TECHNICAL DOCUMENTS

A collection of documents presented at thematic workshops of the Education Indicators Regional Project of the Summit of the Americas

THE CHALLENGES TO EDUCATION INFORMATION SYSTEMS:

teachers and the dissemination of school-focused information

PRIE Américas

Regional Bureau of Education for Latin America and the Caribbean

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teachers and the dissemination of school-focused information

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UNESCO
Regional Bureau of Education for Latin America and the Caribbean

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PREFACE

A broad set of themes contribute to the successful functioning of education information systems. Many of these are frequently mentioned in the education debate in the region both as explicit requests of decision makers and other education professionals, and as expressions of concern from those responsible for education information who, in their daily activities, are attentive to the appearance of new demands.

Within this framework of concerns, and in addition to the general considerations regarding continual improvement of education information systems, during the Fifth Latin American Education Statistics Workshop (UNESCO; Bogotá, Colombia; March, 2005), representatives of the countries were consulted regarding the possibility of holding a set of discussions on themes considered to be most urgent for carrying out their tasks. On that occasion a particular interest was expressed in discussing the need to move toward the construction of pertinent information on teachers – a theme of central importance in education – as well as discussing the need to systematically treat information dissemination policies and practices, particularly those focused on schools.

At the same time, the current phase of execution of the Summit of the Americas Education Indicators Project (PRIE 2004-2007) provides for opportunities for discussion of specific themes that will allow countries to move forward in treating these issues. Thus, two discussion workshops were scheduled focusing on the above-mentioned themes. In order to provide for extensive country participation, two of these events were programmed to occur simultaneously with the deliberations of the II Summit of the Americas Hemispheric Assessment Forum held in Brasília in June of this year.

Representatives of the technical teams of 21 Ministries of Education of the region participated in these two workshops organized around a working document prepared and presented by UNESCO as the agency responsible for technical aspects of PRIE, and presentations of national experiences that were requested from professionals from nine countries in the region. Both the base documents as well as support material for the country presentations are included in this volume.

We trust that publication of these documents will contribute to reflection supporting the on-going improvement of education information systems in face of the challenges that various current political mandates present to them.

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INTRODUCTION

Education information systems of the region face a broad set of challenges that are linked to the general need to continuously adapt to the growing and varied demands resulting from the new challenges faced by education systems such as changes in concepts and paradigms that guide activities in the area of education.

In effect, as was evident in the discussions held during the Fifth Latin American Statistics Workshop (UNESCO. Bogotá, Colombia, March, 2005), education information systems are required in order to keep up with growing information needs. This necessarily involves a review of basic assumptions upon which these information systems have been created, including growing sensitivity in regard to the appearance of thematic areas and more specific, complex, and changing information demands.

For example, information ordinarily available on teachers - their numbers, formal training, and student/teacher ratios (linked to resource allocation concerns of education systems) is clearly insufficient.

At the same time, there is a clear need for information that considers teachers as key actors in education systems and which is able to inform us about their activities through a better understanding of teachers as subjects of their practices, as well as the interaction between these elements and the institutional conditions that influence such practices.[1] The discussion document of the first section of this publication focuses on the information needs of teachers and it is conceptually and analytically organized in order to construct a structured set of information on the teacher issue. To this end, it brings together discussions carried out by the OREALC UNESCO/Santiago team.

These general reflections are presented together with the national experiences of Argentina, Chile, Trinidad & Tobago, and Paraguay.

The first of these (Argentina) focuses on a teacher census carried out in 2004 (repeating one of a decade before) the objectives, scope, operational aspects, and first results of which are presented herein.

The second experience (Chile) identifies key variables on teachers that are part of the production of education information of that country. This information is linked to general attributes such as teacher salaries; their perceptions regarding management of the educational content for which they are responsible as an explanatory factor of student academic performance; and results of programs carried out by public authorities in the field of teaching.

The third experience (Trinidad & Tobago) presents the information on teachers produced by the country linked to needs projected for the education system up to 2020, the basic guidelines of education policy for 2000-

[1] *See Guadalupe, C. (2005) Sistemas de Información sobre Docentes: alta prioridad pero baja exploración. Un comentario necesario en Revista PRELAC Nº 1, Julio 2005. UNESCO. Santiago (pp. 182-183).*

2003, and the country's international commitments. The information is for indicators classified as inputs, processes, and environment.

Finally, the fourth experience presented (Paraguay) contains a description of regularly produced information using the human resources sub-system of the Continuing Statistical Information System of that country. In effect, statistical surveys carried out at the beginning and end of each school year make it possible to collect information on basic teacher attributes: education attainment, certification, time in–service, teaching post and time dedicated to it, and source of payment. The document includes information on teachers for the 2004 school year.

The second part of this publication seeks to respond to growing consensus regarding education as a public good and emphasizing the key role of schools. This has important implications for the development of information systems both in terms of the support they can provide in the areas of accountability of education systems through transparent and public access to information on key themes as well as in terms of the understanding that schools are both key producers and users of education information in the development of actions that in the final analysis make up the environment in which learning does (or does not) take place.

The discussion document of this second section presents a set of reflections that respond to current question regarding the «return» of information focused on schools, arguing for the need to understand that management of information on the national level should be accompanied by greater understanding of information needs of schools and placing particular emphasis on communicational aspects, on meaningful structuring of information, and on viewing schools as managers of their own information. Such information is a key resource for formulating strategies linked to the quality of services that schools provide, to their institutional and pedagogical efforts, to their results, and to their management.

These general considerations are accompanied by the national experiences of Brazil, Mexico, the Canadian province of New Brunswick, and of Saint Lucia.[2]

The first experience (Brazil) describes work of the *Office of Education Information Treatment and Dissemination* of INEP (*National Institute of Education Studies and Research*) in identifying its users and current information dissemination policies.

The second experience (Mexico) treats the work carried out by the General Office of Policy Assessment of the Public Education Secretariat, linked to student performance assessment as a global evaluation component and part of the national teaching careers program.

The third experience (New Brunswick) treats provincial feedback of information from national and international studies of student academic achievement with the understanding that such achievement is a central element of education quality.

Finally, the fourth experience (Saint Lucia) treats statistical information that is disseminated according to categories (inputs, processes, and education results) according to an education plan up to 2005. The text reflects on the quality and integrity of the information, as well as methods used for its dissemination, offering a number of considerations regarding current limitations in information dissemination practices.

Treatment of these broad subjects, of teachers and school-focused information dissemination, is part of a very large set of subjects worthy of reflection in order to assure that education information systems maintain

[2] *Unfortunately, at the time that the present publication went to press, one of the presentors of the meeting had not sent the material in writing. Therefore, it could not be included.*

and develop their service capacities. This publication contains both general considerations as well as those more directly associated with experience, with the understanding that bringing both elements together will make it possible for those who work with national education information systems to have available key elements for improving their own performance.

TOWARD AN INFORMATION SYSTEM ON LATIN AMERICAN AND THE CARIBBEAN PRIMARY AND SECONDARY SCHOOL TEACHERS. A CONTRIBUTION TO THE DISCUSSION.[1]

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[1] *The purpose of this document is to organize discussion and to develop ideas. Therefore, it is presented as a preliminary contribution to discussion.*

[2] *The content and opinions expressed herein are the sole responsibility of the author and are not necessarily those of UNESCO.*

1. INTRODUCTION

The governments of the region have committed themselves to attaining the education goals established in the Millennium Declaration, at the World Conference on Education for All, and more recently at the Summit of the Americas. Within the framework of actions established[3] to foster attainment of these objectives, the ministers of education approved the Regional Education Project for Latin America and the Caribbean (PRELAC) for the period 2002-2017. PRELAC defined five strategic focuses around which its activities are to be based: the meaning of education, teachers, school culture, school management, and social responsibility for education[4].

The second strategic focus, centered on teachers and strengthening their active participation in the education change process, seeks to support policies to foster social recognition of teachers and their support in education system change[5]. The focus emphasizes the need to design comprehensive policies that go beyond partial approaches, that consider proposals for changing the role of teachers, and that include the many areas that affect teacher performance. This refers not only to classroom teachers but to principals, supervisors, and other specialists as well. It aims to better interface initial and in-service training; to promote career policies that foster improvements in teacher performance; to lead to the improvement of working conditions and salary policies; to encourage teacher performance assessment that emphasizes the intellectual and ethical development of students as well as to the support of local communities.

The definition of policies seeking to bring about change in the professional status of teachers exists in a broader context of a need for systemic change and to approach the problem from various dimensions. This means thinking simultaneously about changes in school policies. For this reason focus 3 of PRELAC centers on school culture, strengthening the concept of teaching «teams», and going beyond the idea of «the» teacher as an individual able to bring together all of the skills necessary for instruction; on fostering the development of learning and participatory communities, not only among teachers, but with the participation of families and students and in which everyone has input into decision-making.

This means thinking about a new organizational and normative framework, about changes in school management, granting them more autonomy in decision- making in both pedagogy and management that contributes to the construction of collaborative education projects that take on the identity of schools themselves[6].

Definition of these policies as well as reasoned decision-making and implementation of resulting programs and projects demands the availability of up-to-date, relevant, and meaningful information that contributes to constructing the necessary comprehensive vision. It is therefore pertinent for us to ask ourselves about what kind of teacher-related information is collected and available in the countries of the region.

National education statistics programs have as a basic component consistent and comparable information about teachers collected with various degrees of detail. Statistics are also available from other public sources[7] and results of research carried out by both public and private entities with different scope, coverage, and without presenting a sufficient number of connections between them.

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[3] *The global action framework as well as regional frameworks can be found in UNESCO (2000) Framework of Action*

[4] *UNESCO (2002). Proyecto Regional de Educación para América Latina y el Caribe (PRELAC). OREALC/UNESCO Santiago. Ver http://wwww.unesco.cl/esp/prelac*

[5] *PRELAC- Strategic focus 2.*

[6] *PRELAC. Strategic focus 3.*

[7] *For instance the Permanent Household Survey and Labour Statistics (ILO).*

In terms of the availability of data on teachers of the region, UNESCO's Institute for Statistics currently has updated data[8] on:

- Teaching personnel by level of education according to ISCED 97[9], with «teaching personnel» understood to be the number of individuals officially authorized, either full or part-time, whatever their professional training or teaching method (face-to-face or distance), to guide the learning experience of students.
- Percentage of female teaching personnel by education level according to ISCED 97.
- Percentage of certified teachers by ISCED 97 level, with «certified teachers» understood to be individuals who have received minimum organized training (initial or in-service) required in each country in order to teaching at the corresponding level of education.
- Student/teacher ratio, by ISCED 97 level.
- For countries participating in the WEI[10] project, one has as well the number of full time[11] teachers by age range and salaries paid in public schools in three categories (minimal training upon entry, after 15 years, and maximum salary).

The basic information described is not available for all countries of the region, as can be seen in the sources indicated. In spite of great efforts within countries, there are still problems of consistency and comparability.

This information on teachers is clearly insufficient for providing needed knowledge of the teacher question and in order to have a broad and comprehensive perspective for creating a basis for policies aimed at improving the professional development and quality of life of teachers, as well as to contribute to the kind of teacher performance that can have a positive impact on the learning of children as set forth by PRELAC.

This has led the UNESCO Regional Bureau of Education, as a joint initiative in two of its areas (teacher training and the Regional Information System– SIRI) to urge the need to design a teacher information system that responds to the needs of countries in terms of pertinent statistics for public policy-making and within the framework of the strategic focuses of PRELAC described above. The development of the framework of such a system, the model and analysis, and the contents, coverage, and scope drafted by the teams in a multidisciplinary effort in which a variety of OREALC/UNESCO professionals have been involved, constitute the basis of this document.

2. SCOPE OF THE SYSTEM

The objective that underlies this teacher information system proposal is to indicate what information should be sought regarding teachers and how such information should be organized in order to create a teacher information system with a primary focus on their role as key actors in the transformation of education and in its ability to respond to the learning needs of students.

The system will make use of data produced by the UNESCO Institute for Statistics as well as those produced in the region and in each country by other public and private entities that meet the requirements of quality and comparability. Based upon availability and the priorities assigned to different themes, lines will be

[8] *UNESCO Institute for Statistics -UIS. Compendio Mundial de la Educación 2004 y bases de datos disponibles en www.unesco.org*

[9] *UNESCO. International Standardized Education Classification in its latest revision of 1997 (SCED 97)*

[10] *World Education Indicators Project, a joint initiative of OECD and UIS.*

[11] *This is a numerical expression that makes it possible to correct the effect of the existence of teachers who work part-time, expressing total teachers as a full-time equivalent.*

established for the production of new indicators, for proposing modifications to current collection methods, or for developing new methods.

In regard to the uses to be made of the system, without here presenting an exhaustive list, in general terms the goal is to help improve our knowledge about teachers as persons and as professionals through the availability of systematic, reliable, and regionally comparable data that make possible the construction of indicators associated with teacher performance and quality and contributes to policy-making within the sector in a number of areas: in teacher training supply; in the development of training programs; in the modification of regulation, entry, and teacher promotion policies, salary and social security policies, and in the improvement of teaching practices, among others. Another substantive use is in the connection with research that is necessary in order to contribute to understanding of the teacher issue, thus providing a more solid basis for public policies.

The data produced should be widely distributed, especially to schools and to teacher teams in order to stimulate thinking about school management and performance, encourage links to the community and examination by teachers of their practices in order to serve as a stimulus for the definition of school improvement and innovation.

The system should include all teachers who are directly involved in teaching students, including personnel who provide direct support to students including librarians, laboratory personnel, guidance counselors, as well as those who provide technical-pedagogical support from intermediate levels of the system.

Education levels included are ISCED 97 levels 0 to 3:

- Level 0 - pre-school
- Level 1 – primary school
- Level 2 – first cycle of secondary education
- Level 3 – second cycle of secondary education

Most of those who will be teaching in coming decades are currently students in teacher training institutions. If we assume that the pedagogical and institutional models under which teachers are trained have a strong impact on their subsequent teaching practice, it is then useful to assess the pertinence and possibility of extending the scope of the system to tertiary level teacher training institutions, collecting all of the variables with the pertinent adaptations to guarantee adaptability to the characteristics of this level. In these institutions the view would extend also to students currently enrolled, to their social, educational, and economic characteristics, to the motives that led them to choose a teaching career, to their perceptions of social prestige earned by following such a career, and to their expectations regarding their futures as teachers.

The dimensions proposed for making up the system are included in item five.

In treating who will be included in the system it is necessary to reflect on the questions that such a system should help to answer. Here are three:

- Who are the teachers?
- In what institutional environments are they trained?
- How may we characterize their performance?

3. CONCEPTUAL FRAMEWORK

Thinking about teachers and their development means thinking first about the kind of education that society expects and needs in the sense of the meaning given to education as well as the new challenges and new functions assigned to teachers and which they are expected to fulfill.

It is within this framework that PRELAC proposes changes in how we look at the role that teachers play in transforming education. These changes can be seen in the literature and in policy discourse, supported in the results of research. They involve discarding the view that teachers are merely one more additional input and to begin seeing them as key actors in the educational process. Tedesco[12] notes that the three traditional views of teachers have exhausted their explanatory power: the disassociation between the importance assigned to teachers and lack of policies or actions aimed at improving their training, working conditions, or participation; that which sees them as «victims» of the system or as «guilty» for its unsatisfactory results; and that which seriously underestimates the role of teachers in transforming the system.

Students are the key actors in the learning process. But they require expert facilitators as well as a stimulating environment that teachers and schools can offer. Thus, the answer to the question *what do teachers do?* is understood as the result of interaction between the characteristics of these actors (*who are they?*) within a given institutional context (*in what context?*). Both practices and context effect the characteristics of teachers, their actions, and the context, making it possible to analyze the logic of reciprocal adjustments and determinations.

It should be noted that activities of teachers are key elements for the attainment of education objectives depending, on the one hand, on the initial and in-service training that they receive (the concept of continual training); of their working and career conditions (the institutional context); and the system of material and symbolic rewards that they are offered.

