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IDENTIFYING HOW SUMMER CAMP EXPERIENCES AFFECT CHILDREN'S ENVIRONMENTAL LITERACY

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IDENTIFYING HOW SUMMER CAMP EXPERIENCES AFFECT CHILDREN'S
ENVIRONMENTAL LITERACY

by

Quinn Kimbell

AN UNDERGRADUATE THESIS

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IDENTIFYING HOW SUMMER CAMP EXPERIENCES AFFECT CHILDREN'S
ENVIRONMENTAL LITERACY

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University of Nebraska, 2022

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Abstract

Ensuring that children are prepared for environmental issues in the future can be aided by building the skill of environmental literacy. A key factor in building this skill is having natural experiences and creating one's connection and perception of the environment. This paper aims to identify if summer camps increase children's perception of the environment. This was completed by testing children with an environmental perception survey (Children's Environmental Perception Scale) before and after attending a summer camp and assessing environmental pollution knowledge through drawing (modified Draw-An-Environment Test). The rural Nebraska summer camp subjected the children to many outdoor experiences, including experiences with animals, nature, and gardening. Data analysis comparing perception scores before and after the camp showed no significant differences in their perception of the environment. The research also found no correlations between the children's environmental pollution knowledge and their perceptions. However, the children's drawings reveal a base knowledge of environmental pollution issues and a basic understanding of potential solutions. Further investigation into children's understanding of environmental pollution may reveal how the younger generation may engage with increasing environmental issues.

Acknowledgments

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Introduction

When looking forward to the future, what do the people of earth wish to see for our world and collective environment? Who will help us get there, and what decisions will be made to overcome the many challenges ahead? Ready or not, the current and future generations of children will be expected to solve environmental issues. One of the biggest advantages people can give children is the power of knowledge, but something even more important is the ability to take that knowledge and actively make informed decisions knowing the impact it has on all the systems involved. An environmentally literate person acts as such, they are a person who makes “informed decisions concerning the environment and is willing to act on these decisions to improve the well-being of other individuals, societies, and the global environment; and participates in civic life” (NEEF, 2015). **

So, if having the skill of environmental literacy is so important, how can one develop this skill? The route most often taken is to educate children on the issues and the complexity of the environment (Scott et. al. 2021). This approach uses tests and surveys to measure children's environmental knowledge. While this method works great for older children, younger children may find it hard to grasp these issues and be engaged in heavy environmental knowledge and systematic thinking (Iliopoulou, 2016). With this in mind, it is essential to understand that knowledge isn't the only variable contributing to one's environmental literacy. One's awareness and perception of the environment are a critical part of building environmental literacy (McBride et. al. 2013). Before gaining knowledge of the environment, people need to grow connections and understand human interactions with the environment. Additionally, many find that development starts with an open attitude toward the environment. Researchers have found that the more willing and open a person is about learning new material, the more often they will

engage in pro-environmental behaviors and make environmentally literate decisions (Scott et al., 2021).

Do you know what types of people are willing and open? Children. And what better than the outdoors to provide a natural environment for learning? Places such as state parks, nature centers, and summer camps offer an ideal environment for creating a sense of interconnectedness with nature. Creating this interconnection allows the children to include themselves in their environment. When in these environments educators can incorporate activities based on pollution, recycling, and climate change to show that humans really affect what is happening around them.

In a systematic review of environmental education literature and how it influences environmental literacy, 76% of sources use ‘time in nature’ as the approach to their education (Ardoin et al., 2020). Through this, it is identified that many people depend on exposure to nature and outdoor settings to learn about the environment. The downside to this is that many people are losing access to nature, especially populations who need it the most. It was found that many people of color and low-income populations are losing their access to nature throughout the United States (McClure et al., 2020). These populations are likely to not have access to formal environmental education programs. More information must be revealed on the effectiveness of using nature or camps as a medium for environmental education so more people can utilize them as an educational tool.

Therefore, the purpose of this work is to increase the knowledge of how children can be educated on the environment and increase their environmental literacy. This work is important because the discovery and addition of information regarding educating children in environmental literacy can lead to a more knowledgeable society that is prepared to tackle systemic

environmental issues. This study is significant as it builds on existing knowledge of environmental education and aims to test how well a basic connection with one's environment can increase children's environmental literacy. A society educated on the environment is a successful society. This approach is important as it identifies how useful outdoor interaction is as a tool for creating an environmentally literate child population.

