International
Journal of
**Human
Sciences
Research**

LEVEL OF AWARENESS IN ENVIRONMENTAL MANAGEMENT PRESENTED BY PRIMARY AND SECONDARY STUDENTS OF EDUCATIONAL INSTITUTIONS IN THE PROVINCE OF TACNA

Brígida Dionicia Huallpa Quispe
Ciudad de Tacna
https://orcid.org/0000-0002-9729-7482

Walter Merma Cruz
Universidad Nacional de Moquegua- Perú
Escuela Profesional de Ingeniería Pesquera
Ciudad de Ilo – Moquegua
https://orcid.org/0000-0003-3742-6235

Lucy Goretti Huallpa Quispe
Ciudad de Ilo
https://orcid.org/0000-0001-7260-2148

Patricia Matilde Huallpa Quispe
Ciudad de Tacna
https://orcid.org/0000-0003-1456-2015

Nelly Azucena Sotelo Medina
Ciudad de Ica
https://orcid.org/0000-0002-5183-8298

1

Abstract: The research begins with the question: What will be the level of awareness in environmental management of students at the primary and secondary level of the Educational Institutions of the province of Tacna? aiming to propose strategies to generate awareness in environmental management, with environmental awareness as the main variable, the study having three stages: field diagnosis, systematization and proposal development, as results and conclusions: There are differences between the entry test and exit from primary and secondary level, observing a variability of grades upon entry and exit, comparing the means and using the T-Student; It shows us a p-value less than 0.05, so there is a significant difference between both tests; The Kolmogorov-Smirnov normality test, according to the degrees of freedom, indicates that of the total 382 people applied the test, with 190 women and 192 men, with p-values less than <0.05; There is a level of environmental awareness, being passing with a basic level, the 75% percentile is between grade 16 and 25% is in a range of grade 11; then the strategic proposal to influence awareness in environmental management must be built from 3 strategies such as: improving positive environmental behavior and knowledge, teacher training, environmental monitoring in I.E.

Keywords: environmental awareness.

INTRODUCTION

In identifying the problem we can mention that various studies have shown the concern of various world authorities for the planet's environmental problems, due to the fact that many human attitudes developed throughout history have been concerned only with the interest of natural resources. without considering the impacts that we generate with different activities on nature, which is why, in recent times, affected and contaminated spaces, animals and species have been observed unfavorably affected. Therefore, several countries and authorities on different continents develop plans and projects in order to solve problems, but these efforts do not achieve relevant changes.

Also, we observe concern about the ineffectiveness of the various works, this mainly due to the indifference that many people do not participate in solving these problems through their own actions.

The stage of childhood, adolescence and youth, from childhood to youth, is a decisive stage in the development of a person, because it is at this stage where the education received lays the foundations for their conduct and behavior and for the person, level., for example, in society, because the objective is to provide them with an education that develops their basic competence, from which it becomes the learning that society needs to face environmental problems, this way, after obtaining education, a person can optimally integrate into society. (Zamora, 2014).

In recent years, Peru as a country has also shown the growth of its environmental problems, where the degradation of green areas and environmental pollution seriously threaten the environment, which is why the United Nations, as a participating member, is committed to the implementation of measurements. that allow solving environmental problems through the implementation of environmental policy, through the training of citizens who are aware of caring for the environment, according to Carrasco and La Rosa (2013).

The educational institutions of the province of Tacna follow a curriculum that we could say has a deficiency in developing aspects of environmental awareness, since children often do not take care of the environment that surrounds them, sometimes breaking plants, trampling them, thinking it's part of

their game; which reveals to us an idea of the research related to: Environmental awareness in primary and secondary Educational Institutions in the province of Tacna. For this reason, a research question was: What will be the level of awareness in environmental management presented by students at the primary and secondary levels of the Educational Institutions of the province of Tacna? Therefore, the objective was: "Evaluate level of awareness in environmental management presented by primary and secondary students from Educational Institutions in the province of Tacna." Based on it, develop a strategic proposal to influence students' environmental management awareness.

