

Incidence of School Poverty in the Teaching-Learning Process in Peruvian Primary and Secondary Education of Regular Basic Education

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Abstract

The influence of the School Poverty in the Process Teaching-learning was studied by the construction of Indicators. The endogenous factors were identified that they have incidence in the process teaching-learning and it was quantified the causes that hinder an educational service of quality with an eye toward making viable the improvement of the quality of the education. A model was built to characterize the situation of the learning environment, for levels and modalities and influence environments. This product will provide to the sector education of a reliable tool to guide the design of the strategies of institutional development and it improves of the quality of the education.

Keywords: School Poverty, Indicators, Regular Basic Education, EPM, Contracted teachers

Introduction

The objective of the modernization and development plans of the education system is to improve the quality of the educational service and require an adequate supply of sufficient and updated information to cover the different dimensions of the educational action. It should serve as a guiding framework for all levels of the administration of the System, to make it possible for those involved in the task to be nourished by the same information, and thus share the goals that are proposed. Otherwise, the information would result in a theoretical product without utility for improving the quality of education, a fundamental purpose of any educational policy. (Cueto, 2004) (Orihuela & Rivera, 1995).

Important aspect to take into account in the operation of the formal education system, is related to the "quality of life of the student in the educational center." The quality of life of the student within the formal education system is based on the quality of their learning environment, which is constituted by instructional means intentionally organized to achieve a human development determined by educational needs. Valdivia (2003) stat that the learning environment is made up of physical facilities, the sociological environment and cultural factors. For its part, Kliksberg (2005) stated that, the physical facility is constituted by infrastructure, equipment and materials, climate, access (viability), organization and distribution of media, etc.; and influence learning, especially motivation, attention and

internalization. The sociocultural factor is the attitude of the community towards the School, the role of parents in the educational process, the attitude towards innovations, the educational media and the specific prejudices and judgments towards educational action.

The educational management aims to lead a process towards the fulfillment of the institutional mission at a standardized quality level; for this, it provides the necessary facilities for the educational process. These facilities are divided into physical, instrumental and human. It is understood as physical facilities to infrastructure (school premises) and special environments (fields, free areas and the communal environment), that is, all that means that houses students. On the other hand, it is known as instrumental facilities for equipment, tools and didactic material, that is, the means that are manipulated or observed in training processes. And, finally, the human facilities, means that facilitate experiences and affective interaction and, what is more important, activate and empower the previous elements, conditioning the levels of instructional satisfaction.

In 1995, with the results of the 1993 School Census, the Ministry of Education developed a statistical research called "Mapa de Situación de la Educación Primaria y Secundaria de Menores" The objective of this research was to know the magnitude and spatial distribution of the shortcomings and deficiencies of the direct instructional environment of the student. The average indicator of school poverty, represents 16 indicators, the same ones that are weighted based on their incidence in basic educational competences that the student must develop as it passes through the formal education system. This statistical research has been the subject of debate in various national and international forums, managing to disturb the students of the educational field, the same ones who issued a favorable opinion and showed interest in the study. (INEI, 2000)

In summary, the direct instructional environment or scenario in which the teaching / learning process is carried out, specially prepared and enhanced for him, is constituted by the physical facilities, the support services and the situation of the teacher and student. Hence, we will call as instructional satisfaction, the sufficient provision of means: motivators, receivers, registrars, processors and effectors

that act in the action and pedagogical intermediation. Therefore, it is necessary to know the state of this environment as a fundamental element to infer conclusions about the quality of education.

The study consisted of identifying the variables of the internal context of the educational production unit (school or college) that have an impact on the teaching-learning process, and measure its influence as determinants of school success or failure of the Formal Educational System of Peru. Understood the influence that the direct instructional environment exerts on the quality of education, it is necessary to know and identify the determining variables and with what weight they affect the formation of the graduate profile of primary and secondary education centers of EBR, identifying in addition the causes that generate them. It was a diagnostic investigation with explanatory descriptive character, based on the information provided. The research focused on the management and processing of data obtained from the databases of the Ministry of Education. There was no need to elaborate and apply surveys or other information collection instrument as long as the databases provided by the Statistics Unit of the Ministry of Education were sufficiently solid and reliable, all the census records were obtained, imputed and not imputed. The variables included in this research were: School Poverty, School Performance, School Efficiency and Internal Efficiency, considering the School Poverty variable as the most important.

