Increasing Student Achievement Through Environmental Education

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A Special Project

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Increasing Student Achievement

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ABSTRACT

The purpose of the research was to determine if teachers, within a particular school district, were meeting the requirements of RCW 28A.230.020 and WAC 180-50-115 pertaining to environmental education. Three elementary schools were given a qualitative survey to measure teacher's level of knowledge about RCW 28A.230.020 and WAC 180-50-115 and teacher's knowledge of professional development opportunities to help meet the requirements of RCW 28A.230.020 and WAC 180-50-115. The survey found teachers lacked knowledge about RCW 28A.230.020 and WAC 180-50-115, felt comfortable meeting the requirements of RCW 28A.230.020 and WAC 180-50-115, but felt the materials were not available from the district to support the teaching of environmental education. Teachers were supportive of professional development opportunities to increase the level of environmental education being taught.

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CHAPTER 1

Introduction

Background for the Project

The 1990 National Environmental Education Act (Public Law 101-619) established national leadership to increase environmental literacy throughout the United States. Out of this act the State of Washington passed RCW 28A.230.020 and WAC 180-50-115 which provided statutory authority for the state to provide environmental education as part of the common school curriculum, and established a definition for environmental education. Both state laws established the fact that environmental education should be part of all children's education at all grade levels in an interdisciplinary manner. In reality, educators assumed environmental education should and could only be taught in the science classroom. The misconception was environmental education had a very limited place in the public education system. With increasing pressure to raise student achievement on standardized tests, school districts across the state cut back the amount of time spent on subjects not tested on the Washington Assessment of Student Learning (WASL) exam (students have only been tested in reading, writing, mathematics and science). Research proved using environmental education in the classroom in an interdisciplinary approach raised student achievement on standardized tests like the WASL in all subject areas, not just science (Taylor, Smith, Tudor, Ferguson, & Bartosh, 2006). The purpose of

environmental education in the classroom was to increase students' environmental literacy (the amount of knowledge about the environment) and to make them wise stewards of our natural resources.

Statement of the Problem

Are teachers in Washington State teaching environmental education in the classroom? Would students achieve at higher rates on standardized tests if they were instructed in environmental education? Are students in Washington State developing environmental literacy skills, and, in turn, becoming stewards of our natural resources?

Purpose of the Project

The purpose of the project was to gain an understanding of how much environmental education was being taught in the classroom. The project was also to find out how many teachers were using environmental education in current science curriculums and how many were integrating environmental education into other subjects. Lastly, the purpose of the project was to see how open local teachers were to incorporating environmental education into current curriculums in an interdisciplinary way.

Delimitations

The delimitations to the project were the level of honesty teachers had in taking the survey, the lack of time during staff meetings to complete the survey and getting principals to allow the survey to take time away from staff meetings.

Another delimitation was only giving the survey to one school district. The school district participating had a 73% minority student population and 67% free and reduced lunch participants.

Assumptions

An assumption the researcher was making was that there was a limited amount of environmental education taking place in the classroom because teachers did not have an understanding of the law behind environmental education. Another assumption was that teachers were not comfortable teaching environmental education because of a lack of knowledge in the subject area. The final assumption was that most teachers did not integrate disciplines in the classroom either because they did not value the concept or they lacked training on how to integrate disciplines.

Research Question

Would teachers be more willing to teach environmental education in an integrating context (within multiple disciplines i.e., science, math, reading, social studies) if the teachers were aware of the law, had the skills to incorporate environmental education into existing curriculum and had professional development to provide training opportunities for the instructional changes?

Significance of the Project

Research has proven environmental education increased student scores on standardized tests in all subject areas not just science (Taylor et al., 2006).

Research has also proven environmental education increased students' motivation to learn and reduced discipline problems (Lieberman & Hoody, 1998). Students were able to develop problem-solving skills, higher-order thinking skills and see first hand the benefits of the students' work in the real world.

Procedure

Surveys were distributed to three elementary schools in a medium-size school district in southeast Washington State. Surveys gave an explanation of the statutory authority pertaining to environmental education in the classroom. Teachers were asked to rate the amount of environmental education being used in the classrooms. Teachers were also asked to rate the amount of environmental education professional development opportunities available. Teachers were asked to rate their familiarity with state and national environmental education programs.

