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Environmental Education Perception Index (IPEA)[1]headed for sustainable development: A study in Elementary Schools in the city of Guajará-Mirim, Rondônia (Brazil)

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[1] The translator kept the Portuguese nomenclature IPEA (Índice de Percepção da Educação Ambiental)

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Abstract*— Goal:** *To analyze in the framework of elementary State schools located in Guajará-Mirim, the environmental education practice in reference of the National Curriculum Parameters for Education in Brazil which may bring new elements allowing to infer on the prospects for the future generations of a region highly committed to the environmental policy instituted in the State of Rondônia (Brazil) along its trajectory.* ***Method: *It has been used a construction method of Environmental Education Perception Index (IPEA) which has followed the logic of factorial analysis.* ***Results:*** *In general, the IPEA (Teachers) submitted a result considered "good". About the students, the result was troubling due to 75% of the of the schools studied submitted results considered only "regular". The average IPEA of formal public education at the fundamental level was considered "regular" at the IPEA of 0.597.* ***Final Considerations:*** *It does not notice an educational coherence for what is the strongest point in Guajará-Mirim: environmental preservation. It was possible to observe that the Guajaramirense society is experiencing a moment of institutional crisis, of values, ethics and behavior which reflects directly on the citizens' attitudes that do not correspond to the status of a region with a strong environmental policy.*

***Keywords*— IPEA. Environmental Policy. Environmental Education.**

I. INTRODUCTION

There are new proposals for solving the environmental challenges facing the planet today. Environmental problems, according to Dias (2004), are individual and collective responsibility. The author emphasizes that at the end of the day, we must have done something for improving and maintaining environmental quality.

In Brazil, environmental education has been taken for quite a while into consideration among the speeches and discussions in matters of proposing institutional action in search of the planet's balance. For Moraes (2012) there is a consensus in the educational community that environmental education is fundamental to achieve the ideal of a sustainable society.

The city Guajará-Mirim located in the State of Rondonia holds the title of "The Green City". This title had been granted by the Biosphere Environmental Institute in May 2009 in the city of Rio de Janeiro due to the recognition of the significant number of legally protected areas that comprise approximately 92% of the city Guajará-Mirim which are distributed by Conservation Units of Nature (CU's) and Indigenous Lands (IL's).

It is important to highlight the following questions: how is the environmental education practice at the schools in Guajará-Mirim? What is its relationship with the sustainable development based on the perspective observed among the student staff, faculty and professionals with technical degree of the schools?

The general goal of this work was to analyze the environmental education practice in the context of the basic education of the State schools in Guajará-Mirim in reference of the National Curricular Parameters for Education in Brazil which may bring new elements allowing to infer on the prospects for the future generations of a region highly committed to the environmental policy instituted in the State of Rondonia along its trajectory.

II. THE NATIONAL CURRICULUM PARAMETERS AND ENVIRONMENTAL EDUCATION: THE BASES OF BRAZILIAN FORMAL EDUCATION

The National Curriculum Parameters for Education in Brazil are a set of documents. In the year of 1997 have been implemented throughout the national territory as a reference for renewal and re-elaboration of the curricular proposal. (BRASIL, 1997a).

The National Curriculum Parameters for Education in Brazil are structured in specific documents at each stage of school education: Childhood Education, Primary Education and Secondary Education, addressing the contents of the different areas of knowledge. In other words, from elementary to middle school the students must study Portuguese language, mathematics, the physical and natural world, social and political reality, emphasizing the Brazilian situation (BRASIL, 1997a, p.14)

In the year of 1997 the National Curriculum Parameters for Education in Brazil (PCNs)[2] were approved by the National Education Council after two years of discussions. The PCNs are a subsidy to support the school during the development of its educational project inserting procedures, attitudes and values in the school community, as well as the need to deal with some urgent national issues of national scope, called cross-cutting[3] themes: environment, ethics, cultural plurality, sexual orientation, work and consumption, with the possibility of schools and/or communities electing others of importance relevant to their reality. (BRASIL / MEC / SECAD, 2007).

The PCN, "*The option for working with the environment theme brings the need to acquire knowledge and information on the part of the school so we can*

[2] The translator kept the Portuguese nomenclature PCNs (Parâmetros Curriculares Nacionais).

[3] According to UNESCO, either transversal themes or cross-cutting themes are correct.

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develop a suitable work with students" (Brasil, 1997, p. 35 b).

The official documents point out that, "by the nature of environmental issue, acquisition of information on the subject is a necessity for all". It must not affirm teachers should "know everything""to develop" projects but they should be willing to learn about the subject for better sharing the knowledge with their students.

The education is seen as an indispensable element which helps transformation of environmental consciousness. At school the environmental content must be integrated into the curriculum through cross-cutting themes, because they will be treated in different areas of knowledge, so to permeate the entire educational practice and, at the same time, create a global and comprehensive vision of the environmental issue. (TOMAZELLO, 2001)

The Department of Education of Brazil[4], through the National Curriculum Parameters (PCN), seeks to bring the schools closer to reality surrounding the proposal of work with cross-cutting themes in education which should be incorporated into school practice to avoid extracurricular and disarticulated treatment. In this way, the inclusion of environmental education in the school curriculum, proposed by PCNs encircling the environment theme implies an educational innovation process (BRASIL, 1998).