The only variable is environmental awareness, environmental problems, severity of the case, effects generated and criticism of the case are constantly addressed, but we can improve environmental awareness with educational induction strategies, then, the dimensions are: knowledge, procedure, habits and attitudes.

FRAMEWORK:

ON AN INTERNATIONAL LEVEL

Paladinez (2013). Naturalistic intelligence and environmental responsibility in seventh grade students of an Algerian Agricultural Institution. (Master's Thesis). University of Manizales; Colombia. Ethnographic research and correlational design. A questionnaire and an observation form were used as data collection tools. They drew the following conclusions: The sample studied, to which it was applied, achieved only a degree of understanding of the role of man and the environment in concepts and ideas, but this could not be translated into actions in the year. The work carried out is related to the environment. responsibility, an issue that was not addressed, because such a moral concept refers to a human action, where the

author assumes its consequences, but since the action was not carried out, there is no responsibility as such. This makes sense, if not expressed theoretically, because questions about morality and responsibility only have a moral significance in human activities, which in the considered case would encourage future activities in the field of environmental protection. Comment: The global lack of concern about the problem of environmental pollution, which irreversibly affects the planet, is notorious. Due to ignorance, people do not have environmental responsibility, so they behave negatively. The burning of waste and the excessive use of plastic are the most common forms of pollution and, in turn, the most polluting.

AT THE NATIONAL LEVEL

Huilca, M. (2019) tried to know in his research the relationship between environmental awareness and healthy lifestyles in 5-year-old children from primary school 33 of La Tinguiña-Ica in 2018, it was a descriptive correlational study., the researcher used a correlational model. The population was made up of 161 children from primary school 33 of La Tinguiña-Ica in 2018, and the sample was made up of 52 children, whose number was selected using a non-probabilistic sampling technique. For data collection, an environmental awareness scale and a healthy lifestyle scale were developed. Data processing used descriptive statistics to present the results in the form of Tables and figures; in addition to inferential statistics for hypothesis testing. The results demonstrated that there is a direct and significant relationship between environmental awareness and healthy lifestyles in 5-year-old children from primary school 33 of Tinguiña-Ica in 2018. The Rho Spearman correlation was r = 0.719.

Cornejo, A. (2019) manages to know the effect of the application in his study

"Application of environmental education in the management of solid waste by students of the Faculty of Education of the Daniel Alcides Carrión National University, Pasco 2018". Environmental education on solid waste management for students of the Faculty of Education of the Daniel Alcides Carrión National University, Pasco 2018. For this, descriptive statistics are used with a quasi-experimental pretest and posttest design with two groups, to study the data under study. . The sample is intentionally obtained with inclusion and exclusion criteria in already formed groups of 40 students from the second semester of part A and C of the UNDAC Vocational School. The preliminary test shows that there are very weak or no gaps in the knowledge of the study population about environmental education and solid waste management. Used Student's "t" statistical test and selected a significance level of 0.05, the result shows that the p value is less than the significance level (0.004 and < 0.05). Therefore, the null hypothesis is rejected and it is concluded that there are statistically significant differences between the scores before and after applying the independent variable; The conclusion is that the implementation of environmental education has a positive effect on solid waste management on students of the UNDAC Pasco Faculty of Education (2018).

