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SUCCESFUL ALTERNATIVES FOR RURAL EDUCATION: TUTORIAL LEARNING SYSTEM (TLS) AND NEW SCHOOL METHODOLOGY RURAL POST-PRIMARY

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SUMMARY[1]

This is an analytical summary of the study prepared by Centro de Estudios Regionales, Cafeteros y Empresariales (CRECE) for the Inter-American Development Bank's Regional Policy Dialogue. This paper will discuss the experience of two rural education models: Tutorial Learning System (TLS) and New School methodology for Post-Primary.

These models respond to Colombia's rural education conditions: insufficient access, high dropout rates[2] and low quality standards. According to different studies, other Latin American and Caribbean Countries live under similar educative conditions. PREAL (1998); CEPAL (2000); Murphy-Graham (2001).

These models' assessments, positive results, achievements, flexibility, adaptability to different educative contexts, and their possibility of improvement make them an interesting alternative for other Latin American countries.

The following are the main conclusions of the study:

- Almost 125 thousand post-primary students in rural zones enrolled.

- These models have created educative **opportunities** for rural students at the basic and intermediate (TLS) levels.
- These models have started an *educative revolution*. According to the "*Census Evaluation of Basic Competencies*" conducted by the Education Office of Manizales (Colombia) in April 2001, two elementary public rural schools that implemented the New School (NS) model (sponsored jointly by the Local Committee of Caldas Coffee Producers and the public sector), were rated the best schools among public and private schools of urban and rural zones.

- They have increased educative **retention and promotion**.

- Positive results in terms of democratic behavior and gender equality.

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[2] In the early 70s, urban school attainment was 48 percent for third grade; and 38 percent for fifth grade. In rural areas the percentages were 10 and 3 percent respectively (Ministry of National Education, 1998) in the middle of the 80s decade, "high rural illiteracy rates were related to low coverage for primary school and high drop out rates, lack of contents and methodologies adapted to rural population's expectative. While school-aged urban population was covered at a 90 percent rate, the percentage for rural zones was less than 40 percent and only 20 percent of students enrolling in primary school were able to achieve five grades or more…primary education system was inefficient; urban school attainment was 3.7 years compared to 1.7 years in rural areas" (Ministry of National Education; Working Papers Series; Colombia, 1998)

- Stronger community-school relationship that has created extra curricular activities in communities

- Content and instruments adjustments have been implemented.

- Migratory movements have been stopped.

- **A business-management mentality** is promoted through different economic projects developed at school.

- TLS's **intervention hypothesis** have been achieved and both models have had an **impact on community**, **local and regional development** due to promotion and implementation of social, educative, cultural and productive projects.

- Implementation and expansion experiences of these models have showed to the **public sector** that **private actors can emerge as important partners in the solution of social problems** (educative problems in this case).

  Due to its characteristics, rural education requires a high level of flexibility, improvement, and better pedagogic practices. These changes have taken place because of new methodological strategies; the new role of teachers; functions of pedagogic material; teachers training strategies, etc.

  Therefore, some of the most relevant factors behind the success of these educative models are:

  i) Adaptation and creation of new pedagogic concepts for rural realities

  ii) Flexible methodologies that are adapted to rural life necessities

  iii) Creation of inter-institutional networks or strategic alliances that facilitate program management, financing, assessment and risk reduction. Interaction between public and private sectors has been significant in this aspect.

  iv) Strategic alliances have facilitated the implementation of permanent teachers training programs.

  v) Efficient use of infrastructure resources to reduce the programs' implementation cost (use of existent primary school infrastructure).

Although the study's initial objective was to show results of two models, we found sufficient elements to consider the Post-primary New School Methodology model, promoted by the Ministry of National Education, as an independent one.

The models' qualities and positive results (some of them already evaluated), constitute a viable option for educative expansion in Latin America's rural zones. However, it must be noted that financial comparative analysis between these and traditional educative models has not been done already. Also, systematic

evaluations of educative achievement and teachers qualification are not yet available for TLS and the Ministry of National Education's New School models.

INTRODUCTION

This paper presents an analytical summary of the study ordered by the Inter-American Development Bank's Regional Policy Dialogue and conducted by CRECE (*Centro de Estudios Regionales, Cafeteros y Empresariales*). This study will discuss experiences of two rural education models implemented in Colombia: Tutorial Learning System (TLS) and Post-Primary New School methodology model (NS).

The models respond to dramatic deficiencies of Colombia's rural education system. The most visible problems that gave origin to these programs were: lack of rural secondary school infrastructure and inadequate educative options: i) curricula was not adapted to rural contexts; ii) system and methodologies rigidity impeded students to support their families, especially during the harvest season; iii) educative process had an isolationist concept: primary education was conceived as independent from secondary and higher levels; and, even worse, there was not a clear connection between the educative process and students work or how could they benefit rural communities. The fact that it was necessary to create independent infrastructure from that of primary schools in order to expand coverage that would reach post-primary levels was indeed a clear reflection of this concept.

In general terms, this was the origin of rural education problems in the country. However, the models' implementation responded to specific reasons that are discussed below.[3]

On the other hand, these problems are not present only in Colombia. In the Latin American context, although coverage and quality improvement have advanced in the last decade, serious deficiencies are still observed, mostly in rural areas. At secondary levels (post-primary), such deficiencies are even deeper.

> "In average (2000) estimates show that one in every six children of urban areas has dropped out primary school or has fallen behind. This situation affects almost 40 percent of rural areas children. In terms of secondary school completion—minimum requirement to enter the labor force—, the situation is worse: among 20 year-old youngsters, only one in every two in urban areas and one of every four in rural areas graduate from secondary school. Two circumstances make this situation even more complex. First, secondary school completion is the minimum requisite that creates the necessary income for

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[3] See appendix 2 for more details on the each model's characteristics and components. See CRECE (2001a) for a complete description of the model's expansion processes; this document explains the study's methodology. See appendix 1 for Colombia's rural-urban population characteristics and school attainment levels.

people to live above poverty lines. Second, opposed to primary education, during the 1990's achievement gaps were not reduced significantly among students of different socioeconomic origin. These two facts indicate that, in this region, poverty reproduction and income inequality mechanisms still persist" (CEPAL 2000). "Although educative coverage has been expanded, high selectivity rates are observed in secondary education enrollment. Indigenous youngsters from depressed rural and urban areas have more difficulties to enroll and complete secondary school that offers more possibilities of social mobility. Equality is not real for the majority of this population group" (Schiefelbein, et. al. 2001).

Clearly, primary education standardization efforts implemented by Latin American countries have reduced secondary education enrollment capacity, especially in rural areas.

1. EDUCATIVE MODELS

In this section, we offer a description of each model's components and characteristics and their implementation and expansion process.

1.1. Tutorial Learning System (TLS)

A TLS distinctive element is that it was conceived as a post-primary model and as part of a comprehensive rural development strategy.

In 1974, a group of professionals from *Universidad del Valle* founded FUNDAEC (*Fundación Para la Aplicación y Enseñanza de las Ciencias*), as an NGO with the purpose of designing a rural development model based on scientific knowledge practices. A relevant problem resided in how development was conceived. Mainstream thought (1970's) conceived development in terms of modernization and industrialization. But development projects based on this concept were not contributing to rural communities' progress. "In fact, it was the opposite since development projects made poor people more dependent". FUNDAEC noted that aid agencies were promoting "development" as a product, not as a process. Inevitably, beneficiaries of development became more dependent". (Richards, 1999).

FUNDAEC started to work in rural communities of northern Cauca, Colombia. The group's main task was to "promote new production and technology sustainable systems for these areas" (Gamboa et. al. 1997). Accordingly, the Foundation designed a pedagogical program that served as the foundation for subsequent productive practice improvement programs and as a connection line for the rest of

its programs[4]. Consequently, the educative program should be aimed at abilities and skills development demanded by rural communities.

In this context, 25 rural students from the Department of Cauca participated in the program for the first time. The objective was to train them as rural well being engineers (a non-formal degree), this is, people who possessed the necessary skills and knowledge to propose solutions for rural areas development problems (Gamboa et. al. 1997); interview with FUNDAEC[5] (2001).

The model's central elements arose from this experience and later became a new and viable rural education alternative. These elements can be classified as follows:

Curricular:

The model emphasizes capacity development more than contents memorization. The learning modules are designed to find practical applications that are implemented through community and productive projects.

As a result, one of TLS characteristic as a curricular improvement program is its emphasis on capacity development, not on new curriculum creation.

Unlike the traditional models, which consider secondary school as one educative phase, the post-primary TLS program is divided in three correlated functional phases that have practical results whether the student complete the three phases or not.

This model is adapted to rural students' time frames because it allows them to leave school during harvest seasons, or home duties, and they can continue their education. Also, the schedules are arranged by students and their tutor.

Pedagogic:

The model introduces the tutor figure as a substitute to the traditional teacher. This innovation involves two elements: i) the tutor is conceived as a guide not as mere knowledge *transmitter*; ii) the tutor comes from the same community where the model is being implemented. These two elements constitute a radical change in teaching-learning processes. First, changing the teachers' role also modifies students' making them more participative and cooperative. Second, introducing the community teacher figure facilitates this role modification.

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[4] FUNDAEC's fundamental programs were: 1) Sustainable Production Systems in Small Farms; 2) Small scale production processes for Families and Groups that have poor access to land; 3) Opening and strengthening Support and Service Micro-businesses; 4) Marketing and Community Funds Management

[5] Interviews conducted for this study: Caldas Coffee Producers Committee, FUNDAEC, COREDUCAR, Ministry of National Education, two on-site visits to Caldas schools, and one to TLS and MEN schools. Acronyms are explained below.