Literature Review

Environmental education and environmental literacy are not easily accessible to all children. When environmental education is received, many variables can affect the quality and effectiveness of the education. Firstly, having and finding access to environmental education can be difficult based on several socio-economic factors. One of the more obvious differences is in how money and region influence education. An example of this was identified in a post-camp reflection by a researcher who studied two summer camps in rural Ohio. The researcher found that the camps differed drastically in learning content, food availability, and community connections (Watson, 2014). One camp received organic and fresh produce, while the other received meals from a free school meal program. All of this occurred because of the geographic location of the camps, and the money that was available to them.

Additionally, some campers could not attend camp due to the prices, and cost of transportation to get to the camps. If we want children to grow up environmentally literate, we must be more accessible and equal in the education we can provide. While, yes, the quality of these camps may differ in the rural areas, it is still better than nothing as many rural children often do not have the opportunity to engage in such experiences. Studies show that even short-term camps for rural areas can drastically impact one's scientific literacy and the development of long-term values (Foster, 2011).

Factors that Contribute to Children's Understanding

It turns out that different age groups of children connect with the environment differently. In a study that researched how different variables affected scores in tests completed on summer camp students, it was found that age played a huge role. Younger children, under ten years old, were more likely to have a higher “eco-affinity,” or a likeness towards nature than older children. Studying the socioeconomic factors behind educating children is extremely important as it gives researchers and educators more insight into how they can eventually educate the world better (Larson et. al. 2010). This research also developed a scale to gauge children's perception of the environment through a series of easy-to-understand questions that measure children's eco-awareness and eco-affinity.

Another importance of environmental education is the setting in which the students are educated in. To increase a child's environmental literacy and understanding, an environment that makes them connect with nature is ideal. Many studies have identified that creating place attachment, an attachment or likeness towards a specific setting, allows for a better and deeper understanding of the environment (Hägström et. al. 2020). Some schools, like forest schools in Europe, use a forest as a place of learning. As a result, children become attached to certain parts of the forest, and even specific trees and they have an overall increase in pro-environmental behavior and environmental knowledge (Harris, 2017).

While an outdoor setting can provide higher-quality environmental education, some indoor activities can enable children to better understand urban and modern environments. Using materials related to the environment, like garbage scrapes or recyclable materials, can engage students in their understanding of human-environment interactions (Kuswendi, 2020). In this study, the researchers used pre-test and post-test information to gauge how well the activities

affected the children's understanding. The systems involved with environmental literacy are limitless.

Other than using tests and surveys for measuring environmental literacy factors, some researchers used drawings to understand how people can model the environment of environmental issues. The Draw-An-Environment Test allows the subjects to create drawings that can then be analyzed to reveal trends in a group of people (Moseley et al., 2010). Additional works have had children create drawings of environmental pollution to identify what ecological issues children know about (Özer-Keskin et al, 2020). These methods provide non-traditional ways of gathering people's knowledge about the environment and can act as an additional metric to support quantitative data.

Environmental Perceptions and Decisions

Current literature identifies that the most popular and effective ways to measure children's perception and knowledge of the environment were through a series of surveys, tests, and drawings. Given this, empirical study methods will produce both qualitative and quantitative data. This study will be driven by correlational and explanatory questions, which aim to find the relationship and effect summer camp and environmental literacy have on one another. One of the best ways to test a person's environmental literacy is through short surveys and drawings. The big question is how one gets children to show their environmental literacy through a drawing. Through the Draw-An-Environment Test (DAET) (Moseley et al., 2010), the types of information children know and think about in relation to the environment can be analyzed. While the main focus will be to gauge perception, seeking info on the knowledge of young children could better inform the survey results. Modifying the Draw-An-Environment Test to have the

children draw solutions to environmental issues would show that the children would be able to engage in environmental decision-making.

Research Question and Objective

How do outdoor summer camps affect elementary-aged children's environmental literacy? This is the central question that drives this research. This question will be answered with the objective of identifying how children's perceptions of the environment change throughout an outdoor-based summer camp. It is hypothesized that the treatment of the summer camp will change the children's perception of the environment and it is predicted that their perception will increase. Another objective of this study was to identify how children think about environmental pollution and how well they can propose solutions to environmental issues.

Overview of Contents

The following contents of this thesis contain the methods for measuring children's perception of the environment and how to make a mental model of environmental pollution. It reveals the results of these methods and discusses the meanings found in the results. It concludes with a summary and reflection on this project.

Methods

Research and Design Approaches

This research aims to measure children's perception of the environment before and after engagement in a summer camp. The approach utilizes a pre-and-post-test method to determine whether perceptions change after exposure. Additionally, these methods aim to gather existing knowledge on the children's understanding of the environment and pollution through drawings.

The purpose of this is that it can provide a basis for measurement of the child's environmental literacy as it allows the child to make and propose solutions to environmental issues.