Acronyms

EIC. Environment as an Integrating Context

NAAEE. North American Association of Environmental Educators

NCLB. No Child Left Behind

OSPI. Office of Superintendent of Public Instruction

WASL. Washington Assessment of Student Learning

CHAPTER 2

Review of Selected Literature

Introduction

Research in environmental education was relatively new. Most of the laws pertaining to environmental education were established within the last 30 to 40 years. The literature established the benefits of environmental education when used in the classroom as an integrating context for learning.

Using the Environment as an Integrating Context (EIC) for Learning

Traditional school curriculums separated disciplines. Teachers devoted so much time a day to mathematics, reading, writing or science. The traditional method of subject separation was carried over into the middle school and high school years to a greater degree. In the natural environment, however, people could not separate the disciplines related to environmental issues. "Using the Environment as an Integrating Context (EIC) defines a framework for education: a framework for interdisciplinary, collaborative, student-centered, hands-on, and engaged learning" (Lieberman & Hoody, 1998, p. 7).

The EIC Model motivated students in learning traditional subjects in the context of the environment. The environment could not be separated into compartmentalized subjects, and neither should a student's learning. "Environmental learning helps students make the connections they need to transfer concepts from familiar to unfamiliar contexts. Its interdisciplinary nature

helps students to understand the world around them and sharpens their ability to think systematically" (Glenn, 2000, p. 13). Students became interested in one facet of the environment, but realized they needed to explore other subject matter to answer the questions in a complete way. "Students learned to 'do' science rather than just 'learn about science'" (Glenn, 2000, p. 6). Inquiry-based learning has been found to be a major tool in student achievement, and using the environment as the integrating context makes inquiry-based exploration authentic in context and applicability.

When the EIC Model was used in the classroom, the environment became the over-lying theme behind all learning that took place. Standards were still established and criterion still needed to be met in order to gain content knowledge that was tested on standardized tests, but the students became the lesson designers. According to Dixie Reimer, a science teacher at Komachin Middle School in Olympia, Washington, "Children care deeply about the environment" (Flanagan, 1999, p. 3). Important and relevant environmental concepts and issues became the courses of study for students when using EIC. Schools using EIC found common benefits to the students and communities. Those benefits as defined by Lieberman and Hoody (1998) were: (a) better performance on standardized measures of academic achievement in reading, writing, math, science and social studies; (b) reduced discipline and classroom management problems; (c) increased engagement and enthusiasm for learning; and, (d) greater

pride and ownership in accomplishments.

Environmental Literacy

"Environmental literacy is essentially the capacity to perceive and interpret the relative health of environmental systems and take appropriate action to maintain, restore, or improve the health of those systems…" (Disinger & Roth, 1992, p. 3). Environmental educators discovered environmental literacy focused on the idea of systems; the natural and social systems and the interaction between the two. According to the Minnesota Office of Environmental Assistance, "The earth is a set of interacting natural and social systems. An environmentally literate person must understand the relationship of the parts of a system and the interdependence of human and environmental systems. "The content of environmental education is the exploration of the relationship between social and natural systems" (Environmental Literacy Scope and Sequence, 2002, p. 6).

The state of Massachusetts established K-12 benchmarks for environmental literacy because it was discovered environmental literacy took place over time ("Benchmark on the Way to Environmental Literacy," n.d.). Environmental literacy benchmarks were essentially interdisciplinary in nature. An environmentally literate student needed exposure to environmental topics throughout the K-12 system. Students built environmental literacy from one grade to another similar to traditional disciplines, except the concepts were related to the local community and environment.

Guidelines for environmental education were established by the North American Association of Environmental Education (NAAEE) which gave states, school districts and educators the tools necessary to align existing curriculums with environmental education standards. The guidelines established a standard for, "An environmentally literate citizenry – a citizenry that can compete in our global economy; has the skills, knowledge, and inclinations to make well-informed choices; and participates responsibly in the decision making processes that are our right and our duty" (McCrea, n.d., p. 1).

