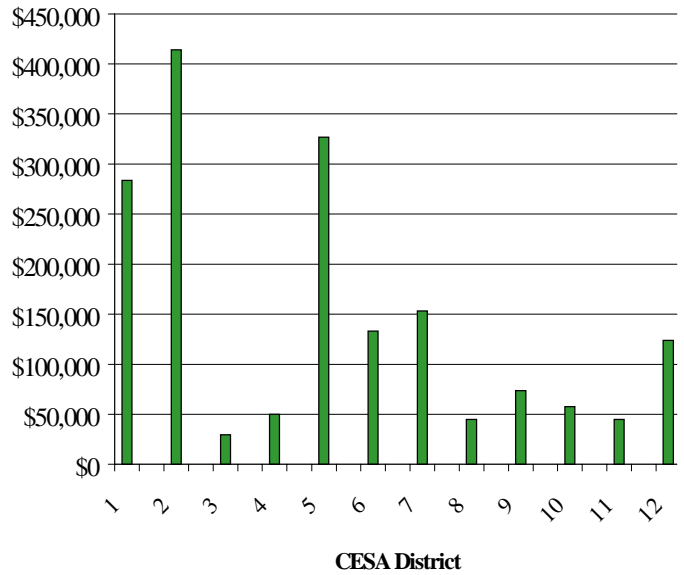
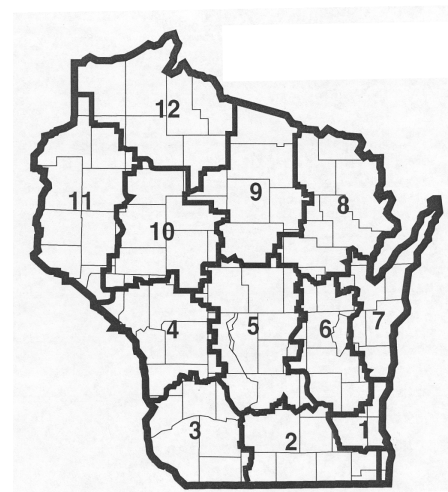


Figure 5. CESA Map



Part Two: Development of Local Leaders and Citizens

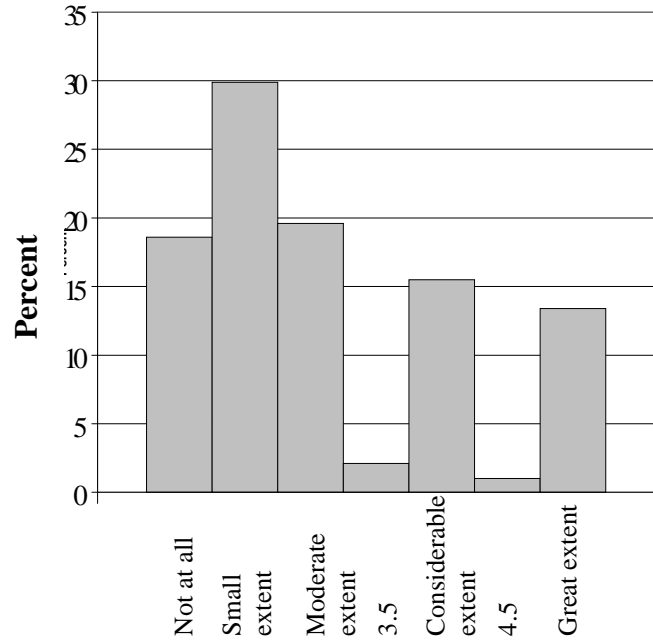
This section of the evaluation includes data concerning the extent to which the WEEB grants program is supporting the development of local leaders and their fellow citizens to become environmentally active.

The following symbols were used to report the results of the quantitative data: N = total number of respondents for an item, n = number of respondents after data have been filtered, M = mean response, Mdn = median and SD = Standard Deviation. The values for the response options of the Likert items are 1 for not at all, 2 for to a small extent, 3 for to a moderate extent, 4 for to a considerable extent and 5 for to a great extent.

Question One: To what extent is development of current local leaders or citizens to become active environmental problem-solvers a priority of your grant?

It is clear by looking at Figure 6 that more than half agreed to at least a small extent that the development of local leaders and citizens was a priority of their grant.

Figure 6. The extent to which the development of local leaders or citizens to become active environmental problem-solvers was a priority of the grant. (Item 1, Part I)
N = 97 (M = 2.778, Mdn = 3, mode = 2.0, SD = 1.315)



Development of Local Leaders

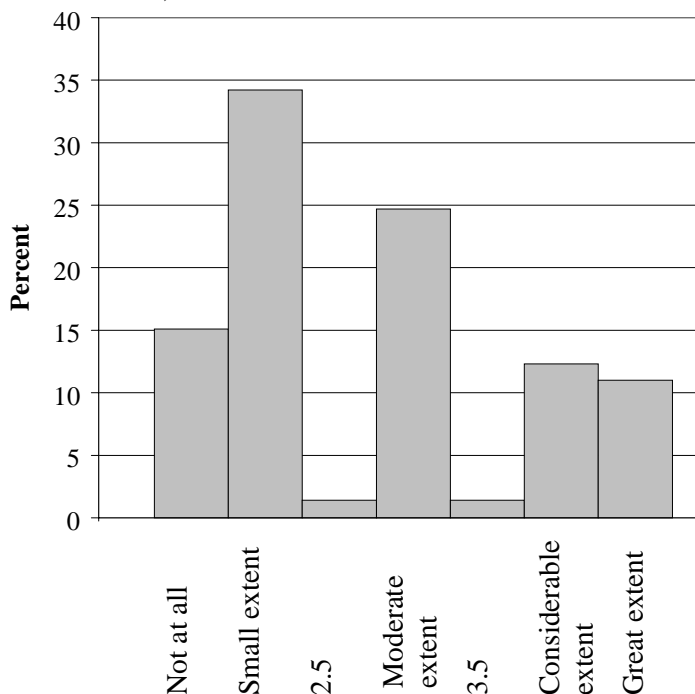
(Editor's note: Only the responses of those who identified the development of current local leaders as a priority of their grant were included in question five.)

Question Five: To what extent did your grant support the development of current local leaders to become active environmental problem-solvers?

Slightly less than fifty-percent of respondents agreed at least to a moderate extent that their grant supported the development of local leaders. The average response was 2.7 (Figure 7). When asked to identify the local leaders targeted by their grant, most respondents identified students and teachers. However, administrators, politicians, parents, staff, youth leaders, non-formal educators, local community members and library personnel were also mentioned.

Figure 7. The extent to which the grant supported the development of current local leaders to become active environmental problem-solvers. (Item 5, Part II)

n = 73 (M = 2.699, Mdn = 2.5, mode = 2, SD = 1.201)

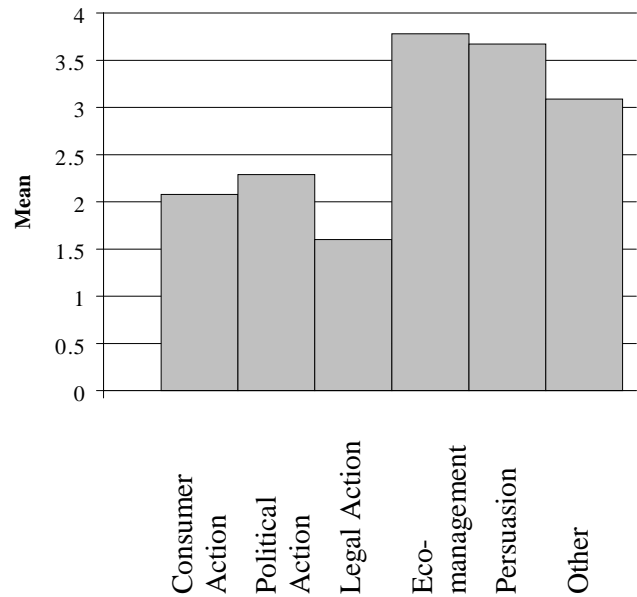


(Editor's note: Only the responses of those that identified the development of current local leaders as a priority and agreed to at least a small extent that their grant supported the development of current local leaders were included in questions six and eight.)

Question Six: To what extent were the following action strategies addressed in your project's development of current local leaders?

While the n size for most categories was 60 or 61, the "other" category had an n size of 11. Eco-management, which is any physical action by an individual or group that improves or maintains some part of the environment, had the highest average rating with a value of 3.78 (Figure 8). Persuasion was a close second with an average response of 3.67. Legal Action was the action strategy with the lowest average (1.6).

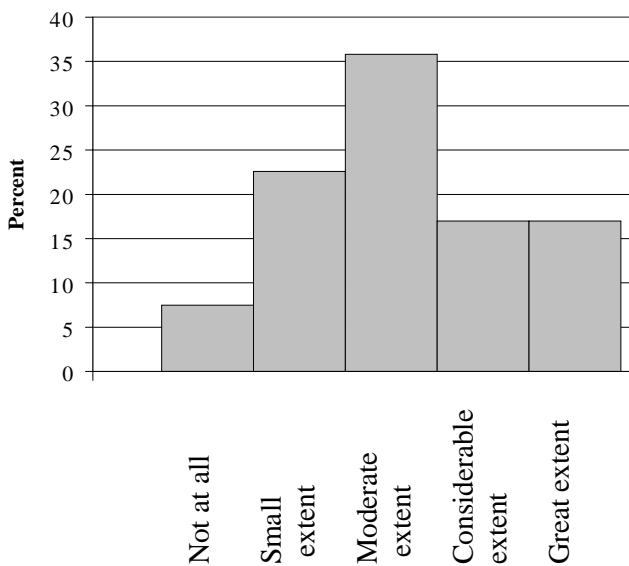
Figure 8. The action strategies addressed in the projects' development of current local leaders. (Item 6, Part II)



Question Eight: To what extent was your project successful in the development of current local leaders to become active environmental problem-solvers?