Another model's innovative pedagogical aspect its purpose to achieve inter-disciplinary integration aimed at the solution of rural development problems. The TLS model was conceived as an inter-disciplinary tool that contributes to the solution of specific rural development problems

TLS TUTOR

Tutors come from the same communities where the model is applied. According to FUNDAEC, the tutor characteristics include respect and interest for rural life progress, leadership skills, and commitment to the program; "the tutor must realize that his/her testimony is stronger than his/her words" (FUNDAEC 2001). Tutors receive special TLS training and they should posses certain cognitive abilities like appreciation for others' opinions and critics, ability to implement work projects, and administrative skills related to rural projects. Also, the tutor concept is oriented by the notion of community service: "the tutor is not only an educator but an active player of a social movement" (FUNDAEC 2001). An essential requisite for tutors is to be widely accepted in the communities where they work. Therefore, it is better that tutors work in their community of origin or in communities nearby. As a minimum academic requirement tutors should have a high school degree. In some cases they have been recruited without this degree, but have to demonstrate they possess sufficient knowledge in order to be able to work. Tutors are chosen during the training process offered by FUNDAEC before the program starts.

Clearly, tutors constitute an innovation in rural education alternatives based on two theoretic hypotheses. i) an educative system managed, directed and adapted with the benefited community participation is more successful than traditional ones; ii) rural areas development projects contribute to communities development only if they adopt a participative role and avoid having the benefit *receivers* role.

Institutional:

From the institutional perspective, TLS presents evident innovations. First, the model was created and applied by a NGO as a civil society response to rural education severe problems. Second, unlike other models, TLS has been growing as a demand-driven not a supply-driven model. In fact, institutions or communities contact FUNDAEC to implement the model. Third, the model has developed institutional strategies for tutors training improvement and funding activities. Two new model supporting institutions were created i) National Corporation for Rural Education SAT-COREDUCAR (created in 1999), which congregates all NGOs implementing the model and represents them at the national and international levels for government, private and international funding activities; and ii) Foundation University Center for Rural Well Being created by FUNDAEC in 1988

to respond to two different demands. On the one hand, the model's expansion process demanded tutors academic level improvement. On the other, the Ministry of National Education (MNE) required post-primary teachers to hold a higher academic degree. Accordingly, FUNDAEC created the University Center for Rural Well Being, which offers a Bachelor's degree in Rural Education with two academic concentrations: i) alternatives and methods for rural educative development; and ii) rural education with TLS model. Currently, the Center offers a graduate-level specialization in education and social development.

Finally, an important innovation (found in the other two models) is that communities play a central role in the inter-institutional network activities. As it will be noted, the new institutional role of communities has solved some problems found in the process of implementation and expansion of this model.

The model has developed new components during the expansion process and some of the most important have taken place in four departments: Santander, Tolima, Risaralda and Antioquia. Nevertheless, different expansion processes have developed similar characteristics. For example, in all cases private sector (NGOs mainly) participation has been very active; government's certification to the model has been issued after its implementation—the model has been officially recognized as a rural education alternative in the four departments and also the Ministry of National Education has included it in its portfolio of education alternatives.

Also, some adjustments have taken place; specifically, aspects related to the model's development (normally, a FUNDAEC's responsibility) have been modified due to the rapidity of the expansion process exceeding FUNDAEC's training capacities. However, in comparison to other models' curriculum and content aspects, TLS has suffered less adjustments, content adaptation or curricular modifications.

Another important result of TLS's implementation and expansion process is that, in this case, communities have been involved in education (tutors are the best example of this); education alternatives development need no special infrastructure; and curricular contents can be adapted to the educative system's reality and, therefore, knowledge contributes to the solution of development problems. Other positive results include employment creation in rural areas, not only through the people who work as tutors but also because communities are improving their capacities and skills; and the use of science-related topics aimed at the solution of real life problems (Villegas 2000).

An interesting aspect of TLS is that NGOs have included this model in their of development strategies (in some cases TLS has modified these strategies). The best example of this is the one of Foundation *El Camino* in the Department of Santander. According to the priest James Mitchell, one of the Foundation's directives, the fact that TLS was conceived as a development strategy more than a just an educative program is the most interesting aspect of it. He added: "in many

sectors, TLS is seen as an alternative rural secondary education program, and indeed it is. However, its main goal is to enhance human resources capacity aimed at development and well being. Every TLS student represents new perspectives for their communities' transformation and development" (Mitchell, in Correa & Torné (1995).

1.2. New School methodology Post-primary: the Department of Caldas case

In 1981, the New School methodology was implemented in the Department of Caldas with very successful results for primary education. This situation caused an increasing demand for secondary school creating a problem: almost 70 percent of students who completed primary education did not have access to secondary education.

Consequently, in 1988 Caldas' Coffee Producers Committee promoted an educative experiment to expand New School Methodology (NS) offer to six school grades. This experience started with 30 students who were attending New School methodology primary schools. The Department's Education Office[6], University of Caldas, and the Experimental Pilot Center (CEP) participated in the project's implementation. The learning manuals, a basic NS methodology component, were designed by the University of Caldas' School of Pedagogy.

In the case of rural Caldas, there were two additional reasons that led to the model's expansion. First, Coffee Producers Committee (CPC) investment was traditionally used for the construction and rehabilitation of school infrastructure. However, some years later (early 1990), school construction demand almost disappeared (CDCC;1998) and, therefore, investment was directed to quality education purposes. Second, a study conducted to assess Department's educative infrastructure conditions (CDCC 1998) found that some schools were not in use and that student-teacher ratio was very low (13.3 students per teacher). Given these facts, the CPC focused on expanding educative coverage based on the existing teachers and infrastructure (schools). Therefore, the model was expanded in territorial (other rural areas) and academic (from six to nine school grades) ways.

Although it was based on NS methodology concepts (originally designed for primary school level), post-primary model contents and teachers' guides approach were adapted to students' ages. This implied higher development of formal operation thought (Interview CDCC; 2001). TLS and NS methodology post-primary (Caldas) innovative characteristics can be classified as follows:

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[6] Departmental Education offices are responsible for the implementation of central government's policies, strategies, programs and legal provisions related to education. Also, they are in charge of complying with the Departmental Development Plan guidelines; designate teachers and allocate budget resources for the educative sector.

<u>Curricular:</u>

- They include a "*progress control chart*" in which students' achievements (previously established academic goals) are registered in each unit (**school guides or sub-topics**). This self-rating method is supervised and then validated by teachers. Also there is a teacher-student evaluation practice at the end of each unit.

- Contents are adapted to the rural context. In order to achieve this, the model includes projects aimed at developing students' capacities for the solution of rural problems (especially those related to farming activities)

- The model's flexibility facilitates rural students academic promotion because is adapted to their learning conditions and working capacities (during any given year rural students have to leave school once or more in order to support their family's productive activity).

- The model requires physical spaces and tools for active learning (orchards, classroom libraries and laboratories).

- Students begin their school day with Group Activities. These activities (readings, contests, etc.) are implemented by students with the teachers' assistance and there are student committees organized by subject. The committees include a Directive Council (president, vice president, secretary, classroom work assistant and a "leader"). Existing committees are: Resources and Learning Center efficient management, Recreation and Sports, Journalism, Well Being and Environment (Gallego-Ospina, 1998; interview CDCC 2001).

<u>Pedagogic:</u>

- The model is based on an active pedagogy principal: learning is reasoning more than memorizing; work must be supportive and it has to be planned according to interests and necessities of students' development age. From this perspective, students are the center of a learning process and teachers and directives become the advisors. This implies a permanent curricular and methodology updates in order to adapt them to rural youngsters' necessities and interests (Gallego-Ospina; 1998).

- The concept of multi-grade classrooms and teachers was introduced to facilitate the model's flexibility. This means that teachers are able to teach different post-primary school grades simultaneously facilitated by a curricular strategy based on self-learning guides.

Institutional:

The model includes several innovations. For the first time, micro and participative institutions are introduced in rural education: student government (organized in classrooms and at the school level). The student government facilitates the work of teachers as advisors helping students to understand their role at school and also they are involved in the school's administrative processes.

On the other hand, the Caldas successful experience with inter-institutional cooperation led to the creation of an Institutional Strategic Alliance responsible for New School post-primary's management, support and maintenance. This alliance formed by the Coffee Producers Committee, the Department's Education Office and the Ministry of National Education, facilitated the model's financial support (training, innovations, adjustments, among others). Also, these Alliance activities have led to the creation of new institutions:

- Technical Committee: its main objective is to adapt and comply with MEN and government's legal and technical guidelines; to develop and implement training programs; and to coordinate different teams' actions. This committee is formed by two members of CPC, two Department's Education Office officials (Training coordinator and Supervisors Technical Body coordinator), the secretary of the Department's Education Office and New School teacher.

- New School Sponsoring Team: it supports the Technical Committee and designs and implements specific plans of action. This team is formed by teachers, supervisors, school directives and experts in computer science and agronomy.

Another important innovation is that primary and secondary schools can share the same infrastructure. Before the model's implementation, formal education divided these schools in "*escuelas*" (primary school) and "*colegios*" (secondary school); thus, in order to have a new secondary school, communities had to create new infrastructure. Conversely, the NS post-primary model used Caldas infrastructure for primary schools (CPC funded most of infrastructure construction expenses).

On the other hand, successful modifications, adjustments and content adaptations to the model can be observed in the following two cases:

i) School and Coffee:
The Department of Caldas is one of Colombia's largest coffee producers. In fact, coffee production added value represents almost 12 percent of the Department's GDP. One of country's highest. In 1998, an evaluation of Caldas post-primary schools' farming projects showed that only two school projects were related to coffee issues and the rest were related to other farming activities (rabbits, radishes, vegetables, bananas, etc). Teachers did not know how to approach coffee-related

subjects and although children from coffee producing families had higher school attainment levels than their parents, they only performed physical activities of coffee production: harvesting, loading, transportation, etc. In other words, greater human capital represented in children's higher educative level was not being used efficiently at their homes.