Schools are invited to find a solution to the environmental crisis through activities directed to environmental education. They can follow the National Curriculum Parameters (PCN) - Environmental Health referring to the first four grades of fundamental education, which aims to assist the teacher while their work. It seeks to share in the daily effort to make children able to have the knowledge they need to grow as fully recognized citizens and aware of their role in our society (BRASIL, 1997b).

It is necessary for the whole school community take responsibility about environment issues and take over objectives that will be accomplished in different kinds of actions which may involve everyone where each person will have a special role to play. (BRASIL, 1997b).

III. PROPOSAL for AN ANALYTICAL MODEL

The parameters used during the research corresponded to the perception evaluation based on teachers' environmental attitudes of the studied schools; the practices and experiences developed by teachers inside the classrooms with regard to environmental education; and the young elementary school students' perception of each involved school in this research and about how they recognize that the environmental education practices are being achieved among these chosen schools, capable of generating the Environmental Education Perception Index (IPEA).

For this purpose, factorial analysis had been used as a mechanism to build the performance indexes for each parameter studied. Factorial analysis is a generic name given to a class of multivariate statistical methods whose main purpose is to define the underlying structure in a data array.

In general terms, factorial analysis addresses the problem of analyzing the structure of interrelationships (correlations) among many variables defining a set of common latent dimensions, called factor. With factorial analysis, the researcher can first identify the separate dimensions of the structure and then ascertains the degree where each variable is explained by each dimension. Once these dimensions and the explanation of each variable are determined, the two main operations of factorial analysis - summary and data reduction - can be achieved.

The factorial analysis gets latent dimensions. They describe the data in a much smaller number of concepts than the original individual variables.Data reduction can be achieved by calculating scores for each latent dimension and substituting the original variables for them (HAIR et al., 2005, p.91). For more information see the works of SANTANA (2005a; 2005b; 2006; 2007) and Cavalcante (2011).

For analysis of such parameters, 4 (four) State schools in Guajará-Mirim were aleatory selected: Paulo Saldanha, Durvalina Estilben de Oliveira, Alkindar Brasil de Arouca and Almirante Tamandaré.

Tables 1, 2, 3 and 4 illustrate each of these State schools investigated as a form of better understand the reality of this study.

[4] The Portuguese nomenclature is MEC (Ministério da Educação)

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Table.1: General characterization of Paulo Saldanha School.

Historical	PAULO SALDANHA State School
1-School Creation Law	Law Decree No. 317 of 24/02/1956.
2-Management Competence	Elementary and Middle School.
3-Overall, how many students are enrolled in the school?	652 students.
4-Of this total, how many are enrolled in elementary school?	476 students.
5-In general, what is the quantity of teachers linked to the school?	Twenty-three teachers.
6-Of this total, how many are crowded in elementary school?	Seventeen teachers.

Source: Search data.

Table.2: General characterization of Durvalina School.

Historical	DURVALINA ESTILBEN DE OLIVEIRA State School
1-School Creation Law	Law Decree No. 2,862 of 12/02/1986.
2-Management Competence	State Elementary School.
3-Overall, how many students are enrolled in the school?	404 students.
4-Of this total, how many are enrolled in elementary school?	404 students.
5-In general, what is the quantity of teachers linked to the school?	Twenty-three teachers.
6-Of this total, how many are crowded in elementary school?	Twenty-three teachers.

Table.3: General characterization of Alkindar School

Historical	State School in Brazil
1-School Creation Law	Law Decree No. 385 in 10/08/1980.
2-Management Competence	Elementary and Middle School.
3-Overall, how many students are enrolled in the school?	846 students.
4-Of this total, how many are enrolled in elementary school?	619 students.
5-In general, what is the quantity of teachers linked to the school?	Twenty-three teachers.
6-Of this total, how many are crowded in elementary school?	Twenty-two teachers.

Table.4: General characterization of Admiral Tamandaré School.

Historical	School State Admiral Tamandaré
1-School Creation Law	Law Decree No. 493 of 26/12/1966.
2-Management Competence	State Elementary School.
3-Overall, how many students are enrolled in the school?	303 students.
4-of this total, how many are enrolled in elementary school	303 students.
5-In general, what is the quantity of teachers linked to the school?	Fourteen teachers.
6-of this total, how many are crowded in elementary school?	Fourteen teachers.

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IV. METHOD: CONSTRUCTION METHOD OF ENVIRONMENTAL EDUCATION PERCEPTION INDEX (IPEA)

The method used in this study followed the logic of factorial analysis, which can be seen in the matrix form as in Dillon; Goldstein (1984):

$$X=\alpha F+\varepsilon \quad (1)$$

Then

X = is the p-dimensional vector transposed from observable variables, denoted by $X = (x_1, x_2,..., x_p)$;

F = is the q-dimensional vector transposed from non-observable variables or latent variables called common factors, denoted by $F = (f_1, f_2,..., f_q)$, where q < P;

ε = is the p-dimensional vector transposed from random variables or unique factors, denoted by $\varepsilon = (e_1, e_2,..., e_p)$;

α = is the array (p, q) of unknown constants, called factorials loads.

According to Gama *et al*. (2007); Santana (2007), in the factorial analysis model it is assumed that specific factors are orthogonal, among themselves, with all common factors. Normally, E (ε) = E (F) = 0 and Cov (ε, F) = 0.

According to the authors, the initial structure used to determine the array of factorials loads, in general, may not provide a significant pattern of variable loads, so it is not definitive. This initial structure can be done by several methods of rotation of the factors, as Dillon; Goldstein (1984); Johnson; Wichern (1988). It was used the VARIMAX method of orthogonal rotation of the factors for this study.