Indicators

A set of strategic indicators was selected that represent the situation or state as a consequence of structural actions accumulated over time and whose definition is found in Orihuela & Valdivia (1996), Orihuela, Jhoncon and Valdivia (*Manual de estadística básica para la planificación educativa*. 496 pp., in press, 2018). The indicators were:

A. Regarding the student: Late entry, school delay, disapproved school population, withdrawn school population, repetitive school population, working school population and school population with chronic malnutrition.

B. Regarding the teacher: Teachers hired and teachers without pedagogical qualifications.

C. Regarding school infrastructure: Deficiency of classrooms, deficiency of academic facilities, deficiency of recreational facilities and number of sections-grade per classroom.

D. Regarding common services for public use: Deficiency of electrical energy, water deficiency and drainage and deficiency of hygienic services.

E. Regarding health services: Deficiency of assistance services.

F. Regarding educational management: Management deficiency. Once the indicators of shortcomings and deficiencies were identified and defined, it was necessary to characterize and dimension them from their most determining aspects, to know the impact they have on the student's educational process, on the development of the

competences and / or basic educational capacities that the system is proposed to achieve in the learner. This characterization was made from the **social, pedagogical and psychological** aspects and for the extensive is not described in this publication.

METHODS AND TECHNIQUES

Strategies

a. Based on the "School Poverty" model developed by Pedro Orihuela, the methodology for the development of the research "Incidence of School Poverty in the teaching-learning process in primary and secondary education of EBR 2007" was designed. In this stage, the variables and indicators of the direct instructional learning environment were identified and the incidence in the basic educational competences that the student should develop during the formal education system was defined and established. The models to measure the amount of school poverty were established and the standard or socioeconomic reality was defined according to stratum or scope.

b. Once the methodology was defined, the situation map of the direct instructional environment was constructed. The input for this module is the database of the 1999 and 2007 School Censuses and the 1999 Size Census produced by the Educational Statistics Unit of the Ministry of Education.

c. In each of the strata determined by the shortcomings and deficiencies worked on in the previous point, small samples were designed in which the variables of the external learning environments were observed and the amount of their incidence in the basic educational competences was measured.

d. Once the variables and indicators of the learning environment were identified, the causes that generate them were identified, their social, Psychological and pedagogical dependence was defined, the amount standard was determined and the amount necessary for their elimination was evaluated.

Research Instruments

The instruments used were the census information collection cards that, at the beginning of each year, all educational institutions have to deliver to the Ministry of Education. Likewise, statistical computer programs were used to process the data and their respective graphic expressions.

Universe and Sample

The universe was made up of the Educational Centers and students of the national education system during the years 1999 and 2007, information that is available in the Databases of the Ministry of Education. It is a non-probabilistic structure. We worked with the universe of databases.

Data Treatment

Data management programs were built that allowed the construction of the indicators, that is, the data will be

analyzed based on measures of central tendency and dispersion. No statistical work was necessary, as the total number of census cards that the total number of state and private institutions are required by law to deliver to the Ministry of Education each year in addition to processing the information provided by these same institutions during the year was used. the 2007 size census.

RESULTS

Reading of the Indicators

Each of the selected indicators represents lack or deficiency of structural type, all expressed in percentage. The value of the shortcomings or deficiency has a descending behavior, from the lack or total deficiency that is equivalent to 100%, until the nonexistence of the same that is 0%. Due to its statistical behavior, the sequence of the values of some indicators is continuous; and others, discreet. As in any model, the selection of the variables and their indicators is the author's arbitrary decision, duly supported and justified. The researcher applying the model can use all the selected indicators or part of them.

You can also choose others, but these must meet the requirement to represent lack or deficiency of structural type. The analysis and conclusions of the behavior of the indicators in the educational process will guide the establishment of the sector's policy strategies.

School Poverty Indicator

In the educational event, the phenomena provided by each of the variables that interact in the teaching / learning process converge; consequently, it is necessary to know or measure in each unit of educational production or in a set of production units, including the entire formal educational system, the magnitude of this set of phenomena.

One of the purposes of the present model is to know school poverty at different levels of aggregation; consequently, it will be necessary to construct an indicator capable of summarizing in it, the shortcomings or deficiencies of each of the variables that intervene in the teaching / learning process.