Respondents were also asked to rate how successful their projects were in the development of current local leaders. Figure 9 shows that that over sixty percent responded with a three or higher. Only seven and a half percent of respondents ranked the extent of their project's success as "not at all".

Figure 9. The extent the project was successful in the development of current local leaders to become active environmental problem-solvers. (Item 8, Part II)
 n = 53 (M = 3.132, Mdn = 3, mode = 3, SD = 1.177)



Question Eight: Please provide an example of its success and describe how it was measured.

Many respondents also provided qualitative data to support their claims of success. Some of the comments made by respondents follow:

- *Nearly a decade later the amount of burn barrels in County has greatly decreased. Open burning is down.*
- *Students became active in Environmental Club and in activities around school*
- *89 troops sent in a project summary and evaluation. Of these, 1,157 girls were involved in planning and over 3,000 people participated in programs and events, not including people of 30 schools, 2 churches, 7 parks, 3 local businesses, a nursing home and post office where the projects took place. (Hundreds of other troops also did projects, but did not submit reports)*
- *We have five school prairies in a district that only had one before the project started.*
- *Students continued to be involved in Prairie Restoration in a variety of ways including seed harvesting, burning prairies, and eliminating invasive plants.*
- *Teachers extended their lessons to students' families. One school conducted a river cleanup and stenciled storm drains. Two schools tested water from students' homes. One sent home a survey on household hazardous materials.*
- *We conducted pre and post assessment of student attitudes toward the environment in general, and this restoration in particular the survey administered indicated considerable change in attitude toward the environment and a strong desire to contribute toward its growth.*

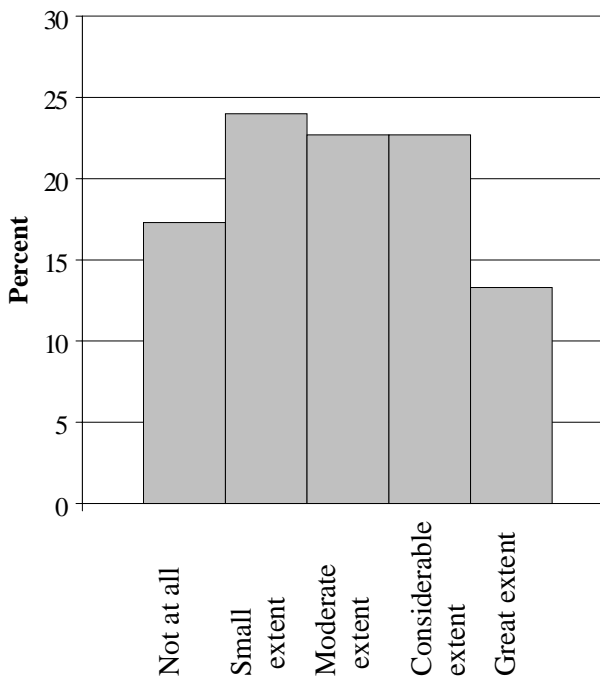
Development of Citizens

(Editor's note: Only the responses of those who identified the development of local citizens as a priority of their grant were included in question nine.)

Question Nine: To what extent did your grant support the development of local citizens to become active environmental problem-solvers?

Over fifty-percent of respondents agreed at least to a moderate extent that their grant supported the development of local leaders. The average response was 2.9 (Figure 10). When asked to identify the local citizens targeted by their grant, most respondents identified students and local community members. However, teachers, adults, community organizations, parents, youth leaders, and non-formal educators were also mentioned.

Figure 10. The extent to which the grant supported the development of local citizens to become active environmental problem-solvers. (Item 9, Part III)
 n = 75 (M = 2.907, Mdn = 3, mode = 2, SD = 1.307)

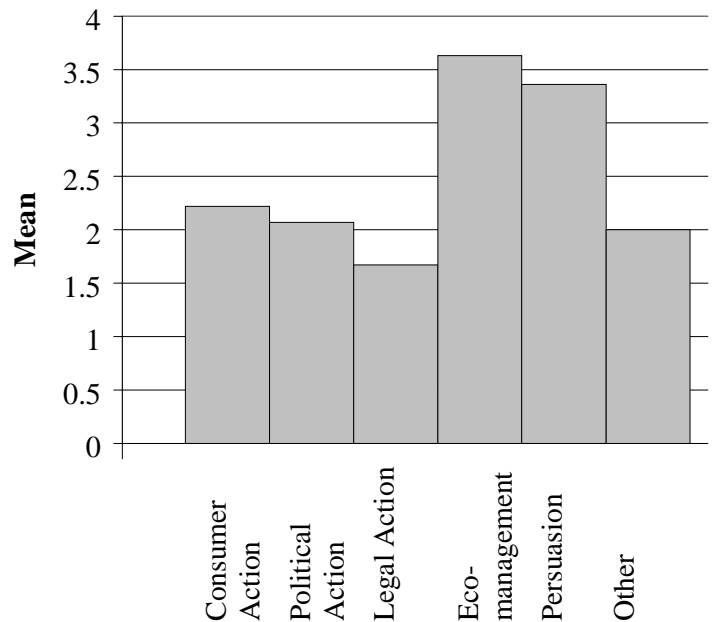


(Editor's note: Only the responses of those that identified the development of local citizens as a priority and agreed to at least a small extent that their grant supported the development of local citizens were included in questions ten and twelve.)

Question Ten: To what extent were the following action strategies addressed in your project's development of local citizens?

Figure 11 shows that each action strategy category had an n size of more than fifty with the exception of the "other" category which had an n size of only 10. Similar to responses concerning projects' development of current local leaders, eco-management and persuasion were the two leading action strategies cited in the development of local citizens. Eco-management had a mean value of 3.6 and persuasion a mean value of 3.4. Legal action is again the strategy addressed least often, consistent with grant recipients' responses to the development of current local leaders.

Figure 11. The action strategies addressed in the project's development of local citizens. (Item 10, Part II)

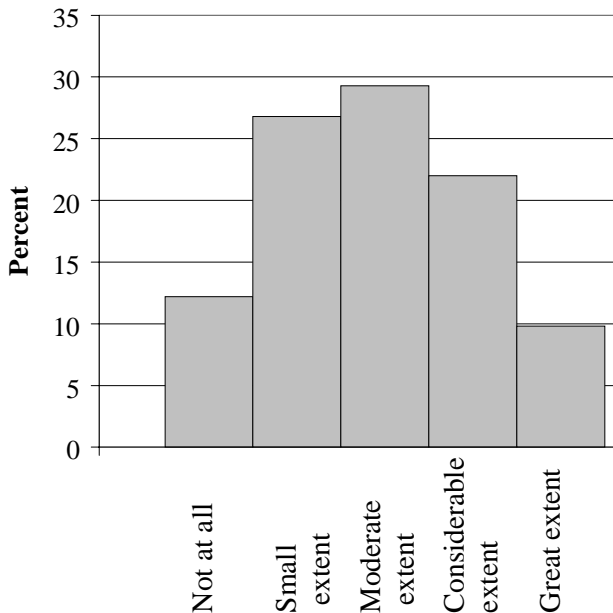


Question Twelve: To what extent was your project successful in the development of local citizens to become active environmental problem-solvers?

Respondents were also asked to rate how successful their projects were in the development of local citizens. Figure 12 shows that over eighty-five percent agreed to at least a small extent that their project was successful. Over fifty percent agreed to at least a moderate extent.

Figure 12. The extent the project was successful in the development of local citizens to become active environmental problem-solvers. (Item 12, Part III)

n = 41 (M = 2.902, Mdn = 3, mode = 3, SD = 1.179)



Question Twelve: Please provide an example of its success and describe how it was measured.

Many respondents also provided qualitative data to support their claims of success. Some of the comments made by respondents are presented below:

- *Our school (students and teaching staff) extended what the grant had done to an Earth Day project. Each grade chose a part of the community of Evansville to clean up and beautify. This was made possible by the awareness created, broadened and enlightened by the grant before. The idea was for things like this to happen, become more involved in "community"*
- *parents of our children (citizens) partook in the project particularly in physically helping restore habitat.*
- *students have been instrumental in developing our prairie restoration area. They have worked on site preparation, seed collection, seeding, monitoring and all other aspects of the restoration. They have performed original research and presented their results. As a result, our area has expanded from 900 square feet to over one acre. We have developed mesic prairie and are now adding a dry mesic area, wetland, and a woodland. The restoration area and its plant, animal and bacterial species have become a major part of the biology curriculum.*
- *Reports have indicated more students selecting elective courses or special study projects in EE. (telephone survey)*
- *Student awareness was achieved through hands on activities that demonstrated environmental knowledge. Increase of recycling and student projects that demonstrate environmental themes.*

Part Three: Development and Implementation of Curricula

This section of the evaluation includes questions concerning the development and implementation of interdisciplinary, environmentally-based curricula at all levels of the educational system.

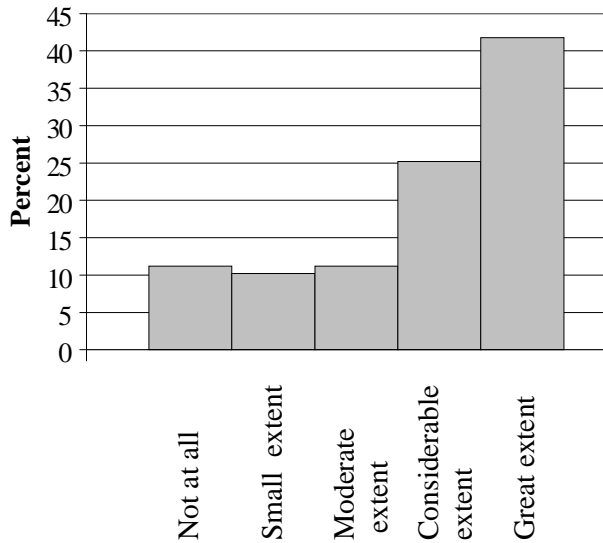
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Question Two: To what extent was the development and implementation of interdisciplinary, environmentally-based curricula a priority of your grant?