The VARIMAX method is a process where the reference axes of the factors are rotated around the source until some other position is reached. The objective is to redistribute the variance of the first factors to others and to achieve a simpler and more theoretically significant factorial (REIS, 2001; HAIR et al., 2005; SANTANA, 2005b, GAMA et al., 2007; SANTANA, 2007).

The choice of factors was carried out through the technique of latent root. So, the array of factorials loads, which measures the correlation between the common factors and observable variables, is determined by means of the correlation matrix, as Dillon; Goldstein (1984).

For determining environmental education perception index (IPEA)it was used the matrix of factorials scores estimated by the orthogonal base factorial rotation process, as pointed out by Santana (2006). The factorial score puts each observation in the gap of the common factors. For each factor f_j, the i-th factor score extracted factorial score is defined by F_{Ij}, expressed as follows (DILLON; GOLDSTEIN, 1984; SPSS, 1997):

$$F_{IJ}=b_1x_{i1}+b_2x_{i2}+b_px_{ip} \quad (2)$$

Then:

b_i = are the estimated regression coefficients for the n Common factorials scores;

x_{Ij} = Are the n Observations of p Observable variables.

i = 1.2,...N.

j = 1,2,...,p.

To reach the equation that is the perception index, Gama *et al*. (2007); Santana (2007), show the sequence evolution of the formulas from the previous equation. It turns out that even if the variable F_{Ij} is not observable it can be estimated through the factorial analysis techniques, using the matrix of observations of the vector x of observable variables. In factorial notation, equation 2 becomes:

$$F_{(n,q)}=X_{(n,q)}\,b_{(p,q)} \quad (3)$$

In Equation 3, F is the matrix of the estimated regression from the n Factorials scores and it can be affected by both the magnitude and the measurement units of the variables x. To work around this kind of problem, replace the variable x by the standard variable w, given the ratio of the deviation around the average and the standard deviation of x, as follows:

$$\frac{x_i - \bar{x})}{S_x}$$

With these values, Equation 3 is modified making equation 4 possible, then:

$$F_{(n,q)}=w_{(n,q)}\,\beta_{(p,q)} \quad (4)$$

Based on equation 4, the beta weights matrix (β) with q standardized regression coefficients, replaces b, given that the variables are standardized on both sides of the equation. Pre-multiplying both sides of equation 4 by the value $\frac{1}{n}\boldsymbol{w'}$, in which n Is the number of observations and W is the transposed matrix of w', it makes it possible to reach the following equation:

$$\frac{1}{n}\,w'_{(p,n)}\,F_{(n,q)}=\frac{1}{n}\,w'_{(p,n)}\,w_{(n,p)}\,\beta_{(p,q)}=R_{(p,p)}\,\beta_{(} \quad (5)$$

The Matrix $\frac{1}{n}\boldsymbol{w'w}$, therefore is the matrix of intercorrelated variables or correlation matrix among the observations of the matrix x, designated by R. The Matrix $\frac{1}{k}w'F$ It represents the correlation between the factorials scores and the factors themselves, denoted by Λ. With this, rewriting the equation 5, one must:

$$\Lambda_{(p,q)}=R_{(p,p)}\,\beta_{(p,q)} \quad (6)$$

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If the matrix R is non-singular, one can pre-multiply both sides of equation 6 by the inverse of R, obtaining:

$$\beta=R^{-1}\Lambda (7)$$

Substituting the β vector into equation 4, we obtain the factorial score associated with each observation, as follows:

$$F_{(n,q)}=w_{(n,p)}R^{-1}_{(p,p)}\Lambda_{(p,q)} (8)$$

The main formula of the perception index is reached where the IP is defined as a linear combination of these factorials scores and the proportion of the variance explained by each factor in relation to the common variance. The mathematical expression is represented by the following formula:

$$IP_i = \sum_{j=1}^{q}\left(\frac{\lambda_j}{\sum_j \lambda_j} FP_{ij}\right) (9)$$

Then:

i = 1.2,...n.

λ = is the variance explained by each factor;

∑ λ = is the total sum of the variance explained by the set of common factors.

The factorial score was standardized (FP) to obtain positive values from the original scores and allow the hierarchies of the cities as the values of the performance index are located between zero and one. The formula that allows this tiering can be seen by the following equation:

$$FP_i = \left(\frac{F_i - F_{min}}{F_{max} - F_{min}}\right)$$

It can be seen that F_{min} And F_{max} are the maximum and minimum values observed for the factorial scores associated with the parameters observed in the Guajará-Mirim schools. It is based on this understanding that it was possible to calculate the perception index adopted in this study.

4.1 Tests of adequacy of the factorial method to the data mass

According to Gama et al. (2007); Santana (2007), the two main tests with the objective of assessing the adequacy of the method to the mass relate, first to Bartlett's sphericity test, which has the property to evaluate the general significance of the correlation matrix, that is, test the null hypothesis that the correlation matrix is an identity matrix. In addition to the Bartlett test, the Kaiser-Meyer-Olkin (KMO) test is also widely used and is based on the principle that the inverse of the correlation matrix approaches the diagonal matrix in which case it seeks to compare the correlations between the observable variables. The two methods were used by this research as techniques of gauging the adequacy of the method to the raised database.