To construct the summary indicator of school poverty, it is necessary to associate the lack or deficiency indicator with an educational result, taking care or taking into account the existence of direct incidence of the former in the latter. This result is the so-called educational competence. It was defined as educational competence to the combination of attitudes, skills and knowledge that the student develops through the teaching / learning process, to be able to act with a sense of purpose in solving problems. For the purposes of model development, the following educational competencies have been established: verbal development, intellectual development, cognitive strategies, attitudes, psychomotor skills, socialization, national identity, development of instruments and symbols, body education, mathematical alphabetical expression, protection of the health and preservation of the environment.

In some cases, it may appear that competencies are duplicated: for example, psychomotor skills could be

included in the development of instruments and symbols, and also in corporal education, the important thing is that it is recognized that the proposed competences serve as a guide in the treatment of the programs and topics that the teacher develops in the classroom.

Conceptual Description of the Proposed Competences

1. Verbal Development.- ability to express by different means (written, oral, graphic, symbolic, etc.) concepts and ideas learned, experienced and / or intuited that can take the form of facts, names, statements, etc.

2. Intellectual development.- Ability to apply and use the knowledge, skills and abilities (procedures) that form the basis of discernment in the solution of problems, and that are implemented in the management of symbolic relationships in specific situations.

3. Cognitive strategy.- Ability to manage and organize the processes of thought and learning, also called self-management behavior, such as the strategy of information coding, short-term and long-term memory, the processes of solving the problem and the mechanisms of discovery.

4. Attitude.- Ability to develop certain mental states that influence the decision-making processes in relation to personal actions that require the intervention of certain moods. Attitudes remain in the human being as latent states that act as filters in individual actions and are not always conscious.

5. Psychomotor skills.- Ability to execute coherent and precise muscle movements with minimum effort and maximum efficiency; they are the result of certain skills generated by specific mental schemes, which at a more elaborate level, are produced as automatic operations.

6. Socialization.- Ability to live in community, actively and productively, as a result of having developed participation and service behaviors. This capacity requires an adequate environment such as school, an environment conducive to a formal and informal interaction with other children, mainly those of their generational group, which has a special significance in children's lives.

7. National identity.- Attitude and spirit of belonging and identity with a certain social and cultural environment, to which the educational process responds, reassessing and affirming the local idiosyncrasies, in order to achieve transcendence of the contents that the school provides to the student.

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9. Body education.- Ability that the student achieves to use his body with the maximum result and as a result of rational efforts, which involve coordination, interrelation and division of functions between members and organs of the human body.

This capacity is the product of education by movement or kinesthetic, as it is known in the educational action.

10. Alphabetic-mathematical expression.- Skills and abilities for the development and management of alphabetic and mathematical instruments, in the processes of elaboration and transmission of messages and the accumulation of human creation.

11. Protection of health.- Knowledge and attitude that the child has to preserve his health, protect it from risks and excesses, and strengthen it with effective training disciplines.

12. Preservation of the environment.- It is a competence that permeates all those that interact in the child. It is not expressed in linear form because the child's activity, in general, occurs regularly in the environment, which strategically becomes a critical element of human survival. Preserving means using it rationally, without preying on it or isolating it as a misunderstood form of protection.

Interrelation and Weighting of Indicators with Educational Competences

In the first place, it is accepted that each one of the educational competences proposed has a value according to

their participation-result in the teaching / learning process.