AT REGIONAL LEVEL

Cartagena R. (2018), prepares the thesis "Environmental awareness and thematic aspects in the training of engineering students in a public and private university in the Tacna region, 2017; The objective is to know if environmental awareness is understood as a system of experiences, the knowledge and experiences that students actively use in their relationship with the environment are opposed to whether they were the result of their education. The type of study used was a cross-sectional descriptive design, a sample of 356 engineering students from the Jorge Basadre Grohmann National University (58%) and Tacna Private University (42%), to measure environmental awareness the survey technique was used and The content of the summaries was analyzed using a checklist, then the responses were classified to determine the level of environmental awareness in its four dimensions: affective, cognitive, conative and active. The results showed that there is no relationship between environmental awareness and the content of sumillas ($p<0.05$). In general, all dimensions of students' environmental awareness are average, although cognitive awareness stands out more in low-level students. Significant differences were also found in the dimensions of environmental awareness of the students ($p<0.05$), highlighting the affective dimension with the best average. Likewise, the content of the sumillas follows the environmental aspects defined in the environmental policy guidelines. Finally, it is concluded that the environmental awareness of students from public and private universities is different ($p<0.05$), which indicates that students from public universities have better environmental awareness than students from private universities.

MATERIALS AND METHODS

The research level is non-experimental and quantitative, descriptive level; Because, the research design is relevant to the variable of environmental awareness.

TREATMENTS:

T1 = Students chosen for treatment without induction

T2 = Students after undergoing induction treatment

Observable variables:

1. Knowledge of caring for the environment

2. Behavioral habits in relation to the environment

POPULATION AND SAMPLE
STUDY POPULATION

Composed of students from the primary and secondary level of Educational Institutions of the province of Tacna, according to the Statistics unit of the Regional Directorate of Education as of 2020, it reports for UGEL Tacna, 34,953 students at the primary level and 26,982 students at the secondary level, The total population being 61,935 students, both state and private.

SAMPLING

The sample according to population size was 382 students in total, with a confidence level of 95% to ensure the certainty of the study, it will be distributed proportionally according to the number of students from each educational institution in the province of Tacna.

MATERIALS AND/OR INSTRUMENTS:

Technique: Survey

The researcher collects a set of data using a questionnaire, which is therefore pre-planned without changing the context or controlling the process; composed of 25 items divided into the following dimensions: Cognitive, Affective and Active. With Yes and No response options, carried out in 10 primary and 7 secondary institutions.

Instrument: Environmental awareness questions, intervals in Table 1.

RESULTS
a) Environmental awareness in educational institutions at the primary level

Tables 2 and 3 present statistical results of the entry (before induction) and exit (after induction) tests of the primary level of the Educational Institutions of the province of Tacna. In both cases approval.

Graph 1, which clearly highlights the difference between the entry and exit tests at the primary level of the Educational Institutions of the province of Tacna, observing the variability of the grades upon entry (before the awareness induction is applied), the grade average of all participating Educational Institutions is 12.6 and exit (after awareness raising), the average grade of all participating Educational Institutions is 16.6; which reveals that the primary level does pass the test before induction or sensitization on environmental awareness, and also afterwards.

b) Environmental awareness test before and after in Secondary

At this point, the variability in the level of environmental awareness before and after using the didactic sequence strategy in secondary educational institutions in the province of Tacna is presented, statistically observing the variations in said educational level, which are reflected in Tables 4 and 5.

Tables 4 and 5 present the statistical result of the entry test with an average of 15.02 and 16.41 in the exit test of the secondary level of the Educational Institutions of the province of Tacna.

Figure 2 highlights the difference in entry and exit of the secondary level of Educational Institutions in the province of Tacna.

c. Kolmogorov-Smirnov test to assess the level of consciousness

To evaluate the results obtained from the level of awareness about environmental management, the Kolmogorov-Smirnov test was applied, which allows verifying variables in a sample.

Tables 6 and 7 show that the p-value result is <0.05, which gives rise to a normal distribution of the data and can be taken into account to make the comparison

5

LEVEL	BREAK	DESCRIPTION
Low	[0;10]	They have a low level of environmental awareness
Regular	[11;13]	They present a regular level of environmental awareness
High	[14;20]	They present a good level of environmental awareness

Table 1 - *Categorization of intervals of variable X (Environmental awareness) and variable Y (Healthy living habits)*

Note:The Table shows us the intervals by level of consciousness.