According to Dillon; Goldstein (1984); Reis (2001); Mingoti (2005); Gama et al. (2007); Santana (2007) the mathematical formulas of these tests can be seen by the following equations:

$$KMO = \frac{\sum_i \sum_j r_{ij}^2}{\sum_i \sum_j r_{ij+}^2 \sum_i \sum_j a_{ij}^2} (10)$$

Like this

r_{ij} = is the correlation coefficient of the sample between the variables x_i and x_j;

a_{ij} = It is the partial correlation coefficient between the same variables which is, at the same time, an estimation of correlates between factors, eliminating the effect of other variables.

According to Hair *et al*. (2005), the a_{ij}should assume values close to zero, since it is assumed that the factors are orthogonal to each other. So according to this same author, values of this test below 0.50 are unacceptable.

The Bartlett test of sphericity tests the null hypothesis that the variables are independent against the alternative hypothesis that the variables are correlated with each other. That is, H_0: R = 1 or H_0: $\lambda_1=\lambda_2=\cdots=\lambda_P$, which allows us to arrive at the following mathematical formula:

$$X^2 = -\left[n-1-\frac{1}{6}(2p+5)\right].\in\vee R\ \vee ou$$

$$X^2 = -\left[n-1-\frac{1}{6}(2p+5)\right].\sum_{j=1}^{p} In\ \lambda$$

(11)

Then

|R| = is the determinant of the sample correlation matrix;

λ= is the variance explained by each factor;

n= is the number of observations;

p = is the number of variables;

The statistic has an asymptotic distribution of x^2 with $[0{,}5p(p-1)]$ degrees of freedom. The Bartlett test is the most common method applied to test the homogeneity of variances (ZAR, 1996).

4.2 Analysis Tool

The SPSS programming (version 17) enabled the application of mathematical knowledge and allowed the construction of the index of perception based on each parameter analyzed. This statistical program (statistical package SPSS software, version 17.0) is widely applied for data analysis in the social sciences which made possible the factorial analysis of the data and the generation of performance indexes subsidized the discussions and the main conclusions of this work**.**

As indexes generated by this tool follow a perspective of how much "greater, better" then there was the need to reverse, since for some of them this relation

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indicated exactly the opposite. Without this method the statistic could indicate an unrealistic situation. The following data used in this study: deforestation, illiteracy rate, Gini index, percentage of the population with incomes less than ½ and ¼ minimum wages, percentage of children with incomes less than ½ and ¼ minimum wages, unemployment rate and child labor rates.

4.3 Scale levels

The classification used by the research to express the results achieved by the schools in Guajará-Mirim is described in Table 5.

Table.5: Analysis scale adopted by the research.

Scale	Description	Color
0,801 – 1,000	Great	
0,601 – 0,800	Good	
0,401 – 0,600	Regular	
0,201 – 0,400	Bad	
0,000 – 0,200	Terrible	

Source: Own Elaboration.

V. RESULTS AND DISCUSSION

According to Chart 1, the IPEA - Teachers had a result considered "good" by the scale adopted in this study. The highest indices occurred in descending order in the Durvalina schools (0.706), followed by the Tamandaré (0.690), Paulo Saldanha (0.630) and Alkindar (0.611) schools.

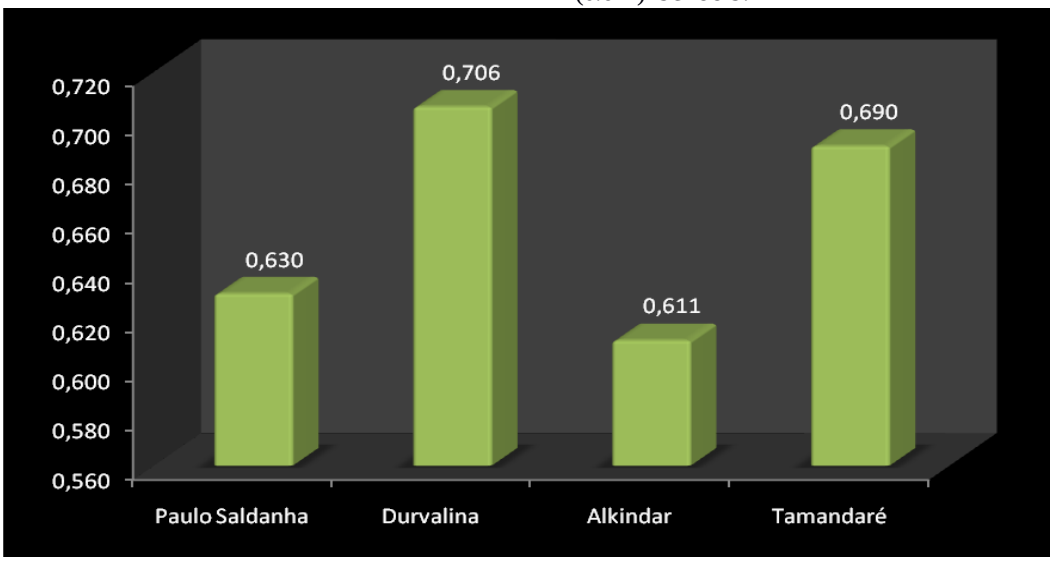

Chart 1: IPEA – Parameter: Teachers

Source: Own Elaboration

From the point of view of staff (administrative and managerial part), the Durvalina, Tamandaré and Paulo Saldanha schools had a "good" performance, while the Arouca Alkindar Brasil school had “regular" result. (Chart 2).