Environmental Education on Standardized Test Scores

In the United States scores on standardized tests have traditionally been lower than other developed countries. In 1983, President Reagan released *A Nation at Risk,* describing the U.S.'s poor academic system creating an atmosphere of incompetent citizens. The report served as a wake up call for educators, administrators and school districts across the country to reform the existing education systems. Very few schools have used the environment as an approach to increasing student achievement. In "Environmental-based Education: Creating High Performance Schools and Students," author Joanne Lozar Glenn outlined a collection of case studies documenting evidence that environment-based education increased academic performance across the disciplines as compared to traditional approaches. Research on environmental education has found that students offered the opportunity to learn with the EIC Model do better on

standardized test scores than students in the traditional setting (Glenn, 2006). Lieberman and Hoody found the EIC Model significantly improved students' performances in reading, writing, math, science and social studies (1998, p. 8). A study conducted in Washington State compared schools using environmental-based curriculums with schools using traditional curriculums and found that on a criterion-reference test (similar to the WASL) students scored better when taught in an environmentally rich, integrated approach (Taylor, et al., 2006).

The U. S. has typically scored significantly lower in science compared to other developed countries (Haury, 2001, p. 2). A difficult problem seen in our current academic environment is the use of high-stakes testing in science. Students were expected to pass with a certain percentage to move to the next grade level, or to earn a diploma. Students studying science in an environmental-based curriculum learned concepts, problem-solving skills and a broader base of knowledge than traditional curriculums. Environmental-based education also allowed for genuine contextual learning. Students did not study hypothetical situations, but rather real-world, applicable problems related to their immediate environment. Teachers have been able to motivate students into becoming active participants in the communities by using the community as the classroom. "The students improved significantly over time in their ability to remember details, to classify information, and to link facts to larger themes" (Null, 2002, p. 8-9).

Environmental Education in Washington State

In 2004, the Washington State Legislature issued the "Report Card on the Status of Environmental Education in Washington State." Several findings came from the study including an important statement about the significance of environmental education increasing student test scores on standardized tests. The school using environmental education also had an increase in parental involvement and support from the administration and community. The report also found students' overall grade point averages improved, students stayed in school longer, received higher-than-average scholarship awards, and displayed more responsible behavior in school and in their community (Report Card, 2004). A report in 2001-2002 found little environmental education happening in Washington State and found an unmet need for environmental education (Ellis & McWayne, 2002. p. 4). Most of the respondents to the survey responded favorably to using environmental education in the classroom, and welcomed the opportunity to participate in environmental-based professional development.

Summary

Students exposed to environmental education in an integrating context displayed an increased level of environmental literacy, increased scores on standardized tests, and an appreciation for the natural world and the interactions people had within it. When used in an integrating context environmental education taught students problem-solving skills, higher-order thinking skills and

communication skills.

CHAPTER 3

Methodology and Treatment of Data

Introduction

A goal of the 1990 National Environmental Education Act was to increase environmental literacy throughout the county. The State of Washington, in response to this law, provided statutory support for environmental education in the state's public schools. This research project attempted to determine how much environmental education was being taught, if teachers were aware of the law pertaining to environmental education, if the teachers felt supported in meeting the requirements of the law and if teachers had professional developmental opportunities to incorporate environmental education into their curriculums. The tool used to determine this information was a qualitative survey created by the researcher.

Methodology

A survey consisting of qualitative questions was administered at three elementary schools within one school district. The results of the survey were then analyzed to determine the amount of knowledge teachers had about the law pertaining to environmental education. The results were also analyzed to determine if teachers felt comfortable teaching environmental education, had the proper curriculums and professional development to teach environmental education, and if teachers would be willing to participate in future environmental

education workshops. The researcher did qualitative research on the topic of environmental education using a descriptive study.

Participants

The 79 participants in the survey were teachers grades Kindergarten through 5th grade in three elementary schools in a medium-sized school district in southeast Washington State. The first school surveyed had 32 participants, the second school surveyed had 23 participants and the third school surveyed had 24 participants. Each participant had to be a classroom teacher, and included special education, physical education, art, music and student teachers.