Result of test of entry	Descriptive		Statistics									
			1	2	3	4	5	6	7	8	9	10
	Average		11.96	12.91	14.84	11.88	12.64	12.59	12.46	11.73	12.46	12.61
	95% confidence interval for the mean	Lower limit	7	11.14	13.44	10.27	10.89	11.39	10.87	9.77	11.10	11.22
Primary		Upper limit	5	14.69	16.24	13.48	14.39	13.80	14.05	13.69	13.82	13.99
	Average cropped at 5%		0	12.95	14.89	11.80	12.66	12.61	12.46	11.64	12.40	12.56
	Median		11.50	12.00	15.00	11.00	12.00	12.00	12.00	11.00	12.00	11.50
	Variance		17.95	16.81	11.47	14.46	17.91	7.40	15.46	19.54	10.35	12.77
	Standard deviation		4.24	4.10	3.39	3.80	4.23	2.72	3.93	4.42	3.22	3.57
	Minimum		6	6	9	6	6	7	6	6	7	7
	Maximum		19	19	20	19	19	18	19	19	19	19
	Range		13	13	11	13	13	11	13	13	12	12

Table 2 - *Primary level entry test results*

Note: The Table shows the data comes from the SPSS statistical program

Result of test of exit	Descriptive		Statistics									
			1	2	3	4	5	6	7	8	9	10
	Average		16.71	16.61	17.00	16.42	16.72	16.77	16.50	16.64	16.79	16.18
	95% confidence interval for the mean	Lower limit	.92	15.78	16.32	15.54	15.95	16.01	15.75	15.78	16.09	15.42
Primary		Upper limit	.50	17.44	17.68	17.30	17.49	17.53	17.25	17.50	17.50	16.93
	Average cropped at 5%		.79	16.68	17.10	16.46	16.81	16.85	16.56	16.71	16.87	16.20
	Median		18.00	18.00	18.00	18.00	18.00	17.00	17.00	18.00	17.50	16.00
	Variance		3.520	3.704	2.750	4.341	3.460	2.946	3.460	3.766	2.781	3.782
	Standard deviation		1.876	1.924	1.658	2.083	1.860	1.716	1.860	1.941	1.668	1.945
	Minimum		13	13	13	13	13	13	13	13	13	13
	Maximum		19	19	19	19	19	19	19	19	19	19
	Range		6	6	6	6	6	6	6	6	6	6

Table 3 - *Primary level exit test results*

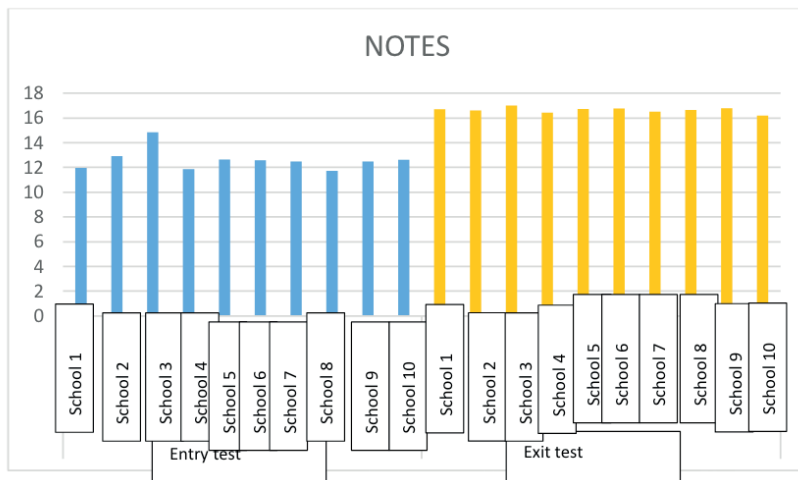Note: The Table shows test data results entered into the SPSS statistic