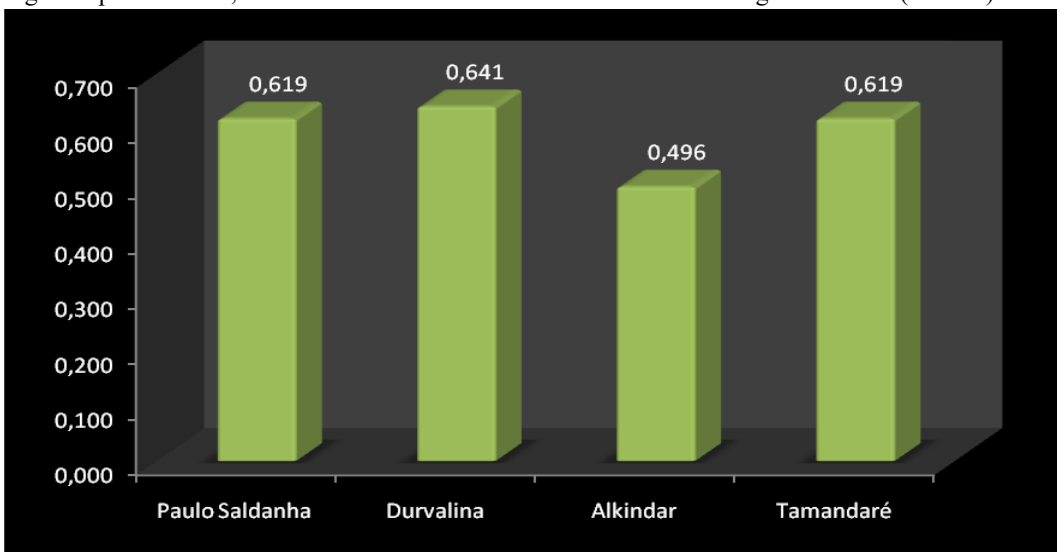

Chart 2: IPEA – Parameter: School

Source: Own Elaboration

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Regarding the students, the result was somewhat worrisome because 75% of the schools studied had results considered just "regular". In this category appears the Paulo Saldanha School (0.535), followed by the Durvalina School (0.532) and Alkindar School (0.459). The Tamandaré School was the only one classified as "good" (Chart 3).

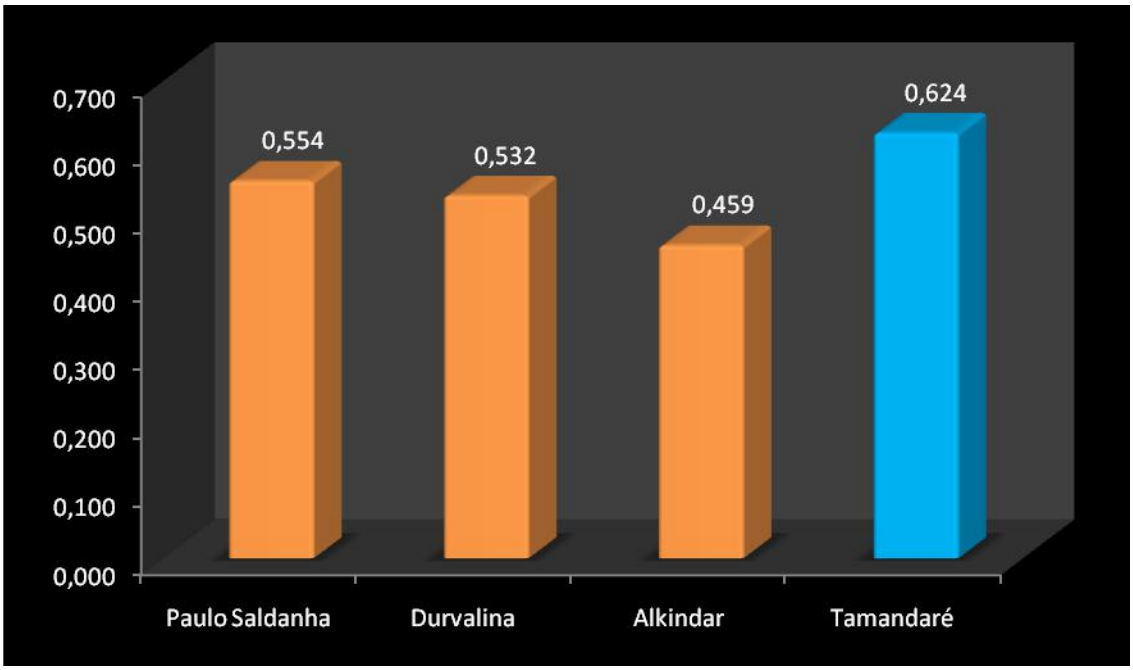

Chart 3: IPEA – Parameter: Students

Source: Own Elaboration

Considering the average of the results found for each of the analyzed parameters, i.e. teachers, school (staff) and students, it reaches the environmental education perception index (IPEA) in elementary school for each of the schools studied. On this wise, it was possible to verify that the Tamandaré and Durvalina Schools were the ones with the best performances among all those surveyed, reaching rates of 0.644 and 0.626, respectively. On the other hand, the Paulo Saldanha and Alkindar Schools were classified as "regular" when they reached 0.595 and 0.522, respectively (Chart 4).