In analyzing the multiple dimensions that make up their professional activities it is necessary to study those who choose a teaching career, to examine their motives for doing so, the training that they receive, and its impact on their subsequent professional performance. We should also consider opportunities for in-service training, the continuity and pertinence of such training, and assessment of its impact on their classroom work. Moreover, their cultural backgrounds, personal and family expectations, professional growth paths, and other attributes contribute in defining how each teacher carries out his or her tasks in terms of the resources available, the degree of satisfaction, and how they perceive the institutional framework, their own responsibilities, and expectations of the learning of their students.

Teachers work almost exclusively within institutional contexts[13]. The norms established for their entry and for the potential development of their careers, the levels of demands, opportunities for participation, salaries and stimuli offered, influence the potential of teachers and determine in the long run the characteristics and composition of teachers as a group and their impact on education outcomes.

One also needs to consider the question of independence or autonomy with which teachers carry out their tasks in the classroom. The individualism of teachers is strongly affected by changes in school organization and management fostered by countries of the region. Focus 3 of PRELAC points to the need to consider the culture of schools so they may become learning and participatory communities. In this, one of the aspects to

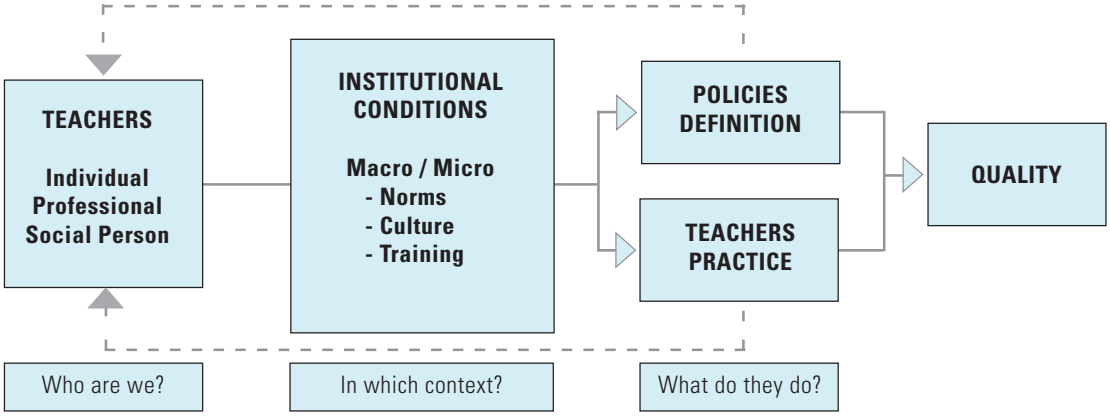
[12] *Tedesco, J.C. Profesionalización y capacitación docente. IIPE/UNESCO Buenos Aires.*

[13] *Only "private teachers" are autonomous.*

consider is how to strengthen teacher organizations. The challenge lies in achieving schools that are autonomous, flexible, democratic, and linked to the local and world context, strengthening the concept of «teaching teams» and thus overcoming the idea of «the» teacher as a person able to unite all the skills necessary to be developed within a school. Thus, the changes that are needed must take place not only in the classroom, but in schools. Improved teacher performance must be sought not only in the individual sense, but in the collective sense as well.

4. ANALYTIC MODEL

In seeking to answer these questions and using the described conceptual framework, we here specify the components of the system and establish the dynamic of relations between them here summarized in the analytic model.



Taken from: UNESCO (2005) ***Notes for the development of a teacher information system***. Working document, preliminary version. Santiago, Chile.

This model seeks to present dimensions related to the teacher question from the perspective of focus 2 of PRELAC, establishing synergies between them and making possible the organization of information required by theme.

5. SYSTEM CONTENTS

The information is organized in four general dimensions:

- Teacher characteristics;
- Institutional conditions;
- Teaching practice;
- Participation in policy definition.

5.1 Teacher characteristics.

This dimension seeks to treat all of those aspects that allow us to characterize those who study and carry out the activity of teaching - their characteristics as individuals, their living conditions, their initial and in-service training, and their social and professional growth.

From a global perspective, the activity of teaching should be analyzed in terms of its economic importance, employment structure, and labor behavior, identifying its most important characteristics.

Developing a teacher profile involves asking about living conditions, family composition, working conditions (including holding more than one job), household income, and the contribution of teacher salaries to total income, making comparisons with incomes derived from other activities. Salaries will be determinant for the analysis of consumption patterns (including cultural and technological goods) and for access to professional enhancement.

Initial training and that which teachers receive in-service should be investigated by looking at training institutions and at training policies, establishing the relations between them and between training and the work that teachers carry out seen from the point of view of teacher specialties, and the pertinence of subjects treated in their training. It is important to learn about the motives that lead individuals to select a teaching career and the characteristics of the career, with emphasis on institutional and personal incentives that have an impact on teacher performance.

We also need to learn about the social origin of teachers. This will lead us to investigate family background and their current social and economic conditions as well as the perceptions that they have of their profession including its social position and prestige.[14] In all countries there appears to be clear agreement regarding the social rank of different occupations, a ranking that in the case of teaching in the region has experienced drastic changes through time.

The following thematic areas are part of this dimension:

- Social and demographic characteristics;
- Living conditions;
- Initial and in-service training;
- Professional career growth;
- Social growth.

5.2. Institutional conditions

Every country has a legal framework that regulates the teaching activity and that establishes with a lesser or greater degree of precision aspects related to: teacher rights and duties, career entry, promotions, personal mobility, certification, salary, incompatibility of functions, and training.

The content of these regulations are determinant in the analysis of the impact of employment policies, incentives, and salaries. Often, the rigidity of these systems makes them «de-professionalizing» or inoperable, constituting negative stimuli for entry to the profession or for continuation within it.

[14] *In this regard, see results published by IIPE- Buenos Aires of the research project on the training of primary and secondary teachers in Argentina, Peru, and Uruguay. See J.C Tedesco- E.Tenti Fanfani. (2002) Nuevos tiempos y nuevos docentes (preliminary version). Documentos IIPE/UNESCO.*

It is also important to analyze the bonuses matrices that are part of salaries, according to the how they are defined and the percentage that they represent. It will be noted that such systems usually award time in service rather than skill enhancement.

The analysis of teacher working conditions should also include how work is assigned, the number of hours per week and the tasks included. This has a strong impact on institutional organization. One cannot directly compare a teaching assignment that is wholly dedicated to classroom work with another that includes time for class preparation, test correction, and professional up-dating. The fragmentation of teaching assignments into class hours, a common practice in many schools, such as secondary school teaching in some countries, makes it impossible for teachers to actively participate in the life of the school and makes it difficult to create a sense of belonging. Moreover, in terms of collecting data on teachers this situation creates serious problems for countries of the region. They therefore will have to seek viable alternatives that can result in improved collection of data that have a direct impact on the construction of teacher indicators.

One needs to inquire about the organization of human resources within schools, both in vertical organization in the distribution of levels of authority and responsibility, including processes of delegation and participation, as well as horizontal organization for task execution (curricular organization, working in teams, creation of groups).

The placement and size of a school, its accessibility, the services available to it, quantification and description of physical conditions (the building, equipment, teaching material), the presence or absence of security, provide knowledge about the immediate context and conditions the quality of the teaching that takes place.

This information should be complemented with social and economic profiles of the population served by the school which we can estimate through the educational attainment and occupation of families as well as complementary services that they require such as meals and clothing, either from the school or from other community organizations.

The variables or these that make up this dimension are organized into two major areas:

- Macro level: structure and organization of the education system, legal framework, public policies;
- Micro level; schools, school management models.

5.3. Teaching practices

This dimension seeks to describe various aspects of the work of teachers and to consider institutional factors that influence teacher performance. When we ask the question, «what do teachers do?» we wish to adopt a perspective that includes all teacher activities, those for which they are paid and those for which they are not. These are not limited to classroom and administrative tasks, but cover many kinds of interactions with their superiors, colleagues, parents, and with students outside the classroom. The contents proposed may be divided into three kinds: classroom teaching, interaction with other school staff, and interactions with parents both in and outside the school.

We wish to take a first look at the methodological strategies used by teachers in their daily activities aimed at generating conditions to aid student learning, either creating greater autonomy or greater dependence on learning. These strategies are related to a particular pedagogical model that is manifest, although closely combined with a hidden curriculum, determining the sequence of activities carried out in the classroom.

Teacher-student relations are the product of interaction in various activities, behaviors, and attitudes. In order to characterize them we need to view them:

a) From the perspective of teachers in regard to the organization and presentation of contents, the organization of classroom space, the fostering of reflexive, participatory, and collaborative activities; in regard to assessment strategies; in regard to the diversity of teaching resources used; in regard to the use of new information and communication technologies; and in regard to willingness to participate in projects aimed at improvement and innovation.

b) From the perspective of students in regard to their motivation, participation, and independence in study and research, in regard to discipline, organization of content, results, and classroom climate.

Schools as organizations have three basic elements: goals and objectives; an organizational structure; and a system of relations. Their characteristics and ways of distributing responsibilities and forms of control determine the different management models. We wish to look at teachers in relation to these elements, characterizing their performance as members of the teaching community. This must be done in regard to the characteristics of the school and its management model (type of management, autonomy) and specifically address the functions carried out within it - whether by a group, a administrative, or support personnel.

Some of the aspects to be investigated are related to the development of pedagogical-administrative functions such as timely presentation of documentation required by the school; participation in development of school projects and curricula; the levels and uses of autonomy; organization and/or participation in extra-curricular activities; actions in the face of peer conflict; willingness to work in teams, and integration and collaboration between teachers.

The function of the school principal will be focused on his or her leadership, on accompanying the classroom work of teachers, in the ability to solve problems, willingness to provide venues for reflection and participation, and the ability to coordinate and control school activities.

Examining the link between teachers and families in this context should consider the fostering and calling of meetings, encouragement of parent participation, fostering activities with the community, and teacher intervention in the solution of family and social conflicts associated with their students.

Consensus that the professional performance of teachers is determined by their ability to improve student learning outcomes has led in recent years to an interest in defining better mechanisms for assessing teacher performance. The performance of teachers, like their practice, has been approached by researchers from different conceptual and methodological perspectives. The literature provides examples of these various approaches[15].

Within the information system framework, one may look at performance through professional qualities, preparation and attitudes toward teaching, and in terms or knowledge, commitment, responsibility in carrying out teaching functions, initiative, personality, dedication, collaboration, openness to innovations, changes, and results.

In order to provide knowledge in regard to the work satisfaction of teachers, understood as «a positive or pleasurable emotional state resulting from the subjective perception of the person's work experiences» (Locke,

[15] *Rockwell, Elsie and others. La investigación sobre la práctica docente. Una bibliografía anotada. México. IPN.; J.C. Navarro. (2002) El docente latinoamericano: carrera, incentivos y desempeño en ¿Quiénes son los Maestros?: carreras, e incentivos docentes en América Latina. BID.*

1976)[16] we propose to look at teacher satisfaction from the following dimensions: work satisfaction, which includes intrinsic interest in the work, variety, learning opportunities, difficulty, amount of work; satisfaction with salaries; satisfaction with promotions, including references to the mechanisms through which they are carried out, career development possibilities, and job stability; satisfaction with continual training, referring to opportunities for in-service training; satisfaction with recognition of work within the school by superiors, colleagues, and other members of the education community; satisfaction with social recognition of the teacher's role, and with their own performance.

The contents of this dimension are organized into the following thematic areas:

- Methodological strategies. Teachers in the classroom;
- Relational system. Teachers and the education community;
- Teacher performance;
- Satisfaction.

5.3. Participation in policy definition

Focus 2 of PRELAC speaks of the need to overcome the disassociation between those who design and those who execute the policies that characterize the traditional public policy-making model, placing emphasis on the actors. The active participation of teachers not only as executors, but also in phases previous to the definition and planning of policies and programs, with the substantial contribution of their experience is an indispensable condition for guaranteeing progress in processes of change.

For its part, focus 4 of PRELAC calls attention to this disassociation in the vertical management model that characterizes education systems and that hinders changes in education practices and attitudes, and proposes moving toward a system management model based on real contexts and on persons who act in them within a fluid communication system[17].

Systematic research is needed regarding participatory venues established by current legislation and regarding the implementation of concrete experiences as well as their assessment on the macro and micro or local levels.

6. TOWARD AN ACTION PROPOSAL

Organizing the innumerable themes and variables herein described into a coherent system that responds to expectations is no easy task.

The objective of designing a teacher information system employing a broad conceptual and methodological framework that guides activities for collecting information, and for carrying out studies and research within countries of the region needs to be carried forward by official statistical offices, teacher trainers, human resource managers, and by the teaching community itself, with both design and subsequent implementation of the system carried out with the broadest possible participation.

[16] *Bravo, María Jesús. Satisfacción laboral. Tratado de psicología del trabajo: actividad laboral en su contexto.*
[17] *PRELAC. Focus 4. OREALC/UNESCO.*

Once the proposal is formalized, one can move on to agreement on the objectives, scope, organization, and content of the system.

Based on these definitions, and having analyzed compatibility of definitions, classifications, and methodologies, the goal is to carry out a complete collection of surveys, census reports, statistics, administrative records, studies and research both completed and in-progress that will make it possible to be aware of the current availability of information for each country and its possible contribution to the system.

In the determination of sources and collection methods, it is important that work be carried out in cooperation with the responsible human resource areas of ministries of education, thus resulting in statistical use of existing administrative records. The means must be found to take best advantage of these records with the resulting advantages in terms of cost, reduction of work load of informants (teachers) and in order to avoid duplication of effort in terms of assessment of the conceptual and methodological base, classifications, quality, and processing.

Among other priorities are the collection and analysis of the legal frameworks that regulate teaching activities in each country and (where applicable) in provinces, states, and municipalities, as well as research documents and reports that describe and summarize them[18] allowing us to construct institutional conditions described in dimension two of the information system.

As a result of these steps and paying attention to the priorities that define responsibilities, it will be necessary to establish a sequential action plan that determines when and how each of the dimensions and variables of the system will be incorporated.

[18] *An example of a research report for Argentina is: M.S Gvirtz. Los estatutos y la configuración del docente como profesional. PREDE-OEA-FLACSO*

TEACHERS NATIONAL CENSUS – 2004

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BACKGROUND

The current education information system in Argentina began to be developed in the beginning of the 1990s within the framework of a new Federal Education Law that marked an important change in the education system by modifying not only the organizational structure of education levels but also by increasing compulsory schooling from seven to twelve years and designing new curricular content.

During the 1980s, the lack of uniform and reliable education statistics and the requirement for new information to make possible monitoring of the changes fixed by law, brought about the need to design a new education information system that could guarantee the timely and quality data.

To this effect, in 1994 a National Teachers and School Census was carried out that provided information on schools, teacher profiles, the conditions of school buildings, and student enrollments. This census served as a basis for annual surveys that since 1996 have up-dated information on schools, teachers, and student progress. In 1998 a School Infrastructure Census up-dated and increased information on school infrastructure, while sample surveys collected information on other aspects of the school system.

During the 1990s there were changes in the Argentine education system involving the magnitude and the school profiles of teachers in our country. Various studies show that the demand for teachers expanded along with changes in enrollments, especially in secondary schools, and that there is a lack of teachers to meet the needs generated by the new education structure, especially in key secondary school subjects (currently composed by the third cycle of Basic General and Polymodal Education).

In order to learn about teacher profiles, their social and demographic characteristics, the levels and subjects that they teach, their selection, training, the factors determining their career choices and their opinions and expectations, it was necessary to up-date and broaden the information collected by the National Teacher and School Census of 1994.

Therefore, in 2004 the Teachers National Census collected information on personal and professional profiles of teachers, information that cannot be gathered from annual school censuses.

GENERAL OBJECTIVE

To learn about school, social-demographic, labor, and professional profiles of teachers who work in the **education system** throughout the country in all types and levels of education with the exception of tertiary education, as well as their perceptions regarding the conditions under which they carry out their teaching responsibilities.

SPECIFIC OBJECTIVES

- To describe the work of teachers, the functions they are assigned, and including different subjects and the activities they carry out in their teaching.
- To describe the demographic and social and economic profiles of those who work as teachers in the country (age, sex, family composition, income, etc.).
- To learn about the exercise of the teaching profession, training activities, and professional development (education levels reached, types of training, degrees earned, training courses, participation in research, etc.).