In the literature, it has been identified that surveys and testing are popular approaches to understanding children's knowledge and perceptions of the environment. Most are used to evaluate the success of a program. This approach, similarly, will work as it will evaluate the success of a summer camp program in increasing perceptions of the environment.

Research Setting

For two summer months, children attended a 6-hour day camp on a property similar to a rural farm in Nebraska. The property had a forest, a prairie, a garden, a barn with horses, fruit trees, and many more natural elements. Each week had a different theme focused on connecting, navigating, and understanding nature through the natural setting of the camp. Themes included living on other planets (what is necessary for life), animals, music, art, forest/survival, and indigenous knowledge. Themes each week incorporated children getting involved and using knowledge of nature to engage in the week's theme. The kids spent time interacting with horses and cats daily, working in a garden, eating outside, and playing outside and in the forest. The attendance of the children at the camp varied from week to week. For the summer a consistent group of children were always there. These are the children from whom data was collected. Before the summer camp started, guardians of the attending children were given an informed consent form to fill out for their child to participate in this study. The document included information about this study and the type of data to be collected from the children.

Data collection tools

The approach used to measure children's environmental perceptions utilized the Children's Environmental Perception Scale (CEPS), developed by (Larson et. al. 2011). This scale aims to focus on children's eco-awareness and their eco-affinity. It is a 16-item, 5-point Likert scale that asks easy-to-answer scaled questions to understand where a person is in their environmental perception and understanding. This scale was developed with younger children in mind and considered socioeconomic factors that sometimes negatively influence other scales. This scale does a great job of asking straightforward but strong questions, that a wide variety of individuals can understand and answer well. Higher answers through the survey indicate a higher eco-awareness and eco-affinity. Additional research shows that using Likert scales in children proves very successful as children can easily comprehend the number-scale concept (Mellor and Moore, 2013).

In addition to the survey, another test will be used, a modified version of the Draw An Environment Test, where children will be asked to draw environmental pollution. Following this, children will also be asked to draw a solution to the pollution they have drawn. This test has been adapted from (Özer-Keskin et, a1., 2020) and (Moseley et al., 2010). This test aims to seek children's knowledge and perception of environmental pollution, and their ability to propose solutions to environmental issues. This was chosen as a knowledge metric as traditional testing methods on environmental knowledge were found unsuitable for young children These drawings allow for a more accessible way to determine what the children know about environmental pollution issues.

Data Collection

The data was collected from the children, ages 6-10 years old, during June and July of 2022. This camp ran for six weeks and five days a week. Data collection occurred during the first week of camp (pre-) and the last week of camp (post-). During free time in the afternoon, the children whose parents had consented to data collection were gathered and informed of this study and what they would complete. The children were put in small groups and separated from one another to ensure responses were not shared. For the CEPS survey, the instructions were read aloud, and the survey statements were read aloud, providing enough time for each of the children to think and answer. The survey instrument (Figure 7) included 16 different statements.

After all 16 statements were read and their survey answers were collected, the modified DAET was distributed along with many markers. A copy of the handout used can be found in *Figure 6*. The children were given the instructions to “draw environmental pollution.” After their first drawing, they were instructed to draw a solution to environmental pollution. After the drawings were completed, informal interviews occurred in order to confirm what was in their drawing. A few more data collection sessions occurred until all the children with guardian consent were tested. A few weeks later, during the final weeks of the camp, the second set of data was collected using the same methods as before.

An additional set of drawings were intended to be collected from the children to analyze any changes in their knowledge. However, issues of camp time restraints and COVID became issues. Due to this, the drawings were used to be a tool to recognize patterns in understanding problems and solutions to environmental pollution and act as a knowledge indicator on environmental issues.

Data Analysis

A total of ten complete sets of data were collected from the children. These data sets included a CEPS pre-survey, a CEPS post-survey, and a two-part drawing for each participant child.

Quantitative Analysis

The survey results were to be used to determine if the children's perception of the environment had changed over their time at the camp. Each child's pre- and post-survey scores were input into excel. The children's total score was calculated and converted to an average value out of five. A paired t-test was used to see if, as a group, the children's environmental perceptions had changed. After the paired t-test was conducted in excel, the two-tailed p-value was used to determine whether their score had significantly increased or decreased over the summer camp.

The modified DAET drawings were analyzed using quantitative and qualitative techniques. First, the individual drawings (pollution and solution) were scored using a rubric developed by Moseley and colleagues (2010). This rubric explored the presence of four environmental factors— humans, other life, a physical environment, and a built environment — and whether these factors interacted. Drawings were given one point based on the existence of any of those factors, with additional points awarded if these factors interacted with one another. Two points were given if the factor interacted with another factor, and three points were given if a factor interacted with two or more factors. The total maximum awarded points a drawing could receive was 12 points.