As shown in Figure 13, eighty-nine respondents answered that the development and implementation of interdisciplinary, environmentally-based curricula was, at least to a small extent, a priority of their grant. Forty-one percent answered that to a great extent this was a priority of the grant.

Figure 13. The extent to which the development and implementation of interdisciplinary, environmentally-based curricula was a priority of the grant? (Item 2, Part I)

N = 98 (M = 3.765, Mdn = 4, mode = 5, SD = 1.383)

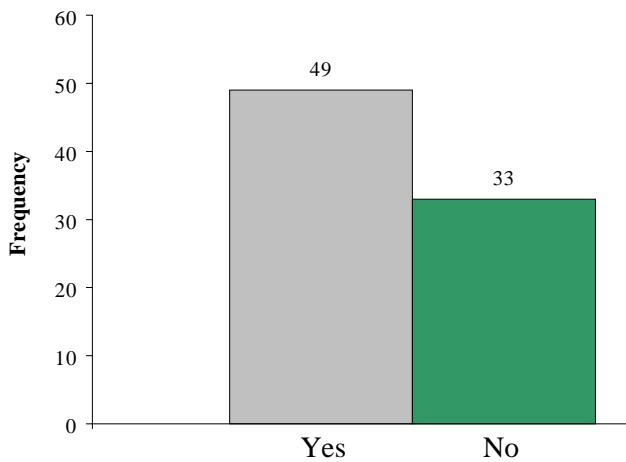


(Editor's note: Only the responses of those who identified the development and implementation of curricula as a priority of their grant were included in questions fourteen through twenty-six)

Question Fourteen: Were new curricula developed as a result of your grant?

Of the eighty-seven who responded that the development and implementation of curriculum was a priority of their grant, eighty-two then answered the question asking if the development of new curriculum was a result of their grant (Figure 14). Of these eighty-two respondents, forty-nine (almost sixty percent) reported that new curricula were developed as a result of their grant.

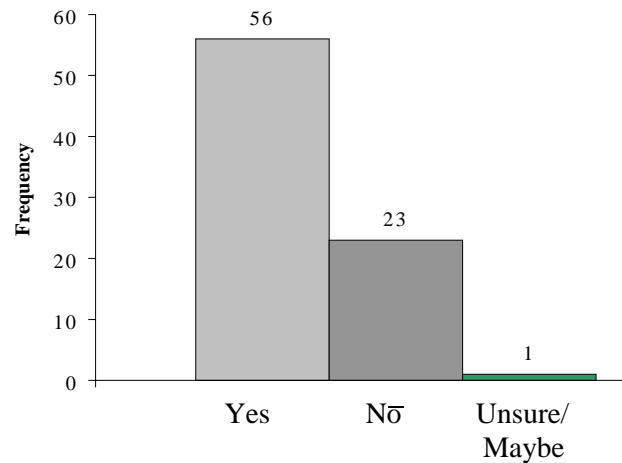
Figure 14. Number of new curricula developed as a result of the grant. (Item 14, Part IV)
n = 82



Question Fifteen: Were existing curricula adopted/adapted as a result of your grant?

Seventy percent of respondents said that as a result of their grant, existing curricula were adopted or adapted (Figure 15).

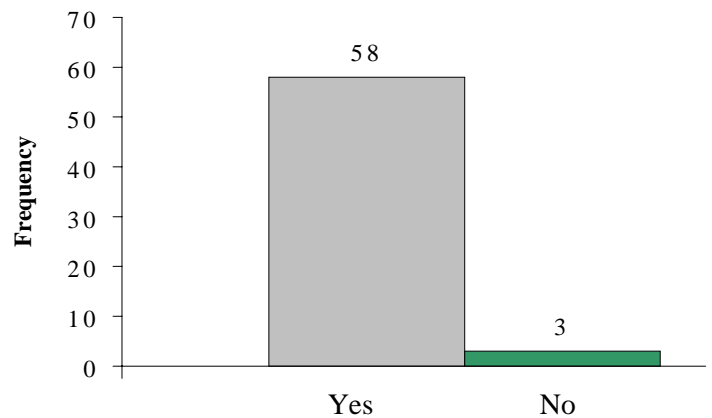
Figure 15. Number of respondents who adopted/adapted existing curricula as a result of the grant. (Item 15, Part IV)
n = 80



Question Eighteen: Is the curriculum still in use?

When asked if the curriculum was still in use, fifty-eight out of sixty respondents answered that it was (Figure 16). Only three acknowledged that it was no longer being used.

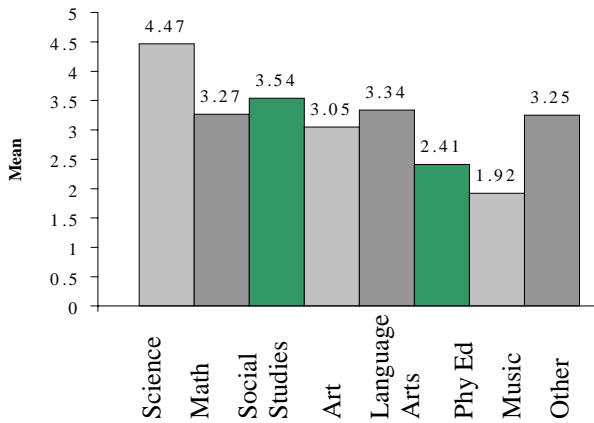
Figure 16. Number of curricula still in use. (Item 18, Part IV)
n = 61



Question Twenty-one: To what extent did the curriculum integrate the following subject areas?

Science had the highest average with 4.47 (Figure 17). Physical education and music were the only two subjects with an average response less than three.

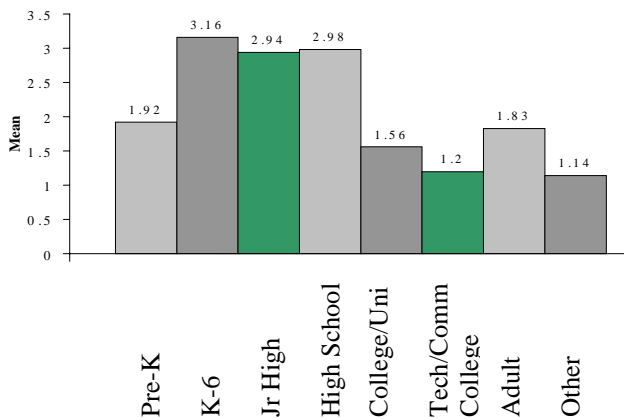
Figure 17. The extent to which the curriculum integrated different subject areas. (Item 21, Part IV)



Question Twenty-three: To what extent did the curriculum focus on the following grade levels?

When asked to identify the grade levels the curriculum focused on, K-6 had the highest averages (Figure 18). Five categories had an average of less than two. Those were pre-k, college/university, tech/community college, adult and other.

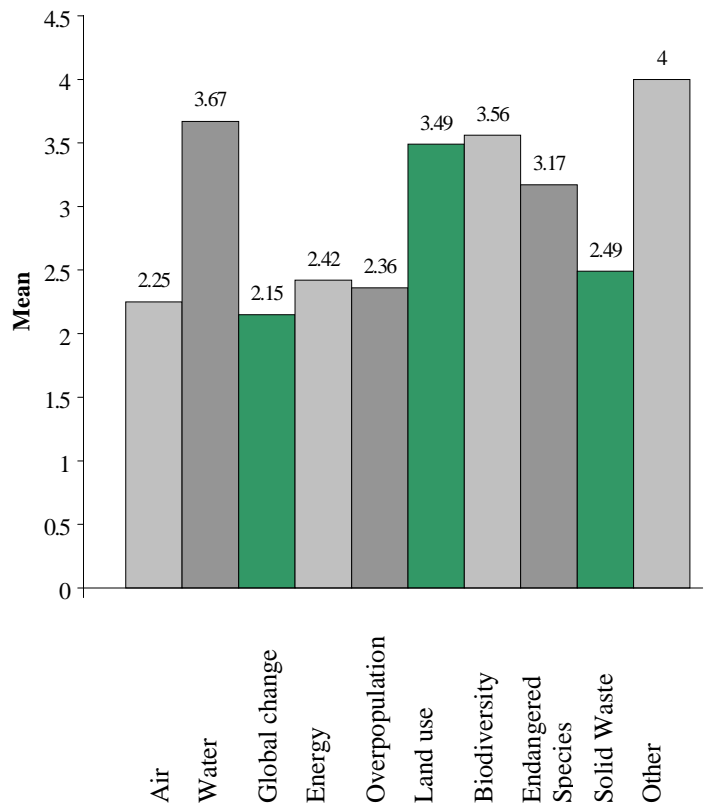
Figure 18. Grade levels on which the curriculum focused. (Item 23, Part IV)



Question Twenty-four: To what extent did the curriculum focus on the following content areas?

Question twenty-four asked respondents to identify the content area on which the curriculum focused (Figure 19). The n size for most categories was in the fifties. The “other” category however, with an n size of only 24, had the highest average response. Water and biodiversity were the subject areas with the next highest averages. Global change issues averaged the lowest response.

Figure 19. Content Areas on which the Curriculum Focused. (Item 24, Part IV)



Question Twenty-five: Were any standards used to guide the development of the curriculum? (e.g. EE Materials: Guidelines for Excellence- NAAEE, State or National Subject area standards – i.e. science, social studies, etc.)