- To inquire about the educational and professional trajectories of the teachers.
- To learn about different labor conditions and situations of teachers, considering the activities they carry out both within and outside the education system.
- To identify teacher perceptions regarding their working conditions, training activities undertaken, and their exercise of the teaching profession.

UNIVERSE OF ANALYSIS

The universe of analysis of the census included all teachers working in public and private schools in regular, special, and adult education and at all levels except tertiary education.

In contrast to the 1994 census, this one included teachers working in administrative and supervisory levels within the provinces.

The teachers surveyed were carrying out teaching tasks in one of the following functions:

Management and administrative personnel: Including principals, assistant principals, secretaries, treasurers, etc.

In-class personnel: Including classroom teachers, teaching assistants, teachers of specific subjects, etc.

Support personnel: librarians, precepts

Supervisors

CENSUS ORGANIZATION

The entity responsible for carrying out the census was the Federal Education Information Network (REDFIE), the information office of the Ministry of Education, Science, and Technology.

The central census structure was composed of various teams headed by an Executive Director and a Census Coordinator who were in charge of the areas of conceptual and methodological design, training, logistics, administration assistance to provinces, and data processing.

THE CENSUS QUESTIONNAIRE

In order to determine the contents of the census form meetings were held during April and May 2004 with other professionals and technicians of the Ministry of Education as well as with other ministries, research institutes, specialists, and teacher union representatives.

The form was composed by two parts. The first collected school profile information and data regarding teacher activities in each school, their types of responsibilities in different schools or within the same school. The second part included questions for obtaining social and demographic information, working conditions, training and professional development, as well as teacher career trajectory. The census form also included in each of the thematic fields certain questions designed to reveal the perceptions, opinions, or expectations of those surveyed.

A preliminary version of the questionnaire was designed in order to be discussed with national and provincial

government authorities and researchers. A second, improved version was tested partially in schools in metropolitan Buenos Aires.

A pilot test of the final version was conducted in July in six provinces corresponding to each of the six regions of the country.

TRAINING PROGRAM

A team was responsible for a training program. Its tasks included:

- writing manuals for different levels in the field;
- training higher levels in the field, including coordinators, assistant coordinators, and heads of provincial supervisors;
- training of a special group of trainers who were responsible for the training of supervisors and census takers. One hundred forty training sessions were held in nearly 100 localities throughout the country.

DATA COLLECTION METHODOLOGY

Data was collected through a **self-administered** filled out by teachers with the help of the census taker.

DISSEMINATION OF CND 2004

Given that in large measure one wished to ask about personal matters (for example, teacher income) a broad awareness building campaign was carried out using different graphic media as well as radio and television in order to that teachers understood the objectives of the census and the importance of cooperating for its success. At the same time, it was emphasized that information given by teachers would be strictly confidential and used solely for statistical purposes.

All teachers were sent a letter signed by the Minister of Education explaining the objectives of the census and the importance of the participation of all teachers in all schools. Posters were printed advertising the event.

FIELD WORK

The organization of field work was decentralized, with a coordinator for each of the 24 jurisdictions of the country. Briefly, field work was structured as follows:

Provincial coordinators: 24
Assistant provincial coordinators: 24
Supervision heads: 90
Supervisors: 654
Census takers: 6,554

The census was carried out during the months of October and November, 2004. Census takers visited more than 46,000 schools, and more than 80,000 teachers completed 1,300,000 census questionnaires.

DATA PROCESSING

The questionnaires are read using ICR (Intelligent Character Reading) technology. After reading and consistency checks, databases will be developed for each province so they may have detailed information about their teachers.

Results will be duly supplied to schools.

PRELIMINARY RESULTS

During May of this year preliminary results have been presented obtained from summary data sheets. The latter are completed in each school surveyed, with the census taker noting the identification of each teacher with respective types and levels of education.

These data are of a **preliminary nature** and will be confirmed or refined once the census forms filled out by teachers are completed.

The **preliminary results** of CND 2004 provide information on:

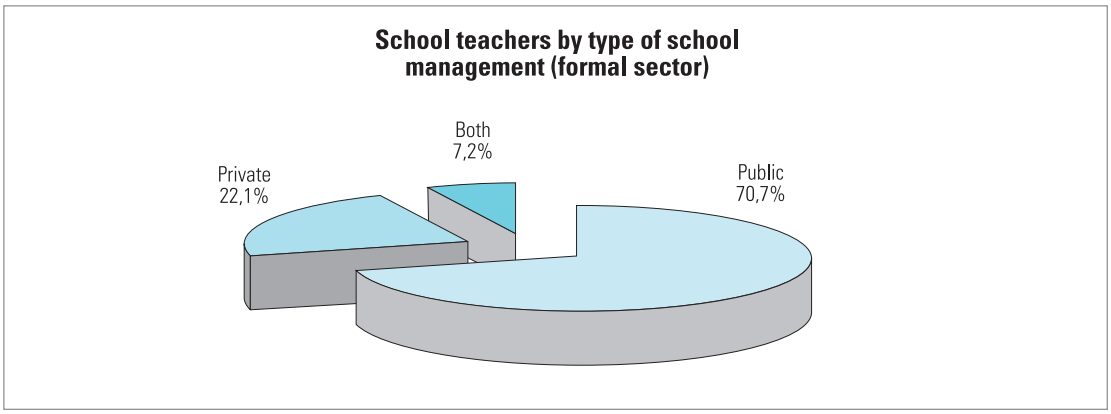
- The number of teachers working throughout the country and in each jurisdiction.
- The number of teachers in schools.
- The number of teachers in public and private schools.
- The number of teachers according to different types and levels of education.

Some results are presented below.

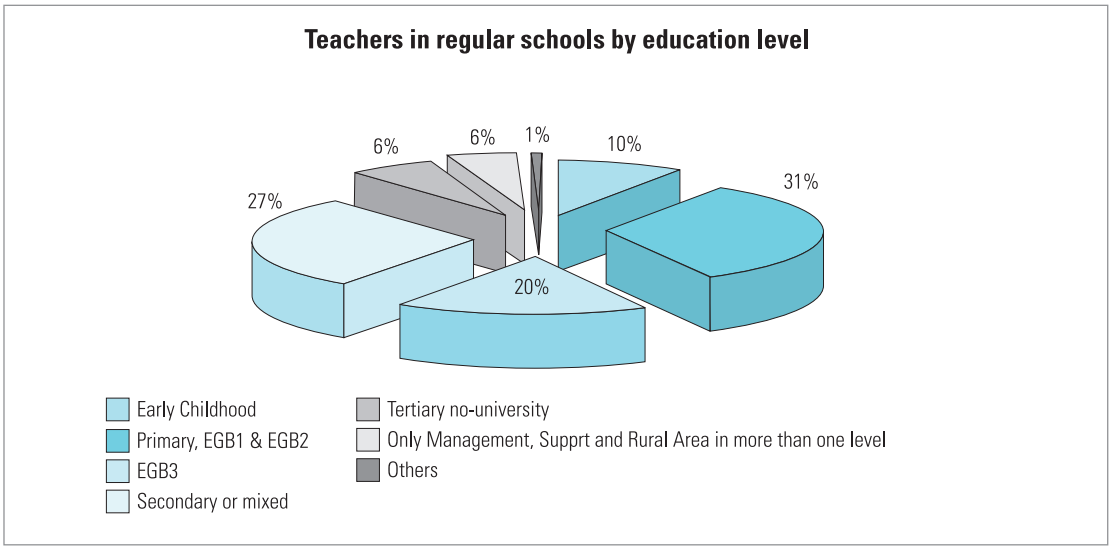
Preliminary results indicate a total of 826,536 teachers, 821,313 of whom work only in schools, 2,936 exclusively in administration, and 2,287 in both. Some 98.4% work in formal systems and the rest in non-formal systems.

In comparison to the National Teachers and Schools Census of 1994, we see a 25% growth in the number of teachers, in line with enrollment increases during the same period.

Those who work in the formal sector are distributed in the following manner:



Some 95.3% work in regular schools in the following proportions:



RELEVANT INFORMATION ON TEACHERS[1]

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[1] *The author wishes to thank Eduardo Correa, Ángela Cortes, Erna López, and María Isabel Valladares for their comments. Errors or omissions are the sole responsibility of the author.*

INTRODUCTION

Education statistics contribute to the design, execution, and follow-up of education policies.

The purpose of this paper is to identify the kind of teacher-related information that the Ministry of Education should produce, analyze, and consider for the purpose of education policy-making.

Therefore we here identify information needs in regard to teachers and how we have approached these needs over the years. The questions to be answered are: What do we need to know about teachers? Why is it important to possess such information? What information do we have in this regard? What is to be done with it? We will also present examples and describe activities that have been carried out using the information.

RELEVANT INFORMATION

When we respond to the question, "what do we need to know about teachers" we note that three areas have been identified and studied by the ministry. These are: teachers within the school system (teacher profiles and their distribution), salaries, and finally, what and how much do they know and how sure are they of their knowledge.

Furthermore, there is an identified but still underdeveloped area. In general terms this has to do with the results of programs and assessments directed at teachers.

TEACHERS IN THE SYSTEM, WHO THEY ARE AND HOW THEY ARE DISTRIBUTED

It is important to identify each actor in the educational system. Teachers play a key role in the teaching process. Therefore, for policy decisions it is essential the knowledge of teacher profiles.

In order to collect this information, the Ministry of Education of Chile created a system to capture teacher data called «Teacher Aptitude». This project presents an official data base of teachers who work within the regular school system, specifically in officially-recognized schools[2]. The basic objective for obtaining such information is to assure that teachers possess the necessary degrees and training and that schools have the teachers that they need.

These data are published in *Education Statistics* and in *National Indicators*. They are also reported internationally.

An example is the indicator of teachers by age range. See Figure 1. Here we see that the age range with fewest teachers is that of 30 years old or less, followed by those over 60 years of age.

This indicator - the distribution of teachers by age range and by gender is used to take initiatives in encouraging individuals to enter teaching. Pedagogy grants have been created for this purpose. These grants seek to encourage students with a desire to teach and with good school records to enter teaching. Grant recipients assume a commitment to teach in a school system for at least years.

[2] *A process that begins by collecting information from each school. This is carried out annually, in April.*

In addition, an initiative has been developed to offer early retirement with additional benefits to older teachers. This voluntary retirement bonus is directed at individuals teaching in municipal systems who at the date of publication of the law[3] are 65 years of age or more for men, and 60 years of age or more for women.

This indicator is considered over time in order to determine if the above-described policies have produced results.

TEACHER SALARIES

For public schools, teacher salaries are determined at the central level through negotiations between the Ministry of Education and the teachers union. One therefore has estimates of salaries received by years of service. For private government subsidized schools only a minimum total salary has been established.

There is a new survey initiative called the «Longitudinal Teacher Study» to be externally administered and that will permit monitoring of demographic and salary variables over time. It will treat perceived salaries.

Salary information is published in National Statistics and in Education Indicators. It is also reported as international statistics. Among the indicators constructed are changes in public teacher salaries and teacher salaries compared to per capita GDP. See Figure 2.

This information is used by governments to negotiate salaries with teacher unions.

In one of these negotiations[4] it was decided not to increase salaries across the board as had been done in the past, but rather to create an performance incentive system. Beginning in 1996 the Ministry of Education incorporated a teacher productivity incentive called the «performance excellence bonus» which is part of the «National Subsidized Schools Performance Assessment System (SNED)». This idea has been encouraged by government, with salaries increases carried out in this manner.

WHAT AND HOW MUCH DO TEACHERS KNOW, AND HOW CONFIDENT THEY ARE OF THEIR KNOWLEDGE

This information helps to explain student performance in national and international standardized tests. It thus makes it possible to identify priority areas to be strengthened in initial teacher training.

In order to obtain this information, a specific question was included in the teacher questionnaires in the standardized *Measurement System of the Quality of Education* (SIMCE) test. It is as follows: «How prepared do you feel to teach the following contents?" The responses to this question are analyzed together with those of another that indicates how much is taught of the content that is considered to be the obligatory minimum: How much have you taught of the following contents to your students of this course?

Additional information is captured through *Trends in Mathematics and Science Study* (TIMSS).

This information has had various uses. In regard to national tests, the above-mentioned questions have been used as control variables in carrying out econometric studies that explain the results of standardized tests. In regard to TIMSS information, an initiative exists for this to be published in the international section in a

[3] *Law 19.933 of February, 2004.*
[4] *Negotiation 1994-1995.*

document of national indicators. Finally, the Curriculum and Assessment Unit (UCE) of the Ministry of Education publishes a document with this information[5].

This has generated public discussion in regard to the nature of initial teacher training offered at the post-secondary level, and in approval of Law 19.961 on teacher assessment.

RESULTS OF INCENTIVES, ASSESSMENTS, AND PROGRAMS DIRECTED AT TEACHERS

This information is important for re-assessing and guiding teacher policies in order to improve the outcomes of Chilean education.

There are three broad initiatives that seek to produce changes in the Chilean education system. Changes are sought through incentives, awards, and punishment, and finally through training or programs directed at strengthening teaching skills. The initiatives are the following:

- National Performance Assessment System (SNED)
- Teacher performance assessment
- Varied programs

As mentioned above, this is a priority area. It has not been completely developed, and assessment has begun.

Internally, at the request of the ministry an internal study has been carried out in order to examine the influence of such initiatives directed at teachers on the results achieved by students in the latest SIMCE standardized test. However, it is not yet known what the government intends to do with this information.

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[5] *For more information, see "Chile y el aprendizaje de matemáticas y ciencias según TIMSS", Unidad de Currículum y Evaluación, Ministerio de Educación, Diciembre 2004.*

Figure 1

Teachers by age group (2002)

Distribution of teachers by age group and gender

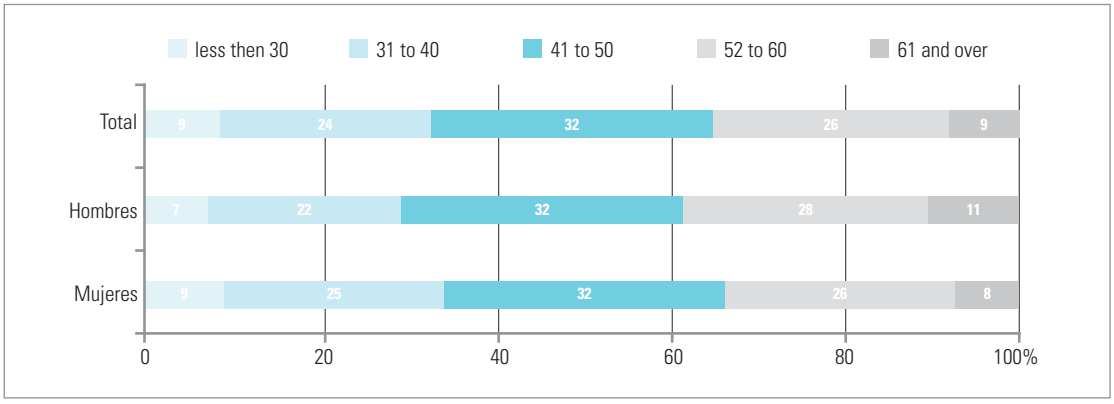
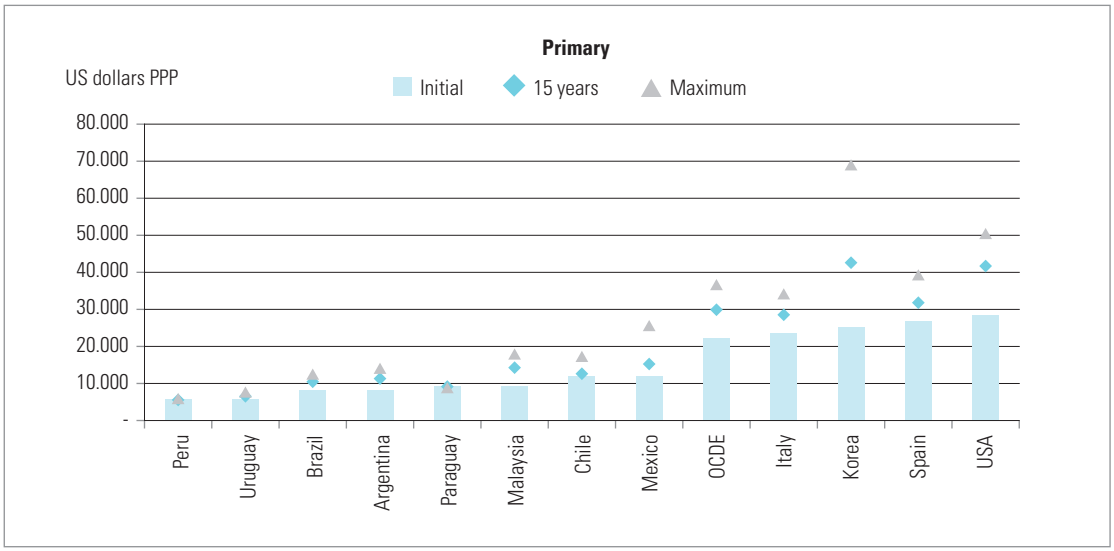


Figure 2

Average public teacher salaries (2000)

Annual salaries of public primary school teachers measured in PPP dollars, by years of experience (beginning, 15 years, and maximum)



CONTINUING STATISTICS INFORMATION SYSTEM

HUMAN RESOURCES SUB-SYSTEM – TEACHERS

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CONTINUAL STATISTICS INFORMATION SYSTEM - SIEC

HUMAN RESOURCES SUB-SYSTEM – TEACHERS

SIEC generates information about the current state of national and local education, key inputs for the activities of assessment, planning, and budgeting carried out by the national education sector. The system seeks to facilitate census scope data processing for different levels and modalities of the Paraguayan education system (early childhood, primary, secondary, higher, and continuing education).