Thus "School and Coffee" project's main goal was to develop employment creation capacities; increase coffee producers' school attainment level, make coffee producing a competitive activity; improve production processes through training activities for rural youngsters; and take advantage of human capital represented by coffee producers' children. Modules were developed by a team of school "*Colonia Escolar La Enea*" teachers and an agronomist who adapted its contents to the New School methodology.

Also, the community participated in the "School and Coffee" project:

- Parents provided a piece farming land for their children practices.

- The institution (school) included "School and Coffee" in its Institutional Educative Project[7] (PEI) and studies plan, and conducted a coffee producing analysis in the community where the school operates[8].

- Coffee Producers Committee's technical assistance specialists joined the project

This program has maximized the use of human capital represented by coffee producers' children who participate in their parents' activities (interviews in schools *La Violeta* and *La Trinidad*).

ii) Virtual School:
This program is aimed at enhancing the model with new technologies for learning-teaching processes. This program is implemented in 4 different phases that include teachers training and implementation of collaborative projects by New School post-primary students. These projects are also being developed with students from other national and international institutions. For example, there is one project where Caldas rural children interact with English children who teach them the language while Colombian children teach them on coffee-related subjects.
During the training phase teachers are able to contact different education specialists via internet reducing on-site training costs, among other things. The Autonomous University of Bogotá has joined this training project and Caldas Coffee Producers Committee has provided equipment and educative software.

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[7] Institutional Educative Project; communities are responsible of their formulation and programs' development in each educative institution.
[8] Colombia's municipalities are sub-divided in *veredas*, which represent a portion of rural land.

The most visible impacts of this program are: enhancement of students academic level; inclusion of other entities (e.g. telephone companies have reduced their internet access rates); and teachers have included internet and webpage use to self-learning guides requiring students to use with them as a means to develop class work. The model schools have obtained free software licensing from Microsoft Foundation and it made it to the final round of the "Junior Challenge" contest in Rome, Italy; the program is included in the World Bank INFODEV's ICT Stories. Finally, students were distinguished with the Educative Information Technology Award (interview CDCC 2001).

An important aspect of these two educative programs is how they are inserted in the model's methodology. These programs were not conceived as productive projects for rural areas or computer-skills development rooms, but as content adaptations and tools inserted in the model's strategies and methodologies. Modifications and adaptations to self-learning guides' are an example of this; also the use of "virtual" instruments (software or Internet) to complement the guides or presentation of coffee production cases to develop some contents— mathematics courses use coffee production examples as part of their contents.

An original innovation, the Learning Acceleration program, created in 2000, was designed to provide primary school access to over-aged students and included a proposal from Brazil's Ministry of Education that was integrated to the New School model. In one year of school work, students are able to achieve five school grades with this program. They attend a regular school but take special courses during the day. Thanks to this program many dropouts return to school. This program was implemented for the first time with 120 children distributed in 4 pilot-groups of 30 children. Today, these 30 children groups have expanded to sixteen. As a result, urban schools of the Manizales Department have already asked for advice in the implementation of this type of programs.

Another important innovation is the Adult Education program that initiated in 1999. The program's objective is to educate adults and parents with functional analphabetism. The first group initiated with 7 groups of 25 people that completed primary school in one year with New School methodology (their main achievements were on mathematics, reading and writing). Funds for the pilot project (USD$12,500) were provided by the Coffee Producers Committee (CPC). An agreement between CPC and *Caja de Compensación Familiar* (CONFAMILIARES) was signed and CONFAMILIARES materials were adapted to the New School methodology. Today the program works with 52 groups where 1,560 people attend a post-primary school. Their eight-hour school day is complemented with 8 hours of work at home—they receive a primary school certificate when they finish. Currently, a pilot testing is operating for secondary school with three groups of 72 students and post-primary teachers who work with them. In this case, municipalities collaborate with teachers' weekend transportation expenses.

The Caldas model is the only one of the three that has been evaluated in terms of academic achievement in mathematics, language and democracy (based on official parameters).[9] The tests were conducted in both New School methodology and non-New School methodology schools and the evaluation was carried out by CRECE (1999). The most important results were:

Some of the model's methodological components are related to greater achievements. For example, the more self-instruction mathematics guides provided to students the mores achievement; provision of trapezoidal tables for cooperative work; the methodology pedagogic process is related to students' achievement; three indicators account for this: teachers' role; student participation; and pedagogic strategies (CRECE 1999).

In comparison, non-New School farming schools achievements were smaller. Also, New School academic results were similar between genders as well as their concepts of support, acknowledgement, motivation, communication, participation and respect. However, farming schools students had different perceptions about participation and care for others— these values were more important for girls (CRECE 1999).

As a result of this evaluation, self-instruction guides are being adjusted (interview CDCC 2001) Teachers are participating and the objective is to adapt guides contents to MEN's pedagogic approaches and regional and institutional experiences as well; comply with General Education Act provisions related to development of students capacities and integral education concepts; strengthen New School methodological strategies; propose a dynamic and adequate curriculum for Caldas coffee producing areas; and to improve the guides' teaching and pedagogic conditions.

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[9] Different kind of evaluations have been conducted for the other two models

Two MEN methodology schools from Manizales (Caldas, Colombia) obtained unprecedented results in official tests of MEN's "Basic Competencies Evaluation". These tests were conducted in every municipal school (urban, rural, private and public) and two rural schools, *El Tablazo y La Trinidad* (New School post-primaries) obtained the highest rates in mathematics and language (analytical work) (Department of Education, Manizales 2001); interview *La Trinidad* school (2001). The following is a graphic containing a comparative analysis for La Trinidad school.

Students (percentage) results in Mathematics ability levels; La Trinidad, Educative Nucleus and Manizales, Caldas, Colombia (2001)
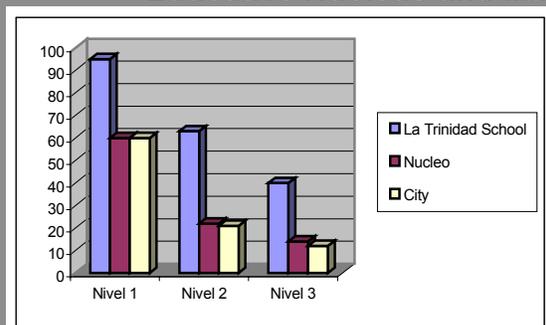
Level 1: Recognition and description of mathematical objects: attributes, properties and operations.
Level 2: Use of knowledge and procedures to contrast, classify and calculate mathematic results and to establish relationship between different representations.
Level 3: Model construction, problem solving.
Source: Department of Education, Manizales (2001).

1.3. Ministry of National Education's New School Post-primary:

Originally, the New School post-primary model was the only one considered for this work. However, during data recollection processes, the New School post-primary promoted by the Ministry of Education was considered an independent model.[10]

Although MEN model shares some theoretic and methodological elements with the two models described above—especially Caldas model—, it also has clear differences: MEN's objective is to provide viable education to rural students more than retaining them in the countryside; combination of formal and non-formal education at school; it is not the only pedagogic option; it develops productive projects aimed at micro-business creation; teachers' training is focused on the Institutional Project of Rural Education formulation and development; it offers different alternatives for implementation and expansion.

Currently, the University of Pamplona offers two kinds of training programs for MEN's teachers: on-site and distance training: at the on-site training, teachers have three five-day workshops on PIER components; at distance training, they attend five sessions in ten months. PIER components are divided in eight modules:

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[10] In order to simplify, the New School methodology rural post-primary model promoted by the Ministry of National Education will be called "MEN model" or MEN; and the Caldas New School Methodology post-primary will be called "Caldas model" or Caldas schools.

five of them are on PIER components and the other three are related to productive pedagogic projects (interview MEN-U. of Pamplona 2001). MEN model includes multi-subject (not multi-grade) teachers.

MEN model objectives have less emphasis in rural life than Caldas model. As mentioned before, MEN's main goal is to provide adequate education for rural students more than retaining them in the countryside after they finish school.

Despite their differences, the three models' (MEN, Caldas and TLS) main goal is to attack Colombia's rural education severe problems. At the same time, this is the government's most comprehensive response to education problems. According to the National Educative Plan called "The Pacific Revolution", the priority of the Multinational Project of Basic Education (PRODEBAS) was to develop active methodologies for urban basic education and rural post-primary education (Prodebas 1; 1995).

In rural areas, twenty-two of every 100 children were not attending school (Prodebas 1; 1995). The New School Program was reducing the effects of this problem, but at the same time secondary education demand increased to 300 hundred thousand new spaces annually. This situation demanded the implementation of new alternatives such as:

- Implement active methodologies in rural schools compatible with New School methodology principles.

- Increase school grade availability in New Schools

- Provide more educative alternatives than basic and secondary education institutions.

- Develop alternatives for secondary-level teachers and schools (Prodebas 1; 1995)

The Multinational Project of Basic Education (Prodebas) developed four innovative active methodologies for rural post-primary education between 1990 and 1994: New School Methodology Rural Post-Primary in the *Hojas Anchas* community of *Supía* (Municipality, Department of Caldas); Rural Basic Education Integral Model in *Balboa* (Municipality, Department of Risaralda); Rural Post-primary Basic Education in *Fómeque* (Municipality, Department of Cundinamarca); and Rural Areas New School Post-primary in Pamplonita (Municipality, Department of Norte de Santander) (Prodebas 1; 1995).