Figure 1 - *Results of the entrance test and exit test, primary level*

Note: The figure shows the differences between Tables 2 and 3

Result of exit test	Descriptive		1	2	3	Statistics		6	7
	Average		13.79	14.50	15.09	14.95	16.33	15.00	15.50
	95% confidence interval for the mean	Lower limit	12.36	12.58	12.53	13.99	13.01	13.01	
		Upper limit	16.64	17.61	17.37	18.67	16.99	17.99	
	Average cropped at 5%		13.88	14.67	15.32	15.16	16.70	15.22	15.78
Secondary	Median		12.00	17.00	19.00	17.00	19.00	17.00	19.00
	Variance		13.29	20.89	32.18	25.16	22.12	19.10	28.26
	Standard deviation		3.65	4.57	5.67	5.02	4.70	4.37	5.32
	Minimum		7	7	7	7	7	7	7
	Maximum		19	19	19	19	19	19	19
	Range		12	12	12	12	12	12	12

Table 4 - *Secondary level entrance test results*

Note: The data shown in the Table come from the SPSS statistical program

Result of exit test	Descriptive		Statistics						
			1	2	3	4	5	6	7
	Average		16.21	16.55	16.41	16.47	16.67	16.24	16.35
	95% confidence interval for the mean	Lower limit	.27	15.70	15.55	15.59	15.80	15.35	15.45
		Upper limit	.6	17.40	17.27	17.36	17.54	17.12	17.25
	Average cropped at 5%		16.23	16.61	16.45	16.53	16.74	16.27	16.39
Secondary	Median		16.00	17.00	16.50	17.00	17.50	17.00	17.00
	Variance		3.842	3.313	3.777	3.374	3.059	3.790	3.713
	Standard deviation		1.960	1.820	1.943	1.837	1.749	1.947	1.927
	Minimum		13	13	13	13	13	13	13
	Maximum		19	19	19	19	19	19	19
	Range		6	6	6	6	6	6	6

Table 5 - *Secondary level exit test results*

Note: The data shown in the Table come from the SPSS statistical program
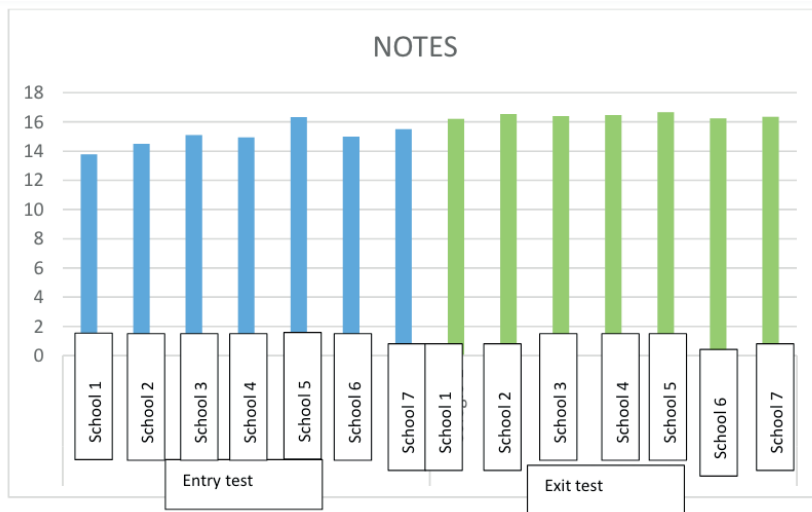
Figure 2 -Results of the entrance test and exit test, secondary level

Note: The figure presents the data from Tables 4 and 5.