The objectives of SIEC are:

- To improve the quality, reliability, availability, and timeliness of education statistics.
- To provide education levels involved in statistics management with the ability to process and use the information.
- To strengthen decision-processes based on information use.
- To disseminate the information according to the characteristics of different users, both within and outside the education sector.

SIEC operations are decentralized. Included in this process are:

At the Departmental level:

- Departmental supervision units, through Departmental Statistics Units (UDEs), of which there are 23. The major functions of UDEs are: processing of data of different levels and modalities of the national education system; training of those responsible for filling out data reporting forms; analysis of education indicators produced by SIEC; provision of information at departmental and local levels.

At the level of the Ministry of Education:

- The General Office of Educational and Cultural Planning (DGPEC) regulates, monitors, evaluates, and provides technical assistance to UDEs and the statistics units of general offices of education for early childhood, primary, secondary, higher, and continuing education.
- The National Coordinating Office of Education Supervision supports SIEC management.
- The General Offices of Education levels and modalities through their Statistical Units which carry out consolidation and assistance for information at the corresponding levels.

Data collection takes place using initial and final school year statistics reporting forms.

The **initial form** provides institutional data for the different education sectors. It provides a description of the situation at the beginning of the school year for the different levels and modalities. The form collects data for locales, levels and/or modalities, sections, human resources, enrollments, repeaters, and the results of complementary and extraordinary examinations.

The **final form** shows variations in the institutional life of different sectors of education. This provides a description of the situation at the end of the school year for different levels and modalities. It collects data on locales, levels and/or modalities, sections, human resources, enrollment and its variations, school attendance, and results of final examinations.

The data on teachers includes:

- First and last name
- Identification number

- Date of birth
- Gender
- Educational attainment
- Training in education
- Degree earned and/or specialization
- Function performed and/or subject taught
- Grade, course or program responsibility
- Number of classes per subject
- Working schedule
- Years of service in education (total and public)
- Payment by MEC
- Payment by others

Levels of analysis, dissemination, and use of information are:

a. **National:** Through a system of education indicators that include coverage, efficiency, results, spending, among others, that are used basically for planning, follow-up, and assessment of education policies.

b. **Regional:** An information and communication system is being developed in the Education Section of MERCOSUR. One of its objectives is to offer comparable and up-to-date information of the education systems of MERCOSUR countries using a set of comparable indicators in order to contribute to the formulation, monitoring, and validation of education policies in the region and to satisfy requirements of communication, knowledge management, information, and cooperative efforts within the education sector of MERCOSUR at all levels.

c. **International:** Since 1998, Paraguay has been part of the UIS/OECD World Education Indicators Project, the major objective of which is to furnish participating countries with internationally comparable data and indicators regarding the major aspects of education systems. These include information on participation, costs, and human and educational resources

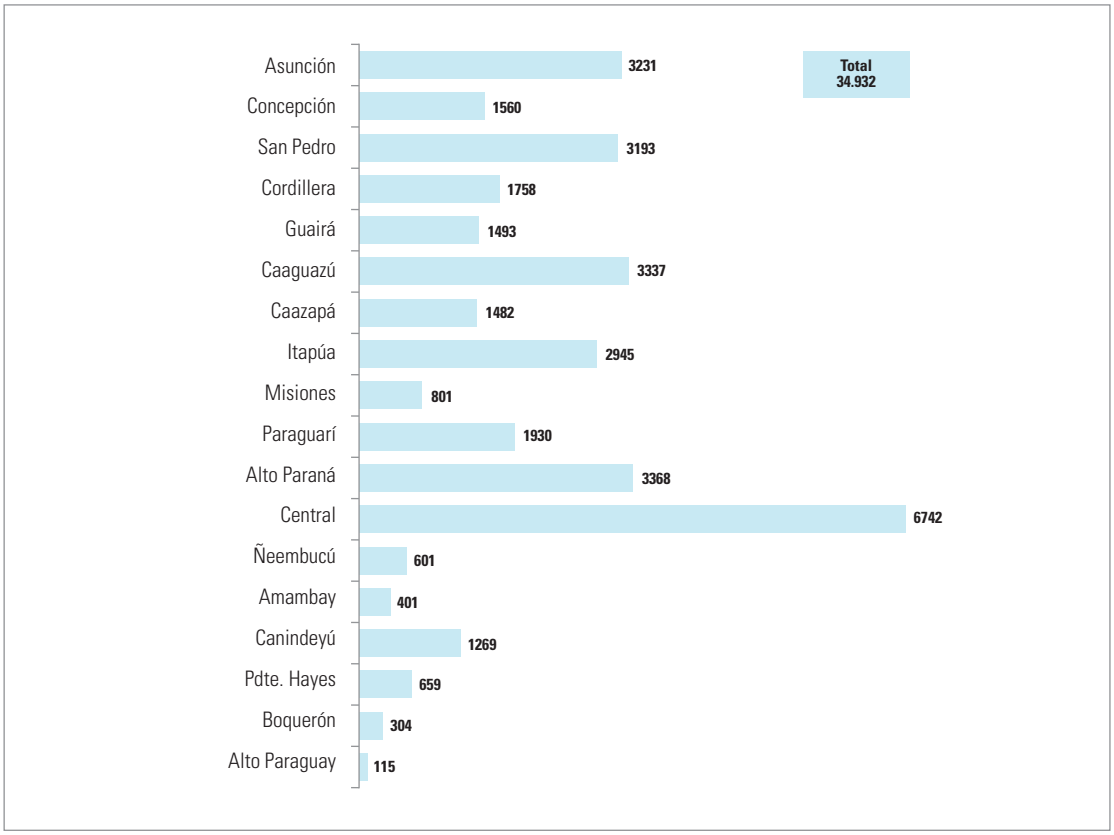
All of these include indicators related to teachers, and for which SIEC is the data source.

As an example, we present below data for the year 2004.

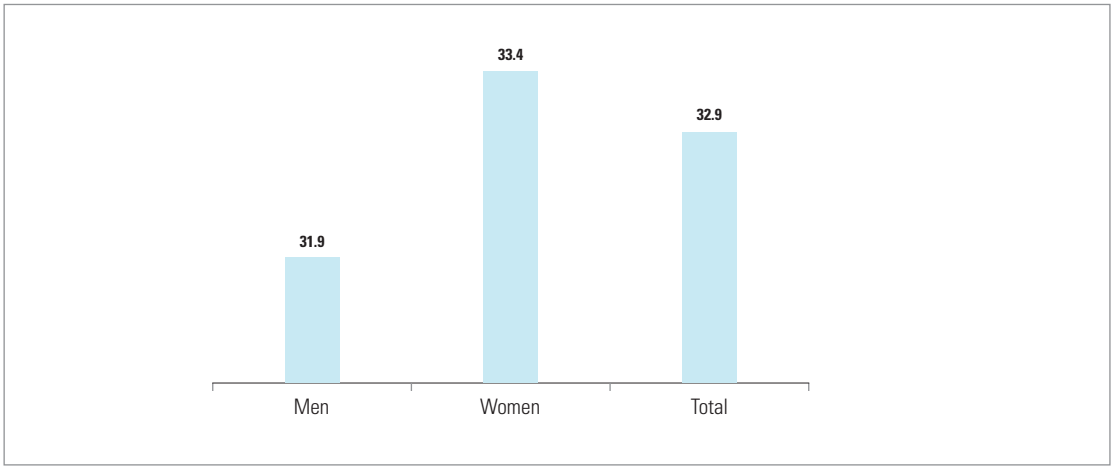
Basic education (1st and 2nd cycle) – ISCED 1. Teachers by working time employment conditions. Year 2004

WORKING TIME CONDITIONS	NUMBER OF TEACHERS
Part-time	33815
Full-time	249
Hourly teaching	581
Part-time and hourly teaching	287
TOTAL	**34932**

ISCED Level 1. Number of teachers by department. 2004.



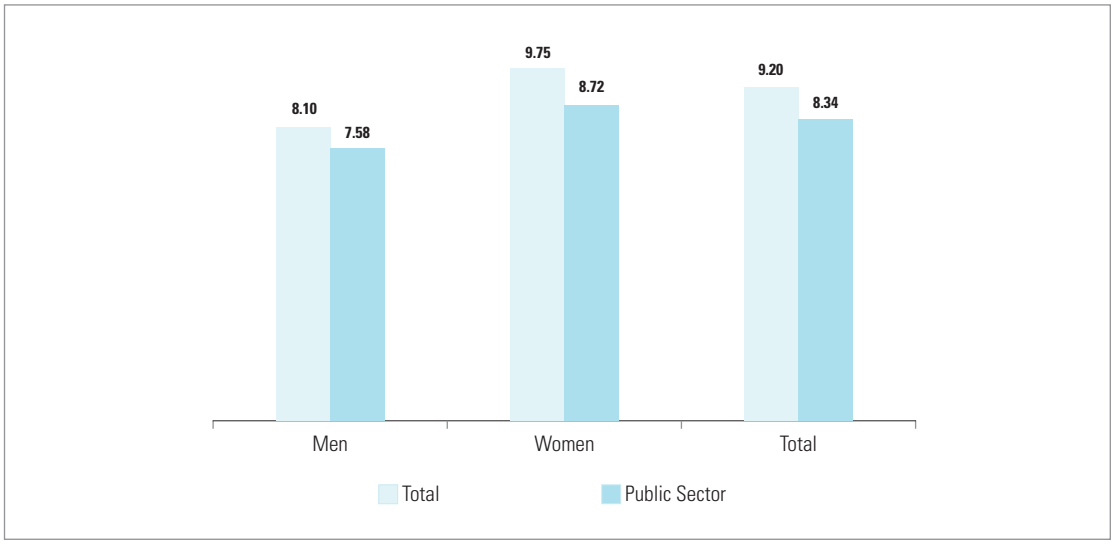
Basic education (1st and 2nd cycle) – ISCED 1. Teachers age average by gender. Year 2004



Basic education (1st and 2nd cycle) – ISCED 1. Statistical parameters estimates for teachers years of service by gender. Year 2004

PARAMETERS	GENDER		TOTAL
	MEN	WOMEN	
TOTAL			
Mean	8.1	9.8	9.2
Maximum	45.0	52.0	52.0
Median	7.0	8.0	8.0
Minimum	0.0	0.0	0.0
Mode	5.0	4.0	4.0
PUBLIC SECTOR			
Mean	7.6	8.7	8.3
Maximum	40.0	48.0	48.0
Median	7.0	7.0	7.0
Minimum	0.0	0.0	0.0
Mode	6.0	7.0	0.0

Basic education (1st and 2nd cycle) – ISCED 1. Teachers average years of service. Year 2004



IDENTIFYING THE INFORMATIONAL NEEDS OF FACULTY

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Ministry of Education

Trinidad and Tobago

IDENTIFYING INFORMATIONAL NEEDS OF FACULTY

INTRODUCTION

The Government of Trinidad and Tobago through the Ministry of Education is presently engaged in the Modernization and renewal of the education system with an emphasis on equity and equality. The current thrust by the Ministry of Education in achieving quality and the informational needs, including that of faculty to support this effort, is informed by:

- Vision 2020 - an initiative of the Government to transform Trinidad and Tobago into developed country status by the year 2020.
- Education Policy Paper 1993 – 2003.
- Globalization and the Commitment by the Government of Trinidad and Tobago to a number of international agreements.

VISION 2020

The government of Trinidad and Tobago views the development of its human resources as the platform for taking the country to developed country status and education as the key to this process. To achieve developed country status by the year 2020 the following goals have been placed on the national agenda:

- The achievement of a high level of human development and standard of living;
- Full participation of citizens in the mainstream socio-economic activities;
- A strong and salient economy;
- Good effective governance of the country;
- Social cohesion;
- Preservation of the natural environment;
- Efficient and effective social institutional structures.

EDUCATION POLICY PAPER (1993 – 2003)

The Educational Policy Paper acknowledges "that education is fundamental to the development of Trinidad and Tobago and an efficient and effective education system, where every child has an inalienable right to education, can improve economic productivity, and mobilize the talents and potential of individuals and groups in society.

The Education Policy Paper identified a number of issues to be addressed:

(i) The need for an improved Human Resource Management Capability.

(ii) A unified educational service catering to the full variety of national needs.

(iii) School-based management that facilitates

- quality administrators and teachers
- enhancement of the learning environment

- more organic links between school and community
- self-renewing articulation within and among the levels of the system
- proper transition between levels
- curriculum reform
- professional development of teacher

GLOBALIZATION AND COMMITMENT TO INTERNATIONAL AGREEMENTS

The vision of the Ministry of Education is "to be a pacesetter in the holistic development of an individual through an education system which enables meaningful contributions within a global context". This points to the need for quality within an international context.

Commitment of Trinidad and Tobago to international agreements such as the convention on the "Rights of the Child (1996), the Dakar Framework for action (2000) and the Caribbean Education for all plan have served to refocus the debate on the quality of education and the informational needs to inform and support educational quality.

In developing its Strategic Plan 2002-2006, the Ministry of Education outlined four major objectives. These are:

- Accessibility to educational opportunities for all;
- Delivery of quality education to citizens at all levels of the education system;
- Sustainable policy development for the education sector;
- Continuous alignment of the strategic direction in the education system with objectives set for national development

To accomplish these objectives and support the thrust for quality education, the Ministry of Education has embarked on a range of initiatives that include:

1. The restructuring and decentralization of operations as a fundamental transformational strategy to achieve better organizational performance, better management of schools and a higher level of effectiveness throughout the system. The responsibility for the formulation of policy and administrative control remained with the central head office. This approach increased bureaucracy and limited the effectiveness of service delivery to schools and ultimately the student. Many of these responsibilities and functions will now be move to district offices.
2. A programme of extensive training for all personnel including directors, heads of departments, school administrators and teachers to ensure that they are capable of effectively accomplishing their respective functions.
3. A comprehensive programme to upgrade, renovate, refurbish and construct new schools, with a view to modernizing the physical infrastructure of all schools within its jurisdiction and provide educational opportunities for all from early childhood to adulthood.
4. School – based management will be facilitated by the enhancement of school boards and the strengthening of school-based management.

5. A dynamic curriculum to be introduced at all levels of the school system. At the secondary level the new curriculum supported with a range of training for teacher to reflect contemporary pedagogical approaches and teaching styles.
6. The infusion of technology in the teaching and learning process.
7. Greater participation in the educational process including the establishing of student councils.
8. Strengthening student support services.