The rural post-primary model promoted by the Ministry of National Education was based on these experiences. Between 1991 and 1993, this model expansion was promoted by the Ministry of National Education - National Plan of Rehabilitation agreement [11] (MEN-PNR Agreement). The rural post-primary was implemented in

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[11] Presidency of the Republic plan for municipalities affected by high violence rates and the internal armed conflict.

40 schools of 30 municipalities covered by the PNR. Ten of them were located in Norte de Santander, Boyacá and Cundinamarca departments and were chosen by municipality mayors.

The MEN model and the New School methodology share pedagogical guidelines based on active pedagogies. Nevertheless, in the implantation and expansion process of the model some interesting innovations occurred:

Curricular:
The model focuses in socially productive activities (Gelvez, 1997; Ramírez-Ramón, 1998) for the solution of theoretical, practical, ethical and moral aspects that contribute to students' integral education. The model promotes qualitative education to maximize Sustainable Human Development (Parra, 1999).

It is aimed at developing an adequate curriculum that combines mandatory basic education courses with productive pedagogic projects (U. Pamplona, 2000) that are compatible with existing programs and learning conditions in rural areas (Gelvez, 1997; Ramírez-Ramón, 1998; Parra 1999).

The model includes a flexible and diversified curriculum adapted to different rural socio-economic contexts (Gelvez 1997; Ramírez-Ramón 1998; Parra 1999).

Pedagogic:

As an active pedagogy, the model is adapted to the rural context and integrates basic and rural education concepts.

Basic education includes projects aimed at developing, capacities, skills, aptitudes and information management using local resources and an education process based on positive values.

Rural education is aimed at achieving basic education goals; it has an emphasis on rural life's positive values; considers socio-cultural conditions; and offers students the opportunity to complete their education enabling them to join their society's labor force.

Institutional:

One of MEN's institutional innovations is that involves a higher education institution (University of Pamplona) in the model's implementation and teachers training activities. This model is promoted based on the agreement between the U. of Pamplona and the Ministry of National Education. Departments and/or municipalities act as fund providers and the University supervises the model's implementation and training programs for teachers.

In this context, basic education teachers have access to permanent updating programs and are able to develop the model's administrative, pedagogic, community and productive projects components (Gelvez 1997).

Schools that adopted rural post-primary should implement a Rural Education Institutional Project (PIER) which has five components: i) conceptual (educative center objective); ii) organization, administration and management (includes context evaluation, work coordination with primary schools, school government implementation, coexistence manual, inter-institutional agreements, resources control, and Municipal Educative Project coordination; iii) pedagogic (strategies and achievements); iv) community interaction and participation; v) productive pedagogic projects (considered as educative community production of goods and services that increase their economic, social and cultural assets) Gelvez 1997; Parra 1999.

MEN's rural post-primary operations started in isolated schools where school grade coverage was expanded. Today, the model's implementation is based on coordinated work of primary schools and post-primaries through an institutional rural educative project (PIER).

The most relevant experiences and results of Rural Post-primary:

- This model provides low-cost basic education to rural zones.

- Rural education levels have been expanded to basic secondary. The system has 600 post-primaries and serves 70 thousand students (grades sixth to ninth) in 15 departments throughout the country.

- Students and community participate in the development of rural productive projects and learning activities.

- The model's training program facilitates primary school teachers to participate in secondary school teaching (Coffee Producers National Federation, Colombia; 2000).

- Other institutions are now involved in school activities

SCHOOL DAY IN THE THREE MODELS
TLS: School days are Saturday and Sunday (at school or community house). Tutors verify students' weekly activities; discussions groups are formed under tutors' supervision. Classes are based on the guides; projects are conducted in the afternoon; students receive week assignments on Sunday.   **CALDAS POST-PRIMARY:**   Class attendance self-control. Student reviews week planning and develops group activities. A group of four students develops the guide (library and teacher advisory). Coordinates (during recess) activities with his teammates. In the last block (farming) students and teacher evaluate the progress of the project. Practices learned lessons at home.   **MEN RURAL POST-PRIMARY:**   Student attends two classes (first block), listens to teacher's lesson and makes individual practices. Students and group director implement and/or develop the pedagogic productive project. In the third block, the student develops group work with guides and library support. Borrows a text from school to read at home. Goes home and inform parents about training project schedules for students and parents. Every student has homework to do (projects or duties).

It can be said that the model is the most comprehensive governmental response to rural secondary education problems in the country and, at the same time, an implicit recognition that deficiencies in the traditional public education system for rural areas can be solved with the implementation of Rural Post-primary models.

2. COMPARISON:

As these three programs initiated as a response to rural education problems in Colombia, they share a common context. However, the main differences derive from their respective goals.

There is a central difference in relation to theory and methodology aspects. One of the explicit goals of both models, Caldas and MEN, was to increase secondary school coverage in rural zones and, the most important aspect, both models were based on theoretical and methodological concepts of Escuela Nueva, an existent methodology for rural primary while TLS original goals did not contemplate increasing access to formal education and lacked a previous methodology. Furthermore, TLS was conceived not as an alternative to the traditional educative system, but as a component, among others, of a general development strategy for rural zones.

Despite these differences, TLS shares a common "spirit" with the other two. This aspect is clearer if one considers that all three models were aimed at facing similar

problems. These similarities stem from the need to offer training alternatives and education to rural areas which, in the case of TLS and Caldas is even clearer, since their purpose was to retain rural students in their communities; though this was not as clear in the case of the MEN.

TEACHERS OPINION

TLS:
"There was one year when the Municipal government did not sign the agreement and, therefore, I had no salary. I depended on this job to subsist and I was not able to continue. However, the community was very satisfied with TLS work and they collect the necessary money to pay for my salary and they pressed the Municipal Council to sign the agreement….the students' enthusiasm and their hopes on the program stimulate me and also are a challenge to me. I feel that I have the obligation to stay with them". TLS teacher, Paramillo community.

CALDAS POST-PRIMARY:
"The methodology obliged me to learn more and also helped me to improve my writing skills (due to the guides work)". Teacher, La Violeta school.
The work based on the guides helped me think about what I am teaching, and also helped me to develop my pedagogic and writing skills". When I was realizing that the guides were either very complicated or repetitive I was improving them. As a result, I will publish a text book on algebra with the support of the Coffee Producers Committee. Mathematics professor, La Trinidad school.

MEN RURAL POST-PRIMARY:
According to some post-primary teachers surveyed by Parra (1999), thanks to the implementation of the model:

- Students are aware of the environment and the rational use of natural resources
- The productive pedagogic projects have encouraged students, parents and community residents to open small businesses.
- Also, these projects have promoted a business mentality among students.
- Pacific solution and dialogue has been promoted among community families, the students have increased their self-esteem and they are more analytic. The participation and support of private business have encouraged other communities to participate in these projects.

The distinctive feature of TLS is the tutor concept, which is not part of the other two models. In this context, such concept may be considered as an innovation in

relation to both traditional and alternative models of rural education (such as MEN and Caldas). According to FUNDAEC officials who were interviewed for this study, the tutor concept made true the hypothesis under which the community would be able to successfully integrate with all aspects and phases of the educative process (interview FUNDAEC; 2001). Another important particularity of TLS is the fact that demand-driven (not supply-driven) factors are behind the expansion of this model.

On the other hand, the MEN and Caldas models have been expanded through institutional support, although they also involve demand-driven factors to promote their expansion because communities (Caldas) or Municipalities (MEN) are the models' petitioners

A common element of the three models, which has already been mentioned, has to do with the new role of communities. The three models include a participative involvement of communities and they are considered another institution. This new role of communities has had important consequences in overcoming some obstacles within the models.

For example, in the case of TLS, lack of adequate space to implement the different educative projects is a problem for the model operation. In order to solve this problem, communities or families have lent small pieces of land. Another important problem is that the agreements celebrated between TLS and municipal governments sometimes are at risk due to political changes in local administrations. However, due to the collaboration of NGOs and municipal governments this problem is not affecting all regions where the program operates. In the case of affected communities they have sought a solution through different mechanisms: some times they use their own mechanisms of democratic participation (Concejos Municipales) to make pressure or they pay for the teacher's salaries and expenses with their own funds. Some communities have combined both mechanisms—Paramillo community in the municipality of La Unión of Valle del Cauca Department; this community was visited during a field trip for this study.

Also, this space restriction problem has been the case of the New School at Caldas and the School and Coffee program and, as it was mentioned, the community has to facilitate some land for the projects' implementation. This is benefiting families whose children are able to collaborate in their homes' productive activities.

STUDENTS OPINIONS

<u>**TLS:**</u>

"The fact that the tutor comes from our community made me trust the mode and therefore I enrolled". Parent attending TLS. "When I became an SL student, I convinced myself that my children had to continue studying, and that is why we are making every effort to retain them at school". Parent mother attending TLS. "I was not interested in staying at school because I thought that was not a way to make money. However, when my sister enrolled in TLS and I realized that she was taught how to improve harvests and do better math, I was convinced that school is profitable". Young TLS student. "My father got me out of school because it was very far away and he could not afford my transportation expenses and school fees. I thought am would not be able to study again until the TLS group arrived to the community. Today, I think I will be able to get into college". Girl attending TLS. "I dropped out of school twenty years ago because my father could not afford my transportation expenses, but when the TLS group arrived to the community it was like a new opportunity in my life. I have children and am not able to attend school on weekdays. However, since I enrolled in TLS my husband and children help me out and I am able to attend school on weekends. This is like a dream coming true, I want to attend college, it does not matter if am old". Mother attending TLS.