Instruments

The instrument was a survey consisting of 18 qualitative questions. The survey was administered at each participating elementary school during a regularly scheduled staff meeting. Each survey had a cover letter describing the reason for the survey as well as the applicable RCW and WAC codes. Teachers were asked to read the RCW and WAC codes associated with environmental education and answer the questions as they pertained to their own classroom. The 18 questions were answered using a Lykert Scale, with the options being strongly disagree, disagree, not sure, agree and strongly agree. The researcher wrote the questions pertaining to the RCW and WAC codes based on personal experience with the chosen school district as well as environment education programs offered Washington State.

Design

The researcher used a qualitative design by conducting a survey. Teachers, Kindergarten through fifth grade, answered various questions pertaining to RCW 28A.230.020 and WAC 118-50-115, the statutory authority regarding environmental education in the classroom.

Procedure

The qualitative surveys were conducted in late March and early April of 2007. Principals of 11 elementary schools within one district were contacted to participate in the survey. The three schools which responded represented very different demographics within the school district. The surveys were administered at regularly scheduled staff meetings. Classroom teachers were asked to read the cover letter attached to the survey, answer the questions on the survey, and the researcher collected all the surveys once completed.

Treatment of the Data

The researcher analyzed the data based on the number of responses to each question, as well as the answers to the questions. A bar graph was created for each answer in order to obtain a visual diagram of the total number of responses as well as how the majority of respondents answered. The researcher drew conclusions about the amount of environmental education being taught in the classroom, the amount of professional development teachers have been given, and the likelihood for future professional development opportunities based on the

respondent's answers.

Summary

The researcher conducted a qualitative survey at three elementary schools within one school district. The surveys were answered by a total of 79 teachers in grades Kindergarten through fifth grade. The author analyzed the data based on the responses to the questions.

CHAPTER 4

Analysis of the Data

Introduction

The surveys given to classroom teachers at three elementary schools gathered qualitative data. The 79 teacher's surveys were analyzed by the researcher and conclusions were drawn based on the responses to the questions.

Description of the Environment

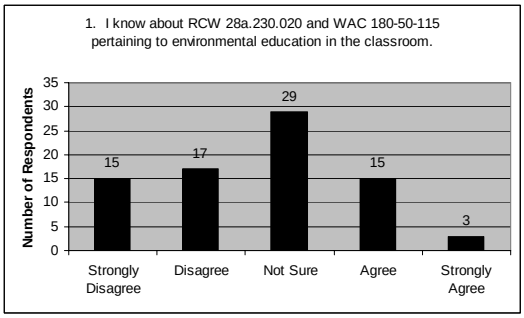
The data interpretation was limited because of the small number of participants. All efforts were exhausted to obtain more participants. The time frame needed to conduct the survey made principals hesitant to participate due to Spring Break Vacation and the impending WASL test needing a majority of staff meeting time. The three schools participating represented a broad range of demographics within the school district. The researcher did not need to generalize the data to other groups or districts. The goal of the research was to obtain information about the participating district only.

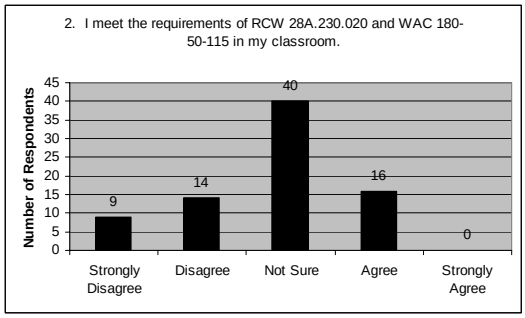
Research Question

Would teachers be more willing to teach environmental education in an integrating context (within multiple disciplines i.e., science, math, reading, social studies) if the teachers were aware of the law, had the skills to incorporate environmental education into existing curriculum, and had professional development to provide training opportunities for the instructional changes?