As can be seen in Table 3, the use of standards has increased over the years.

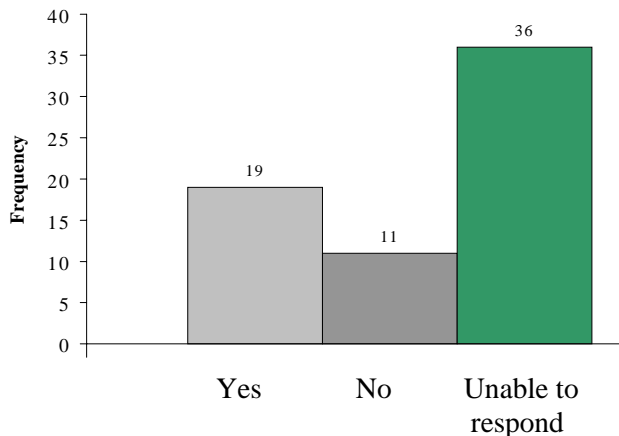
Table 3. Frequency of use of standards

Year	# of developed &/or adopted curriculum	# of times standards were used	% of time standards were used
1990	10	1	10%
1991	8	2	25%
1992	6	2	33%
1993	10	2	20%
1994	10	4	40%
1995	10	3	30%
1996	5	3	60%
1997	13	8	62%

Question Twenty-six: Has the curriculum been adopted and used by others?

When asked if their curriculum had been adopted and used by others, almost thirty percent of respondents answered yes. However, over fifty percent were not able to respond (Figure 20).

Figure 20. Curriculum adopted and used by others. (Item 26, Part IV)
 n = 66 (M = 2.26, Mdn = 3, mode = 3, SD = .88)



Question Twenty-six: If yes, please specify by whom and how it is being used.

The majority of respondents indicated that other teachers, schools, or school districts in Wisconsin were using the curricula. There were a few responses which indicated the curriculum was being used internationally. Several examples are provided below:

- *Again, these activities which were "Wisconsinized" to be more specific to state water issues were intended to be supplemental to an educator's curriculum. Teachers and other educators have been utilizing these activities in WET workshops and applying those experiences in their classrooms or other educational settings.*
- *parts of the curriculum have been presented at the local, regional and national levels*
- *Shared with other teachers in our cluster group of schools.*
- *Over 10,000 copies out in WI, + 15 states and 3 Canadian Provinces*
- *Has been used at an environmental camp in far Eastern Russia, Wonewoc School district. I recall sending it to a couple of other places back in '92 - I don't recall who I sent it to. My guess is that anyone who has received it pulls activities to use that best suit their needs.*
- *So far, by about 700 teachers in roughly 500 schools. Expect this to expand in state, US, and possibly some international.*
- *We are the only nature center using it, but it has expanded from one to three participating schools.*
- *A similar program has been developed in Minnesota Universities.*

Part Four: Professional Development

This section of the evaluation includes data concerning the extent to which the WEEB grants program is supporting the continuing professional development of staff working at all levels of formal and non-formal education to enable them to accomplish needed environmental goals.

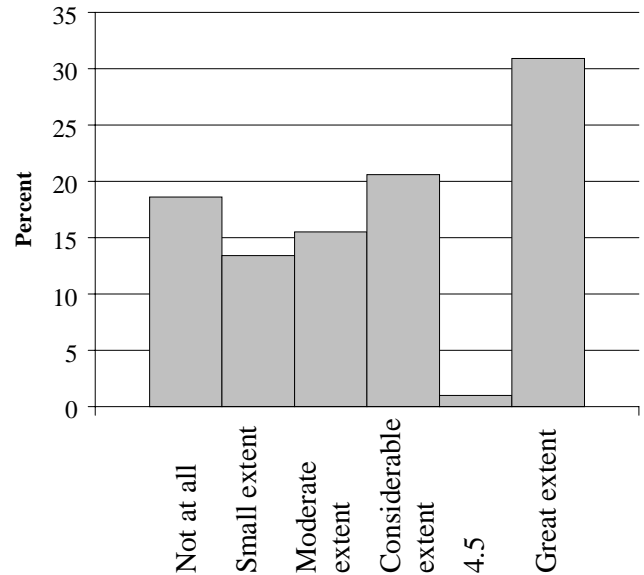
The following symbols were used to report the results of the quantitative data: N = total number of respondents for an item, n = number of respondents after data have been filtered, M = mean response, Mdn = median and SD = Standard Deviation. The values for the response options of the Likert items are 1 for not at all, 2 for to a small extent, 3 for to a moderate extent, 4 for to a considerable extent and 5 for to a great extent.

Question Three: To what extent was the support of continuing professional development of staff working at all levels of formal education, to enable them to accomplish needed environmental goals, a priority of your grant?

Over eighty percent responded that professional development for formal educators was a priority, with a mean value of 3.34 (Figure 21).

Figure 21. The extent to which the support of continuing, professional development of staff working at any level of formal education, to enable staff to accomplish environmental education goals was a priority of the grant. (Items 3, Part I)

n = 97 (M = 3.34, Mdn = 4, mode = 5, SD = 1.5)

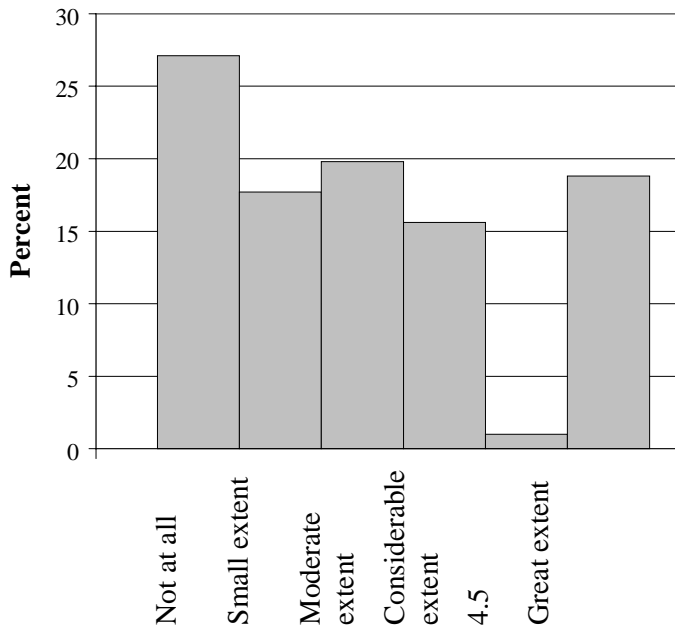


Question Four: To what extent was the support of continuing professional development of staff working at all levels of non-formal education, to enable them to accomplish needed environmental goals, a priority of your grant?

In contrast to the responses concerning the professional development of formal educators, only seventy-three percent of respondents said that the support of non-formal educators was a priority of their grant (Figure 22).

Figure 22. The extent to which the support of continuing, professional development of staff working at any level of non-formal education, to enable staff to accomplish environmental education goals was a priority of the grant. (Items 4, Part I)

n = 96 (M = 2.83, Mdn = 3, mode = 1, SD = 1.48)



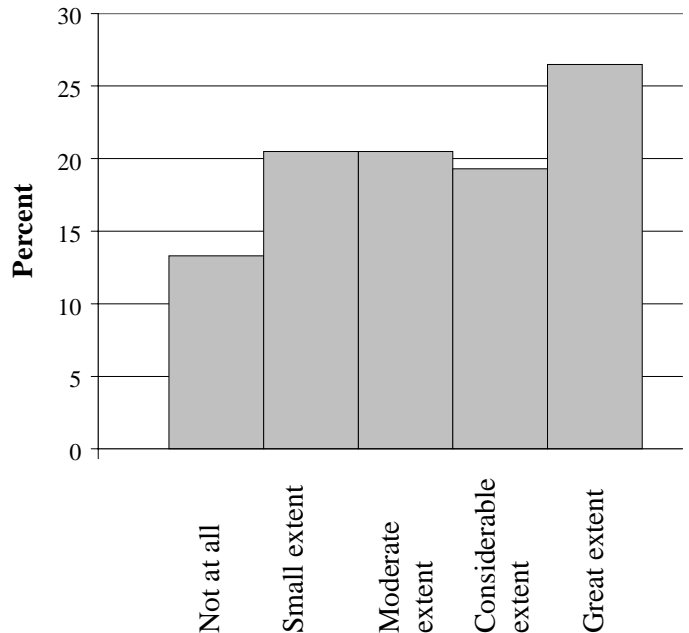
(Editor's note: Only the responses of those that agreed to at least a small extent that the support of continuing professional development of staff working at any level of formal or non-formal education was a priority of their grant were included in question twenty-seven.)

Question Twenty-seven: To what extent did your grant support professional development?

Of those respondents that identified professional development as a priority for either formal or non-formal educators, over eighty-five percent said their grant supported professional development to at least a small extent. The average response to this question was 3.3 (Figure 23).