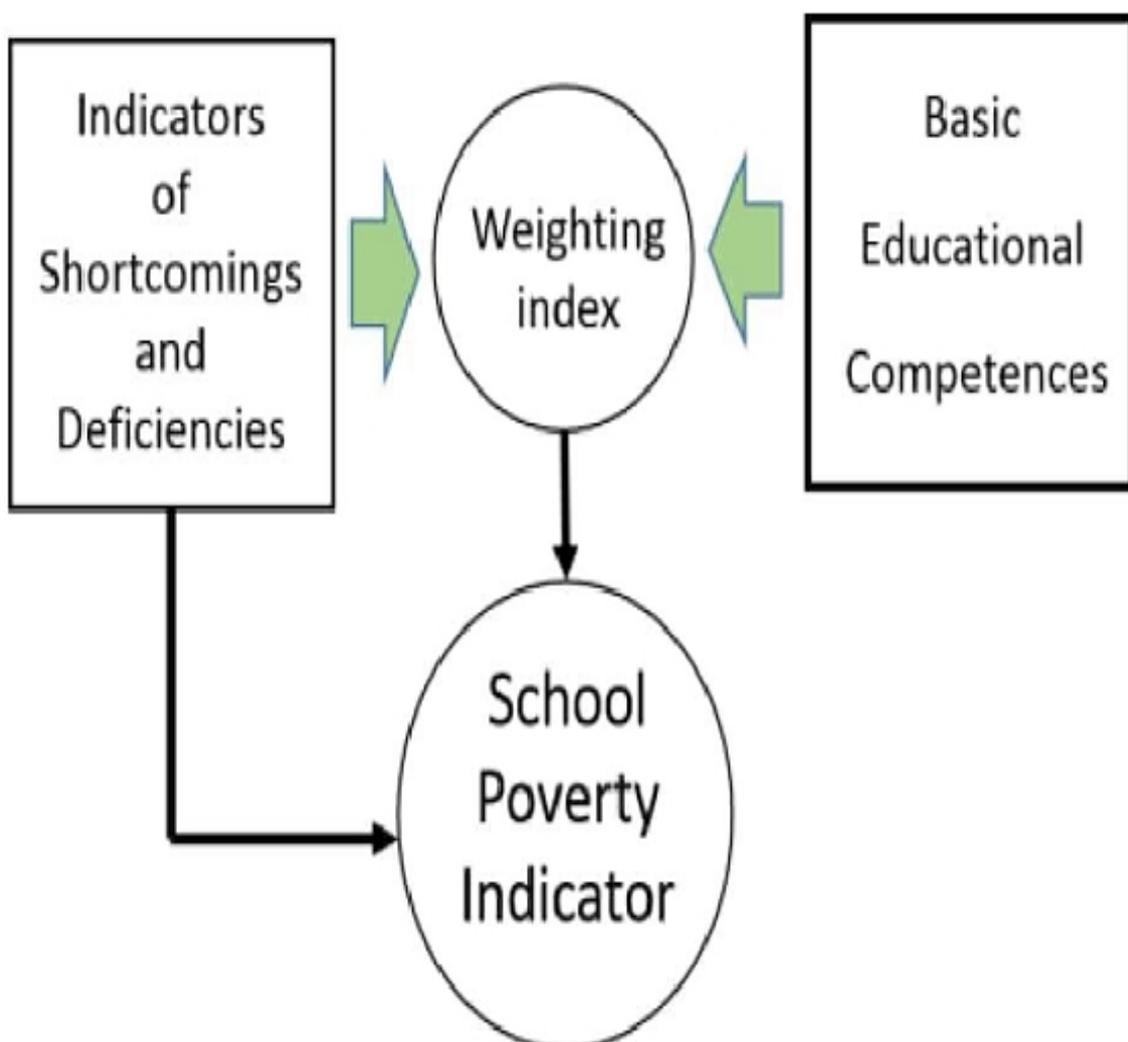
Thus, a five points has been assigned to verbal development, symbolic instrumental development, a value of two, and so on, as expressed in the matrix of incidences of indicators in educational competences.

The determination of the value is an arbitrary decision of the author, does not constitute, nor does it pretend to be, an infallible rule; therefore, the investigator who has a different opinion on this determination, may assign the weights to his / her own free will.

On the other hand, it is accepted that each variable of the direct instructional environment participates actively in the educational event; that is, when the combination of production factors occurs.

It is also taken into account, the greater incidence that each indicator has in some or some educational competences.

Precisely this last relation is the one that is taken into account to establish the value index that will allow converting the different indicators into learning units, so that it will be possible to express school poverty in an indicator-average-result.



To construct the indicator of school poverty, a matrix was designed that shows the incidence of the indicators of shortcomings and deficiencies in the basic educational competences, and the how and to what degree, the latter are sensitive to the situation of the indicators.

As can be seen in the matrix, the weighting of the indicators is determined by the sum of the weights of the basic educational competences in which the indicator has the greatest influence (intersection of the respective indicator competence).