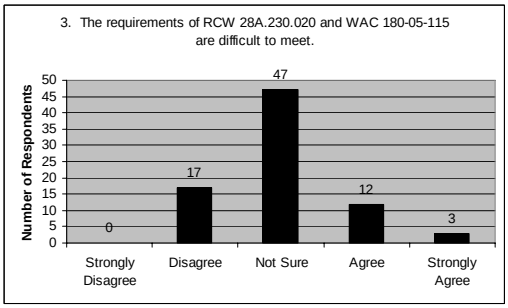
Results of the Study

The researcher discovered 77% of teachers surveyed strongly disagreed, disagreed or were not sure if they knew about the requirements of RCW 28A.230.020 and WAC 118-50-115 pertaining to environmental education (question 1). Most teachers surveyed (80%) strongly disagreed, disagreed or were not sure if the requirements of RCW 28A.230.020 and WAC 118-50-115 were being met in the classrooms (question 2).

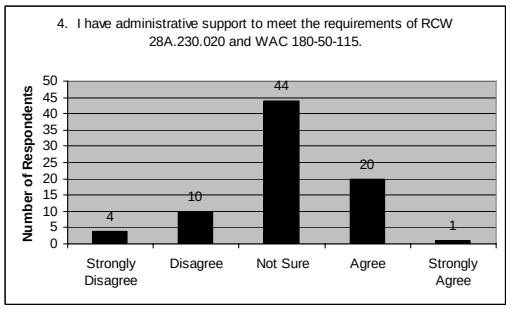


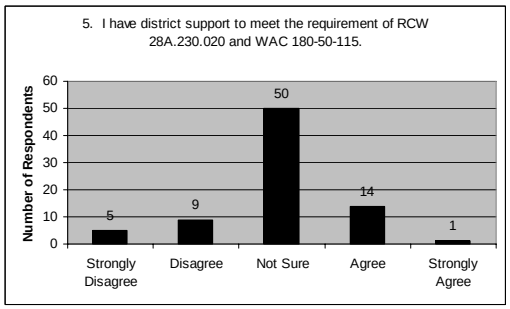


Eighty-one percent of teachers disagreed or were not sure if the requirements of RCW 28A.230.020 and WAC 118-50-115 were too difficult to meet (question 3).

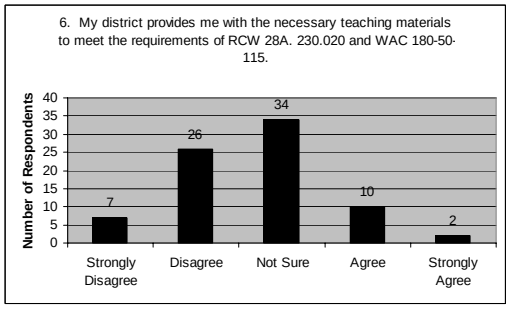


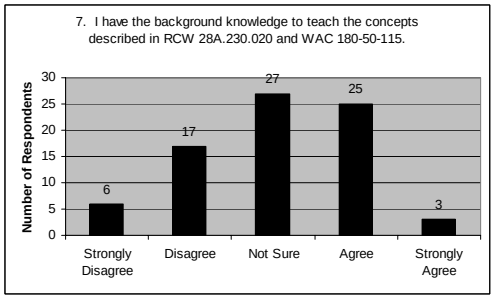
Teachers felt not sure, agreed or strongly agreed (82%) the district and the administration supported teaching to meet the requirements of RCW 28A.230.020 and WAC 118-50-115 (question 4 & 5).



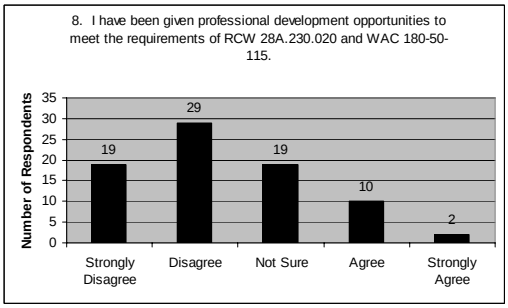


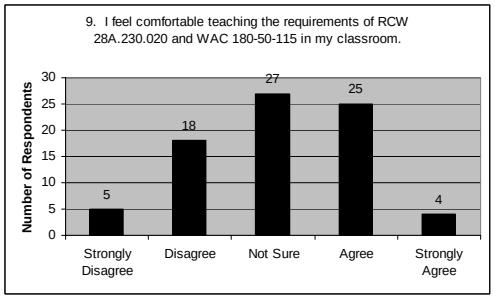
Eighty-five percent of teachers were not sure, disagreed or strongly disagreed on whether the district provided necessary teaching materials to meet RCW 28A.230.020 and WAC 118-50-115 (question 6). Most teachers (70%) were not sure or agreed they had background knowledge necessary to meet the requirements of RCW 28A.230.020 and WAC 118-50-115 (question 7).