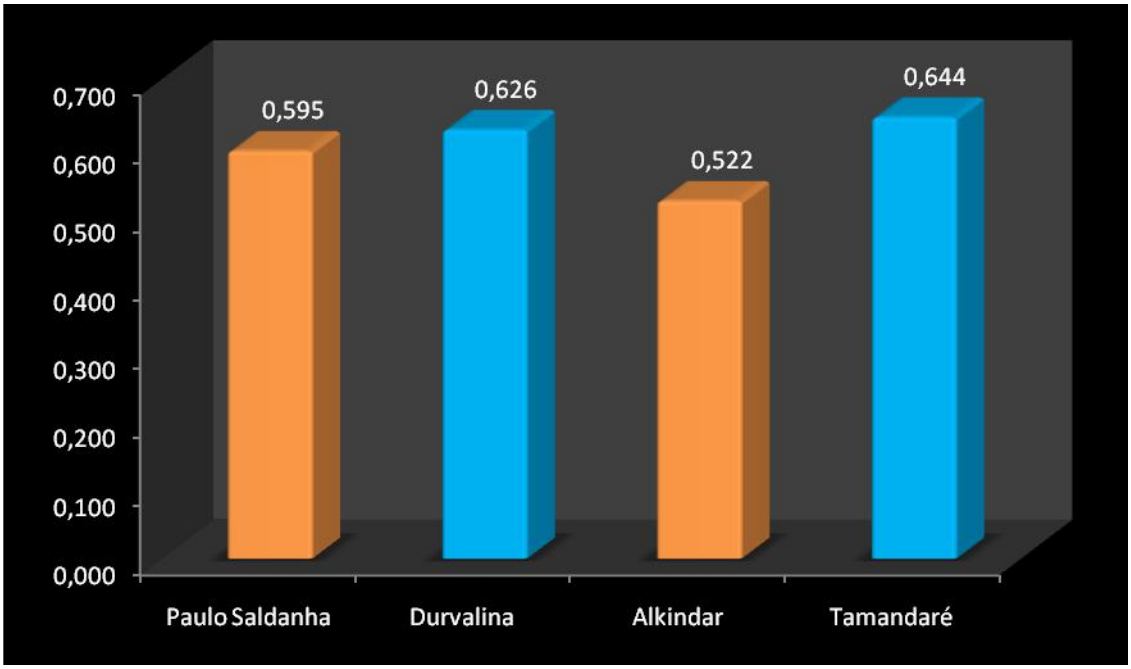

Chart 4: IPEA – Elementary School of studied schools

Source: Own Elaboration

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By making the general average among all the schools studied, it is understood that the average IPEA of formal public education at the fundamental level in Guajará-Mirim is considered "regular" once reached the IPEA of 0.597 (Chart 5).

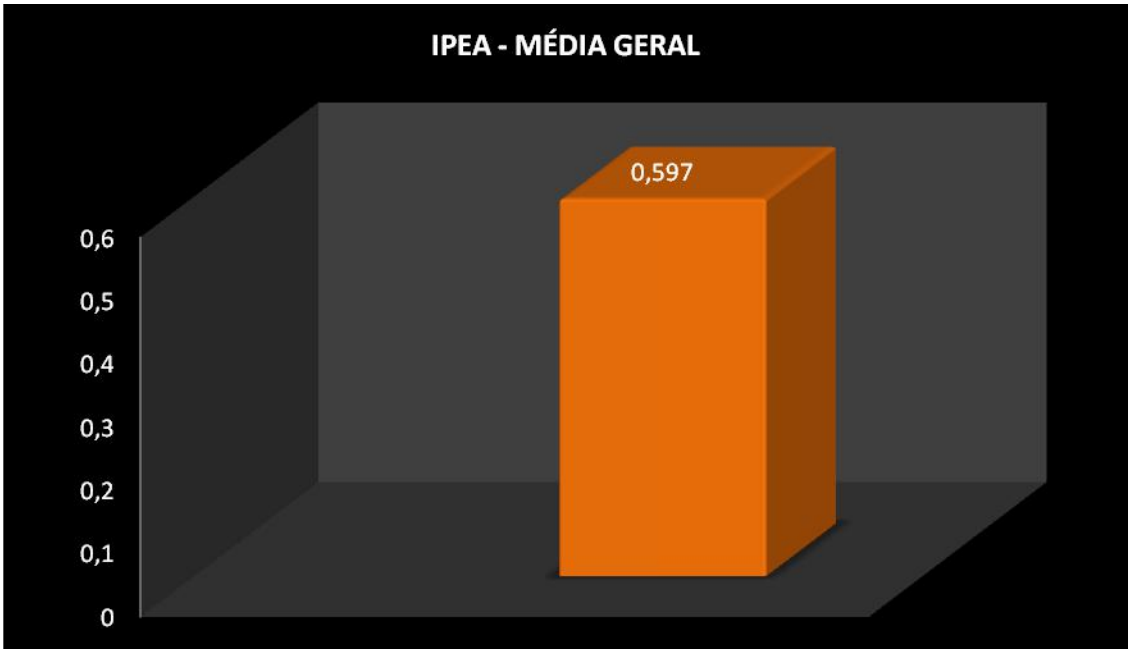

Chart 5: IPEA in Guajará-Mirim

Source: Own Elaboration

There is a distorted vision in Guajará-Mirim in what concerns the perception about the local reality, especially in virtue of 92,06% from its territory is Legally Protected Areas - ALP's[5] as can be seen in Tables 6 and 7. Although environmental education is being discussed in all schools studied the points analyzed allow us to conclude that this practice needs attention, because the schools considered "good" are closer to the "regular" scale.