Finally, the scores from the survey and the drawing were placed into scatter plots to reveal any trends in the data. Two plots were created, a pre-survey and drawing plot and a post-survey and drawing plot.

Qualitative Analysis

The drawings were then reviewed to see if the environmental pollution had a matching and logical solution to the illustrated pollution. Additionally, drawings were examined as a group to identify any patterns seen throughout the group. These patterns included specific types of pollution, popular solutions, and environmental factor interactions.

Data Confidentiality

Confidentiality is essential to discuss when working with human subjects, especially children. This study was a project for a class and thus did not require an IRB process. Additionally, no identifiable information was collected from the children in this study. Guardians of the children were required to fill out an informed consent form with their child to participate and have their survey and drawing data collected. All names on surveys or drawings were converted to a number, and the children's names were removed.

Results

The data from the paired t-test (*Figure 1*) showed that the pre-and post-test scores were not statistically significant. The two-tail p-value was found to be 0.513, with a p-value above 0.05 indicating that the differences in the means between the pre-survey and the post-survey were not significant.

Data from the modified DAET revealed that 70% of the children could draw a logical solution to the proposed pollution in their first drawing. In *Figure 2*, the scores received on

DAET show that many of the children scored low, and the highest number of points received was 8 out of 12. Full descriptions of the children’s drawings can be found in *Figure 8*.

The scatter plot comparison of the CEPS scores and DAET scores (*Figure 3*) reveal that there was no relation between the scores.

Camper	Pre	Post	t-Test: Paired Two Sample for Means	
			Variable 1	Variable 2
1	4.188	3.625		
2	3.813	4.188	Mean	4.18125 4.25
3	3.875	3.813	Variance	0.097613 0.147569
4	4.688	4.500	Observations	10 10
5	4.125	4.250	Pearson Correlation	0.596691
6	4.063	4.125	Hypothesized Mean Difference	0
7	4.063	4.000	df	9
8	4.000	4.438	t Stat	-0.68088
9	4.250	4.750	P(T<=t) one-tail	0.25654
10	4.750	4.813	t Critical one-tail	1.833113
			P(T<=t) two-tail	0.513081
			t Critical two-tail	2.262157

Figure 1. (Left) Children’s pre-survey and post-survey scores for the CEPS. (Right) Results of the paired t-test of the CEPS.

Camper	DAET Score	Correct Sollution
1	4	No
2	4	Yes
3	3	Yes
4	2	Yes
5	1	Yes
6	4	Yes
7	1	No
8	8	No
9	7	Yes
10	5	Yes

Figure 2. Table showing scores received on the children’s modified DAET drawings and determining whether their draw solution logically matched the drawn pollution.

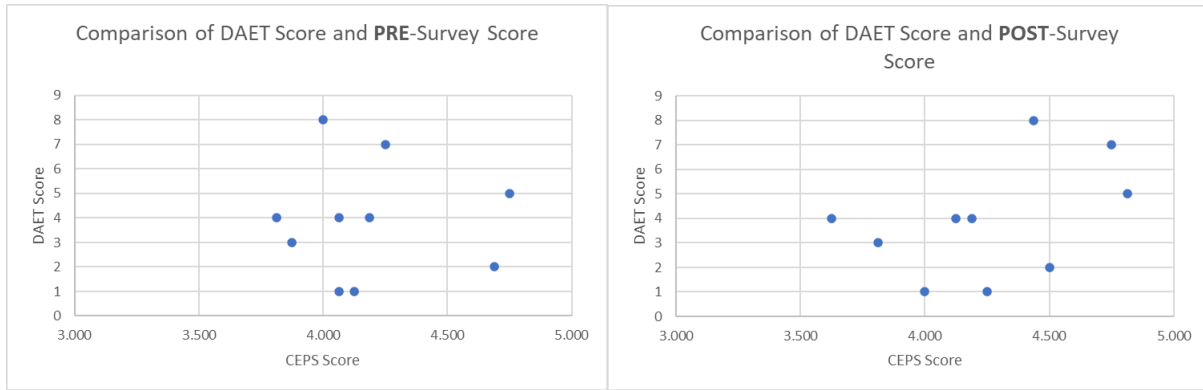


Figure 3. (Left) Scatter plot comparing CEPS Pre-Survey score and DAET Score. (Right) Scatter plot comparing CEPS Post-Survey Score and DAET Score.