THE RATIONALE FOR SELECTION OF EDUCATIONAL INDICATORS ON TEACHERS

- To report on the achievements of the country's Educational Policy Paper (1993 – 2003);
- To monitor, evaluate and report on the achievements of the Ministry of Education (MOE) with regard to the realisation of the education goals for Vision 2020;
- To ensure that the MOE can achieve the four strategic priorities articulated for the transformation of the education system
- To ensure that the education system can achieve the goals of Dakar EFA goals (2000 -2015), the Caribbean Plan of Action (2000 -2015) and attain the standards for international benchmarking namely, the (PIRLS)

The indicators were identified under specific dimensions/aspects of Quality Education. They are:

- Inputs;
- Processes;
- Output; and the
- Enabling or regulatory environment;

INPUTS INDICATORS

Related to teachers

- % of teachers with pre-service training
- Pupil/teacher ratio;
- Teaching staff by level and type of qualification, by level of pedagogical training and specialisation;
- Teaching staff by sex and age;
- Teaching staff by status and length of service.
- Teacher utilisation indicators such as, teacher distribution by teaching load, % of teachers teaching in multi-grade and/or double shift classes, teacher absenteeism, etc.

Related to textbooks and materials

- Number and actual availability of textbooks per pupil;
- Number and actual availability of teachers guider per teacher or school;
- Delays in textbook distribution.

Related to Curriculum

- Curriculum aims and objectives ;
- Recommended teaching-learning methods;
- Number of teaching hours set aside for core subjects according to the official curriculum;

Related to the material conditions of teaching and learning

- Type of materials used for school buildings ;
- Condition of school buildings;
- Average surface area of schools;
- Average surface area by pupil;
- % of schools equipped with electricity, drinking water, toilets, etc.;
- % of schools having a library, computer rooms, specialist rooms, at least a full set of the recommended teaching guides and other teaching materials;
- Utilisation rate of classrooms, i.t.o time and space.

Related to student's achievements/ attainment

- Achievement scores from on-going assessments;
- Results from analyses of standardized and raw scores at national examinations;
- Pass rates of national examinations;
- Attitudes and social behaviour of school leavers.

Process indicators'

- Actual teaching-learning practices, e.g. actual use of experimental learning in small groups, amount and type of homework actually done and corrected per school year or term;
- Punctuality/Absenteeism of teachers and pupils;
- Number of actual teacher-pupil contact hours per school year, by subject if available;
- Frequency of inspections/supervisory visits, per teacher if available;
- Frequency of teacher contacts with other advisory bodies;
- Availability and location of teacher resource centres;
- Management style of school heads (criteria of selection, job-related training, etc.).

Enabling/regulatory Environment

Indicators related to expenditure and resource allocation

- Public expenditure on education as a % of total public budget ;
- Recurrent expenditure on education as a % of total recurrent public expenditure
- Public expenditure on education as a % of GDP.

- Expenditure, both in absolute figures and as a %, by type and level of education
- Breakdown of education budget by type of expenditure (staff, maintenance, materials and equipment)
- Total real expenditure on education, by type and level of indicators

Indicators related to cost and resource utilisation

- Unit cost by level and type of education;
- Efficiency of cost control;
- Teacher utilisation i.t.o. actual workload, classroom contact hours, etc.;

Indicators related to System Management

- The existence and effectiveness of accountability mechanisms built into the different structures and institutions of educational management;
- The cost effectiveness of existing administrative procedures;
- The appropriateness of IS and other mgt. tools;
- The degree of motivation of the various key actors – teachers, principals, teacher trainers, supervisors, administrators at different levels and in different depts.;
- The level of professional competence characterising these key actors;
- The mgt. capacities, i.t.o human, financial and material resources, the legal and political context, etc., existing at decentralised levels – school, local, district and provincial.

TEACHER EDUCATION HEMISPHERIC PROJECT

The OAS Teacher Education Hemispheric Project is entitled, *Responses to the challenge of improving the quality of recruitment and selection, initial formation, professional development and evaluation of teachers in countries in the hemisphere.*

At the III Meeting of Ministers, fifth plenary session, in Mexico in August 2003, Ministers adopted the declarative statement:

"*We underscore the importance of the forums for debating and exchanging experiences and proposals created by the nations of the Americas to generate a continuous process of education, assessment, training and professional development for teachers, which will serve as a tool for meeting the challenge of interconnecting education policy with social realities, in order to promote equity, overcome the educational differences existing between rich and poor, and with the help of modern information and communication technologies, devise pedagogical models that will afford teachers proper professional development"*

The Rationale for a Policy Framework for Teacher Education incorporates the following:

- Conceptual understanding of Teacher Education as a ***comprehensive system***.
- Declaration of a ***philosophy*** for Teacher Education.
- ***Streamlining and harmonization*** of Teacher Education initiatives and institutions.
- ***Direction (focus: vision and mission)*** for Teacher Education curricula and programs

The critical areas of Teacher Education which the Project focuses on are teacher/teaching quality; teacher development; curriculum and programs; governance and funding. The activities of concern are to:

- develop philosophy, vision, and mission statements
- review curriculum and program
- develop a framework for teacher development
- determine career paths for practitioners
- develop a quality assurance mechanism

In considering the elements of a Quality Assurance Mechanism for the Project the following were taken into consideration:

- Selection criteria for entry into the teaching service
- Selection criteria for teacher educators
- Standards of professional behavior for teachers and teacher educators
- Performance management and performance evaluation of teachers and teacher educators
- Provision of opportunities for professional growth and development

There is a need with respect to the Teacher Education Hemispheric Project, at this point in time, to develop indicators which can best be used in the areas of **Recruitment and Selection, Pre-Service for each level Teacher Evaluation and Certification and Professional Development.**

SCHOOL-BASED INFORMATION FEEDBACK PRACTICES: A CONTRIBUTION FOR DISCUSSION[1]

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[1] *The objective of this document is to organize the discussion and to develop ideas. Therefore, it is offered as a preliminary contribution to discussion.*

[2] *The contents and opinions expressed herein are the author's, and are not necessarily those of UNESCO.*

INTRODUCTION

Education information systems are increasingly paying attention to the need to improve information access, processes and practices, particularly in regard to feedback of statistical information to schools, as an important element for consolidating information production processes. To this end, quality requirements include broad access to such information as well as its exhaustive use.

This objective has long been on the agendas of most statistics offices. Many valuable examples can be found; nevertheless, for many information producers it continues to be an unfulfilled wish and a pending theme. This may be seen in the conclusions of the workshop held in July 2002 in Ouro Preto, Brazil[3], an event that brought together statistical planners, technicians, analysts, and school principals in order to discuss, among other themes, the value, use, and circulation of information. For its part, a study carried out in Argentina concludes that «in the opinion of those interviewed, the impact of information systems on schools has been poor or nil for the following reasons: the absence of or delay in data feedback; the fact that at the time of application the needs of schools or of teachers are not considered; lack of its incorporation into the classroom; little teacher interest; difficulties in translating results into policy.» [4]

Is it difficult to respond to this need? Indeed, does the need really exist? In order to answer these questions we need to analyze and bring together two positions:

- that of national and state offices that produce information, responsible for providing feedback while facing serious budgetary, technical, and human resource limitations both in number and in quality, and in which the processes of data definition, collection, and processing demand the most attention with very little left over for data analysis, communication, and dissemination.
- that of schools – key actors in the data collection phase, which do not exert strong pressure to receive feedback, not doing so for a number of reasons: because they do not possess a culture of statistical information use; because they are not efficient managers of their own information; because the feedback that they generally receive is not adjusted to their needs; and because they are unaware of what they can receive and how to best use it. What one doesn't know, one doesn't need and doesn't complain.

Providing feedback of information to schools is a task that should be viewed from a number of perspectives. Although not difficult, neither is it simple. And the need must be created. The objective is to respond with pertinence and relevance according to the complexity of the institutions involved, providing continuity through time, and contributing significantly to improving school management in the quest to improve the quality of education.

In this interaction process perhaps we should pause in order to closely analyze the idea of «providing information necessary for school management» in order to ask how this is viewed by each of the participants, where they converge and where they do not, in order «together» to try to understand changes in conceptions and attitudes involved and which are part of a broader concept – that of achieving better quality education for all.

The present document seeks to reflect on the issue from the point of view of schools as organizations that must develop new functions in order to adapt themselves to the demands of society.

[3] *Information and knowledge. A challenge to achieving learning focused school management. UNESCO (2003)*

[4] *Facultad Latinoamericana de Ciencias Sociales. Sede Argentina. Área Educación. Resultados de investigación. (2003) Información para la gestión. Un estudio de caso en tres jurisdicciones de la Argentina*

CURRENT CONTEXT

We live during a time of rapid changes caused by progress in culture and in technology that place us in the so-called *information society*. These changes generate new demands for education. In order to confront them, education systems are faced with changes in structures, orientations, and management. Thus, reforms and changes occur that tend to be criticized due to pressures from the changing context.

In its recommendations, the Delors Report[5] states that education systems need to respond to multiple challenges presented by the information society due to continual enrichment of knowledge and exercise of citizenship adapted to the demands of our times. It states that in an information society, education should allow everyone access to this information with the skills to be able to select, order, manage, and use it.

There is increasing demand for higher quality educational services in line with social changes that respond to the future needs of citizens, enabling them to fully participate in the information society. Education needs to be more connected to everyday realities, with increased democratic participation, building the concept of an educational community with comprehensive schools that serve the needs of diversity.

Schools need to be sensitive to the demands of society, to its characteristics, and preferences. Society, in turn, must be aware of the quality of education that it receives, of learning achievement, of the knowledge, skills and venues of participation offered by schools. It must be attentive to school and teacher performance, to all public information and demand transparency in school activities.

In order to meet these new demands it is necessary to revise the traditional organizational model that sees schools as isolated and closed to the outside. The challenge is to foster autonomous, democratic schools connected to the local and global environments; inclusive schools that value diversity and that provide learning to students, teachers, and families[6].

Possession of real greater and real autonomy in pedagogical and administrative decision-making on the part of schools leads to the need to have relevant, meaningful, and up-to-date information that guides decision-making based on real needs and that fosters accountability of their actions. When they win this autonomy, schools must be prepared to make decisions that today are beyond their powers, for which they must be trained in the efficient use of reliable information.

In summary, schools considered as the basic units of change, are and should be active participants in new activities in which information will be a strategic resource.

WHAT INFORMATION DO SCHOOLS NEED?

Information systems should ask what schools need. Above all, they should ask the schools themselves, or more precisely consider this question together with schools.

Many needs will appear, as many as projects might exist, because as schools begin to offer increasingly personalized, comprehensive services that meet needs of diversity, their information requirements to meet these problems will be increasingly specific and singular. These information needs are directly associated to

[5] *Delors, J. (1996) Education: the treasure within. Report to UNESCO of the International Commission of Education for the XXI Century. UNESCO.*

[6] *UNESCO (2002). Regional Education Project for Latin America and the Caribbean (PRELAC). OREALC/UNESCO Santiago. http://wwww.unesco.cl/esp/prelac.*

the characteristics of each school, depending on their degrees of dependence or autonomy, and have an impact on the kind of decisions that they can and must make, and consequently on the specific information needs.

The challenge is to guarantee availability or access to information that is meaningful to schools. This requires close cooperation between producers of information and schools in order to foster an exhaustive analysis of what kind of statistical information can be of real value to schools in their current contexts and in light of the social demands placed upon them, thus permitting them to design doable improvement strategies that can be maintained over time.

And here, with this perspective of project and school specific information, arises a new question ... is it only information that schools require?

Information as a strategic resource

... schools as institutions that receive, produce, and transmit information[7]...

Information and communication are essential elements for the development of all social organizations, particularly for schools, where communication is a structural element.

Schools produce, receive, and circulate large amounts of information of various kinds, origins, and audiences with a variety of objectives to meet the multiplicity of functions inherent in their three-fold functions as social sub-system, community, and organization.

In fact, we can say that schools possess much data, but usually, these data are unarticulated, are not transformed into information, or if they are, are not duly communicated.

In their daily management, schools continually face urgent decisions and micro-decisions basing themselves on administrative facts, isolated data, and informal qualitative information produced by interaction of its members, experience, expectations, and intuition.

Schools must diagnose their functioning and results and project their actions into the mid-term. These actions are based on the definition of what in many countries is known as a «school educational project» in which normative information, education policy, and statistics come to assume (or should assume) preponderant positions.

In order to define actions for the mid-term, that is, in order to make more important decisions or macro-institutional decisions, in addition to basic information on the functioning and composition of the school, they also need:

- to be aware of the opinions that parents and the community have of the school and of the services that it provides in terms of its own expectations and needs
- to know as well the cultural, social, and economic characteristics of students, families, and the neighborhoods of which they are a part.
- be aware of developments in education and the functioning of nearby schools, both similar and very different.

[7] *ARMENGOL A., C.; CARNICERO D., P. (2003) Tecnologías en la gestión escolar. Contenidos Master NNTT educación. Instituto Universitario de Postgrado (IUP).*

Schools should be transparent in their operations, guaranteeing that a minimum level of information is available to parents and the community in general regarding:

- the quality of services offered
- the school and curricular project
- results obtained (efficacy indicators)
- management results (efficiency indicators).

IS IT ONLY INFORMATION THAT SCHOOLS NEED?

Is it sufficient to provide feedback, or is it necessary to develop in parallel or beforehand an information usage culture so that it may be valued and utilized, guaranteeing its circulation and discussion, and going beyond the exclusive knowledge of the school principal to be shared with administrative staff (when present), teachers, and the education community?

In making very important school decisions it is important to avoid giving undue importance to one's own experience, isolated and anecdotal observation, and personal transmission. Institutional capacities must be strengthened with cognitive and material resources so that schools have tools that allow them to take advantage of the data they have available as well as to become users of information that allows them to contextualize their own situations and that provides support for their decisions.

It is increasingly clear that individual and specific treatment of each school, placing emphasis on those indicators that allow them to understand their own realities, is indispensable. This includes positive, outstanding features as well as problems. In order to do so, schools need to be able to bring together a number of factors:

- ...application of appropriate techniques
- ...availability of consistent data
- ...knowledge of the realities of the school and its locale
- ...analytical ability
- ...multi-disciplinary focus

and emphasizing the impossibility of execution carried out by a single actor in the process. Decisions should be the result of joint action by the school, supervisor, the district, and the central/state education statistics office.

Strengthening capacities in the use and analysis of information is a long and arduous task, closely linked to consolidation of schools as managers of their own information.

... information and its treatment are the foundations of appropriate and effective decision-making...

It is important that schools approach information as an additional dimension in comprehensive institutional management. This is not a matter of having a great deal of data; it is one of having good information, *one of managing information efficiently*. This involves[8]:

[8] *ARMENGOL A., C.; CARNICERO D., P., (2003) op. cit.*

- carrying out analysis, assessment, and selection of data and its sources
- systematizing information and to the extent possible making it computer-based
- processing data using reliable techniques
- constructing indicators, using, interpreting, and relating data
- publishing, disseminating, and executing

Data should be treated with reliable criteria and techniques so that information used is of high quality and can contribute to assessments that reflect as clearly as possible the realities of the school and that help to solve its problems.

Information management involves harmonizing the different types that are produced, received, circulated, and distributed daily in schools, establishing hierarchies and priorities for appropriate use according to the kinds of decisions to be made. It is necessary to establish a culture of information for its efficient use, especially for medium-term decisions:

- ... in carrying out school diagnoses
- ... in analyzing institutional behaviors in terms of student achievement (grade promotion, grade repetition, over-age students, annual school drop-out, mid-year school drop-out.
- ...for the definition and justification of improvement and innovation projects
- ...for the development of school projects
- …in order to improve management

The construction, analysis, and comparison of information also make it possible to:

- ...place into context the indicators that characterize various dimensions of schools and compare them to results in their districts, municipalities, and regions, or with strata of schools with similar or different characteristics.

HOW DOES INFORMATION CIRCULATE? DOES IT CIRCULATE?

Like education systems, information systems are vertical in nature. Decisions tend to be taken unidirectionally, from the top down, with data circulating in the opposite direction. There is not always clear feedback between participants of the productive process. This generates problems for knowing, sharing, and using information.

As an example: carrying out a new process involves mobilizing various structures. Awareness must be raised. Supervisors and principals must be trained. Announcements are made in the media, posters are printed, and videos are produced. The availability of results does not generate the same kind of mobilization. Meetings are not scheduled with principals in order to share the results obtained. No advertising or videos are involved, and web pages do not always contain the latest results.