<u>**POST-PRIMARY CALDAS:**</u>

"I attended a Farming School, but now that I enrolled at the New School, I would not want to go back". Opinion of different children attending La Violeta and La Trinidad schools. "My father is a coffee producer, and I did not know anything about coffee cultivation. Since I have attended this school, I have learned many things about coffee and I have realized that my father can improve some of his activities. He listens to me and he has implemented some changes already". Eight-grade boy at La Violeta School. "The only thing that New School needs is to have eleven grades. My mother is very poor, but she doing everything she can. She wants me to stay at school as long as possible, but when I finish ninth grade, I think am won't be able to continue because the other schools have fees and they are far away". Girl student from La Trinidad school.

<u>**RURAL POST-PRIMARY MEN:**</u>

"This is a better school because is free, while the community school has fees". They do not have productive projects at the community school. Here, one learns how to make a living". "The school has a very good and nice library; that is something other schools do not have". Students at Tausa post-primary schools.

The community involvement in these models has a double way effect: on the one hand, this involvement has enriched the models' development and implementation.

On the other hand, communities have benefited from increased positive impacts from the models.[12]

3. EXPORTING THE MODELS

Based on the collected information, we can affirm that there are not specific strategies to export the models. Hence, this process has to do with interest of international organisms, ministries of education and non-governmental organizations that have had contact with the programs' administrators and, some of them, have had on-site experiences with the models' work.[13]

In addition, no clear or systematic communication and dissemination strategy exists; especially, in the case of Caldas and TLS models. In these two cases, dissemination has been irregular and NGOs have been more interested in doing this. In the case of MEN, since it is promoted by the government, it has been supported and permanently disseminated at the territorial level. Nevertheless, as it was mentioned before, MEN's Portfolio of Educative Offers explicitly includes the TLS.

For this study, we were able to collect complete information on TLS's expansion and export process in Honduras only[14] :

3.1. TLS in Honduras

According to Murphy-Graham (2001), some individuals from "Bayan" knew about the success of TLS in Colombia through FUNDAEC people. This motivated the Hondurans to implement a TLS program in "La Mosquitia".

Consequently, "Bayan" sent to youngsters from the region (a *Garífuna* and a *Misquito*) to Colombia to attend the University Center of Rural Well Being, ignoring FUNDAEC's process for the implementation of the program (program development should be based on the region's specific needs).

In 1996, a pilot program was implemented in 14 communities of Bayan with

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[12] Tables presenting students and teachers opinions were based on interviews conducted in schools that have implemented the different models. In TLS' case, the visit was in Paramillo community of La Unión municipality (Valle del Cauca Department); in Caldas' case, the schools visited were in La Violeta y La Trinidad communities in the Manizales municipality (Caldas Department); in MEN's case the school visited were in Páramo Bajo and San Francisco community in the Tausa municipality (Cundinamarca Department)

[13] In 1995, the Kellogg Foundation funded an event hosted by FUNDAEC where different countries institutions interested in the development of educative projects for rural areas participated. They did a three-week long practice: the first week they were provided with general information; in the second, groups formed by three persons visited different regions; and in the third week, they shared their experiences in FUNDAEC's offices. The book "*Para salvar las barreras*" was published.

[14] Other examples are the Guatemalan NGO TALITAKUMI that has been working with Mayan girls and now they have TLS 5 co-ed groups (Interview COREDUCAR-FUNDAEC; 2001).

financial support from the Canadian Government and Kellogg Foundation. Shortly after, Bayan presented a five year proposal to the United Kingdom Department for International Development (DFID), with the support of a British NGO (Based-UK). The project was approved and Based-UK was designated as an intermediary.

The project was aimed at developing a trained human resources base that was able to promote economic and social development and to empower indigenous population, especially female indigenous population. Also, the project aim was to implement the TLS model in 15 communities for two thousand students. According to the mentioned author, the project also sought (although not explicitly) official recognition from the Honduran Ministry of Education as it occurs in the Colombian case. It is worth noting that Bayan tried to "transplant" the TLS model in Honduras but adapting the texts to the Honduran context.

According to Murphy-Graham (2001), although it is premature to assess the program's impacts, especially its goals, what is clear is that the program's quantitative goals cannot be achieved because of existing drop out rates: In the second year of the program, only 79 students from the original two hundred were enrolled. In the second cohort, only 121 remained from a total of 172. According to the author, between 1999 and 2000, the desertion rate increased to 70 percent. However, hurricane Mitch was one of the reasons behind this.

The author mentioned some other reasons (some of them are explained in annual reports prepared for the DFID):

- Students considered it risky to enroll in a new program,.
- Contextual problems (differences between Colombia and Honduras)
- Students' economic problems as well as their productive activities (fishery) make it difficult to develop the program.
- It was hard to find adequately trained tutors
- Implementation of 7th grade by the Ministry of Education

Some of the conditions that gave origin to this experience were: i) scarcity of trained personnel; ii) insufficient infrastructure; and iii) texts were inadequate for the Honduran context—as a result, Bayan has made some adjustments to its TLS model.

4. CONDITIONS FOR SUCCESS, DIFFICULTIES, AND FUTURE CHALLENGES.

There is no doubt that the severe educative problems described in this paper have been reduced because of the implementation and expansion of the models. Although they have different conceptual aspects, pedagogical theories, specific goals, strategies and contents, the programs share common positive results that

make their implementation a viable option for places still suffering those severe problems.

The three models serve to almost 125 thousand post-primary rural students[15]. But access and/or expansion are not the only positive results of the implementation of these programs:

- Almost 125 thousand post-primary students in rural zones enrolled.

- These models have created educative **opportunities** for rural students at the basic and intermediate (TLS) levels.

- These models have started an ***educative revolution***. According to the "*Census Evaluation of Basic Competencies*" conducted by the Education Office of Manizales in April 2001, two elementary public rural schools that implemented the New School (NS) model (sponsored jointly by the Local Committee of Caldas Coffee Producers and the public sector), were rated the best schools among public and private schools of urban and rural zones.

- They have increased educative **retention and promotion**.

- Stronger community-school relationship that has created extra curricular activities in communities

- Content and instruments adjustments have been implemented.

- Migratory movements have been stopped.

- **A business-management mentality** is promoted through different economic projects developed at school.

- TLS's **intervention hypothesis** have been achieved and both models have had an **impact on community**, **local and regional development** due to promotion and implementation of social, educative, cultural and productive projects.

- Implementation and expansion experiences of these models have showed to the **public sector** that **private actors can emerge as important partners in the solution of social problems** (educative problems in this case).

The most important factors behind these positive results are: because of its characteristics, rural education requires a high level of flexibility, improvement, and better pedagogic practices. These changes have taken place because of new methodological strategies; the new role of teachers; functions of pedagogic material; teachers training strategies, etc.

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[15] In 1975, the STL model initiated with a group of 25 students; in 2000, almost 40 thousand students were attending. In 1988, the Caldas model initiated with 30 students; in 2001, 8560 students are attending; and the MEN model initiated with small groups in 1990. today, 70 thousand students are attending.

Therefore, some of the most relevant factors behind the success of these educative models are:

i)   Adaptation and creation of new pedagogic concepts for rural realities

ii) Flexible methodologies that are adapted to rural life necessities

iii) Creation of inter-institutional networks or strategic alliances that facilitate program management, financing, assessment and risk reduction. Interaction between public and private sectors has been significant in this aspect.

iv) Strategic alliances have facilitated the implementation of permanent teachers training programs.

v)   Efficient use of infrastructure resources to reduce the programs' implementation cost (use of existent primary schools)

Nevertheless, these models are also having some difficulties. The most urgent is the lack of sufficient resources for the programs; in the future this will be a determining factor for their expansion. Also, in the case of Caldas and TLS, supported by the Departmental Coffee Producers Committees, the coffee crisis created by drastic reduction of this grain's international prices will surely have a negative impact. Coffee producers have not only diminished their investments in educative and social programs in the last four years (CRECE 2001), but also they have announced their withdrawal from this kind of projects. Consequently, these programs will be "adrift" unless some positive measures are implemented.

One of the problems of TLS is that its learning materials are not updated regularly. According to FUNDAEC (interview 2001), insufficient resources for specialists impede them to update the materials according to the different experiences and expansion process (Correa & Torné 1995).

Administrative viability and financial factors are other determining factors for these models' implementation. Also, this viability depends on decentralization and its operation problems in the educative sector.

Finally, there are some aspects of these models that have not been studied yet. A deeper analysis of such aspects would help not only to overcome existing obstacles or modify some contents, but also to find their conditions for success and their possibilities of implementation in other regions. The following are some of the aspects that require further analysis:

• In Colombia, the TLS model has not been evaluated from the perspective of goal achievements or its different impacts in communities.

• MEN has not been evaluated from the perspective of goal achievements.

• Neither TLS nor MEN have evaluated teachers' qualitative skills.

- None of the three models have been evaluated from the perspective of total costs (this includes teachers salary, training, administrative costs and support personnel).

- Achievements of productive projects have not been evaluated from the perspective of content adjustment, and productive, social and human capital (especially in the case of MEN).

- Finally, based on the collected information, we can affirm that there are no strategies to export the models. Hence, this process has to do with interest of international organisms, ministries of education and non-governmental organizations that have had contact with the programs' administrators and, some of them, have had on-site experiences with the models' work in order to adapt them to the specific conditions of their countries.