Figure 23. Extent the grant supported professional development. (Item 27, Part V)

n = 83 (M = 3.253, Mdn = 3, mode = 5, SD = 1.395)

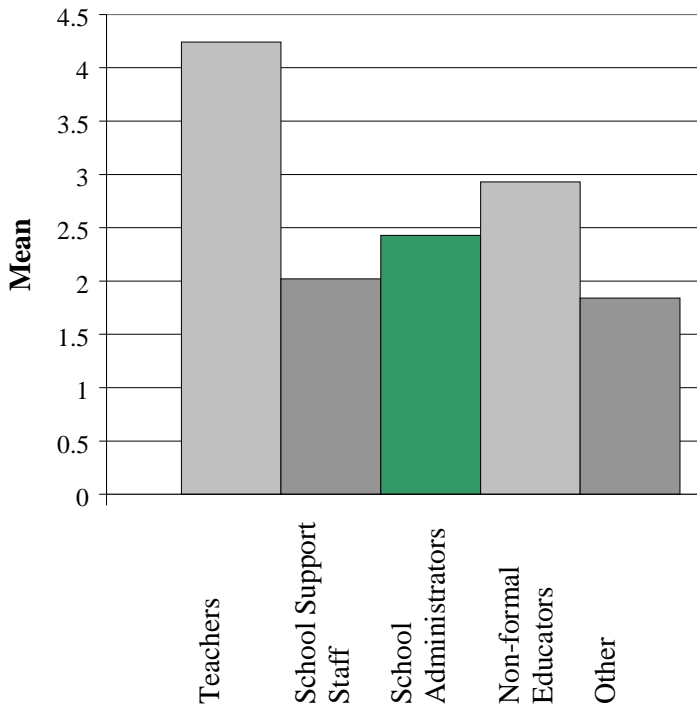


(Editor’s note: Only the responses of those that agreed to at least a small extent that the support of continuing professional development of staff working at any level of formal or non-formal education was a priority of their grant and agreed to at least a small extent that their grant supported professional development were included in questions twenty-eight through thirty-three.)

Question Twenty-eight: To what extent were the following professionals targeted by your grant?

When asked to identify the professionals targeted by their grant, the majority of respondents cited teachers, with a mean value of 4.34. Figure 24 also shows that any other professional targeted by the grant had a mean value of less than three.

Figure 24. Professionals targeted by the grant's professional development. (Item28, Part V)



Question Twenty-nine: To what extent were the following grade levels/populations represented in those receiving professional development?

Those who indicated that professional development was a priority of their grant and that they supported it to at least a small extent also identified the grade levels or populations represented in those receiving the professional development. Table 4 gives a summary of mean responses. With the exception of eighth grade, grade levels from three through twelve received an average response of greater than three. Community colleges and technical colleges/schools had the lowest average ranking.

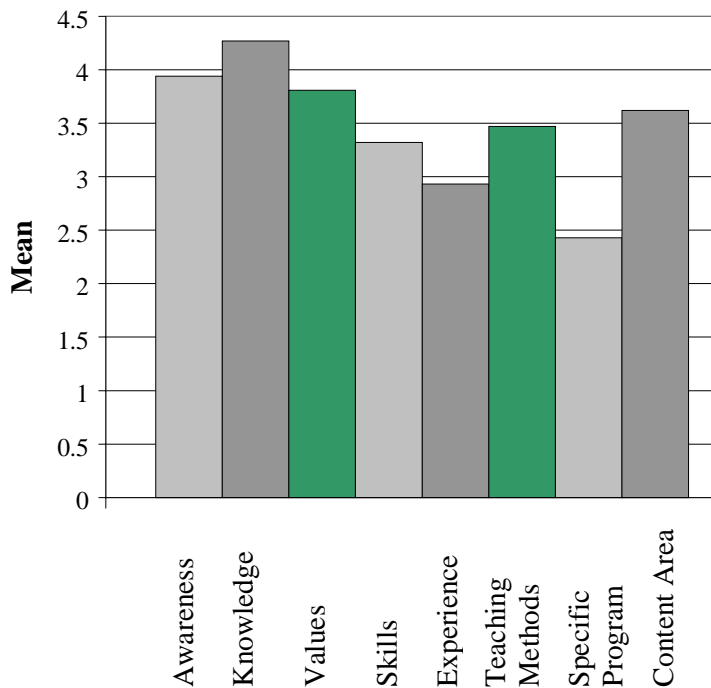
Table 4. Grade levels/populations represented in those receiving professional development. (Item 29, Part V)

Grade Level/ Population	Mean
Pre-K	1.82
Kindergarten	2.43
1 st	2.71
2 nd	2.77
3 rd	3.06
4 th	3.30
5 th	3.33
6 th	3.26
7 th	3.13
8 th	2.98
9 th - 12 th	3.21
College/ University	1.8
Technical College/ School	1.33
Community College	1.27
Adult	2
Family	1.63
Youth Group	1.77
General Public	1.79
Other	1.39

Question 30: To what extent did the professional development program address the following?

Recipients were asked to identify the areas addressed by their professional development program (Figure 25). Of the eight choices, specific programs (i.e. Project WILD, PLT, etc) received the lowest average score. Citizen Action experience, the fifth subgoal of EE, also had a low ranking. Knowledge, the second subgoal of EE, was the area addressed in the professional development program with the highest average.

Figure 25. Areas addressed by the professional development program. (Item 30, Part V)

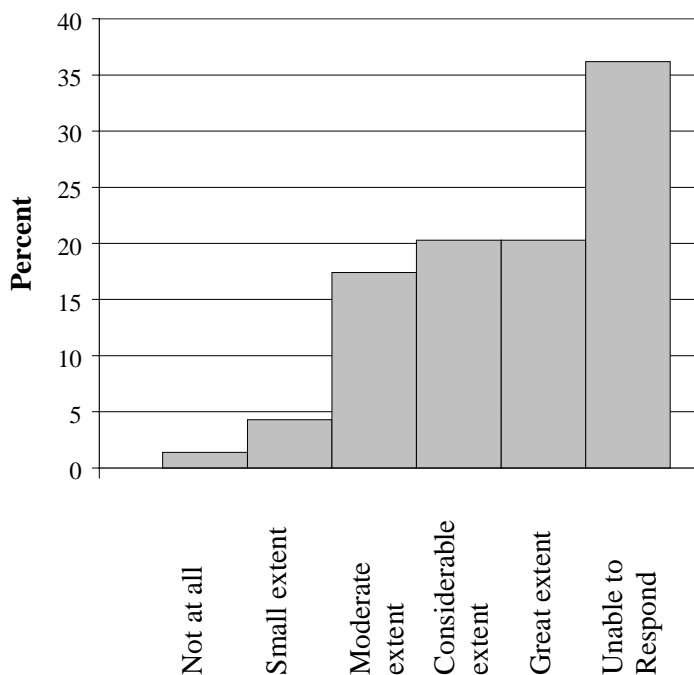


Question Thirty-one: To what extent have professionals who participated in the program(s) incorporated any ideas/materials into their work?

When asked the extent to which professionals who participated in the program(s) had incorporated any ideas/materials into their work, thirty-six percent were unable to respond. Sixty-two percent agreed to at least a small extent.

Figure 26. The extent professionals who participated in the program(s) incorporated any ideas/materials into their work. (Item 31, Part V)

n = 69



Question Thirty-one: Can you offer any evidence relating to this? (please elaborate)

While forty-three respondents said that professionals have incorporated ideas/materials into their work at least to a small extent, thirty-seven provided commentary. Those comments that best illustrate the incorporation follow.

- *I am responsible for teaching science to grades 6-7-8. From the in-service training I received, I have developed an outdoor ed curriculum for these 3 grades which utilizes our outdoor classroom as well as other area locations.*
- *Instructional staff schedule a yearly trip to the school forest and use activities from the curriculum plan with their classes. Project WILD is a program that the instructional staff also incorporated into their teaching lessons.*

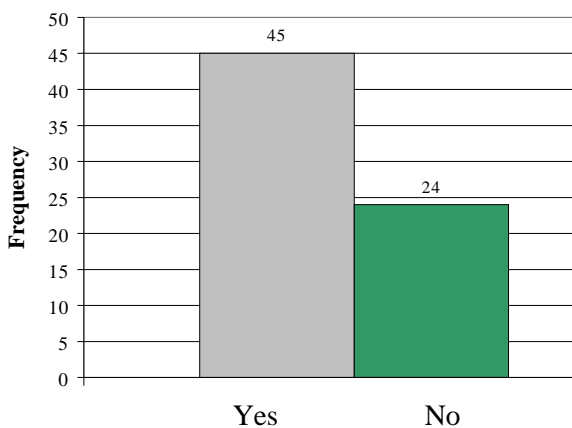
- *Naturalists continue to incorporate the knowledge and skills into special tours for upper elementary and middle school students. We've developed soil specials using equipment purchased from the grant.*
- *The middle school science teacher in particular has used the equipment and information gained extensively at the marsh and she has served as a resource for other teachers, not only at the middle school, but also at area elementary and high schools.*
- *Very positive comments from teachers, most grade levels developed their own pre & post activities. Previous to this grant students were taken to the Outdoor Education Center & basically given a recess day - nothing was taught. Now we have an organized, sequential curriculum that teachers are expanding upon in their classroom.*

Question Thirty-two: Did the professional development project(s) created by this grant extend beyond the grant period?

When asked if the professional development extended beyond the period of the grant the majority of grant recipients responded that it had (Figure 27).

Figure 27. Professional development project(s) which extended beyond the grant period. (Item 32, Part V)

n = 69



Question Thirty-three: If your grant supported professional development, how many individuals were directly involved in the project?

Table 6 gives a summary of the number of individuals directly involved in the professional development project. 1990 had the greatest number of individuals involved due to the creation of the Wisconsin School System's Environmental Education Network. The network is "an association of schools and environmental organizations and agencies dedicated to promoting environmental education" (Wisconsin Center for Environmental Education, 1999). According to the project director, over the eight years the network has been in effect, approximately 40,000 individuals have been involved. The number of individuals involved was also high for the years 1991, 1992 and 1993 as a statewide assessment of K-12 students' environmental literacy was conducted, as was a statewide assessment of teachers' attitudes toward teaching environmental education. According to the project director, 5,000 individuals were involved with each project.