Table.6: Conservation Units in Guajará-Mirim – Rondônia (Brazil).

Conservation Units in the municipality	Administrative Sphere	Area (ha)	% of the area in the municipality[6]	Area in the municipality (ha)	% of the area of the municipality occupied by Conservation Units
PARNA de Pacaás Novos	Federal	764.801	20,04	153.266	6,17
PARNA da Serra da Cutia	Federal	283.611	100	283.611	11,41
RESEX Barreiro das Antas	Federal	107.234	100	107.234	4,31
RESEX do Rio Cautário	Federal	73.817	100	73.817	2,97
RESEX Rio Ouro Preto	Federal	204.583	73,45	150.266	6,05
Parque Estadual de Guajará-Mirim	State	207.148	2,33	4.827	0,19
REBIO estadual Rio Ouro Preto	State	46.838	100	46.838	1,88
REBIO Estadual	State	22.540	100	22.540	0,91

5 The translator kept the Portuguese nomenclature ALPs (Areas Legalmente Protegidas).
6 The translator chose using Municipality instead of County.

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do Traçadal					
Resex Rio Pacaás Novos	State	342.904	100	342.904	13,80
Resex Estadual Rio Cautário	State	146.400	47,5	69.540	2,80
% OF THE MUNICIPALITY AREA OCCUPIED BY CUs					**50,49**

Source: Cavalcante *et. al*. (2014).

Table.7: Indigenous Lands in Guajará-Mirim – Rondônia (Brazil).

IL in the municipality	**Percentage of the municipality area occupied by IL**
IL Ig. Lage	2,30
IL Rio Negro Ocaia	4,17
IL Pacaás Novas	11,43
IL Uru-eu-wau-wau	18,32
IL Sagarana	0,75
IL Rio Guaporé	4,60
% OF THE MUNICIPALITY AREA OCCUPIED BY ILs	**41,57**

Source: Cavalcante *et. al*. (2014).

There is a gap between the reality of a region where 92.06% of its territory is consisted of conservation units, indigenous lands and educational practice within this approach. I.e. there is no educational coherence for what is strongest in the municipality: environmental preservation.

Guajará-Mirim holds one of the world's largest indices in terms of legally protected areas. The educational practices do not go beyond what is customarily done in any other region of Brazil, i.e., it is notorious that perception of the elementary school students about environmental education practices in state public schools in the region, except Tamandaré School, a performance considered only "regular.

It's important to acknowledge the weakness about environmental education practices in the studied schools but these schools cannot be considered as the main responsible for their inadequacy. This fact is noticeable when you look at the answers for the question "do you know what Nature Conservation Units and Indigenous Lands is?" 42.86% of Tamandaré School, 18.18% of Durvalina School and 15.38% of Paulo Saldanha School answered, "I know a little about it" and/or "I fully know".

For those who answered, "I know a little" and/or "I know nothing about it" had reached the highest percentage in Alkindar School (80.00%) followed by Paulo Saldanha School (79.93%), Durvalina School (72.73%), and Tamandaré School (28. 58%).Who answered "more or less" the result pointed to 28.57% for Tamandaré School, 20.00% for Alkindar School, 9.09% for Durvalina School and 7.69% for Paulo Saldanha School (Chart 6).

To the question "Do you know most of the part of Guajará-Mirim is Nature Conservation Units and Indigenous Lands?" From Alkindar School, 40.00% answered "I do not know" and/or "I know a little about it" followed by the Durvalina School (27.27%) and Paulo Saldanha School (23.07%).

For those who answered, "I fully know" and/or "I know little" the highest percentages were found in schools in decreasing order: Tamandaré (85.71%), Durvalina (45.45%), Paulo Saldanha, 46%) and Alkindar (20.00%). (Chart 7)

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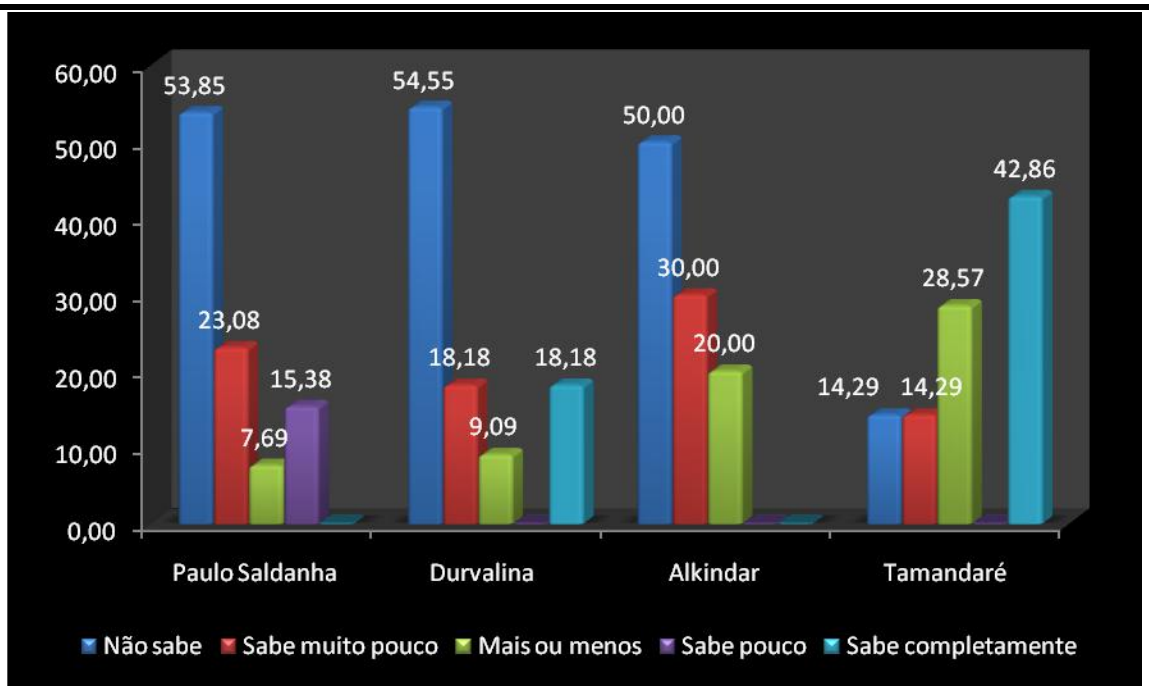