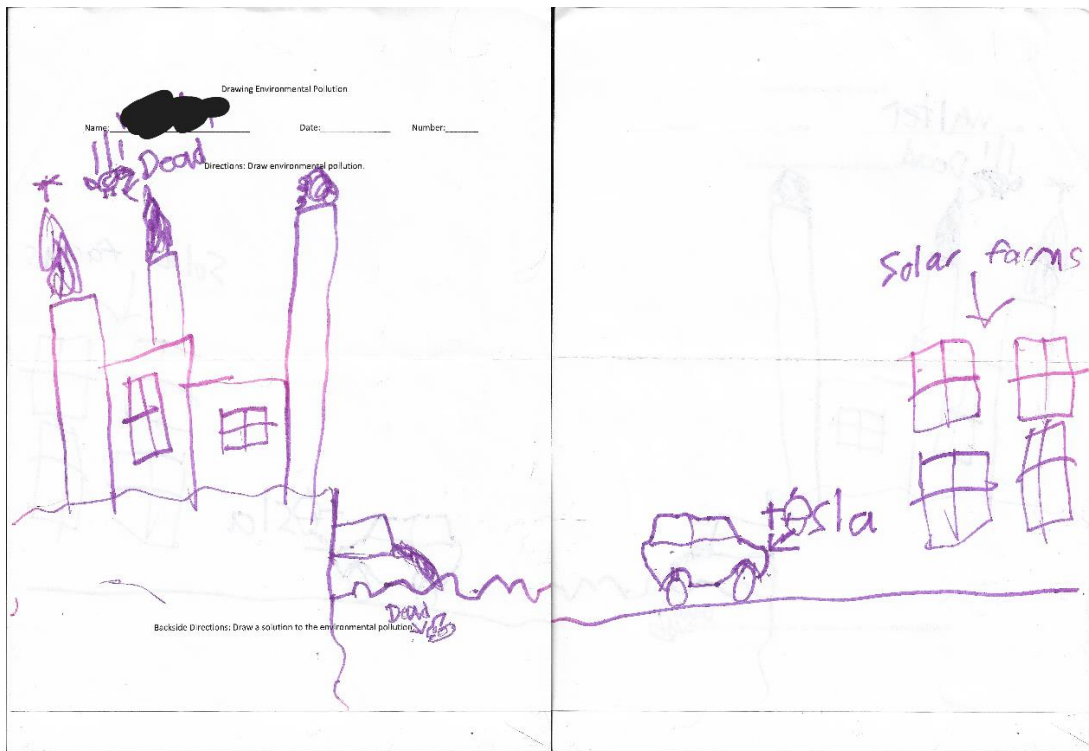


Figure 4. Camper 9's drawing of environmental pollution and their solution. A ten-year-old child's drawing depicting a factory causing air and water pollution. The pollution kills the animals. Their solution is to use electric vehicles and solar panels. Score: 7/12