This concern is part of a larger one that includes dissemination policies inherent to all information systems, requiring them to take a very close look at this important stage of the productive process, the strategic value of which is underestimated.

Schools as communication units

Basic changes are required ...

The circulation of information within each school is vital in order to guarantee the cohesion and harmony of its members – teachers, students, and administrative staff – fostering the development of a school in which all share a common project. The circulation of information within a school is the basis of cohesion and feeling of belonging of its members.

At a time of growing recognition of the need to increase social commitments to education, seeking broader community participation in more open and democratic schools, information is the basis of participation; for no one participates in that which he or she is not familiar. And to the extent that this participation becomes more concrete and broadens, participants increasingly demand access to more and better information.

After analyzing how information circulates within a given institution, it is necessary to design a model for collecting, developing, and transmitting such information, for providing it with reliable channels, placing it into the general structure, always from the perspective of the interest of each school and in the service of best development of its own education project.

HOW CAN PROPOSALS BE CARRIED OUT?

The first proposal related to feedback of information to schools points toward the need that this be part of reflection *with schools* regarding their real needs in order to contribute to the creation or training of new users and fostering school-to-school cooperation.

A second proposal is for fostering use of information at the local level so that schools manage their own information systems and create their own education indicators under norms and criteria defined by national education statistics offices.

A third proposal is for guaranteeing feedback or access to information consolidated for smaller geographic units of analysis.

A fourth proposal seeks to provide theoretical and methodological tools so that schools may initiate analyses and use of information through relating and comparing their performances with regional or national indicators.

In summary, we suggest generating venues and providing tools in order to awaken the need in schools for modifying their information environments. Such modification can allow them to more easily incorporate and use new information and communication technologies.

A good initial contribution for national education statistics offices would be making available a data base that contains the description and assessment of information feedback experiences with schools and other organizations of the community carried out in the countries of the region and that would allow them to analyze achievements attained, underlying problems, and challenges to be met. A significant contribution to this end would be availability of a list of experiences summarized in terms of training projects in use and information feedback within the last decade and its respective assessment - an evaluation that goes beyond mere subjective conceptualization in regard to results.

Bringing together needs, perceptions, and expectations of school principals, management teams, and teachers can be carried out through on-line discussion forums organized using education portals or other alternatives such as sample surveys or by consulting qualified informants.

A serious reflection is required from both sides, as well as an intense collaborative effort.

This is part of a broader dimension in the development of a policy for strengthening capacities and for dissemination that seeks to create awareness of the need for decision-making processes to be informed, and that information deserves occupying a more important position in the programs and agendas of national education statistics offices.

CONCLUSIONS

Isn't it time that national education statistics systems revise their founding principles and construct or reconstruct their links in the chain of production, especially with schools and with information users in general?

Within this framework, don't they need to review and define exchange of information, establishing in agreement with others what is important and not through unilateral decisions based on what is thought to be important at the central level?

The consolidation of national/federal information systems, reflected in the availability of pertinent statistics related to the large thematic areas defined now face a great challenge of the *communication* of their data and meta-data. This demands reflection, review, and re-statement of feedback policies, access, and dissemination in order to respond to what system actors and society demand and need and to the tools that new technologies provide for this purpose.

Statistics offices need communicators as much as they need statisticians.

Thus, they can open the way for schools to begin to move ahead toward management of their own information systems, with all of the complexity that this involves, but knowing that they can count on technical support and initial follow-up until they can fully master this subject.

DISSEMINATION OF EDUCATION INFORMATION

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"The National Institute of Educational Studies and Research (INEP) is a federal agency linked to the Ministry of Education (MEC). Its mission is to foster studies, research, and assessments of the Brazilian education system in order to aid in the formulation and implementation of public policies in the area of education using standards of quality and equity as well as to produce clear and reliable information for administrators, researchers, educators, and the general public».

Education information and statistics processed by INEP seek to provide answers to questions regarding the social and economic conditions within which the educational process takes place, what education systems offer to students, and about who has access to these systems. They also treat the progress of students within the system, the skills that they acquire, education expenditure and financing, and how national education system compare to other education systems. The data collection sources are:

Education Census covers all education levels and modalities: early childhood, pre-primary literacy training, the primary level, the secondary level, secondary level teacher training, special education, youth and adult education, and technical-professional training. The data collected and processed have been used by the federal government in programs that are very important for Brazilian education such as FUNDEF - Fund for Maintenance and Development of Primary Education and Teacher Recognition; PNLD - National School Textbook Program; DINHEIRO NA ESCOLA – Money to Schools, a program for education maintenance and development; PROINFO - Program for Computers in Schools; National School Lunch Program; National School Transportation Program; FUNDESCOLA – Fund for Strengthening Schools; Accelerated Learning, and School Grants.

The Primary and Secondary School Assessment Program (SAEB) analyzes data on the quality of education using cognitive development tests of students in the 4th to 8th grades of primary school and in the 3rd year of secondary school, reports on school infrastructure, and through interviews with students, teachers, and administrators, collecting data on context factors associated with performance. This set of information allows INEP to aid the policy-makers in federal, state, and municipal governments.

The National Secondary School Examination (ENEM) assesses individual skills and abilities. It is voluntary and is an alternative or complement to the Higher Education Entry Exam (PROUNI).

The Higher Education Assessment measures student performance using the obligatory National Student Performance Examination – ENADE. It also assesses undergraduate courses and the offerings of institutions of higher learning through an External Institutional Assessment and, Teaching Conditions Assessment, and guided self-assessment. This set makes up SINAES, the National Higher Education Assessment System.

The Public Education Budget Information System is a computer-based system for the collection, processing, and dissemination of information on national, state, federal district, and municipal revenues and their corresponding spending on education, desegregated by levels and types of expenditure.

Through the international projects in which it participates, INEP obtains information on performance and compared indicators. Among the most important of these are the international student assessment program - PISA/OCDE, World Education Indicators/WEI and indicators for the Mercosur; the Regional Indicators Project and Education Assessment of the Latin American Laboratory for Assessment of the Quality of Education.

By treating the data collected, and when necessary crossing them with data obtained from other sources, especially from surveys carried out by they Brazilian Geography and Statistics Institute - IBGE, INEP seeks to:

- Accompany and assess the Brazilian education system;
- Provide information for the making of education policy;
- Provide information for support of educational programs;

- Strengthen the monitoring capacity of the network of state and municipal education agencies;
- Strengthen the managerial capacity of schools

THE ROLE OF DTDIE IN DISSEMINATING EDUCATION INFORMATION IN INEP

INEP seeks to aid in the formulation and execution of federal, state, and municipal policies related to schools, school managers, and teachers as well as to offer information to the general public, promoting education as indispensable for its development and emancipation. It is extremely important to provide information to the public about its possibilities and opportunities, creating critical awareness about the problems and promises of Brazilian education. In order to guarantee the transparency required by society and foster the participation of different groups involved in educational activities, INEP develops activities that generate and disseminate new knowledge.

In order to achieve these objectives, the structure of INEP contains a sector - DTDIE - specifically aimed at the treatment and dissemination of information on education. Its role is to propose and coordinate policy for the dissemination and documentation of such information, offering support of results and products of assessment systems and of education statistics in cooperation with other sectors. DTDIE also carries out research related to relevant subjects in the field of education through treatment of related collected information. It organizes and systematizes data and information related to areas responsible for education study and assessment processes and plans, coordinates, guides, and controls the execution of visual programming, editorial, publications and event activities.

Current DTDIE management, through a diagnosis carried out in order to identify strong and weak points of current INEP dissemination policy, is reviewing policies and strategies in order to carry out more permanent and effective activities and produce better results for its publics. The great challenge is without doubt how to disseminate within a country of Brazil's size and population while meeting the needs and interests of different publics with which it interacts.

Brazil's education numbers are impressive. Within a country of continental dimensions with large distances separating its five regions, 27 states, and 5,564 municipalities, primary and secondary education includes:

- 174,894 public schools with 49,196,394 students;
- 35,200 private schools with 6,978,603 students.

Higher education includes:

- 207 public institutions, with 1,136,370 students;
- and 1,652 private institutions with 2,750,652 students.

Within this context, how can one deliver information to education authorities in municipalities, schools, principals, teachers, students, and parents? And principally, how can one make the information meaningful to these publics in order that they can use it to plan their activities and improve the quality of education? This involves distinct groups with diverse interests. Among these are:

The Ministry of Education – as an institution part of the ministry, INEP aids in the formulation of education policies in accordance with the social, economic, and political realities of the country. It also develops complementary studies that support various areas of the ministry. It produces indicators for the monitoring of policies and activities of each secretariat, reveals gaps in education policy and suggests changes of direction.

Ministries and Federal Government Agencies – INEP provides similar support to ministries and government agencies, emphasizing policies and measures that have a synergy with the Ministry of Education so they may be implemented successfully and meet the broader demands of society.

State and Municipal Education Systems – Similar to its support for the federal government, INEP also aids state and municipal education systems, pointing out gaps, needs to be fulfilled, and providing support for the definition of policies and strategies, disseminating best practices that contribute to improving the quality of education and system performance.

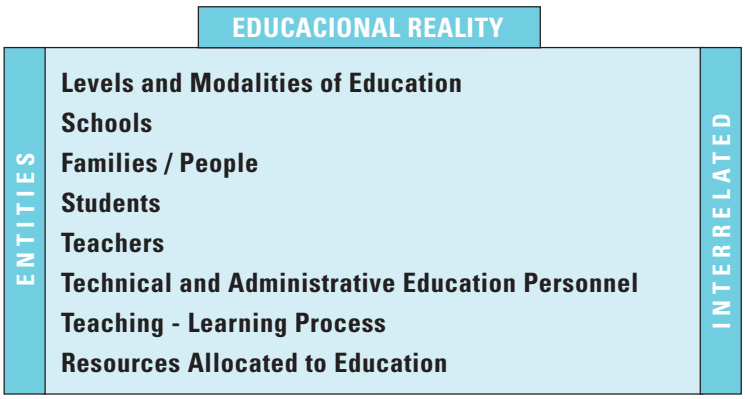
Schools, their Managers and Teachers – A crucial challenge is that of making school administrators and teachers regular users of information supplied by INEP. Besides offering these users full support for data access, INEP is also prepared to train them in the use of its products and services, demonstrating diverse applications in everyday school practice and the benefits to be derived from them.

Students and Teachers, School Councils, and Communities in General – INEP has the responsibility of guaranteeing that information reaches students, their parents and guardians, and other interested parties. In a broader sense, it seeks to contribute to the dissemination of data and knowledge in order that society values education as an indispensable good for its development and emancipation, supplying information that helps them develop a critical awareness of the problems and progress of education in Brazil.

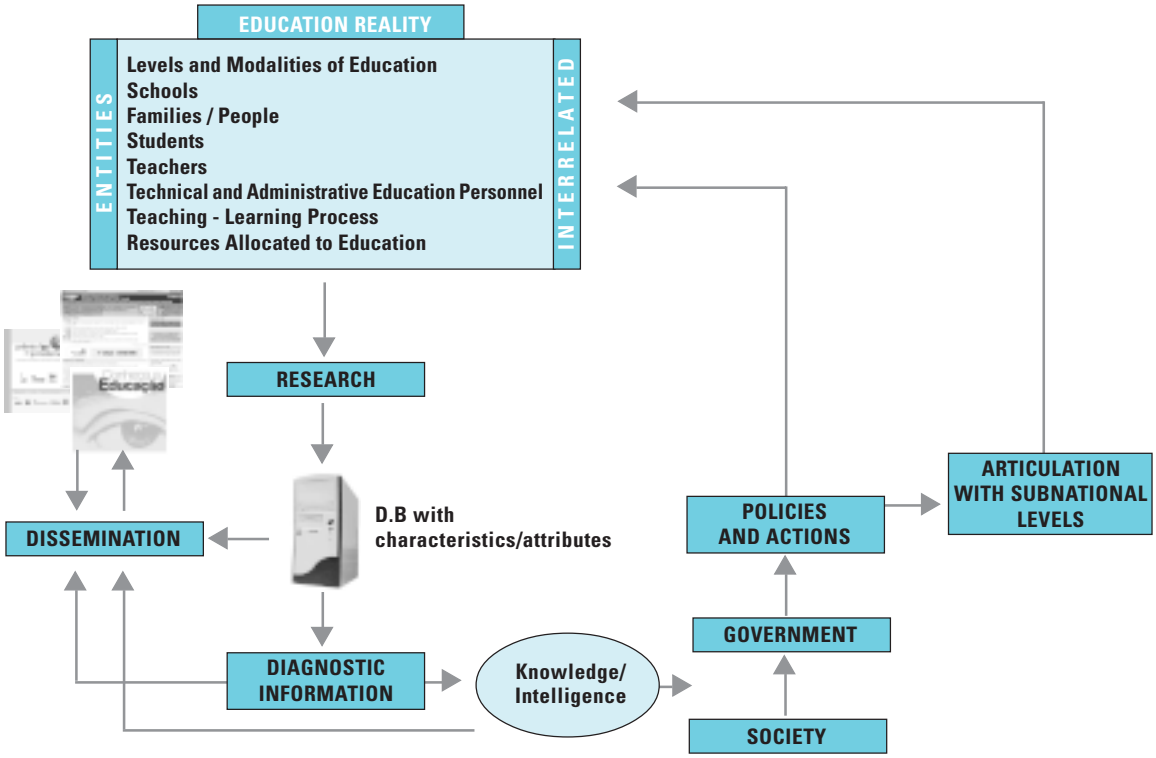
Universities, Teachers, Researchers, and Specialists – These are users of the information produced by INEP and at the same time producers of research that uses this information to thus improve the knowledge of education in Brazil.

Representative Institutions of Education Systems – UNDIME and CONSED, among others, due to their nature and relationships with education systems should be considered special users of the information produced.

The figure below shows how, using data collected and treated, one can present a representation of the current state of education in the country:



This information follows the flow shown below:



After treating the information INEP is able to aid federal, state, and municipal governments in the definition of education policies, strategies, and activities. In addition, such policies and activities become sources for the generation of information on the current state of education.

CURRENT INEP DISSEMINATION POLICY AND THOUGHTS ABOUT ITS IMPROVEMENT

Dissemination occurs above all through making available information through the INEP website. Other sources are publications provided in the publications area of this website. Publications are varied in order to record and to reflect Brazilian thinking on education. They are available as well at the *Education Information Center and Library* (CIBEC), a specialized venue for education topics organized in order to serve visitors. INEP also makes statistical data and indicators desegregated up to the municipal level available through its website *(www.inep.gov.br)* as well other information of interest to the public.

In addition, events are organized that disseminate the outcomes of projects, research, and assessments.

DTDIE has concluded that although it carries out significant activities that are references for the educational community, much can be done to improve its current policies. To begin with, no clear dissemination policy exists for assuring that information of interest to the public does in fact reach those who need it using adequate information forms and channels.

Therefore, DTDIE is carrying out an effort in cooperation with other areas of INEP in order to reformulate dissemination strategies and policies. This effort seeks to respond to the following issues:

- How to establish dissemination strategy and policies in Brazil, given the country's physical size and population.
- How to carry out dissemination according to the needs and interests of diverse relational groups.
- Whether and how users should be segmented into relational groups.
- How to deliver information to these publics, in terms of form, content, frequency, and information channels.
- How to deliver the latest information to schools, principals, teachers, and students.
- How to provide meaningful information to various publics so that it may be used to improve the quality of education.

We thus move toward identification of the profiles of different groups of users of INEP products and services, categorizing them according to relationship groups by identifying specificities, needs, and common preferences.

We then verify the composition of relationship groups together with different areas of INEP, establishing the priorities of each area in regard to the publics of each relationship group.

We are currently in the process of developing an INEP Dissemination Matrix, relating different products and services with the relationship groups. Thereafter, priorities will be established for dissemination, appropriateness of content and form, frequency, and communication channels in order for information produced by INEP using the various products and services developed by each of its areas to be available to relationship groups.

Finally, we will establish an action plan and methodology in order to monitor the results of the dissemination policies so established.

NETWORKS AND PARTNERSHIPS TO AID IN THE DISSEMINATION OF EDUCATION INFORMATION

One of the strategies that certainly will be considered in this policy is the creation of networks and partnerships with entities that can support INEP in its dissemination efforts, and above all for the exchange of experiences and information between INEP specialists and technicians and priority publics representatives (relational groups) in order to mutually strengthen and enrich knowledge of each part.