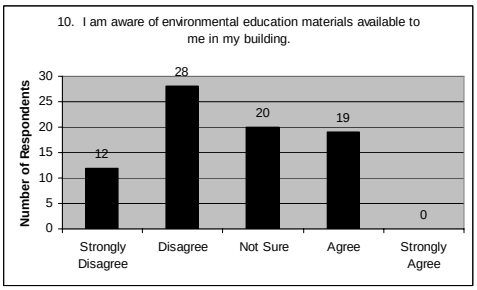


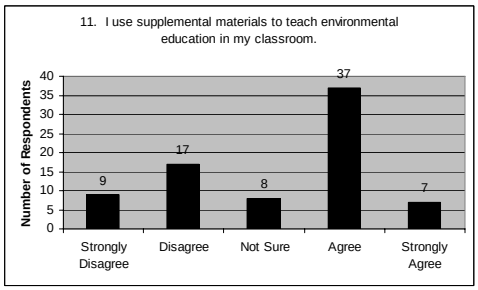
Teachers, however, strongly disagreed or disagreed (61%) being given professional development opportunities to meet the requirements of the RCW 28A.230.020 and WAC 118-50-115 (question 8). Despite the lack of professional development, 37% of teachers agreed or strongly agreed that they felt comfortable teaching the requirements of RCW 28A.230.020 and WAC 118-50-115 (question 9).



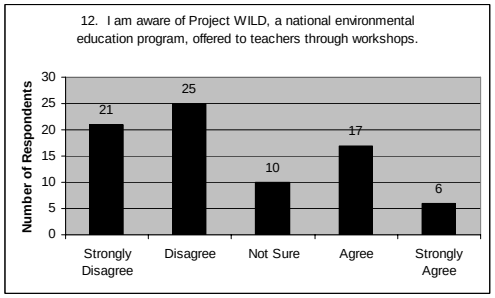


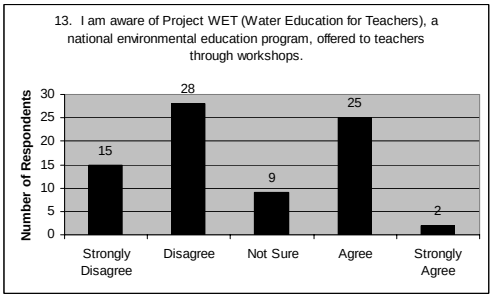
Fifty-one percent of teachers surveyed strongly disagreed or disagreed about being aware of environmental education materials available in their buildings (question 10) and 56% agreed or strongly agreed to using supplemental materials in their classrooms to teach environmental education (question 11).

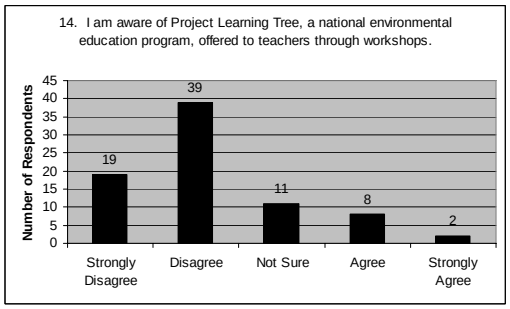


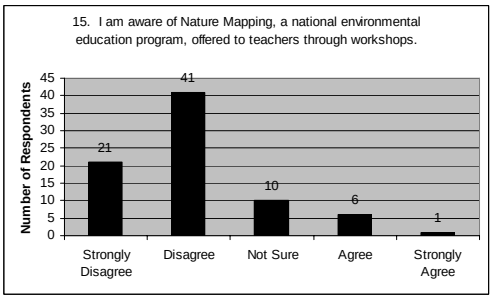


Of the five environmental education programs asked about in the survey, 66% of teachers surveyed were not sure, disagreed or strongly disagreed to being aware of Project WET (Water Education for Teachers), 71% were not sure, disagreed or strongly disagreed to being aware of Project WILD, 87% were not sure, disagreed or strongly disagreed to being aware of Project Learning Tree and 90% were not sure, disagreed or strongly disagreed to being aware of Nature Mapping (questions 12, 13, 14, and 15).