MATRIX OF INCIDENTS OF THE INDICATORS OF SHORTAGE AND DEFICIENCIES IN THE BASIC EDUCATIONAL COMPETENCES

BASIC EDUCATIONAL COMPETENCES		
Preservation of the environment	3	
Protection of health	3	
Alphabetic-mathematical expression	3	
Body education	4	
Symbolic instrumental development	2	
National identity	3	
Socialization	3	
Psychomotor skill	3	
Attitude	4	
Cognitive strategy	4	
Intellectual development	4	
Verbal development	5	

INDICATOR												INDEX				
1	Late entry	5	4				3			3	3					18
2	School delay	5	4	4			3		2	4	3				3	28
3	Disapproved school population						3		2	4						12
4	Working students	5	4		4		3			4	3					23
5	School population with chronic malnutrition	5	4	4	4	3	3	3	2	4	3	3	3			41
6	Contacted teachers				4		3		2							9
7	Teachers without pedagogical degree		4	4	4	3	3		2							20
8	Classroom deficiency	5			4		3		2					3		17
9	Deficiency of academic facilities		4	4	4	3	3		2		3			3		26
10	Deficiency of recreational facilities				4	3	3	3		4		3	3			23
11	Electric power deficiency				4	3	3	3		4		3	3			23
12	Water deficiency and drainage				4	3	3	3		4		3	3			23
13	Deficiency of welfare services				4		3	3	2							12
14	Number of sections per classroom				4		3					3				10
15	Management deficiency				4		3	3								10
16	Deficiency of hygienic services				4					4		3	3			14

The definition or determination of the incidence of the indicator obeys to technical-pedagogical criteria previously analyzed, considering that:

- a. The indicators with more value are those with bidirectional characteristics, that is, they generate interaction between the teacher and the student, or the student and the environment;
- b. Laboratories and libraries have more value with a qualified teacher or a specialist who is trained in the use of such means;
- c. Indicators such as late entry, which are higher in the rural area, entail cultural considerations. Complementary works by sampling should yield more precise answers about this indicator, especially in rural areas, which are basically culturally non-literate environments, so their late assimilation to the School should be evaluated using variables more representative of the Andean culture;
- d. The teacher-student interaction will also vary according to the teacher's condition. If this is titled, hired, specialist, etc., it determines its effectiveness in the educational process.

Calculation of the Value of the Indicators.

For purposes of calculating the value of the indicators, in the present model, the information in the database of the 1999 School Census, Census Card 3, primary education or secondary schooling is used.

Two primary education centers for minors have been chosen with marked differences, one from Castrovirreyna district, Castrovirreyna province from Huancavelica department, and the other, from Santiago de Surco district, from Lima province, Lima department.

1. Late entry

Information is taken from Section "2.3 Enrolled for the first time in first grade by age, by sex," of the school census card corresponding to primary or secondary education.

The normative age for entering primary education for minors or EBR is 6 years. Registrants who are 7 years of age or older have a late entry. The indicator is determined by the percentage of entrants with 7 years or more.

Situation	School of Castrovirreyna		School of Santiago de Surco	
	Students	Percentage	Students	Percentage
Total	49	100,00	165	100,00
Early entry	3	6,12	5	3,03
In age	36	73,47	147	89,09
Late entry	10	20,41	13	7,88

2. School delay

Section Information "2.1 Enrollment by grade level and sex, according to simple ages completed". The normative age to study the first grade of EPM is 6 years of age; for the second grade, 7 years; for the third grade, 8 years; for the fourth grade, 9 years; for the fifth grade, 10 years; and for the sixth

grade, 11 years of age. This means that the students who are studying the respective degree will have school delay, with one year or more years than the corresponding normative age; Therefore, the sum of these students makes up the cohort with school backwardness. The indicator of school delay is determined by the percentage of students with school delay.

Age	Number of students in the school of Castrovirreyna						
	Total	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
Total	280	49	46	46	43	45	51
5	3	3	0	0	0	0	0
6	38	36	2	0	0	0	0
7	43	8	34	1	0	0	0
8	44	2	6	35	1	0	0
9	28	0	2	5	21	0	0
10	38	0	2	0	8	26	2
11	44	0	0	2	6	9	27
12	16	0	0	1	6	2	7
13	7	0	0	2	0	1	4
14	11	0	0	0	1	4	6
15	4	0	0	0	0	1	3
16	2	0	0	0	0	1	1
17	2	0	0	0	0	1	1
Consolidated by situation							
Total	280	49	46	46	43	45	51
With advance	9	3	2	1	1	0	2
In age	179	36	34	35	21	26	27
With delay	92	10	10	10	21	19	22
Percentage of consolidated by situation							
Total	100,00	100,00	100,00	100,00	100,00	100,00	100,00
With advance	3,21	6,12	4,35	2,17	2,33	0,00	3,92
In age	63,93	73,47	73,91	76,09	48,84	57,78	52,94
With delay	32,86	20,41	21,74	21,74	48,84	42,22	48,314

Next, only the consolidated one of the school of Santiago de Surco is presented.