Table 6. Number of individuals directly involved in project support professional development. (Item 33, Part V).

n = 30

Year	Number directly involved
1990	40,380
1991	6,185
1992	5,140
1993	5,052
1994	22
1995	771
1996	1061
1997	110
Total	58,721

Part Five: Additional Comments

Grant recipients were asked to respond to two open-ended questions that did not address any of WEEB's central purposes. Recipients were asked to comment on any "spin-off" projects that have been implemented as a result of their grant or if additional funds have been leveraged from other organizations as a result of their original WEEB project. They were also asked to comment on other aspects of the Grants program not addressed in the survey, such as the grant application, selection and distribution process. Their comments provided valuable information regarding the Grants program.

Question Thirty-five: Has your organization received additional funding from other groups or have there been "spin-off" projects as a result of your WEEB grant? (please elaborate)

Eighty of the ninety-eight respondents who returned the survey provided comments in response to this question. Their responses fell into three main categories, those that had received additional funding, those that had been involved with "spin-off" projects, and those that had not received funding or had not been involved in "spin-off" projects. Some of the comments made regarding additional funding were:

- *Yes to assist with this project we received additional funds (approx \$40,000) from NSF.*
- *We've received grants from CESA, WEST, Sam's Club, WalMart, Sierra Club to continue our projects.*
- *Yes - one more grant for \$10,000 was secured to help with the design layout and artwork. DNR will likely have to pick up the cost of printing.*
- *As stated earlier, two additional schools have joined our EEIR program. Wisconsin Electric donated over \$10,000 over two years to support participation by one school.*

- *The WEEB grant was very important to show public commitment to encourage energy utility funding. To date, over \$1million has been invested in this ongoing effort. We are hoping to expand the use of the curriculum in other states.*
- *For 1999, a grant has been received from a private charitable foundation to continue the summer youth gardening program and leader training workshops; to revise and expand the Handbook for Youth Gardening; to develop new activities related directly to Milwaukee Public School curriculum requirements.*

Other respondents commented on the spin-off projects happening as a result of a WEEB grant.

- *There have been many, many spin-offs. Curriculum has been expanded to include more grade levels, special projects have been developed for 11-12 grades. A school garden was started, a volunteer training program implemented, year-long environmental ed program developed at Elem. School, more outdoor experiences for many grade levels.*
- *We have begun to build a K-12 environmental curriculum tied to our school forest.*
- *Land on the High School Campus has been designated for prairie restoration.*
- *Yes, Resources were used in developing a virtual museum - with the goals 2000 money in our district. The museum is in the final stages of being posted - it can be viewed at: <http://www.cesa10.k12.wi.us/Ecosystems/Woodlands/index.htm>*

Question 36. Please use the space provided to make any additional comments regarding your project, your overall impression of the WEEB Grants Program, or specific issues concerning the grant application, selection or distributions process.

Question thirty-six provided insights into a variety of aspects of the grants program. The data have been divided into categories including comments regarding the grants application and distribution process, support and praise for the Grants program, and suggestions.

Comments regarding the grant application, selection and distribution process fell into two categories. Several recipients found the process easy to navigate and appreciated changes to the system. This can be seen in the following comments.

- *I'm glad to see that the application process has been simplified for the smaller grant request*
- *We were pleased with the grant process and grateful for the opportunity*
- *The process was very well done in that a response was given soon after the due date. Individuals were easy to reach and were pleasant when I had questions. The materials sent were straightforward and simple to complete.*

There were also those who felt there are problems with the system. Some were concerned with the amount of work involved for a relatively small grant. Others cited the actual length of the grant cycle as a problem, wishing it were extended.

- *However, for many educators the grant process is cumbersome and the WEEB seems to be a bit too rigid in its approach to the granting process*
- *It is hard in some cases to complete a grant in 12-18 months.*

Curriculum development is a 2-3 year process. WEEB and EE would be better served if the grant could span a two year period.

- *Grant application process was an ineffective use of time. Too much redundancy built into the procedure*
- *It was ok. I spent a month's worth of lunch times on this grant application and was laughed at by an administrator because this \$16,000+ grant was less than their cost to replace our district sports track. Having to climb mountains for our district didn't gain any respect and the public hearings seemed to be just another headache. It will be awhile before I write another.*
- *The matching requirements were a major burden. The amount of work for the money is not reasonable. It is the same work to go after \$50,000.*
- *WEEB is a great idea, but a time intensive grant to apply for and administer - especially at the <\$5,000 level. As a result have not applied again, because there appears to be some other options that involve less commitment - no quarterly reporting etc. Have chosen to focus more on foundation support.*
- *Given the amount of money involved in our project, there seemed to be a lot of paperwork - I make this judgement based on other grant experiences. 2) We were disappointed that we got no feedback on our project materials. Again, there was a lot of budgetary oversight - very little on the project content. We would have appreciated comments about how this could be improved*
- *The application process and follow-up information was way too much for the amount of \$\$*

Many respondents used this space to praise WEEB and acknowledge that without the grant from WEEB, their project would not have been possible. The following comments illustrate this sentiment.

- *Without the WEEB grant this project would never have been accomplished. Because of the WEEB grants program we (Wisconsin) now has [sic] baseline data related to the environmental literacy of K-12 students in WI. We have the results of a statewide teacher EE needs assessment and K-12 administrator perspectives on EE. All this information allows educators to better plan EE programs for students and teachers in WI.*
- *The WEEB grant that I received allowed me to get a good start on our restoration area. It may not have been possible without this grant*
- *I know that we probably would not have develop such an extensive curriculum and the means to share with local schools without this grant.*
- *I truly hope the board and the grants given out will be around for another decade. Wisconsin is a leader in EE and I'm proud to come from this state and represent it in the Keep America Beautiful Educational Affiliate Network.*
- *The WEEB grants program serves as a vital incentive to the development of quality EE programs in WI. It is a well- balanced program.*
- *The WEEB grant is a wonderful avenue for people with ideas. I am glad that the state has the foresight to invest relatively small amounts of money into projects of an environmental nature. It is difficult for teachers to get much financial support for projects outside the normal realm of academia.*

- *I think the WEEB program is a great idea and at least in the case of this project, a small investment of \$5000 has contributed to many years of EE at Patrick Marsh Middle school, and the greater community. What a great investment!*

Finally, some respondents took the time to offer some suggestions to the Board regarding the Grants program.

- *I hope the WEEB process remains open to new ideas but would give consideration to helping formerly funded programs get a new shot in the arm.*
- *I would suggest an evaluation of the grant application itself and potential areas for simplification.*
- *It is hard in some cases to complete a grant in 12-18 months. Curriculum development is a 2-3 year process. WEEB and EE would be better served if the grant could span a two year period.*
- *Continue to set important priorities for the EE Grants. Provide training/mentoring for area school districts so they can be successful in competing for the grants. Try to make the paperwork less.*
- *I feel strongly that WEEB & WAEE should continue to work together on projects. Professional development should remain a priority.*
- *I would encourage WEEB to consider larger projects when it can meaningfully influence and leverage WEEB funds.*
- *Extending the duration of the project over a longer timeline would benefit the accomplishment of the project goals. Multiple year projects have a better opportunity for longitudinal growth and measurement.*

Recommendations

Outlined below are recommendations based on all the data collected. It is the belief of the researcher however, that the Board needs to look at the data and reflect on what they mean to the grants program. The central purposes used to drive this study are the Board's. While the researcher has identified certain areas that may merit a deeper look, it will be up to the Board to decide which areas need improvement.

Several recommendations call for the Board to fund more projects with specific foci (e.g., pre-K curricula, professional development programs addressing citizen action skills and experience). There are at least two ways this can be accomplished. By identifying a specific focus as a priority in their request for proposals, WEEB could potentially increase the number of proposals with the desired focus. The Board can also fund more projects with that focus by making it a priority during their proposal review process. The Board currently rates each proposal on its own merit, funding projects with the highest scores. One suggestion would be for the reviewers to look at all the proposals as a whole. If the Board were interested in funding more higher education curricula, then they would actively select proposals which met that priority.

Development of Local Leaders and Citizens

Political and Consumer Action as a Focus

Ecomanagement and persuasion are the action strategies addressed most often in projects' development of local leaders and citizens. The researcher recommends that the Board set funding priorities which encourage the development of local leaders and citizens using all of the action strategies, including political and consumer action which are two strategies that seem to have been overlooked.

Development and Implementation of Curricula

Expansion of Focus Populations

Because WEEB's central purpose explicitly refers to development and implementation of interdisciplinary, environmentally-based curricula at *all* levels of the educational system, and because the data from this study show that most curricula developed are targeted for K-12 audiences, the researcher recommends that more effort be made to increase the scope of curricula developed. It may seem obvious why K-12 audiences are most often targeted by new curricula, but there are other populations that may deserve attention. While many students are undoubtedly reached in the middle years, exposure to an environmental education at a younger age could be beneficial. While very young, students can start gaining an awareness of and appreciation for the environment. This would provide students with a foundation for future EE programs that should focus more on knowledge, citizen action skills and citizen action experience.

As for students of higher education, EE programs are valuable in that students are at the level to investigate and explore environmental issues in-depth. It is an opportunity for students to apply much of the knowledge and skills acquired in EE programs they may have been involved in at the lower grade levels.

While it may be difficult for the Board to encourage curricula development at the pre-k level, or for higher education, due to the potential for a lack of proposals for such projects, the Board should keep this imbalance in mind when soliciting proposals and awarding funds.

Evaluation of Materials

A more extensive evaluation of the materials created through WEEB grants is also recommended. While there has been an increase in the use of standards when developing

curricula, it is difficult for the Board to know the quality of materials developed. The Board may want to randomly review materials developed over the past decade and then make recommendations in the request for proposals based on areas they find in need of improvement.