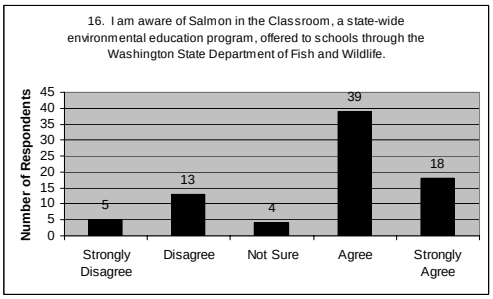






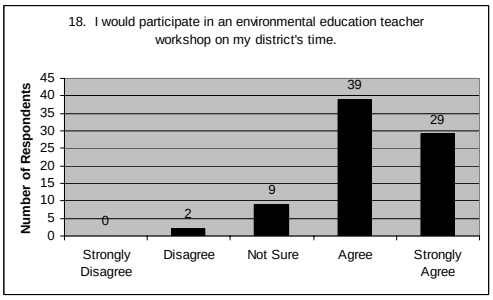


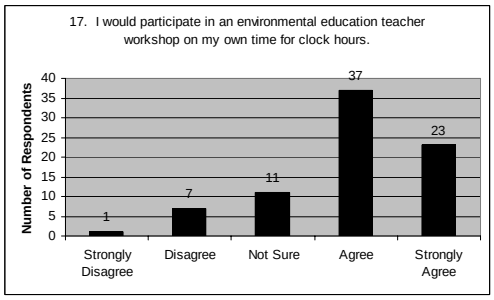
Salmon in the Classroom was one environmental program teachers agreed or strongly agreed (73%) to being aware of (question 16). Two of the schools participating in the survey participate in the Salmon in the Classroom Program each year.



When asked about professional development opportunities in the future, 76% of teachers surveyed agreed or strongly agreed to participate in an environmental education teacher workshop on their own time (question 17). Eighty-six percent

of teachers surveyed agreed or strongly agreed to participate in an environmental education workshop if the workshop took place on the district's time.





Findings

Based on the answers by the teachers, the research discovered environmental education is being under taught within the selected school district. Teachers were not aware of the statutory authority and obligation to teach environmental education at each grade level in all subject matters. Materials may have been available to teachers, but most teachers used supplementary materials to teach environmental education. Teachers felt support from the administration and the district to teach environmental education, but needed further professional development opportunities. Teachers were not aware of environmental education programs available within Washington State.

Discussion

The purpose of the teacher's survey was to open up a dialogue between the researcher and the teachers within the surveyed district. The district has been

undergoing curriculum changes especially focused in Science. The researcher, through the use of the survey, addressed the lack of environmental education in the classroom to all teachers, not just science teachers. Principals also became aware of the RCW and WAC codes pertaining to environmental education and could therefore be held accountable to making sure the teachers in the surveyed schools teach more environmental education and receive more professional development in the area of environmental education. The researcher believes test scores on standardized tests will increase if the amount of environmental education being taught in the classroom increases. Students receiving more environmental education become environmentally literate and can apply their learning to solve real-world problems. In the long-term, it is the researcher's hope that with an increase in environmental education more children will grow to become responsible citizens capable of making wise decisions in regards to protecting our natural resources.

Summary

The researcher discovered a majority of teachers within one school district were not aware of RCW28A.230.020 and WAC 180-50-115 codes pertaining to environmental education. Survey results concluded most teachers were not sure if the requirements of the specific RCW and WAC codes were being met in their classrooms. The researcher learned most teachers surveyed were open to the idea of future professional development opportunities pertaining to environmental

education, especially if the workshop was given during school district time.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

The State of Washington implemented statutory authority pertaining to environmental education in 1990. As a result of RCW 28A.230.020 and WAC 180-50-115, teachers should be teaching environmental education at all grade levels in all subject matters. Research has proven schools using environmental education in an integrated context increased the scores on standardized tests (Taylor et al., 2006). The researcher discovered the three elementary schools within the district surveyed did not meet the requirements of RCW 28A.230.020 and WAC 180-50-115 pertaining to environmental education.