Age	Number and y percentage of students						
	Total	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
Total	932	168	164	161	148	142	149
With advance	36	8	7	6	5	5	5
In age	814	147	142	139	130	126	130
With delay	82	13	15	16	13	11	14
Percentage of consolidated by situation							
Total	100,00	100,00	100,00	100,00	100,00	100,00	100,00
With advance	3,86	4,76	4,27	3,73	3,38	3,52	3,36
In age	87,34	87,50	86,59	86,34	87,84	88,73	87,25
With delay	8,80	7,74	9,15	9,94	8,78	7,75	9,40

It is pertinent to take into account the following precision:

in the educational center of Castrovirreyna there are students with up to 7 years of school delay, while the school delay in the educational center of Santiago de Surco is only one year.

3. Disapproved School Population

Information of Section V, table 5.1 Situation of the student at the end of the educational year of the previous year. The indicator is the percentage of disapproved with respect to the total of enrolled.

Situation	School of Castrovirreyna		School of Santiago de Surco	
	Students	Percentage	Students	Percentage
Total enrolled	271	100.00	946	100.00
Approved	234	86.35	946	100.00
Disapproved	17	6.27	0	0.00
Retired	20	7.38	0	0.00
School failure	37	13.65	0	0.00

4. Working students

Information from Section II, table "2.5. Tuition according to type of occupation ". The indicator is the percentage of the

total number of students who, in addition to studying, also work in an occupation.

Situation	School of Castrovirreyna		School of Santiago de Surco	
	Students	Percentage	Students	Percentage
Total Students	280	100.00	948	100.00
Work and study	0	0.00	0	0.00
Just study	280	100.00	948	100.00

5. School Population with Chronic Malnutrition

The information of the II National School Size Census in 1999 is used. The database reveals that in the educational center

of Castrovirreyna the data of 139 students constitute valid data to establish the nutritional status of the school population; whereas, in the educational center of Santiago de Surco, the set of valid data amounts to 622.

Schools	Valid data	<to DS	Prevalence
Castrovirreyna	139	39	28,1
Santiago de Surco	622	2	0,3

Note: DS = standard deviations

The size of 39 students from the Castrovirreyna's school is below 2 standard deviations from the average of the reference standard population, which means that the school population with chronic malnutrition is equivalent to 28.1% of the total. For its part in the school of Santiago de Surco, only 2 of 622 students have chronic malnutrition, which is equivalent to 0.3% of the total.

6. Contracted Teachers

Information from Section III, table "3.2 Teaching staff by position, according to work condition" of the 1999 School Census.

Labor condition	School of Castrovirreyna		School of Santiago de Surco	
	Teachers	Percentage	Teachers	Percentage
Total teachers	15	100,00	35	100,00
Designate	12	80,00	33	94,29
Contracted	3	20.00	2	5.71

7. Teachers without Pedagogical Degree

On the basis of the total of teachers presented in point 8.,

the information in the table "3.5 teachers with pedagogical degree, depending on the specialty of the chosen degree" is applied..

Teaching degree holder	School of Castrovirreyna		School of Santiago de Surco	
	Teachers	Percentage	Teachers	Percentage
Total teachers	15	100,00	35	100,00
With pedagogical title	14	93,33	33	94,29
Without pedagogical title	1	6,67	2	5,71

8. Classroom Deficiency

Information of Section VI, table "6.1 Environments according to state of conservation". To determine the indicator, the

state of conservation of the classroom is weighted with the following weight: classroom in a poor state of conservation 1; in regular condition, 05; and in good condition, 0.

State of conservation	Weighing (p)	School of Castrovirreyna		School of Santiago de Surco	
		Classrooms (a)	(p x a)	Classrooms (a)	(p x a)
Total		12	0,00	24	0,00
Good	0	12	0,00	24	0,00
Regular	0,50	0	0,00	0	0,00
Bad	1	0	0,00	0	0,00
Deficiency rate			0,00		0,00

In both schools, the deficiency of classrooms is 0%. The percentage of classroom deficiency is a weighted average percentage that results from dividing the total product of the weight by number of classrooms, all divided by the total number of classrooms.

table below. In the case of an school, the value of the indicator is determined by one of the combinations presented in the table; but when the indicator represents an aggregate of educational centers, from district to higher, the indicator is a weighted average percentage, determined by the percentage of deficiencies and the number of educational centers.