Normality tests			
Quizz	Kolmogorov-Smirnov[a]		
	Statistics	gl	Sig.
Environmental education	0.255	382	<.001

Table 6 - *Kolmogorov-Smirnov Normality Test on Environmental Education*

Note: The Table presents the normality test according to SPSS statistics

Normality tests			
Gender	Kolmogorov-Smirnov[a]		
	Statistics	gl	Sig.
Woman	0.272	190	<.001
Man	0.239	192	<.001

Table 7 - *Kolmogorov-Smirnov normality test on Environmental Education differentiated by sex*

Note: The Table presents tests of normality by sex with the SPSS statistic

Quizz of environmental education		
N	Valid	382
	Lost	0
Half		12.66
Median		13.00
Fashion		14
standard deviation		1.342
Minimum		10
Maximum		14
Percentage	25	11.00
	50	13.00
	75	14.00

Table 8 - *Results of the Environmental Education test, Frequency table, with percentage percentiles*

Note: The Table shows a test (questionnaire) on Environmental Education using the SPSS statistic

	Environmental education				
	Score	fi	%	% hi	% Hi
Valid	10	17	4.5	4.5	4.5
	11	107	28.0	28.0	32.5
	12	8	2.1	2.1	34.6
	13	108	28.3	28.3	62.8
	14	142	37.2	37.2	100.0
Total		**382**	**100.0**	**100.0**	

Table 9 - *Input test result, absolute frequency (fi), relative frequency (hi) and cumulative relative frequency (Hi)*

Note: The table shows input test results, according to SPSS statistics

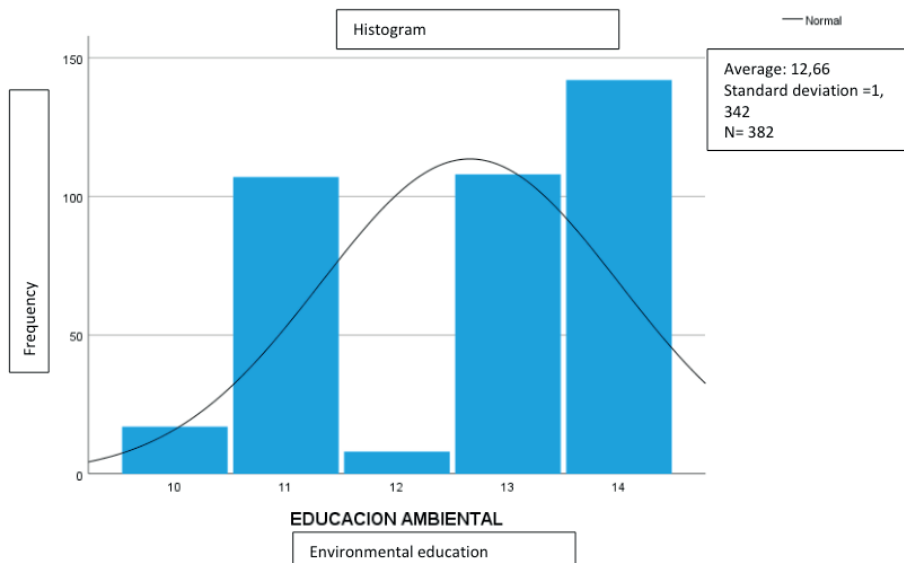**Figure 3** - *Histogram, of the general results of the total number of students; of the questionnaire on Environmental Education*

Note: The figure shows the graph according to Table 16 to 18

Districts of Tacna			N	Average
Result of the environmental questionnaire				
TACNA	primary		96	12.71
	secondary		60	12.62
SAMA	Primary		47	12.68
CALAMA	primary		25	12.56
CORONEL GREGORIO ALBARRACIN			25	12.68
POCOLLAY	primary		22	12.50
	secondary		20	12.75
INCLAN	primary		28	12.68
	secondary		18	12.44
CIUDAD NUEVA	secondary		22	12.77
ALTO ALIANZA	secondary		19	12.68

Table 10 - *Secondary level exit test results*

Source: The table shows level of awareness by districts of the province of Tacna.

between the Environmental Education test (questionnaire). The degrees of freedom are also observed, which are the total number of people who performed 382, with 190 women and 192 men, with p-values less than <0.05; ratifying the result of the general normality test of the Environmental Education test. That is, if the "p" value is less than or equal to the significance level, the null hypothesis is rejected and it is concluded that the data are not normally distributed.