Summary

The researcher conducted a qualitative survey of three schools within one district. The survey measured teacher's awareness of RCW 28A.230.020 and WAC 180-50-115 pertaining to environmental education and found most teachers were not aware of the statutory authority pertaining to environmental education. The survey measured teacher's comfort in teaching environmental education which was strong, however, the availability of materials to teach environmental education in the classrooms appeared to be poor. The survey measured teacher's knowledge about national environmental education programs as well as one state environmental education program and found most teachers were only aware of the

state program. The survey measured teacher's willingness to participate in future professional development opportunities and found most teachers were willing to participate on their own time or the district's time.

Conclusions

Teachers within the district surveyed are not meeting the requirements of RCW 28A.230.020 and WAC 180-50-115 pertaining to environmental education. Students were not developing environmental literacy and, in turn, were not becoming stewards of our natural resources.

Recommendations

Teachers need to participate in and the district needs to support future professional development workshops focused on providing environmental education curriculum in an integrated approach. Students need to become environmentally literate and teachers need to use the environment as the integrating context at all grade levels in all subject matters.

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APPENDIXES

Dear Educator –

Please read the information below pertaining to RCS 28A.230.020 and WAC 180-50-115 obtained from the OSPI website under Education for Environment and Sustainability. Complete the following survey regarding the amount and use of environmental education currently being used in *your* classroom. Please answer honestly as all surveys will be kept confidential.

Thank you,
Kara Kaelber

The current legal authority related to environmental education:

RCW 28A.230.020 Common schools curriculum – fundamentals in conduct.

In 1990, pursuant to RCW 28A.230.020, the State Board of Education (SBE) created a rule defining environmental education as part of Basic Education and mandating its instruction in public school **at all grade levels in all subject matters.**

WAC 180-50-115 Mandatory areas of study in the common school.

Subsection (6) Pursuant to RCW 28A.230.020 instruction about conservation, natural resources, and the environment shall be provided **at all grade levels in an interdisciplinary manner** through science, the social studies, the humanities, and other appropriate areas with an emphasis on solving the problems of human adaptation to the environment.

1. I know about RCW 28A.230.020 and WAC 180-50-115 pertaining to environmental education in the classroom.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

2. I meet the requirements of RCW 28A.230.020 and WAC 180-50-115 in my classroom.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

3. The requirements of RCW 28A.230.020 and WAC 180-50-115 are difficult to meet.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

4. I have administrative support to meet the requirements of RCW 28A.230.020 and WAC 180-50-115.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

5. I have district support to meet the requirements of RCW 28A.230.020 and WAC 180-50-115..

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

6. My district provides me with the necessary teaching material to meet the requirements of RCW 28A.230.020 and WAC 180-50-115.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

7. I have the background knowledge to teach the concepts described in RCW 28A.230.020 and WAC 180-50-115.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

8. I have been given professional development opportunities to meet the requirements of RCW 28A.230.020 and WAC 180-50-115.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

9. 9. I feel comfortable teaching the requirements of RCW 28A.230.020 and WAC 180-50-115 in my classroom.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

10. I am aware of environmental education materials available to me in my building.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

11. I use supplemental materials to teach environmental education in my classroom.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

12. I am aware of Project WILD, a national environmental education program, offered to teachers through workshops.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

13. I am aware of Project WET (Water Education for Teachers), a national environmental education program, offered to teachers through workshops.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

14. I am aware of Project Learning Tree, a national environmental education program, offered to teachers through workshops.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

15. I am aware of Nature Mapping, a national environmental education program, offered to teachers through workshops.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

16. I am aware of Salmon in the Classroom, a state-wide environmental education program, offered to schools through the Washington State Department of Fish and Wildlife.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

17. I would participate in an environmental education teacher workshop on my own time for clock hours.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

18. I would participate in an environmental education teacher workshop on my district's time.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
O	O	O	O	O

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