Professional Development

Citizen Action Experience as a Focus

The data clearly show an imbalance in the subgoals of EE addressed in professional development programs. Knowledge, awareness, and values activities are more often the focus of professional development programs than citizen action skills and experience. While it may be that the Board receives more proposals dealing with the first three subgoals, they could help shift this trend by making professional development programs that focus more on developing citizen action skills and experience more of a funding priority. By encouraging the development of citizen action skills and experience, the Board would be specifically addressing its own mission which states, “to provide leadership in the development of learning opportunities that empower Wisconsin citizens with the *knowledge* and *skills* needed to make *wise environmental decisions* and take *responsible actions* in their personal lives, work places and communities” (WEEB, 1998).

Improved Evaluation and Follow-up of Professional Development Programs

While 62% of respondents agreed to at least a small extent that professionals who participated in their programs incorporated ideas/materials into their work, a full 36% were unable to respond. Organizations that receive a grant, as well as WEEB, would be better served if there were more consistent evaluation and follow-up of professional development programs. It seems reasonable to expect facilitators of a professional development program to know if their program has had any effect on its participants. This would benefit the organization running the program by helping it identify successful

methods as well as areas of improvement. The Board would benefit by being able to speak with conviction regarding the effectiveness of the professional development programs it funds. While the Grants program application requires a summary of how the entire project will be evaluated, and part of the merit review process includes an item regarding program evaluation, the Board may want to put greater emphasis in this area. In addition to benefiting professional development programs, this would help improve the Grants program overall.

Demographic Data

More Equitable Distribution of Funds

While it appears that WEEB funds are not being distributed equitably across the state, the picture is incomplete as CESA districts are not determined by population. By compiling data on fund dispersal by state assembly district, which is determined by population, the Board can better ascertain whether or not funds are being distributed proportionally across the state. If these data show that there is in fact an imbalance, it is recommended that the Board look for ways to ensure the more equitable distribution of funds. It may also be important to determine the reason for this imbalance. Perhaps fewer proposals are coming in from certain areas or it may be that certain areas are overlooked during the grant selection process.

Additional Comments

Evaluation of Grant Application, Selection and Distribution Process

The final question of the survey, asking for additional comments regarding the grants program, brought to light some concerns of grant recipients. While only a minority of respondents mentioned the application process in a negative way, the researcher recommends a more extensive evaluation of the process. The Board expressed interest in an evaluation of the application process that would include the comments of rejected applicants. According to the comments made by those participating in this

survey, there are several areas of the process that need a closer look. These include the length and complexity of the application and follow-up

requirements, especially for small grants, the matching requirements, and the length of the grant cycle.

Conclusion

Between 1990 and 1997, the WEEB Grants program funded over two hundred projects, administering over one and a half million dollars. What has been the result of all those projects? The data in this study suggest that the WEEB Grants program has been funding projects that effectively address the mission of the Board and its central purposes. The data also suggest that the projects funded by WEEB have effects lasting beyond the grant period. For example, over 90% of curricula that have been developed with WEEB funds are still in use. However, this study also identifies areas in which the Grants program can grow and improve in order to increase this effectiveness.

This evaluation provides WEEB with abundant data regarding the Grants program. The data collected reflect the Board's central

purposes and the Grants program's effectiveness in addressing those purposes. The recommendations made for improving the Grants program are based on the quantitative and qualitative data gathered.

The completion of this evaluation is only the first step. The Board needs to review the information in this document, review the researcher's recommendations and identify areas they feel warrant improvement. Because WEEB has limited funds and only a half-time employee, it will need to prioritize potential improvements. The Board must then implement changes and at some point in the future, it must reevaluate the Grants program. It will be through this 'evaluate and change' scenario that the program will continue to grow and improve.

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Appendix

WEEB Grants Program Evaluation Survey Summary of Responses

(Editor's note: Only the quantitative survey questions and their responses are reported.)

Instructions:

Please circle the most appropriate response for each of the following questions. Record your responses directly on the survey.

Key:

NA = Not at all (1)
SE = To a small extent (2)
ME = To a moderate extent (3)
CE = To a considerable extent (4)
GE = To a great extent (5)

Part I. Grant Priorities

1. To what extent was the development of local leaders or citizens to become active environmental problem-solvers was a priority of the grant?
N = 97 (M = 2.778, Mdn = 3, mode = 2.0, SD = 1.315)

	NA	SE	ME	3.5	CE	4.5	GE
%	18.6	29.9	19.6	2.1	15.5	1.0	13.4

2. To what extent was the development and implementation of interdisciplinary, environmentally-based curricula a priority of your grant?
N = 98 (M = 3.765, Mdn = 4, mode = 5, SD = 1.383)

	NA	SE	ME	CE	GE
%	11.2	10.2	11.2	25.2	41.8

3. To what extent was the support of continuing, professional development of staff working at any level of *formal* education, to enable staff to accomplish environmental education goals a priority of your grant?

	NA	SE	ME	CE	4.5	GE
%	18.6	13.4	15.5	20.6	1	30.9

4. To what extent was the support of continuing, professional development of staff working at any level of *non-formal* education, to enable staff to accomplish environmental education goals a priority of your grant?

	NA	SE	ME	CE	4.5	GE
%	27.1	17.7	19.8	15.6	1	18.8

Part II. Development of Local Leaders

(Editor’s note: Question 5 only includes responses by those who in question one agreed to at least a small extent that the development of current local leaders or citizens was a priority.)

5. To what extent did your grant support the development of current local leaders to become active environmental problem-solvers?
 n = 73 (M = 2.699, Mdn = 2.5, mode = 2, SD = 1.201)

	NA	SE	2.5	ME	3.5	CE	GE
%	15.1	34.2	1.4	24.7	1.4	12.3	11.0

(Editor’s note: Questions 6 through 8 only include responses by those who in question one agreed to at least a small extent that the development of current local leaders or citizens was a priority and who in question five agreed at least to a small extent that their grant supported the development of current local leaders.)

6. To what extent were the following action strategies addressed in your project’s development of current local leaders?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Consumer Action	60	2.08	2	1	1.32	46.7%	25%	10%	10%	8.3%
Political Action	61	2.29	2	1	1.28	34.4%	27.9%	21.3%	6.6%	9.8%
Legal Action	60	1.6	1	1	1.05	66.7%	18.3%	6.7%	5%	3.3%
Ecomanagement	60	3.78	4	5	1.29	6.7%	11.7%	20%	20%	41.7%
Persuasion	60	3.67	4	4	1.27	11.7%	5%	16.7%	38.3%	28.3%
Other	11	3.09	3	5	1.76	27.3%	18.2%	9.1%	9.1%	36.4%

7. What specifically did your project do to support the development of current local leaders to become active environmental problem-solvers?
 n = 58

Response	%
Training/Professional Development	29.3
Print Resources	10.3
Other	19.0
Training and Print Resources	24.1
Training and Print Resources and Other	6.9
Training and Other	5.2
Print Resources and Other	5.2

8. To what extent was your project successful in the development of current local leaders to become active environmental problem-solvers?
 n = 53 (M = 3.132, Mdn = 3, mode = 3, SD = 1.177)

	NA	SE	ME	CE	GE
%	7.5	22.6	35.8	17.0	17.0

Part III. Development of Local Citizens

(Editor’s note: Question 9 only includes responses by those who in question one agreed to at least a small extent that the development of current local leaders or citizens was a priority.)

9. To what extent did your grant support the development of local citizens to become active environmental problem-solvers?

n = 75 (M = 2.907, Mdn = 3, mode = 2, SD = 1.307)

	NA	SE	ME	CE	GE
%	17.3	24.0	22.7	22.7	13.3

(Editor’s note: Questions 10 through 12 only include responses by those who in question one agreed to at least a small extent that the development of current local leaders or citizens was a priority and who in question nine agreed at least to a small extent that their grant supported the development of local citizens.)

10. To what extent were the following action strategies addressed in the project's development of local citizens?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Consumer Action	54	2.22	2	1	1.16	35.2%	25.9%	24.1%	11.1%	3.7%
Political Action	55	2.07	2	1	1.07	38.2%	27.3%	27.3%	3.6%	3.6%
Legal Action	54	1.67	1	1	1.08	61.1%	24.1%	7.4%	1.9%	5.6%
Ecomanagement	54	3.63	4	5	1.28	9.3%	9.3%	22.2%	27.8%	31.5%
Persuasion	56	3.36	3	5	1.31	7.1%	25%	19.6%	21.4%	26.8%
Other	10	2	1.5	1	1.33	50%	20%	20%	-	10%

11. What specifically did your project do to support the development of local citizens to become active environmental problem-solvers?

n = 48

Response	%
Training/Professional Development	31.3
Print Resources	16.7
Other	27.1
Training and Print Resources	16.7
Training and Other	2.1
Print Resources and Other	6.3

12. To what extent was your project successful in the development of local citizens to become active environmental problem-solvers?

n = 41 (M = 2.902, Mdn = 3, mode = 3, SD = 1.179)

	NA	SE	ME	CE	GE
%	12.2	26.8	29.3	22.0	9.8

Part IV. Development of Activity Guides and Curricula

(Editor’s note: Questions 14 and 15 only include responses by those who in question two agreed to at least a small extent that the development and implementation of curricula was a priority.)

14. Were new curricula developed as a result of your grant?

n = 82 (M = 1.4, Mdn = 1, mode = 1, SD = .49)

	Yes	No
%	59.8	40.2

15. Were existing curricula adopted/adapted as a result of your grant?

n = 80 (M = 1.31, Mdn = 1, mode = 1, SD = .49)

	Yes	No	Unsure/Maybe
%	70.0	28.8	1.3

(Editor’s note: Questions 16 through 26 only include responses by those who in question two agreed to at least a small extent that the development and implementation of curricula was a priority and those who in question fourteen or fifteen reported that curricula were developed or adopted/adapted as a result of their grant.)