Chart 6: Perception about "What is Nature Conservation Units and Indigenous Lands? "

Source: Own Elaboration

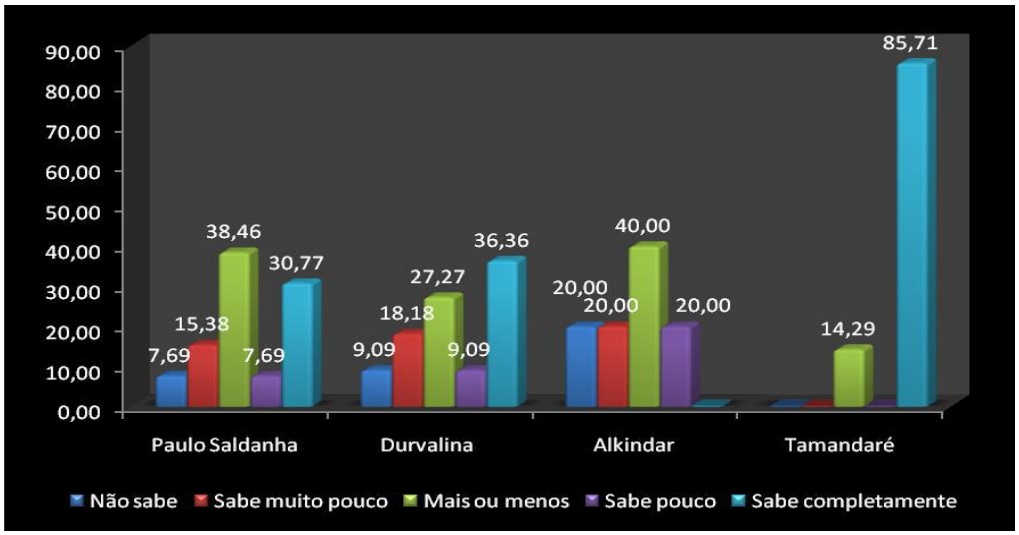

Chart 7: Perception on the issue"Do you know most of the part of Guajará-Mirim is Nature Conservation Units and Indigenous Lands?"

Source: Own Elaboration

It is necessary to analyze the entire local context and notice the Guajaramirense society is experiencing a moment of institutional crisis, of values, of ethics and of behavior. Citizens' attitudes fronting environmental practices do not correspond to the legal status of a place with a strong environmental policy.

The citizens do not care for their own garbage which is thrown in the streets, the bones of slaughtered animals can also be seen in some parts of the city. At the end all the garbage is put in open dumps without any attention. The streets are bumpy and give the impression of carelessness. The deforestation keeps repeating every year and the act of burning the leaves, trees and garbage (high point in August and September) became part of the culture. So, how do we think environmental education where all the facts point to a society in crisis? That is the biggest challenge.

The environmental education cross-cutting must be analyzed and make it work not only with Sciences and Geography subjects. In this case showed a low transverse power in the studied schools. In addition, it is worth highlighting another aspect considered important here and that needs to be better studied: training of teachers.

Brazil has been advancing in relation to interdisciplinary vision as a basic training to work with complex themes such as the environment. Some

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postgraduate programs of higher institutions throughout the country are responsible for the professional formation which become capable to work with this matter.

VI. FINAL CONSIDERATIONS

There is a gap between the reality of a region with approximately 92% of its territory consisting of Conservation Units and Indigenous Lands and the educational practice. There is no educational coherence for what is strongest in the city: environmental preservation.

It is necessary to analyze the entire local context. It was noticed the *Guajaramirense* society experiences moment of institutional crisis, of values, of ethics and of behavior. Citizens' attitudes fronting environmental practices do not correspond to the legal status of a place with a strong environmental policy.

It became clear the low connection between the real and the practice, where the real is the strength of environmental policy in this part of Rondônia (Brazil). Perhaps, in this case, the inexhaustibility thought of natural resources works as wall which hinder the thought of scarcity.

As it written before, Brazil has been advancing in relation to interdisciplinary vision as a basic training to work with complex themes such as the environment. Due to most of the teachers are graduated in Pedagogy, it makes the disciplinary training of teachers still a general rule for those who work with environmental education in the public schools in Guajará-Mirim.

It is concluded the local scenario imposes risks to the environmental awareness of future generations by demonstrating inadequacies to fulfill its role institution as social transformer setting itself up as a limiting of sustainable development.

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