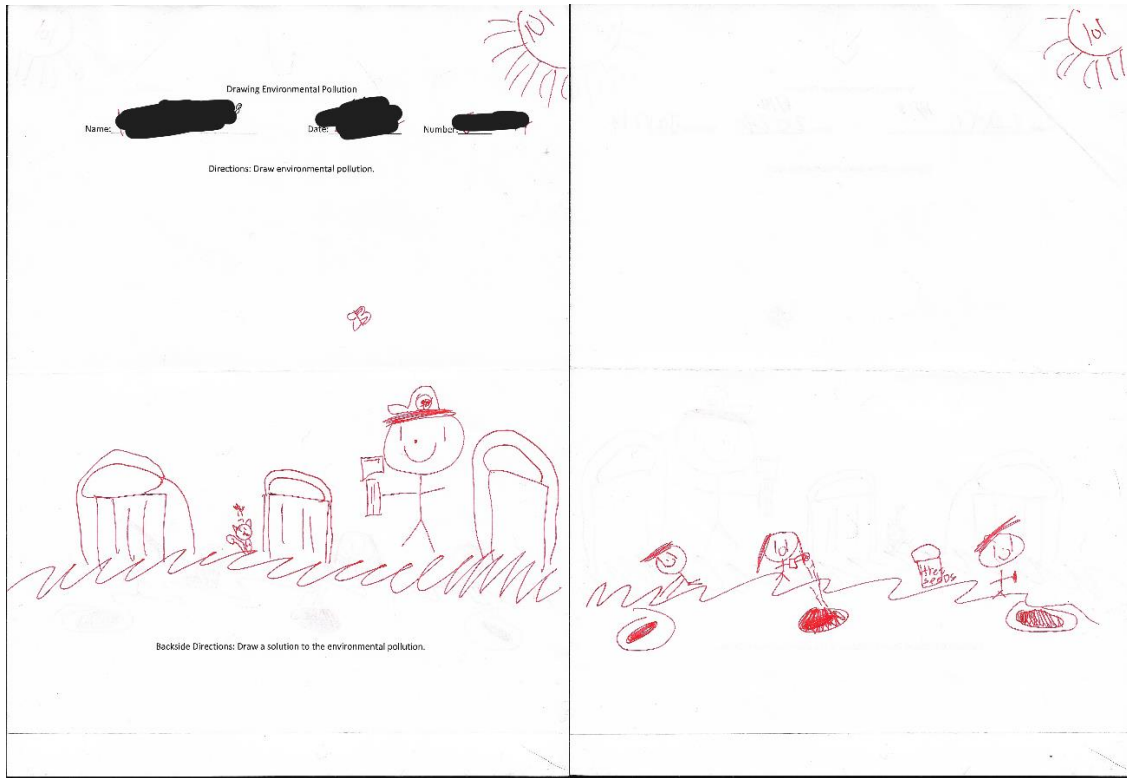


Figure 5. Camper 8’s drawing of environmental pollution and their solution. This six-year-old child’s drawing depicts humans interacting with trash in their environment. Their solution was to plant trees. Score: 8/12

Discussion

The hypothesis and prediction that the children’s perception of the environment would increase over the course of the camp was found not to be true. The results of the paired t-test found that the differences seen in the averages between the group were not significant. This value is determined by the two-tail p-value, which tells us if there was a significant increase or decrease in the scores at the beginning of the camp compared to the end. This result does not match what other literature shows, which finds that children’s perception or understanding of the environment increases with outdoor exposure (Hägström et al., 2020; Harris, 2021; Melis et al.,

2020). The possible reasons why this data set does not reflect this idea are most likely due to the size of the data set, possibly providing less than accurate data.

Due to issues in data collection, the second set of drawings was not obtained, and thus a comparison cannot be made that investigates changes in mental models or knowledge of the environment before and after the camp. However, the single collection of drawings themselves allows for a different form of analysis to happen, which is to reveal patterns across the data set. An unintended byproduct of this study was the development of this modified DAET, which allowed the children to model and depict their knowledge of environmental pollution. The idea of modifying the DAET in this was to create a knowledge metric without actually “traditionally” testing the children on their understanding of environmental pollution. Also, it served as a way to see if the children could propose or at least connect a solution to the environmental pollution they initially drew.

Across the data set, 70% of children drew a logical solution to their initial pollution drawing. For example, this was seen in Camper 5’s drawing (Figure 8). Camper 5 identified electric cars as a solution to regular cars to reduce air pollution. Sixty percent of the children depicted air pollution occurring and 60% drew environmental factors interacting with each other. The main themes expressed in children’s drawings were air pollution, deforestation/planting, and garbage. These ideas can be seen in *Figure 4* and *Figure 5*. These results match other research that found that young children are most aware of the environmental issues of air pollution, deforestation, and garbage (Melis et al., 2020).

Additionally, the results reveal that children in this age range have already developed ideas around environmental pollution and are mainly able to put these ideas into practice and thus may be starting to build skills in environmental literacy. While this drawing data set reveals

small trends in what children think about environmental pollution, further research should be done with a larger group of children to confirm what is seen in this group. Further investigation into how children think about environmental pollution is essential as it could reveal reasons for behaviors and acts toward the environment (Scott et al. 2021).

Summary and Conclusion

Environmental literacy is an essential skill that children should develop to prepare them for future environmental challenges. This study was done to identify how well a rural Nebraskan summer camp increased children's perception of the environment through an outdoor setting. A drawing test revealed that this group of children (ages 6-10 years old) already have knowledge of environmental pollution and can identify ways to solve environmental pollution issues and may be able to engage in environmentally literate thinking. The data analysis (Figure 1) found that outdoor exposure did not increase the summer camp children's perception of the environment and thus did not affect their environmental literacy via perception.

Future Research

There are many aspects of this study that deserve further investigation. Given the results found in this study on children's perception, additional research should be done with a larger number of subjects to confirm whether perception changed from a summer camp experience. Additionally, another data set with children from another population, for example, a public school, could help identify another layer of effectiveness. Another aspect that should be investigated is the modified DAET. This version has not been used in other studies and was the result of a combination of a few studies, Moseley et al. (2010) and Özer-Keskin et al. (2020), but it does reveal similar information found in other studies; it is worth investigating how well it can be used to model children knowledge of environmental pollution.