16. Was the curriculum implemented?

n = 69 (M = 1.09, Mdn = 1, mode = 1, SD = .33)

	Yes	No	Unsure/Maybe
%	92.8	5.8	1.4

17. How many years was the curriculum used?

n = 50 (M = 4.76, Mdn = 4, mode = 3, SD = 2.631)

Number of Years	Frequency	%
1.0	5	10.0
2.0	7	14.0
3.0	8	16.0
4.0	6	12.0
5.0	4	8.0
6.0	6	12.0
7.0	3	6.0
8.0	6	12.0
9.0	4	8.0
10.0	1	2.0

18. Is the curriculum still in use?

n = 61

	Yes	No
%	95.1	4.9

19. By whom was the curriculum used?
n = 69

%	Yourself 17.4	Others 33.3	Yourself AND Others 49.3
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20. In what setting was the curriculum used?
n = 71 (M = 2.2, Mdn = 3, mode = 3, SD = .89)

%	Formal 31.0	Non-Formal 18.3	Formal AND Non-Formal 50.7
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21. To what extent did the curriculum integrate the following subject areas?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Science	70	4.47	5	5	.81	-	1.4%	15.7%	17.1%	65.7%
Math	67	3.27	3	3	1.05	1.5%	22.4%	41.8%	16.4%	17.9%
Social Studies	67	3.54	4	3	1.04	1.5%	14.9%	32.8%	29.9%	20.9%
Art	65	3.05	3	4	1.23	12.3%	23.1%	24.6%	27.7%	12.3%
Language Arts	64	3.34	3	3	1.2	9.4%	10.9%	35.9%	23.4%	20.3%
Physical Education	64	2.41	2	1*	1.22	31.3%	20.3%	31.3%	10.9%	6.3%
Music	61	1.92	2	1	1.05	41%	39.3%	11.5%	3.3%	4.9%
Other	12	3.25	3.5	5	1.66	25%	8.3%	16.7%	16.7%	33.3%

*multiple modes exist

23. To what extent did the curriculum focus on the following grade levels?

	n	M	Mdn	mode	SD	NA	SE	ME	3.5	CE	4.5	GE
Pre-K	61	1.92	1	1	1.39	62.3%	9.8%	13.1%	-	3.3%	-	11.5%
Primary	62	2.90	3	1	1.6	32.3%	8.1%	22.6%	-	11.3%	-	25.8%
Intermediate	60	3.27	3	5	1.54	21.7%	10%	20%	-	16.7%	-	31.7%
Upper Elementary	57	3.47	4	5	1.64	24.6%	3.5%	14%	1.8%	14%	-	42.1%
Middle School	62	3.48	4	5	1.59	21%	6.5%	17.7%	-	12.9%	-	41.9%
Junior High	51	2.94	3	1	1.64	33.3%	7.8%	17.6%	-	13.7%	-	27.5%
High School	59	2.98	3	1	1.68	33.9%	6.8%	18.6%	-	8.5%	1.7%	30.5%
College/ University	55	1.56	1	1	1.23	78.2%	5.5%	7.3%	-	-	-	9.1%
Technical College/ School	52	1.21	1	1	.72	90.4%	1.9%	5.8%	-	-	-	1.9%
Community College	51	1.18	1	1	.68	92.2%	2%	3.9%	-	-	-	2%
Adult	53	1.83	1	1	1.42	69.8%	5.7%	7.5%	-	5.7%	-	11.3%
Other	28	1.14	1	1	.53	92.9%	-	7.1%	-	-	-	-

24. To what extent did the curriculum focus on the following content areas?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Air	53	2.25	2	1	1.29	39.6%	20.8%	22.6%	9.4%	7.5%
Water	58	3.67	4	5	1.29	6.9%	13.8%	22.4%	20.7%	36.2%
Global Change Issues	52	2.15	2	1	1.39	44.2%	26.9%	11.5%	3.8%	13.5%
Energy	55	2.42	2	1	1.47	40%	18.2%	16.4%	10.9%	14.5%
Over-population	53	2.36	2	1	1.24	32.1%	24.5%	26.4%	9.4%	7.5%
Land Use	57	3.49	4	3	1.12	5.3%	12.3%	31.6%	29.8%	21.1%
Bio-diversity	54	3.56	4	5	1.44	13%	13%	16.7%	20.4%	37%
Endangered Species	52	3.17	3	3	1.4	15.4%	17.3%	26.9%	15.4%	25%
Solid Waste	55	2.49	2	1	1.59	41.8%	16.4%	12.7%	9.1%	20%
Other	24	4	5	5	1.56	16.7%	4.2%	4.2%	12.5%	62.5%

25. Were any standards used to guide the development of the curriculum? (e.g. EE Materials: Guidelines for Excellence – NAAEE, State or National subject area standards – i.e. science, social studies, etc.)
n = 65

%	Yes 38.5	No 61.5
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26. Has the curriculum been adopted and used by others?
n = 66

%	Yes 28.8	No 16.7	Unable to Respond 54.5
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Part V. Professional Development

(Editor’s note: Question 27 only includes responses by those who in question three or four agreed to at least a small extent that the support of professional development of staff working at any level of formal or non-formal education was a priority.)

27. To what extent did your grant support professional development?

n = 83 (M = 3.253, Mdn = 3, mode = 5, SD = 1.395)

	NA	SE	ME	CE	GE
%	13.3	20.5	20.5	19.3	26.5

(Editor’s note: Questions 28 through 33 only include responses by those who in question three or four agreed to at least a small extent that the support of professional development of staff working at any level of formal or non-formal education was a priority and those who in question twenty-seven agreed to at least a small extent that their grant supported professional development.)

28. To what extent were the following professionals targeted by your grant?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Teachers	67	4.24	5	5	1.14	3%	9%	10.4%	16.4%	61.2%
School Support Staff	48	2.02	1.5	1	1.3	50%	20.8%	14.6%	6.3%	8.3%
Administrators	51	2.43	2	1	1.5	41.2%	15.7%	17.6%	9.8%	15.7%
Non-formal Educators	54	2.93	3	1	1.62	33.3%	9.3%	13%	20.4%	24.1%
Other	19	1.84	1	1	1.54	73.7%	-	10.5%	-	15.8%

29. To what extent were the following grade levels/populations represented in those receiving professional development?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Pre-K	50	1.82	1	1	1.32	66%	8%	12%	6%	8%
Kindergarten	51	2.43	2	1	1.53	45.1%	9.8%	15.7%	15.7%	13.7%
1 st	52	2.71	2.5	1	1.63	38.5%	11.5%	11.5%	17.3%	21.2%
2 nd	52	2.77	3	1	1.65	38.5%	9.6%	11.5%	17.3%	23.1%
3 rd	53	3.06	3	1	1.6	28.3%	11.3%	13.2%	20.8%	26.4%
4 th	53	3.30	4	5	1.59	22.6%	13.2%	7.5%	24.5%	32.1%
5 th	52	3.33	4	5	1.57	23.1%	9.6%	9.6%	26.9%	30.8%
6 th	54	3.26	4	4*	1.57	25.9%	5.6%	13%	27.8	27.8%
7 th	53	3.13	3	1	1.58	28.3%	5.7%	17%	22.6%	26.4%
8 th	51	2.98	3	1	1.57	29.4%	9.8%	17.6%	19.6%	23.5%
9 th - 12 th	52	3.21	4	5	1.60	26.9%	7.7%	11.5%	25%	28.8%
College/University	44	1.8	1	1	1.36	68.2%	9.1%	6.8%	6.8%	9.1%
Techl College/School	46	1.33	1	1	.92	84.8%	6.5%	4.3%	-	4.3%
Community College	45	1.27	1	1	.81	86.7%	6.7%	2.2%	2.2%	2.2%
Adult	49	2	1	1	1.49	63.3%	6.1%	10.2%	8.2%	12.2%
Family	48	1.63	1	1	1.14	70.8%	10.4%	8.3%	6.3%	4.2%
Youth Group	48	1.77	1	1	1.26	68.8%	6.3%	6.3%	16.7%	2.1%
General Public	48	1.79	1	1	1.24	64.6%	8.3%	16.7%	4.2%	6.3%
Other	31	1.39	1	1	1.09	87.1%	-	6.5%	-	6.5%

*multiple modes exist

30. To what extent did the professional development program address the following?

	n	M	Mdn	mode	SD	NA	SE	ME	CE	GE
Subgoals of EE										
• Awareness	69	3.94	4	5	1.24	5.8%	7.2%	21.7%	17.4%	47.8%
• Knowledge	70	4.27	5	5	.95	-	7.1%	12.9%	25.7%	54.3%
• Values	70	3.81	4	5	1.16	2.9%	12.9%	21.4%	25.7%	37.1%
• Skills	71	3.32	3	5	1.35	11.3%	18.3%	23.9%	19.7%	26.8%
• Experience	70	2.93	3	2	1.47	21.4%	27.1%	7.1%	25.7%	18.6%
Teaching Methods or Techniques	68	3.47	3	5	1.33	10.3%	11.8%	30.9%	14.7%	32.4%
Specific Program (e.g. PLT, Project WILD)	65	2.43	2	1	1.54	43.1%	16.9%	9.2%	15.4%	15.4%
Content (e.g. air, soil, water, etc)	63	3.62	4	5	1.4	14.3%	6.3%	17.5%	27%	34.9%

31. To what extent have professionals who participated in the program(s) incorporated any ideas/materials into their work?

n = 69

	NA	SE	ME	CE	GE	Unable to Respond
%	1.4	4.3	17.4	20.3	20.3	36.2

32. Did the professional development project(s) created by the grant extend beyond the grant period?

n = 69

	Yes	No
%	65.2	34.8

33. If your grant supported professional development, how many individuals were directly involved in the project?

n = 30

Year	Number directly involved
1990	40,380
1991	6,185
1992	5,140
1993	5,052
1994	22
1995	771
1996	1061
1997	110
Total	58,721