HYPOTHESIS:

H0: There will be no positive knowledge in the Environmental Education test, which will be carried out in the Educational Institutions of the Tacna region.

H1: There will be positive knowledge in the Environmental Education test, which will be carried out in the Educational Institutions of the Tacna region.

INTERPRETATION OF SPECIFIC HYPOTHESIS 2:

In the results of Tables 8 and 9, with respect to the second specific hypothesis, an average of 12.66 was obtained in the average grade of the students, with the result being passing, but with a basic level in their knowledge of Environmental Education. But observing the percentiles, 75% are between grade 14 and 25% are in a range of grade 11. All this gives rise to accepting the alternative hypothesis "There would be positive knowledge in the Environmental Education test, which was carried out in the Educational Institutions of the province of Tacna"; We can also see this in Figure 3 of the histogram.

ENVIRONMENTAL AWARENESS BY DISTRICTS OF THE PROVINCE OF TACNA AFTER INDUCTION.

In Table 10, it is observed that the district of Tacna obtained the best average

in the Environmental Education test at the primary level with 12.71. It is observed 12.77 for the result of the Environmental Education test.

CONCLUSIONS

According to the results obtained and the analysis carried out, the following conclusions were reached:

- From a total sample of 382 students evaluated, it is observed that the level of environmental awareness presented by primary and secondary students from Educational Institutions in the province of Tacna was carried out with the Kolmogorov-Smirnov normality test, according to the grades. of freedom indicates that of the total 382 people who applied the test, with 190 women and 192 men, it has a p-value less than <0.05; The alternative hypothesis is accepted that "there is a level of environmental awareness in Educational Institutions in the province of Tacna."

- Statistical data reveal that primary and secondary schools have varying degrees of environmental awareness, but they are in regular order and students have been found to develop attitudes, beliefs and behaviors that protect the environment. Popularize care for the environment and natural resources.

- Environmental awareness as a national, regional and local objective must be guided by actions that strengthen the basic approaches in: a) Promoting the sustainable management of nature and adopting specific, effective measures to combat climate change b) Achieving decent employment and sustainable development in accordance with the natural environment c) Evaluate the effects of global warming by region d)

The problems of the ozone layer and e) The lack of water on the planet, supported by the 17 UN objectives on sustainable development.

REFERENCES

Carrasco, M. y La Rosa, M. (2013). Conciencia ambiental: Una propuesta integral para el trabajo docente en el II ciclo del nivel inicial (Tesis de pregrado). Recuperado de http://tesis.pucp.edu.pe/repositorio/handle/123456789/5147.

Cartagena R. (2018), "Conciencia ambiental y las sumillas de las asignaturas en la formación de los estudiantes de pregrado de las carreras de ingeniería de una universidad pública y privada de la Región Tacna, 2017. Escuela Postgrado UNJBG – TACNA.

Cornejo, A. (2019) en su estudio de "Aplicación de la educación ambiental en el tratamiento de los residuos sólidos por los estudiantes de la Facultad de Ciencias de la Educación de la Universidad Nacional Daniel Alcides Carrión, Pasco 2018". UNIVERSIDAD NACIONAL DE EDUCACIÓN Enrique Guzmán y Valle Alma Máter del Magisterio Nacional ESCUELA DE POSGRADO.LIMA. PERU.

Huilca, M. (2019), Conciencia ambiental y hábitos de vida saludable en niños de 5 años de edad de la Institución Educativa Inicial N° 33 de La Tinguiña-Ica, 2018.UJCMA. Moquegua. Perú.

Paladínez L. (2013). Inteligencia naturalista y responsabilidad ambiental en estudiantes de séptimo grado de una Institución Agrícola Argelina. https://ridum.umanizales.edu.co/xmlui/handle/20.500.12746/991.

Zamora, A. (2014). Proyecto pedagógico de acción docente. Importancia de la educación ambiental en preescolar. (Tesis de grado) Universidad Pedagógica Nacional, Morelia.