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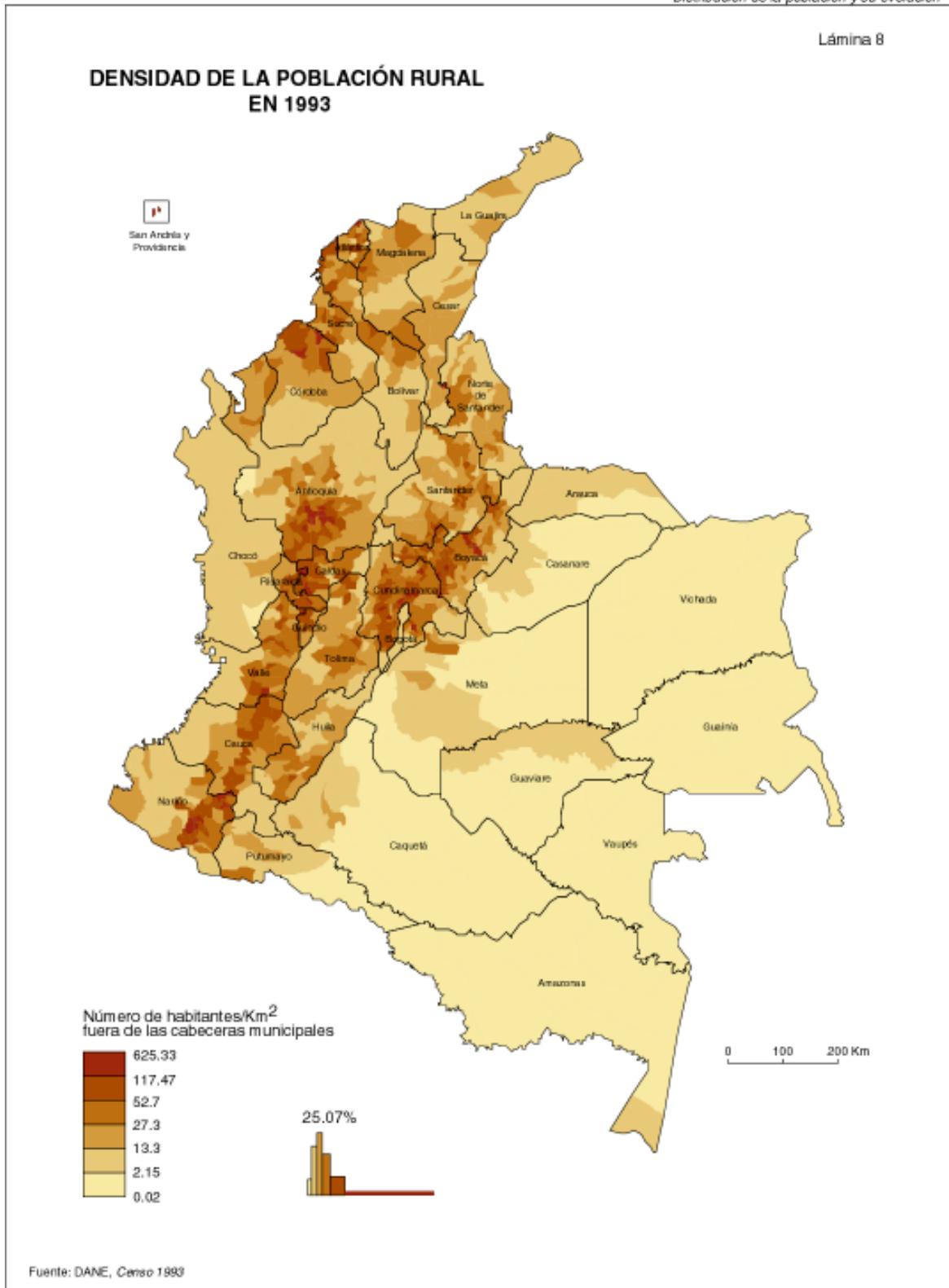
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APPENDIX 1:

REFERENCE MAPS

**Map 1: Rural population density by Department
Colombia**

Lámina 8

DENSIDAD DE LA POBLACIÓN RURAL
EN 1993

San Andrés y
Providencia

La Guajira

Magdalena

Cesar

Sucre

Córdoba

Bolívar

Norte
de
Santander

Antioquia

Santander

Arauca

Chocó

Casanare

Risaralda

Caldas

Boyacá

Vichada

Cundinamarca

Quindío

Bogotá

Valle

Tolima

Meta

Guainía

Huila

Cauca

Guaviare

Nariño

Vaupés

Putumayo

Caquetá

Amazonas

Número de habitantes/Km^2
fuera de las cabeceras municipales

625.33
117.47
52.7
27.3
13.3
2.15
0.02

25.07%

0   100   200 Km

Fuente: DANE, *Censo 1993*

CRECE, IRD, 1999

Source: CRECE et. al. (2000)

Map 2: Concentration of population in municipal urban zones

CONCENTRACIÓN DE LA POBLACIÓN
EN LAS CABECERAS MUNICIPALES EN 1993

Lámina 10

Porcentaje de la población
en la cabecera
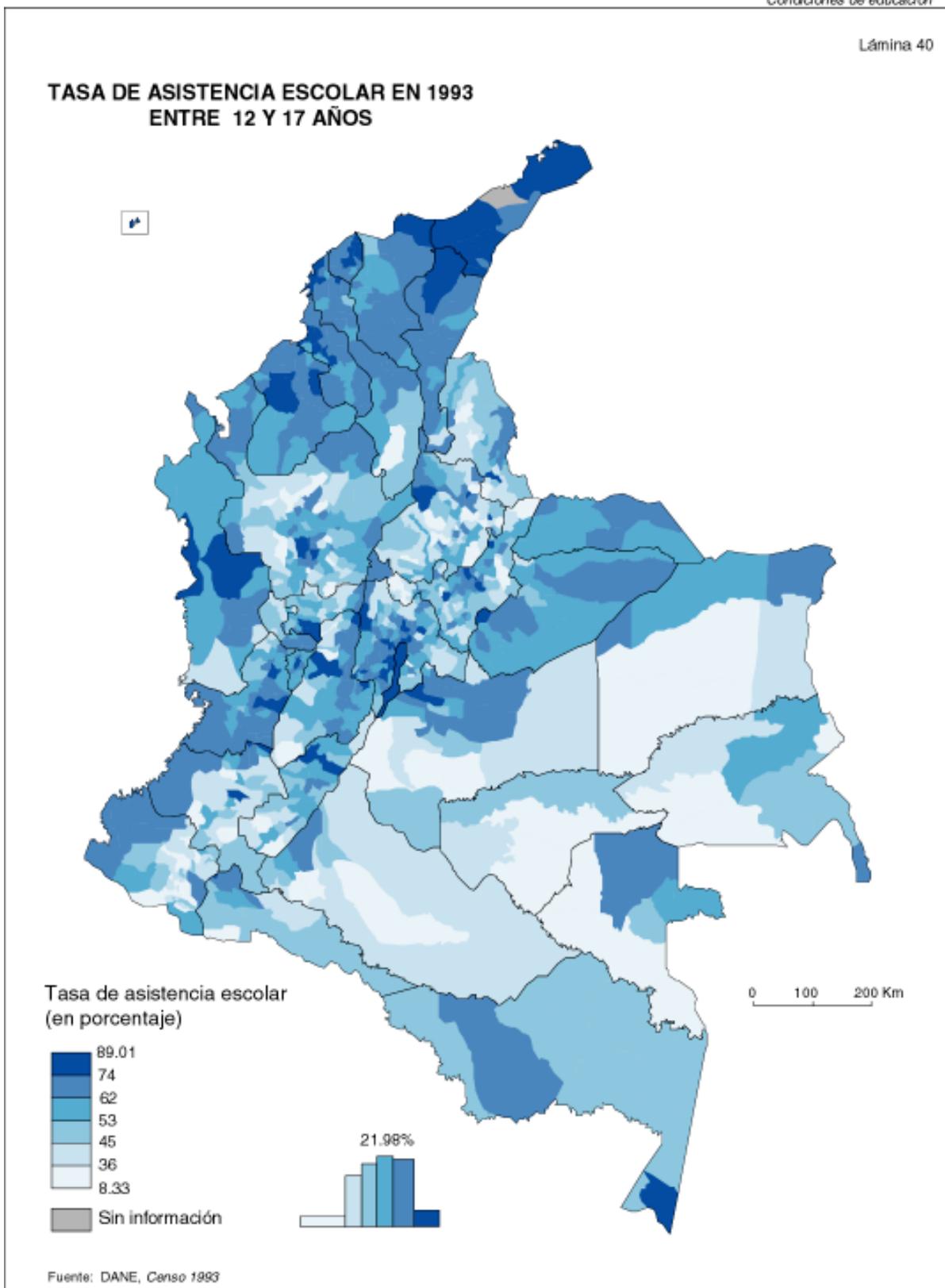
99.72
48.29
28.40
16.76
0