9. Deficiency of Academic Facilities

Information of Section VI, table "6.1 Environments according to state of conservation ...". The value of the indicator is determined by the possession of academic facilities. The combination of academic facilities that determines the stratum and percentage of lack is detailed in the following

The Castrovirreyna school only has a library; then, the percentage of lack of academic facilities is 50%. For its part, the school of Santiago de Surco has a library and computer lab; consequently, the indicator of lack of academic facilities is 25%.

Stratum	Situation	% deficiency
I	It does not have any of the academic facilities	100
II	Have only workshop or only laboratory	75
III	It has only a library	50
IV	Has a library and workshop, or library and laboratories	25
V	It has the three academic facilities	0

10. Deficiency of Recreational Facilities

Information from the same table "6.1 Environments according to state of conservation ..." The procedure to

determine the value of the indicator of the lack of recreational facilities is similar to the lack of academic facilities. The variables to consider are: auditorium, soccer field, basketball and / or volleyball field and gym.

Stratum	Situation	% deficiency
I	It has no recreational facility	100
II	It has only one recreational facility	75
III	It has two recreational facilities	50
IV	It has three recreational facilities	25
V	It has the four recreational facilities	0

The school of Castrovirreyna has an auditorium, soccer field and volleyball, therefore, the level of its lack of recreational facilities is 25%.

For its part, the school of Surco has an auditorium, soccer, basketball, volleyball and gymnasiums, therefore, it has no lack of recreational facilities, that is, the lack is equal to 0%.

11. Electric Power Deficiency

Information of Section VIII. Basic services. First row: Light (electric power). The value of the indicator is determined by the combination of tenure or lack of electricity service in the educational center and/or town center. The table of values of the indicator is the following:

Stratum	Situation	% deficiency
I	The school does not have electricity service, nor the populated center	100
II	The school does not have electricity service, but if the center is populated	75
III	The school has electricity service, but not the populated center	50
IV	The school has electricity service, but not the populated center	25
V	The school has electricity service, also the populated center	0

The Castrovirreyna school has electricity service, also the town center where the institution is located, therefore the deficiency is equal to 0%. The same situation occurs in the case of the school of Santiago de Surco.

12. Water deficiency and drainage

Information of Section VIII. Basic services. Second row:

Stratum	Situation	% deficiency
I	The school does not have water or drainage service	100
II	The school does not have water service, but it does have a sewage system	66.6
III	The school has water service, but not, of drainage	33.3
IV	The school has water and sewage service	0

The school of Castrovirreyna lacks water connected to the public network, but it does have sewage; therefore, the lack of water and drainage is equivalent to 66.6%.

In the case of the school of Santiago de Surco, it has water and sewage service; consequently, it has no such deficiency, or is equivalent to 0%.

Water (public network) and Third row Drainage (public network).

The value of the indicator is determined by the combination of tenure or lack of water service and sewage in the educational center.

The table of values of the indicator is the following:

13. Deficiency of Welfare Services

Information from Section IV, table "4.1 Professional Administrative Staff". The value of the indicator is determined by the combination of the presence of health professionals, whose detail is presented in the following table:

Stratum	Situation	% deficiency
I	The school does not have health professionals	100
II	The school has a nutritionist or psychologist or social worker	75
III	The school has a nutritionist and psychologist and / or social worker	50
IV	The school has only a doctor and / or nurse	25
V	The school has all the health professionals required	0

The school of Castrovireyna does not have health professionals at your service; therefore, it has a deficiency equivalent to 100%.

For its part, the school of Santiago de Surco, has a doctor; consequently, the deficiency of this service amounts to 25%

14. Number of Sections per Classroom

The information of the Basic Statistics 1999 is used. The value of the indicators is based on the number of sections that simultaneously make use of 1 classroom, whose detail is presented in the following table:

Stratum	Situation	% deficiency
I	Five sections simultaneously, make use of a classroom	100
II	Four sections simultaneously, make use of a classroom	75
III	Three sections simultaneously, make use of a classroom	50
IV	Two sections simultaneously, make use of a classroom	25
V	Each section has a classroom for exclusive use	0

The school of Castrovirreyna has 12 sections and also twelve classrooms, therefore, it has no deficiency of number of sections per classroom, or the deficiency is equal to 0%. Similarly, the school of Santiago de Surco has 24 sections that make use of 24 classrooms, therefore, the deficiency of number of sections per classroom is also 0%.