Limitations

Throughout the study, there were several limitations that may have reduced the reproducibility of the results found. Many of the children who attended the summer camp also attended the school the camp was held at. Experiences at this school may have influenced their perceptions already. Additionally, many of the children at the camp come from high-income families. While these factors could have already impact a child's environmental literacy, the testing procedure accounted for this as it was developed for individuals of all backgrounds. There were also issues regarding the number of children able to participate. Many parents failed to consent to the study, and this reduced the number of children available by a considerable amount. There also was a small outbreak of Covid-19 during the final week of the camp, which resulted in the absence of a few of the child subjects.

Additionally, a few facets of the project did not go as planned; the opportunity to complete such a project again is intriguing. If this project were to be completed again, it would be best to identify another, a larger group of children; there were not enough children in the camp who could participate in this project to allow the results to be generalizable. More children involved would produce a larger amount of data to analyze. Another thing that could have been done differently would have more communication with the people running the summer camp. Had the consent form been sent out earlier in the year, it may have been able to get signed by more parents.

Final Thoughts

Throughout this experience, I found myself in a position I didn't think I'd be in; the position of being a scientist. It was a really fun opportunity to collect and analyze this data and make connections to actual research around this subject. I also learned that a project like this

would be better with some partners. Having advisors were helpful, but it would be cool if I could complete something like this with a team in the future. At some point, the amount of work an individual can put into a project can only go so far, and other minds throughout the process can lead to a better overall project.

This project aimed to connect to the whole idea of sustainability. The essence of this work was to assess the children's ability to engage and think about ideas related to the long-term implications of choice. This study tested the knowledge and perceptions of these children, and these ideas can influence how people engage in pro-environmental behaviors. Further investigation of ways to increase children's knowledge and perception of the environment can better prepare our society to practice environmental literacy and engage in sustainability.

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Appendix

Drawing Environmental Pollution

Name: _____ Date: _____ Number: _____

Directions: Draw environmental pollution.

Backside Directions: Draw a solution to the environmental pollution.

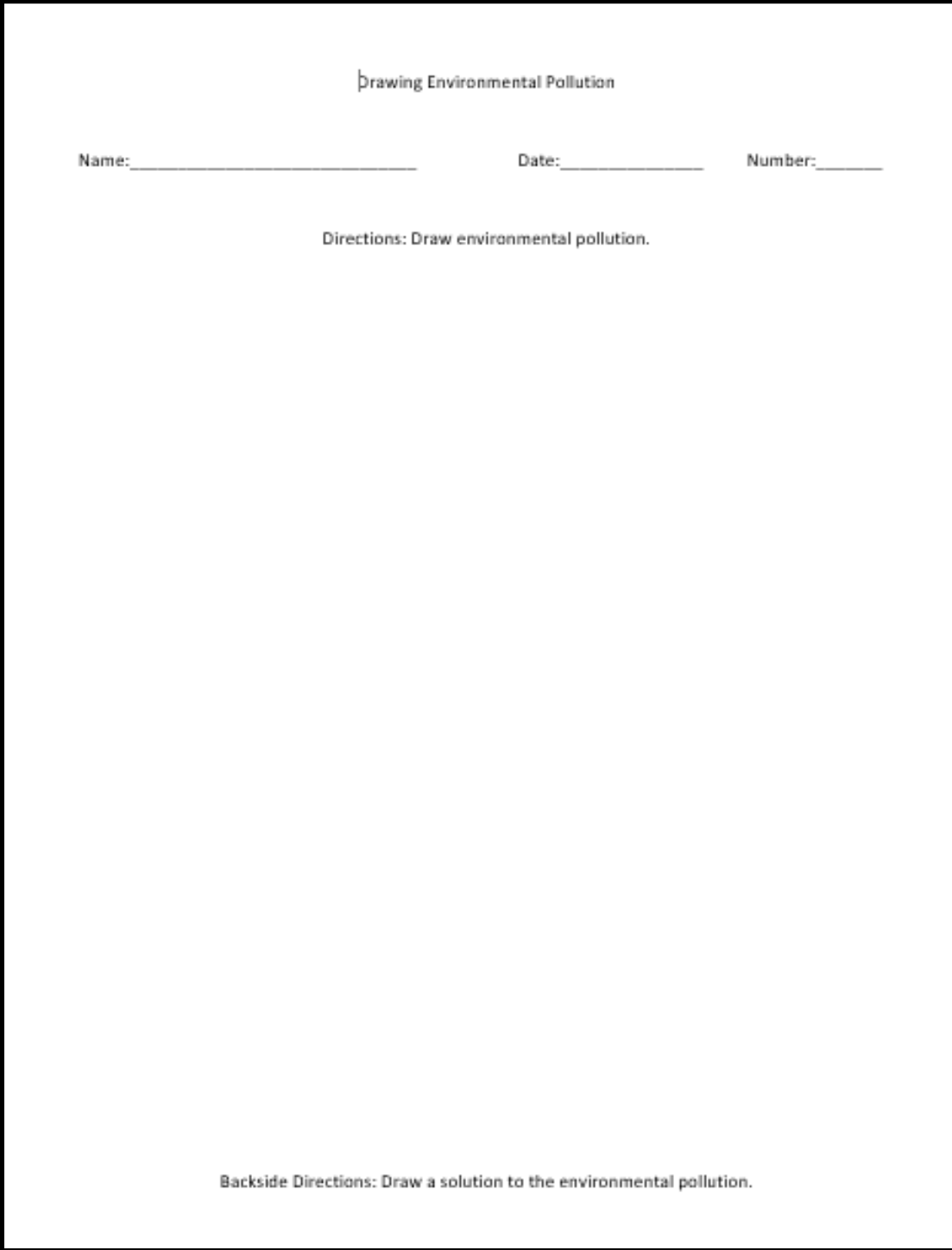
A large, empty rectangular box with a black border, intended for children to draw environmental pollution.