25.07%

0   100   200 Km
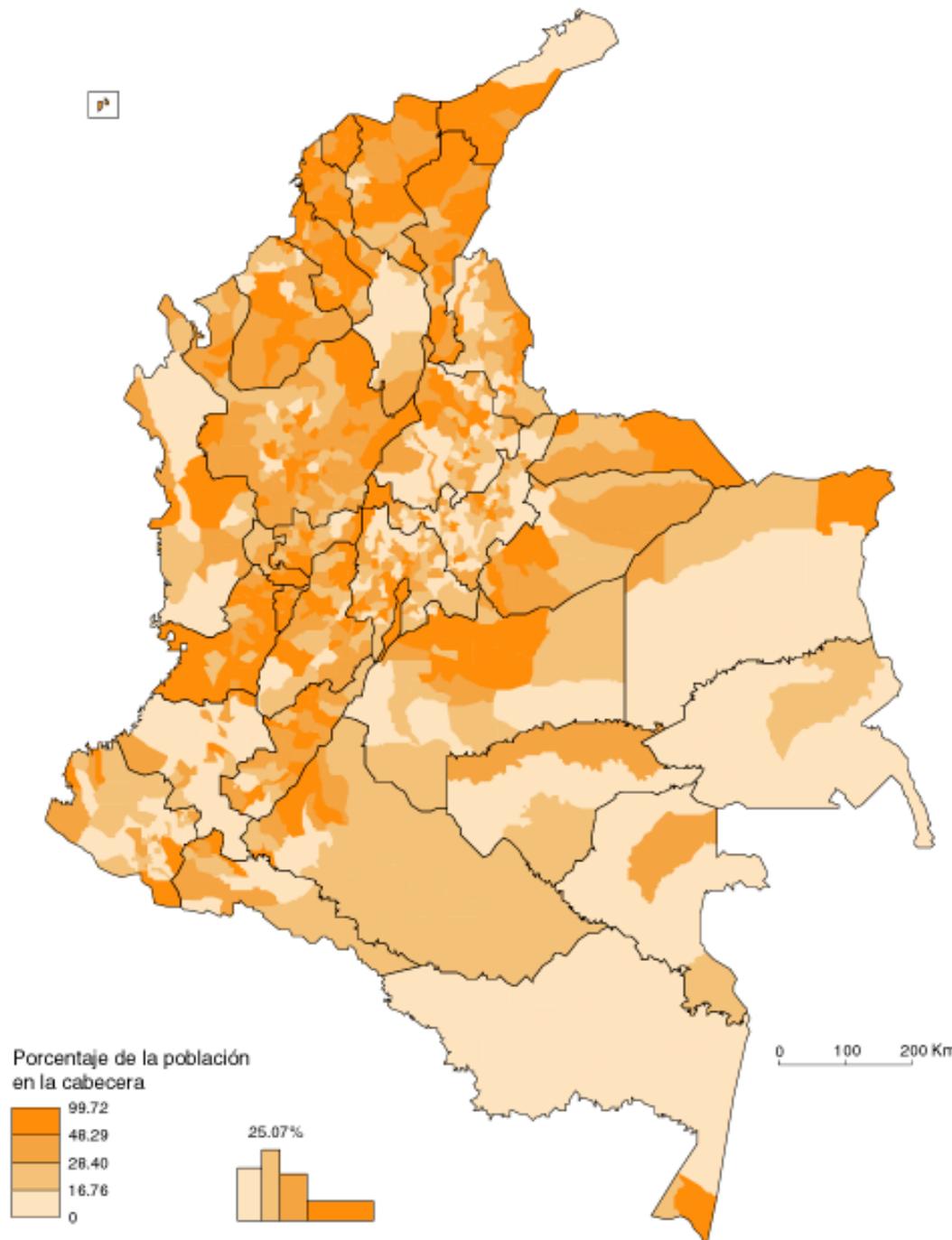
Fuente: DANE, Censo 1993

CRECE, IRD, 1999

Source: CRECE et. al. (2000)

**Map 3: Percentage of children attending school
(students between 12 and 17 years old)**

TASA DE ASISTENCIA ESCOLAR EN 1993
ENTRE 12 Y 17 AÑOS

Tasa de asistencia escolar
(en porcentaje)

- 89.01
- 74
- 62
- 53
- 45
- 36
- 8.33
- Sin información

21.98%

0   100   200 Km

Fuente: DANE, Censo 1993

CRECE, IRD, 1999

Source: CRECE et. al. (2000)

APPENDIX 2:

OBJECTIVES, CHARACTERISTICS
AND COMPONENTS OF THE MODELS

MATRIX 1: OBJECTIVES, CHARACTERISTICS AND COMPONENTS OF TLS MODEL

Context

Context:

- Low coverage in rural zones, especially at secondary level

- The educative system structure was identical for urban and rural zones. This created three problems:

- 1) curricula did not respond to rural needs

- 2) the system left rural youngsters *out of their rural context*:: i) they perceived that education was not adapted to their reality and, therefore, they had to evade this reality in order to continue at school; ii) students pursuing secondary school should migrate to urban zones because of poor access to secondary education in rural areas.

- 3) Traditional education tends to fragment topics, but rural reality demands integration of subjects and rural students are not able to follow the traditional education system

- A deeper problem of the traditional education system (that also affects urban education) is that different school levels (primary, secondary) are not articulated; and, even worse, educative levels are not adapted to the educative system problematic (interview Puerto Tejada, 2001).

- Lack of didactic material for rural students

- Rural youngsters are involved in productive activities at early ages (Villegas, 2000)

- FUNDAEC's analysis of rural education problems questions some of the conventional development approaches:

- 1) Development was conceived as modernization and industrialization, but development projects based on this concept were not contributing to rural zones progress. "In fact, the opposite occurred: development projects made rich people richer and poor people poorer and more dependent. FUNDAEC considered that "development" was being promoted by aid agencies more as a product than as a process. Inevitably, beneficiaries became even more dependent" (Richards, 1999).

- 2) "Given that formal education curricula were not appropriate for the development of rural life skills, knowledge and aptitudes and that they promoted urban values, being a peasant was perceived as an unpopular occupation. This situation led rural youngsters to migrate to cities like Cali or Bogota where they hope to get a "better life" and better employment perspectives" (Richards 1999).

- 3) "Design of development projects had been considering human beings as material or, in the best case, as social beings more than taking into account their spiritual reality. Education without values tends to create individuals that use their knowledge and skills only to improve their own situation or even to exploit less fortunate people and, therefore, they are contributing to rural poverty exacerbation" (Richards, 1999).

- The positive results of the New School Program for primary education created a demand of 300 thousand places for secondary education in rural areas—this is based on the Plan de Apertura Educativa that is part of "Pacific Revolution" Development Plan (Prodebas #1, 1995 and interview with MEN-U. Pamplona).

Previous models: No

Theoretical framework

Conceptual aspects:

⍏ TLS is conceived as pat of a general rural development strategy. The strategy's central thesis argues that development must be generated by regions, not something that can be automatically transferred to underdeveloped zones. In this context, the first requisite is that people should learn how to participate in this process.

⍏ It is worth noting that this model was originally a FUNDAEC experiment. There was not a defined model, but rather a group of ideas were creating a system (interview Pto. Tejada). "The curriculum was not based on specific contents or traditional topics in each educative level. The scheme emerged from an analysis of information, skills and concepts aimed at students and the aptitudes and capacities they should develop in order to approach the problematic of rural zones development and progress" (Torné-Correa 195). TLS is considered an innovative model because it promotes skills development concepts more than curriculum aspects (interview Pto. Tejada).

⍏ The basic concept of TLS's curriculum is community service (in contrast to individual benefit), moral values, honesty and trust (Richards, 199). And its focus on an interdisciplinary integration aimed at the solution of practical problems.

⍏ In contrast to traditional education, this model conceives theory and practice as complementary, not exclusive, elements of education. Thus, theory is not conceived as independent from practice, but as a foundational part of it that also promotes and improves better practices for the future. The model itself is an example of this approach.

⍏ The model is based on different hypothesis that consider knowledge in five steps: 1) information gathering; 2) this leads to the development of skills; 3) use and handling of concepts based on learned skills; 4) this leads to the development of capacities; and 5) finally, to the development of aptitudes. Although there is not a rigorous separation between these five steps, their distinction was very useful for methodology designing purposes. This conception was based on the principle that learning processes should contribute to the modification of practices and people's actions and also includes the idea that more than being simple words, concepts should serve a purpose (Interview Pto. Tejada).

⍏ The model seeks to develop fundamental abilities. The logic is that basic abilities of human beings are finite, though they have infinite probability of realization. These fundamental abilities are: 1) scientific; 2) mathematical; 3) communication; 4) technological; and 5) capacity of service abilities; in the SAT model this capacity of service is the basis for the development of the other four (interview Pto. Tejada)

⍏ In contrast to the traditional educative model that conceives high school education or secondary education as one phase, TLS is comprised of three articulated phases that work with specific objectives in order to provide a functional education: students have sufficient skills and abilities even if they do not complete the cycle. These three phases are:

⍏ 1) Promotion: this is a two-year long phase (completion time is flexible). "The promoter is expected to promote community actions and is able to participate in the analysis and solution of problems. The promoter obtains theoretical and practical knowledge about community service, health, environmental care, rural production and literacy activities" (Torné-Correa, 1995).

⍏ 2) Practice: this is a more work intensive phase. "In this phase students appear to be increasingly aware of their community necessities and opportunities. This self-security helps them to support and promote different health, literacy, and reforestation campaigns, among others. In other words, they work for the progress of their community. When they complete the studies, the *practitioners* are able to develop small productive projects and transformation or commercialization businesses and also to give advice in production-related technological aspects at the community level" (Torné-Correa, 1995).

⍏ 3) Graduate: "graduates' actions are more comprehensive due to their greater exposure to teaching–learning processes. They have better organizational and administrative skills than practitioners. Graduates are able to work in agricultural and farming production units; in transformation, commercial or service sectors; or they may be employed by regional governments or private sector institutions (Torné-Correa, 1995).

Objectives	

Pedagogic theories:

∀ Given the fact that TLS was an innovation among educative models in the country—and originally responded to FUNDAEC's specific interest in developing capacities of certain communities—, this model had no pedagogic references or a identified development process. In fact, TLS was implemented based on the problems the model was aimed at solving, more than using specific pedagogic theories. In the beginning, the model was based on the designing group ideas and they referred to very specific purposes of the model's first group of students. However, as the model was expanding different theoretical elements were incorporated.

∀ "In the beginning, it was clear that the model had a social objective: training people that were able to lead the changes in their communities, and it was not based on any existent educative theory. In the early 70s, behaviorism-based pedagogy was considered appropriate in Colombia. FUNDAEC rejected this approach by rejecting the implementation of rigorously structured objectives. FUNDAEC believed that students would be able to develop capacities without having a strict definition of what was expected from them. In the late 70s, but especially in the beginning of the 80s, Colombian and Latin American educators made deeper analyses about learning processes and decided to abandon behaviorism theories. Those analyses and studies were based on evolution psychology—Piaget, Bruner, among others. Based on evolution theory studies; systems theory; and models theory as well as research work on neuropsychological processes learning process understanding was improving" (Torné et al).