We begin with the principle, supported by various authors and publications, that learning is a social process, and that knowledge is created within the context of a community (or relational groups in our case), and that acquired or accumulated knowledge facilitates the use of other knowledge, since what can be learnt is influenced by what is already known. In other words, new knowledge requires previous knowledge necessary for an institution or group to benefit from the interdependence created through various ties of collaboration.

Accumulated knowledge brings about better access, assimilation, and exploration of new ideas and information. Collaborative projects show to those involved the need to access ideas and knowledge from various sources, strengthening or creating the perception that cooperation is a ticket of entry to a network of information. A network thus serves as a source of innovation by providing timely access to new and complementary resources while at the same time testing internal skills and learning abilities, thus training those involved and contributing to their participation.

In this view, learning is a social construction process in which individuals become practitioners rather than learners of a process. The degree of learning of institutions is a function of their participation in activities

that link those from different groups, entities, and organizations. Thus, the creation of learning occurs within a context of a community that is fluid and that evolves.

We identify as key partners for the creation of these networks state and municipal secretariats of education, as well as areas of the ministry of education that maintain a close relationship with these secretariats. Due to their nature and responsibilities they are in continual contact with schools, school administrators, and teachers. They are familiar with local realities and demands and can contribute with actions that can assure that information reaches this public. Through these networks we believe it will be possible to more quickly and efficiently develop joint and on-going contact activities with users. This is the case of taking advantage of capillarity of the systems and at the same time carry out dissemination and the exchange of knowledge that increase the ability of INEP to generate new interpretations and new understandings of data collected.

Another advantage of these partnerships is that they facilitate the mobilization of people and of institutions (such as universities) directly involved in education and that can also support INEP in the dissemination of education information in their spheres of influence and enrich their perception of education phenomena. They also have an important role in successful realization of various INEP activities (creation of knowledge and action networks).

CONCLUSION

This document expresses our concerns that are a product of re-thinking our policies and strategies.

PRINCIPLES AND PRACTICES OF RETURNING ASSESSMENT RESULTS TO SCHOOLS

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Canada

In Canada, education is the responsibility of the ministers of education in the ten provinces and three territories. There is no national department of education.

Because ministers of education needed a forum in which to discuss issues of mutual concern, they established the Council of Ministers of Education, Canada (CMEC) in 1967.

The Canadian Education Statistics Council (CESC), a partnership between CMEC and Statistics Canada, coordinates the Pan-Canadian Education Indicators Program. This ongoing program provides statistical measures on education systems to support informed decision-making, policy formulation and program development. Indicators concerning school age population, financing, student enrollment, graduation rates, distribution of capital and expenditures can be found in the latest edition of *Education Indicators in Canada: Report of the Pan-Canadian Education Indicators Program 2003.* It is available electronically at the following website *http://www.cesc-csce.ca/pceip/PCEIP2003en.pdf*.

The information contained in Education Indicators in Canada is at the national and provincial levels only. Across Canada each province publishes a similar set of educational indicators pertaining to their schools in order to fulfill a continuing commitment to keep the public well informed about important aspects of the education system. While knowledge of school age population or graduation rates are important, the single most important indicator of quality in education is student achievement. An educational jurisdiction whose students are not literate cannot claim to be a quality system even though its indicators show well trained teachers, small classes and a high graduation rate. Across Canada student performance is the key indicator used to keep the public up to date about the general health of the school system. According to Bussière, et al (2004)

> The skills and knowledge that individuals bring to their jobs, to further studies, and to Canadian society, play an important role in determining our economic success and overall quality of life…Without the tools needed to be effective learners throughout their lives, those individuals, with limited skills, risk economic and social marginalization.[1]

Nine out of ten Canadian provinces create and administer their own large-scale assessments specific to their own curriculum. Results are produced for individual students and returned to schools in order to help teaching and learning.

All provinces participate in PISA and national level testing programs (School Achievement Indictors Program). These assessments are based on student samples and serve as macro indicators at the national and provincial levels.

In classrooms across Canada teachers also administer their own assessments in order to monitor student achievement. However, this brief will focus on the principles and practices for reporting the results of externally developed, large-scale assessments conducted by provincial and/or national authorities.

1 *Bussière, P., Cartwright, F,. Knighton, T. (2004) Measuring up: Canadian Results of the OECD PISA Study The Performance of Canada's Youth in Mathematics, Reading, Science and Problem Solving. Ottawa, Ontario: Statistics Canada and the Council of Ministers of Education, Canada.*

REPORTING INTERNATIONAL AND NATIONAL ASSESSMENT RESULTS TO SCHOOLS

The federal government (Statistics Canada) in cooperation with the Council of Ministers of Education, Canada (CMEC) produce a national report which deals with Canadian PISA results. This public report (*http://www.cmec.ca/pisa/2003/Pisa2003.en.pdf*) includes information that goes beyond interprovincial comparisons and Canada's world ranking by examining a variety of factors that contribute to successful students and schools. For example, across Canada, a student's interest, confidence, enjoyment and perceived ability in mathematics is related to achievement in mathematics. This provides data that allows educational policy-makers to make evidence-based decisions.

Where sampling design permits, provinces can perform secondary analyses of the PISA data and obtain accurate district and school level results. Because one out of every three 15-year-olds in New Brunswick participated in PISA 2003 it was possible to produce PISA results for provincial jurisdictions and individual high schools. School officials across the province received PISA information disaggregated by student gender, language of instruction and student socio-economic/cultural status.

School level test results given within the context of other factors thought to be related to student achievement is a powerful tool for helping to plan for improvement. In the case of New Brunswick, the PISA data demonstrated that socio-economic status (SES) explained only ten percent of the differences in scores. It also showed education officials that low SES schools can outperform high SES schools and that high SES does not always result in high performance. Further investigation suggested that strong educational leadership was a more important determinant of student achievement than SES. While decision-makers cannot easily address the issue of a school's SES, they can effect its leadership through hiring professional development and promotion policies.

Reporting the results of national and international tests to schools within the context of specific factors helps decision-makers to formulate policies to improve the quality of education at the school level. They do not assist the classroom teacher in planning or delivering instruction to individual students. In Canada, provincial assessments serve as indicators of individual student achievement.

REPORTING PROVINCIAL ASSESSMENT RESULTS TO SCHOOLS

With the exception of Prince Edward Island, the other nine Canadian provinces administer provincial examinations at specific grades in a number of subject areas. Alberta, British Columbia and Quebec have the most comprehensive provincial assessment programs administering assessments in many high school subjects as well as in literacy, numeracy and science at middle and elementary level schools. New Brunswick currently administers measures of literacy and numeracy in elementary and middle level schools. Unlike PISA, provincial assessments are better suited to serve the classroom teacher because they are closely aligned with the curriculum. More importantly, they provide the classroom teacher with an indicator that reflects what was taught and what is expected from each student.

New Brunswick reports provincial assessment results to schools for individual students in terms of standards. Students who score at or above a pre-determined value have achieved at or above what is expected of them on a given assessment. Schools are required to provide additional help to any student scoring below the expected level of performance.

In order to help in planning for improvement, provincial assessment results are reported within the context of factors such as language of instruction, gender, school size, school location (urban/rural) and school SES.

Canadians are concerned about the quality of education provided to their children by the education system. Quality must be defined as student achievement. Through the close and constant monitoring of student performance at the school level, policies, teaching methods and funds can be directed to achieve higher levels of skills upon which lifelong learning is based and to help reduce the inequalities in life outcomes.

ASSESSMENT OF ACADEMIC PERFORMANCE AND FEEDBACK OF SCHOOL-BASED INFORMATION

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Mexico

INTRODUCTION

In Mexico, the Secretariat of Public Education (SEP) has exclusive responsibility for over-all planning, programming, and assessment of the national education system. The General Education Act establishes that teachers, students, and parents be informed of the results of assessments carried out.

In terms of education policy management, assessments are used to guide decision-making and to provide stimulus for strengthening the educational (teaching and learning) process as well as for diagnosis of student achievement levels in order to provide feedback of the performance of the national education system.

Within this context, assessment is a key instrument for fostering equity by detecting differences of quality at all types and levels of the education system. Assessment is an instrument that produces useful information in order to carry out improvements. In other words, assessment needs to provide information regarding learning achievements of students and the functioning of schools, state systems, and the national system as established in the National Education Program 2001-2006.

Currently DGEP – Directorate General of Education Policy, disseminates the results of assessments carried out in order to lead to—accountability and to improve education. Pedagogically speaking, it is very important to provide feedback focused on schools. This document will treat one of the experiences of DGEP on this theme.

I NATIONAL TEACHING CAREERS PROGRAM

This is an incentive program for primary and secondary teachers that seeks to raise the quality of education. It is based on a global assessment system that includes six factors. Important among these factors is «student achievement» directed at classroom teachers. The factor assesses learning attained by grade through testing the students of participating teachers.

The tests have questions with multiple choice answers of different degrees of difficulties and are used to measure knowledge acquired by students in 3rd to 6th grade of primary school and the first three years of secondary school in the subjects of Spanish, English, mathematics, physics, chemistry, biology, geography, and civic studies.

Grading is by percentage of correct answers for promotion and incorporation into the program. In order to diagnose student academic achievement, results are analyzed using a statistical procedure in order to clean those tests that present the same response pattern within each type of test of the same school. These tests are eliminated. The results are then standardized, defining the national average as being equal to 100, and the standard deviation equal to 10 on a scale known as the «70 to 130 correct answer index».

This standardization of results makes it possible to compare primary education groups of different grades both within and between schools for each assessment year. For secondary schools, referents are included for academic subjects. Results are provided by school, education level, school zone, municipality, and entity.

Thus, schools are classified by levels of correct answers, ordering them from the greatest to smallest number based on their correct answer index according to the following distribution:

LEVEL OF CORRECT RESPONSES	PORCENTAGE OF SCHOOLS
Lowest	10
Low	20
Medium	40
High	20
Highest	10

The results are desegregated by geographic and administrative units. Comparisons are made for public/private (both urban and rural) for primary schools and by modality (technical or general education). For secondary schools, social level is also included.

It is important to note that scores represent relative position among the subjects examined and not an absolute position of learning, considering that this is a norm-based assessment. Analysis of results provides a diagnosis of the state of education.

Dissemination is carried out through:

a) Printing: reports and publications

b) Electronic media: web page (*http://www.snee.sep.gob.mx* and other computer-based media.

Dissemination of results includes dialogues with:

a) Federal and local education authorities: secretariats of education, under-secretariats, general directors, coordinators, sector heads, supervisors.

b) Educators: school principals and teachers

Education authorities send output reports to schools (including index of correct answers, number of groups examined and level of correct answers) average results per grade (state, municipal, and by subject matter, and the average results by group of schools (over-all and by subject with average and maximum scores by entity and municipality).

FINAL COMMENTS

In Mexico, dissemination of the results of assessments is a legal requirement. The Secretariat of Public Education, through its policy assessment office, administers various student achievement and teacher performance assessments. The results are used for accountability and for education improvements. Pedagogical use is made of the results in order to foster school and teacher planning. Within this context, academic achievement assessment within the framework of teacher assessment for determining teacher scales disseminates results using various media, disaggregating by geographical and administrative units and targeting the information to schools in order to detect areas to be improved.

PRACTICES IN DISSEMINATION OF EDUCATION INFORMATION IN ST. LUCIA

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1. INTRODUCTION

The timely dissemination of data should be the ultimate goal of any statistical system. For St. Lucia, the information that is disseminated is obtained from a comprehensive plan, based on the countries priorities for the education system. Some key goals of this plan are outlined in Section 2.2 of this report. As a result of this plan, a conceptual framework comprising a particular data set has been established. This core framework identifies with the inputs, processes and outputs of the education system and involves a core set of indicators to measure and monitor the education plan.

In St. Lucia, information that is eventually disseminated is part of a system which describes four key areas namely:

1. Coverage of the Data/Information to be Disseminated
   a. Structure of the Education System in St. Lucia
   b. What determines the Information that is disseminated
   c. What Information is disseminated
2. Quality of the Data/Information
3. Integrity of the Data/Information
4. Methods of Disseminating the Data/Information and Use

2. COVERAGE OF THE DATA/INFORMATION TO BE DISSEMINATED

The bulk of education data is captured via an annual census questionnaire which is conducted on an annual basis. This, together with other information obtained from within the Ministry of Education, such as information on examinations, and other government ministries form a comprehensive data set which is processed and disseminated on an annual basis as a complete package. The timeliness for disseminating the information is usually 8 to 12 months following the reference period, which is October of the current school year in question. Usually problems with printing and collating can delay the process a little longer.

The data is disaggregated by age, gender, grade, school, district and level where necessary. In order to adhere to international standards and to encourage data comparability, data submitted to regional and international organizations such as UNESCO and the World Bank are done so using International Standard Classification of Education (ISCED), unless otherwise stated. On the national level data is reported using local standard definitions for example according to ISCED, primary education for St. Lucia would be from grades K to 6 but when reporting locally, this level is referred to as Junior Primary. The entire Primary education would be Junior Primary and Senior Primary (grades 7 – 9). Dissemination according to these local standards is important as it helps local stakeholders, such as parents, teachers, private partners etc, understand better and attach more meaning to the information being used. They can monitor the progress of the system better.

2.1 STRUCTURE OF EDUCATION SYSTEM IN ST. LUCIA

In order to understand the coverage of the data for dissemination in St. Lucia it is useful to understand the education system of the island. Formal education in St. Lucia commences at pre-primary and goes up to the tertiary level. All pre-primary schools are privately owned and the formal entrance age is 3 years. At the

primary level the official entrance age is 5 years and duration is seven years. However since St. Lucia has not yet achieved Universal Secondary education, some students may spend another 2 to 3 years at the senior primary level before leaving school whilst the others proceed to secondary schools, on the basis the number of spaces available at the schools. The duration of secondary education is five years. From then students may proceed to the post secondary or tertiary institution but must have a minimum of 5 O' Levels including Mathematics and English Language. The diagram of the structure of the education system in St. Lucia is found in Annex 1.

The table below gives the number of schools under each of the various levels of education as of the academic year 2004/05.

SCHOOL/INSTITUTION	TOTAL NUMBER
Pre-Schools	113
Public Primary	77
Private Primary	6
Special Education	5
Public Secondary	19
Private Secondary	2
Post Secondary/Continuing Education/Tertiary	1
Skills Training	1
Technical/Vocational	1
Adult Education (National Enrichment & Learning)	1

2.2 WHAT DETERMINES THE DATA/INFORMATION THAT IS DISSEMINATED?

The information disseminated is the data collected and processed. The disseminated information has to have some meaning to all its users. Hence, data is collected based on the data required to monitor the country's Education Sector Plan. The "St. Lucia Education Sector Plan 2000 to 2005 and Beyond", comprises a number of key broad objectives for the education system. These have to be measured on an annual basis to monitor the progress of the plan. Some of these key broad objectives are as follows:

- Increase access and quality of pre-school provision
- Increasing levels of literacy and numeracy at all levels
- Improving the quality of primary education
- Improving access to achieve universal secondary education of a high quality
- Enhancement and expansion of special education
- Increase access to adult and continuing and tertiary education

Hence the data that is disseminated reflects the data needs of the country as a whole. In St. Lucia the country's overall objectives also took into consideration the global movement towards "Education For All" and the "Millennium Development Goals". Therefore the disseminated data is disaggregated accordingly.

In order to meet these reporting requirements, an *education monitoring system (see Annex 2)* was developed based on a **conceptual framework** (see Annex 3) which articulates the relationships between eight key result areas that range from the macro socioeconomic context of education, to the micro level of the teaching-learning process in the classroom and then cycling back through the contribution of learning outcomes to the

socioeconomic development. The indicators fall under the following eight broad categories, Demographic, Social and Economic Context of Education, Administration, Planning and Supervision of Education, Access, Equity, Resources, Teaching Learning Process, System Outputs and Learning Outcomes. The disseminated data to a large extent reflects the status of those broad categories.