15. Management Deficiency

Information from Section III, table "3.2 teaching staff by position and sex, according to work condition". The value of the indicator is specified in the following table:

Stratum	Situation	% deficiency
I	The one-teacher schools	100
II	Polidocente multigrade and full schools with director with section in charge	75
III	The schools that have a classroom teacher and a director or assistant director without a section	50
IV	The schools that have classroom teachers and special and director or assistant director without section in charge	25
V	The schools that have classroom and special teachers, director or assistant director without section in charge, department heads, workshop or laboratory and / or advisors	0

The school of Castrovirreyna has 1 director without a section in charge and 14 classroom teachers; For its part, the school of Santiago de Surco has 1 assistant director without section, 6 department heads, 7 coordinators, 6 advisers, 14 classroom teachers and 4 special teachers. The management deficiency in the first school reaches 50%; and in the second, it is 0% .

16. Deficiency of Hygienic Services

We work with information from Section VI. Infrastructure and furniture.

The value of the indicator is determined by the combination of tenure and state of conservation of the hygienic services:

Stratum	Situation	% deficiency
I	The school does not have hygienic services	100
II	The school has hygienic services, but all are unsuccessful	75
III	The school has hygienic services, some regular and others bad	50
IV	The school has hygienic services, some regular and others good	25
V	The school has all the hygienic services in good condition.	0

The school of Castrovirreyna has two hygienic services in good condition and one regular; therefore the deficiency of hygienic services amounts to 25%. On the other hand, all the hygienic services of the school of Santiago de Surco are in good state of conservation; consequently, said deficiency equals 0%.

Calculation of the School Poverty Indicator

The indicator of school poverty is a weighted average of all the percentages of shortcomings and deficiencies by their respective weights. Its calculation is presented in the following table:

Lack or deficiency	Weight	School of Castrovirreyna		School of Santiago de Surco	
		% de CD	P*CD	% de CD	P*CD
Late entry	18	20.41	367.38	7.88	141.84
School delay	28	32.86	920.08	8.80	246.40
Repeating school population	12	0.00	0.00	0.00	0.00
Working students	23	0.00	0.00	0.00	0.00
Chronic undernourished	41	28.10	1,152.10	0.30	12.30
Teachers hired	9	20.00	180.00	5.71	51.39
Teachers without pedagogical degree	20	6.67	133.40	5.71	114.20
Classroom deficiency	17	0.00	0.00	0.00	0.00
Deficiency of academic facilities	26	50.00	1,300.00	25.00	650.00
Deficiency of recreational facilities	23	25.00	575.00	0.00	0.00
Electric power deficiency	23	0.00	0.00	0.00	0.00
Water deficiency and drainage	12	66.00	1,518.00	0.00	0.00
Deficiency of welfare services	10	100.00	1,200.00	25.00	300.00
Number of sections per classroom	10	0.00	0.00	0.00	0.00
Management deficiency	14	50.00	500.00	0.00	0.00
Deficiency of hygienic services	309	25.00	350.00	0.00	0.00
Total		424.04	8,195.96	78.40	1,516.13
Average School Poverty		26.52		4.91	

CONCLUSIONS

1. The proposed methodology has proved to be successful in that it has made it possible to draw up the map of school poverty based on the 16 proposed indicators.
2. At the national level, the shortcomings and deficiencies of the highest average are the assistance services with 94%, in second place, there are the academic facilities with 86% and in third place the recreational facilities with 82%.
3. The indicators indicated in this study determined that Huancavelica is the region with the highest rate of school poverty with 73% of shortcomings and deficiencies. The behavior of each one of the shortcomings and deficiencies indexes in this region is the following: 100% of assistance services, 98% in academic facilities, 94% in recreational facilities and in hygienic services. In a second group are electric power with 89%, water and sewage with 77%, school backwardness with 71% and teachers without title with 70%, In a third group are the deficiency in classrooms with 51%, the deficiency in management with 48% and the classroom section ratio with 40%.
4. The province with the highest school poverty is Purus of the Department of Ucayali with 83% average shortcomings and deficiencies. Seven indicators: assistance services, academic facilities, recreational facilities, water and sewage, electric power, hygienic services and untitled teachers, reach 100% of shortcomings and deficiencies.
5. The district with the highest levels of school poverty is Yavari of the Ramón Castilla Province of the department of Loreto. The average number of shortcomings and deficiencies in this district is 85%.

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