Figure 6- Modified DAET document given to the children for drawing collection

Children's Environmental Perceptions Scale

Name: _____ Date: _____ Number: _____

Directions: This scale will make a series of statement. You will respond with how much you agree or disagree with the statement. You will answer by circling a number, 1-5.

(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Answer Choice Statement	Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
1. I like to learn about plants and animals.	1	2	3	4	5
2. Plants and animals are important to people.	1	2	3	4	5
3. I like to read about plants and animals.	1	2	3	4	5
4. Plants and animals are easily harmed or hurt by people.	1	2	3	4	5
5. I am interested in learning new ways to help protect plants and animals.	1	2	3	4	5
6. People need plants to live.	1	2	3	4	5
7. My life would change if there were no trees.	1	2	3	4	5

Figure 7a- Children's Environmental Perception Scale. This is the document that was given for the children to fill out. Front side

8. I would give some of my own money to help save wild plants and animals.	1	2	3	4	5
9. I would spend time after <u>school working</u> to fix problems in nature.	1	2	3	4	5
10. We need to take better care of plants and animals	1	2	3	4	5
11. I like to spend time in places that have plants and animals.	1	2	3	4	5
12. It makes me sad to see homes built where plants and animals used to be.	1	2	3	4	5
13. I like to learn about nature.	1	2	3	4	5
14. I would help to clean up green areas in my neighborhood.	1	2	3	4	5
15. Nature is easily harmed or hurt by people.	1	2	3	4	5
16. My life would change if there were no plants and animals.	1	2	3	4	5

Figure 7b- Children’s Environmental Perception Scale. This is the document that was given for the children to fill out. Back side

Figure 8. Data collected from children’s drawings. Includes written descriptions of items in the drawings, score of drawings, and identification of a solution.

Camper	DRAWING DESCRIPTION	DRAWING ITEMS AND IDEAS	SOLUTION	Humans	OTHER LIFE	Physical ENVR	BUILT ENVR	SCORE (x/12)	Correct Solution
1	Plastic factory emmiting air pollution. The pollution is killing the birds	Air pollution, birds, plastic, factory, building	No drawing.	0	2	0	2	4	no
2	Cars emitting pollution, oil in the water, garbage pollution in the ocean,	Cars, air pollution, water, oil, solid waste	Electric vehicles, clean the oceans.	0	0	2	2	4	yes
3	Cars emmiting pollution humans littering	Cars, pollution, humans, trash, grass	Electric vehicles, humans putting trash into a garbage can.	1	0	1	1	3	yes
4	Trash next to an axolotyl	Animals, trash	Clean Meixco City	0	1	0	1	2	yes

			(where the axolotyls live)						
5	Cars being filled up with gas with an X over the picture	car, gas	Charge car with electric energy with a check mark over the image	0	0	0	1	1	yes
6	Big vehicle producing pollution	Car/truck, pollution	Ride bikes	2	0	0	2	4	yes
7	Drawing of a bird	Bird	No drawing	0	1	0	0	1	no
8	Garbage in the environment. Interaction with humans and animals. Human holding garbage.	Garbage, humans, squirrels, butterfly, sun, grass.	People planting tree seeds into the earth. Multiple people healing.	3	1	2	2	8	no

9	Factory polluting the air and water. The air pollution is killing the birds. The water pollution is killing the fish.	Humans, Buildings, Factories, Animals, Birds Fish, Water, Air Pollution, Water Pollution	Use solar farms and electric vehicles	0	2	2	3	7	yes
10	Humans cutting down trees.	Humans, trees, destruction	Soulution: Do not cut trees/ plant more trees.	2	2	1	0	5	yes