2.3 WHAT DATA/INFORMATION IS DISSEMINATED?

The information disseminated is usually categorized into three areas namely, the inputs, the processes and the outputs (see Annex 2 for Indicators list), based on the eight broad categories identified above. That information is disseminated in number of formats based on the needs of various users. These three categories are outlined below.

2.3.1 Inputs

The inputs measure the financial, human and physical resources that are used on the education system. Here also the Ministry of Education tries to ensure equity of access to education. Some of these input measures are:

Financial Resource Indicators

- percentage capital expenditure for school expansion
- percentage capital expenditure for school upgrades
- percentage expenditure for supplies/materials
- public expenditure on education as a percentage of GNP
- percentage recurrent expenditure on salaries/wages
- school funds as a percentage government expenditure on education
- percentage of students receiving bursaries

Human Resource Indicators

- percentage of graduate teachers
- percentage of qualified teachers
- percentage of teachers teaching multi-grade classes
- Teacher attrition rate

Physical Resource Indicators

- ratio of computers for teaching/learning to students
- average sq. ft. of school area per student
- utilization rate of specialized rooms
- percentage of students with all textbooks
- percentage of teachers with full sets of curriculum guides
- percentage of students on school feeding programme
- participation in book rental scheme

2.3.2 Processes

The processes mainly measure the teaching/learning processes and student enrolments throughout the system. Some of the indicators used are:

- teacher attendance and punctuality rate
- pupil/teacher ratios
- percentage of teachers receiving academic and professional training
- average teaching loads
- schools with school development plans
- net enrolment rate
- transition rate
- percentage of schools evaluated by education officers

2.3.3 Outputs

It is hoped that with the right input mix and effective processes, we should get out quality outputs, students who can fit into society and make a meaningful contribution. Measures of systems output are of three categories mainly student attainment, student achievement and learning outcomes. Some of the indicators used to measure the outputs of the education system are:

Student attainment –Measures of student attainment reflect the dynamics of student flows through the education system. Some of the indicators are:

- repetition rate
- student attendance rate
- dropout rate

Student achievement – Measures of student achievement generally reflect the qualitative aspects of the teaching/learning process. Some of the indicators include:

- pass rate in common entrance examinations and other standardized exams
- student performance in minimum standards and common entrance examinations
- percentage of students sitting 5 or more O' Levels, including Mathematics and English Language
- percentage of students passing 5 or more O' Levels, including Mathematics and English Language

Learning Outcomes – These **l**earning outcomes monitor the external efficiency of the education system from the perspective of the relevance of learning outcomes to the labor market. They are usually the most difficult to measure. These are as follows:

- transition to the world of work
- employment rate
- youth unemployment rate

3. QUALITY OF INFORMATION DISSEMINATED

Although the measures of data quality are very broad, the quality of the information disseminated is often assessed from the following measures.

Collecting accurate data - This is one way to ensure that the information we disseminate is of good quality. Since the primary source of the data is the school and the primary collectors are the principals, then training is given to new principals in the completing the annual questionnaires. In most cases one-time training is often sufficient except if there are major changes in the data requests. Most principals also received training on the importance and use of collecting accurate information during IOB (Institute of Business) training.

Clear guidelines for data entry and processing – Persons responsible for the entry and processing of the data, work under clear guidelines. Data entry and processing are timetabled, double and triple checked by other workers besides those doing the entry, and also data is entered as much as possible in quiet and clutter free environment.

Getting feedback from users - Another way we ensure quality is to allow the users of the information to provide feedback on the quality of the data they use. In Lucia a one page feed back form was sent out to users of the information, especially to the schools, to obtain their views on the quality of data. Although the response was low, we were still able to get an idea of the quality of the disseminated data.

Security of the data/information – The data/information is secured in some form at all stages from the manual questionnaires, to the processed data to the information when ready for dissemination. This is done using secured storage and password protected electronic files.

4. DATA/INFORMATION INTEGRITY

To achieve our goal of supplying information to the ministry officials and the public, the official statistics that we disseminate must be trusted by the users. Hence the users of the statistics should have confidence in the producers or source of the statistics. This helps to maintain the integrity of the data to be disseminated.

Collection, Analysis, Reporting and Dissemination of Education data in St. Lucia is primarily the role of the Statistics department of the Ministry of Education. However the Central Statistics Department of the island also compiles and disseminates education statistical reports based on the data supplied by the Ministry of Education. There is transparency in the methods of data collection, processing and dissemination at both the school and department levels, since information surrounding these are readily available to the public. Some of that information can be found in the annual statistical publications and website.

The collection of education statistics is articulated in the country's Education Act under Section 141. Section 22 of the act speaks of the confidentiality of student information.

Before any statistical data is released, it is reviewed by key Ministry of Education personnel other than those involved in producing it. The Ministry of Education then authorizes the release of the information, although there is no written policy or guidelines on the subject.

5. METHODS OF DATA/INFORMATION DISSEMINATION AND USE

Because of the small size of St. Lucia, physically, dissemination of information is not a challenge as compared to larger countries. Data is mainly disseminated as a complete set. This entails summarized data on the entire education system as well as the monitoring indicators. This data/information is disseminated annually and usually disseminated to all concerned (policy personnel, ministry of education officials, schools, other government ministries, the public and regional and international organizations) at the same time. The data is disseminated in hard and electronic copies via the various methods below.

- **Statistical Digest** – The statistical digest is an annual publication, produced in June of every year. The digest is usually disseminated in September, the beginning of the next school year, to all concerned at the same time.

  The data available in the digest covers all levels of the education system and is disaggregated as mentioned earlier by grade, gender, level, school, education district and age where appropriate. The statistical digest also contain trend data and projections. The digest contains a complete set of data from inputs to processes to outputs. It contains the monitoring indicators for the education sector plan. It also includes technical notes and information on the demographic context of education (population by geographic district, age and gender) as well as data on other departments which are affiliated to education, such as library and youth and sports.

  The Statistical Digest is disseminated as hard copies to all schools, key Ministry of Education officials, libraries, other government ministries and regional and international organizations and few members of the public. However, due to limited copies as a result of financial resources, it is also disseminated in electronic formats. It is also disseminated via the Ministry of Education's local intranet so all workers can get access to it. For wider access to the public at large, the statistical digest is posted on the Ministry of Education's website at *www.education.gov.lc*. It is also given to the Central Statistics department for posting on their website at *www.stats.gov.lc*. Schools are usually encouraged to use the information in the Statistical Digest for research and other purposes.
- **Student and Teacher Attendance Reports –** A separate detailed student and teacher attendance report is produced on a termly and annual basis and disseminated in hard copy to the Minister of Education, Permanent Secretary, all Education Officers, Teachers' Union, Teaching Service Commission and School Attendance Officer for action. The report is also available in electronic format to principals and teachers upon request. An edited version is also posted on the internet with the omission of names of teachers.
- **Statistics Brochures/Leaflets –** These statistics brochures are sometimes annual but more seasonal. The information found in the brochure reflects its purpose but yet is related to the country's data needs. The leaflets are mainly targeted towards the public, tourists and for dissemination when traveling to overseas countries. Since the targeted users for the brochures are different, the information in there would be very graphical and summarized for the national level.
- **Examination Reports –** These reports are prepared for all standardized examinations by the Examinations department. They are disseminated to ministry officials, schools, parents and the public.
- **Website –** Education statistics is published on the website of the Ministry of Education as mentioned above. The website contains additional information on the definitions and use of the education indicators.

The users of our education information vary greatly based on the type of information that they need. For example some users are interested in the education indicators whilst others simply want national summary statistics. Some of our users include Ministry of Education staff including policy makers, principals, teachers,

students of all levels, independent researchers, other government ministries, private firms and organizations (locally, regionally and internationally), donor agencies and members of the general public. Most of our users are simply satisfied with the information published in the Statistical Digest or found in the website. However for few users, especially some researchers, the data would have to be presented or packaged differently. As a result this type of data access is obtained upon request. The database containing the raw data would be used to produce this type of information. For security purposes the database itself is not available to all users but a select few from within the Ministry of Education.

Generally, the disseminated data is given in a number of formats to meet the needs of most users of the information. Some of the ways that the information is presented are:

- Tables, graphs and written summary forms in order to meet the needs of various users.
- Past, current and trend data are provided as well as projections.
- The information is also disaggregated in a number of ways as mentioned earlier to cater for all the users, age, grade/form, gender, school, level, school district.
- Other formats are made available upon request

In general it has been observed that schools do not make sufficient use of the data contained in the Statistical Digest. The teachers who use the information are usually those pursuing studies and have to present a thesis or research paper. The schools use mostly use information from the examination reports. That information is used to help identify student weaknesses and plan for remediation.

Most of the other information is used by Ministry of Education officials. Some of the ways that the information is being used are:

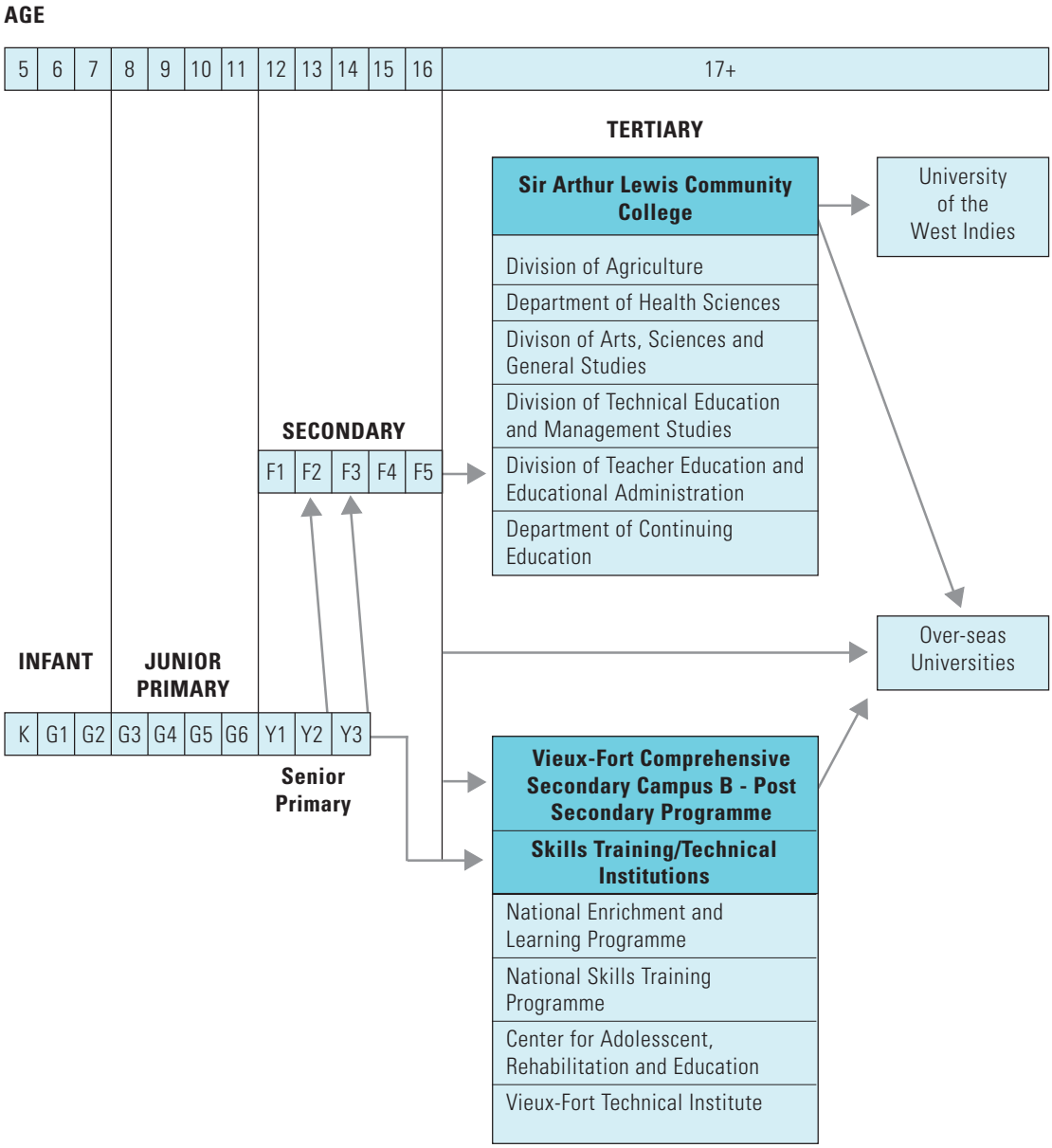
1. Because of the dropout data, an investigation has been lunched into school-aged children not attending schools.
2. Teacher attendance figures are now used when selecting teachers for scholarships and other courses. This measure has helped in the increase in punctuality and attendance of teachers.
3. The information on the performance of students on standardized examinations has assisted the Ministry in putting together numeracy and literacy program in schools.
4. The information on pupil/teacher ratios is being used by the Ministry on an annual basis when conducting staffing exercises with principals, to ensure that schools are neither overstaffed nor understaffed.

6. LIMITATIONS IN THE PRACTICES OF INFORMATION DISSEMINATION

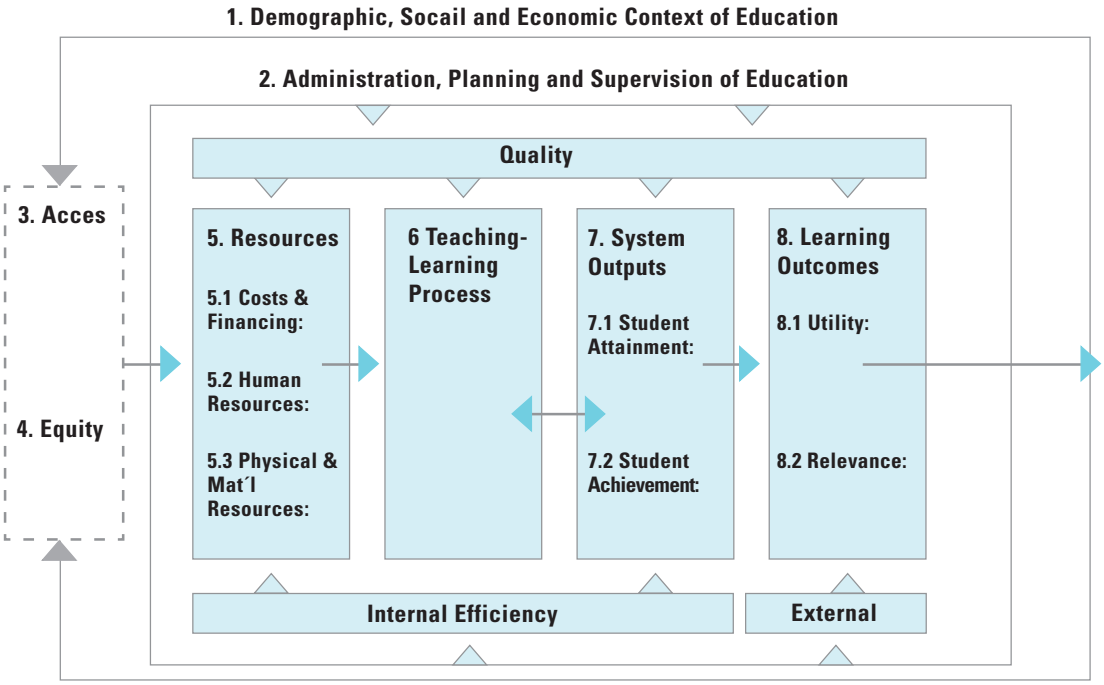
Although St. Lucia has made great strides in the practices of information dissemination there are still some areas which are lacking. These areas are outlined below.

- The absence of clear policy guidelines on the dissemination of official statistics by the Ministry of Education. The current practices that are followed and mentioned earlier are done so in the absence of any guidelines or policies. One of the dangers in this is the lack of continuity if staff members were to change.
- Due to lack of financial resources for the printing of statistical documents, it is usually difficult to release precise dates for dissemination of statistical information such as the statistical digests. Hence only the month is released in the ministries annual work plan.
- Lack of an electronic system to increase the timeliness of the data to be disseminated.

STRUCTURE OF THE EDUCATION SYSTEM OF ST. LUCIA 2005



CONCEPTUAL FRAMEWORK - EDUCATION MONITORING MODEL



ANNEX

PRIE Sub-Regional Workshops

Brasilia, June 2005

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