∀ The aim was to adapt the program to the educative necessities of the first group of students, instead of seeking the implementation of different educative theories. In this context, unplanned and circumstantial similarities between the model and pedagogic theories emerged. (Interview Pto. Tejada)

Intervention hypothesis:

∀ An educative program for rural zones managed and adapted with the participation of the targeted community is more likely to be successful than traditional systems.

∀ An educative system that includes pertinent curricula and requires active participation of the targeted community will improve its capacity to insert in the world context (this will improve the community's management capacity, unity and knowledge of the world) (interview Pto Tejada).

∀ In order to solve rural education's main problems one doesn't need a costly infrastructure like traditional one (Torné et al 1995).

∀ The traditional focus where students try to learn answers should be substituted for one that encourages them to formulate questions (especially those related to their reality). This will make students active agents of their communities' development. Also this is a better approach to investigative education (interview Pto. Tejada).

Objectives:

The original objectives of this model were:

∀ Improve participation capacity of rural communities located in North of Cauca through the improvement of their educative level

∀ Increase rural education coverage beyond basic primary level

∀ Implement an educative model aimed at developing useful skills for rural life rather than traditional contents learning (interview Pto. Tejada).

∀ Seek for the educative system articulation with reality

∀ Implementation of teaching-learning processes aimed at developing skills and solving concrete problems more than at academic goals achievement.

Organizational structure and resources

Organizational structure:

- FUNDAEC: Offers initial training and class materials. Coordinates pedagogic actions in the country's executive entities.

- PETITIONER: applies to FUNDAEC and, in the case of non-governmental organizations, promotes the agreement between governments and FUNDAEC

- TUTOR: in charge of training rural students. Usually, the tutor comes from the community where the model is implemented.

- COMMUNITY: communities are always rural zones where development problems are reflected mainly through educative deficiencies.

- COREDUCAR: brings together executive entities from TLS and represents them before national entities (public and private); applies for allocation of resources; promotes coverage expansion and model presentation.

- UNIVERSITY CENTER OF RURAL WELL-BEING: although is not one of the model's entities, this institution offers academic training for tutors pursuing a college degree and is focused in rural education issues only.

Financial resources:

According to MEN (Portfolio of Educative Offers, 2001), the total cost for the implementation of a TLS group is 12 million pesos (equivalent to USD $5,217). The following table shows the items:

Item	Value (pesos)
Human resources (monthly salary for one year)	$ 8'034,000
Training (3 annual seminars)	$ 856,800
Advisory	$ 1'000,000
Class materials (texts, laboratory, additional books)	$ 807,600
Other costs (communication, transport) and administrative expenses	$ 1'300,000
TOTAL	$12'000,000

Source: MEN (2001) $ 12'000.000

Physical resources:

No infrastructure is required, existing rural primary buildings or the community house serve to this purpose.
Laboratory (used by different groups from communities nearby)
Productive Project space (negotiated with the community)

Institutions	
Territorial: Department and Municipal governments.	
NGOs: FUNDAEC, COREDUCAR, NGOs promote the agreement between Municipalities and FUNDAEC in most of the model's expansion cases.	
Government	The Ministry of National Education has supported some of the model's expansion cases and includes it in its portfolio of educative offers. The government has already granted official recognition to the model as a rural secondary education alternative.
International	

Methodology

Strategies:

<u>Curricular:</u>

- Y Integration between content and students necessities

- Y Modules were designed to promote skills development and researchers and leaders training

<u>Community:</u>

- Y The community accepts tutors because they are from the same community

- Y Flexibility: i) according to their necessities, students are able to enroll and leave the system; ii) the program is adapted to student schedules; though basic goals are already defined within the modules (development of the corresponding capacities), both tutor and student are able to modify goals depending on the region where the model was implemented or on students' learning capacities.

- Y Promotion of cooperative work within the program

- Y The student is required to design and implement community projects

<u>Training:</u>

- Y Tutors receive training during the program

- Y The program includes seminars where they can update and strengthen their knowledge of the model's different components.

- Y The creation of the University Center allows them to improve their educative level.

MATRIX 2: OBJECTIVES, CHARACTERISTICS AND COMPONENTS OF CALDAS NEW SCHOOL POST-PRIMARY

Context	
Context: ✓ The New School primary model was adapted to the department's rural zones conditions (specifically in coffee producing areas) with positive results in Caldas rural schools (Gallego, L.H and R. Ospina, 1998; Interview CDCC, 2001) ✓ Once the "Plan de Universalización de Primaria" was implemented in rural Caldas, a "bottleneck" situation emerged: 70 percent of children completing primary school did not have access to secondary (Gallego, L.H and R. Ospina, 1998; Interview CDCC, 2001). ✓ Studies conducted by FIDUCAL (for the Caldas department) and Institute SER (national level) found: i) curricula were not considering rural conditions and necessities; ii) teachers lacked pedagogic training; iii) teaching –learning processes were repetitive and focused on memorization. These factors discouraged students and communities did not trust education or schools. Institute SER considered that this problem would not be solved hiring more teachers or building more classrooms. they proposed: "flexibility of curricular processes and promotion; ii) rural education should be continuous and adapted to rural realities" (Gallego, L.H and R. Ospina, 1998) ✓ Education was based on standardized curricular programs. The educative perspective was to provide students with basic elements of mathematics, reading, writing, context awareness creation activities and the participation in traditional cultural events. The role of teachers was monotonous; lessons were only "explained" in the classroom, homework assignments, evaluation based on rigid grades and exams (Ministry of National Education, Colombia; 1995). ✓ Innovative "pilot test" in "Colonia Escolar la Enea" school (CDCC, 2000) and two other schools (Prodebas, working papers; 1995). **Previous models:** New School (based on Escuela Unitaria) for primary (Gallego, L.H and R. Ospina, 1998).	

Theoretical framework

Conceptual aspects:

- New school Post-primary learning development methodologies falls within New School framework; expands and deepens the process stages in order to adapt them to students' educative conditions and progress (Gallego, L.H and R. Ospina, 1998; CDCC, 2000; interview CDCC, 2001);
- It has four components: curricular, administrative, community-related, and teachers' training(Colbert, V. 2000).
- These components are based on i) active learning; ii) flexible promotion mechanisms adapted to rural conditions; iii) close relationship between school and community; iv) teaching-learning process is cooperative; focused on students; promotes values and democratic practices; teachers have a different role; introduces the interactive text concept (learning guides) (Colbert, V. 2000); curricula adapted to rural life conditions (interview, CDCC, 2001)

Pedagogic theories:
Based on active school principles: learning starts as a reflexive, dynamic and active behavior; team work is free and based on children's age, interests and necessities; school activities are flexible and are supported by natural methods; teachers and administrative staff are conceived as guiders and promoters; work methodologies and curricular programs are permanently updated (Gallego, L.H and R. Ospina, 1998)

Intervention hypothesis:

- The model rejects the idea of creating "schools" for secondary. Communities had to build new infrastructure in order to have a secondary. Also, curricular contents in these schools had urban focus and teachers, and communities considered this totally inadequate for rural students. The model sought primary and secondary articulation and more efficiency in resources management (interview CDCC, 2001)
- Respect students' learning capacities and provide flexible promotion, schedules and school calendars based on students' necessities and to avoid desertion and repetition (Gallego, L.H and R. Ospina, 1998; CDCC, 2000; interview, CDCC, 2001).
- Multi-grade teachers and classrooms lead to efficiency.
- Participation is a transversal dimension that creates the conditions for democratic practices (Gallego, L.H and R. Ospina, 1998; CDCC, 2000)
- School government implementation (Gallego, L.H and R. Ospina, 1998; CDCC, 2000).

Objectives

Objectives	
Objectives:	**Goals:**
ⅴ Teachers: develop capacities of guidance, orientation, and ability building (Gallego, L.H and R. Ospina, 1998; CDCC, 2000).	ⅴ Increase rural public schools coverage (6-9th grades) in order to provide education to 16 thousand 5th grade students in rural Caldas (World Bank-PNUD, 1998; CDCC, 2000)
ⅴ Students: active learning generates reflexive and analytic attitudes, cooperation, solidarity, participation, leadership, and capacity to generate their own knowledge (Gallego, L.H and R. Ospina, 1998; CDCC, 2000). Coverage increase (6-9th grades) in rural Caldas facilitates basic education access (CDCC, 2000; interview CDCC, 2001).	ⅴ Improve education quality in rural areas (World Bank-PNUD, 1998; CDCC, 2000).
ⅴ Community: create public awareness and commitment for education (Gallego, L.H and R. Ospina, 1998; CDCC, 2000). Improve poor rural and urban schools educative quality (Colbert, V. 2000)	ⅴ Create leaders who are able to impulse technical and cultural development in school communities (World Bank-PNUD, 1998; CDCC, 2000)
ⅴ Infrastructure: school construction and improvement through CDCC direct investment (Interview CDCC; 2001)	
ⅴ Permanence and repetition: develop alternative curricular methodologies that prevent school failure (repetition, desertion, absence) in rural areas (Gallego, L.H and R. Ospina, 1998; World Bank-PNUD, 1998; CDCC, 2000; interview CDCC, 2001).	

Organizational structure and resources

Actors:

- Educative community: *Student government* is an organization of students and for students that provides them the opportunity to experience leadership and democratic participation (Gallego, L.H and R. Ospina, 1998; CDCC, 2000). The community is considered an educative space that strengthens school life and community problems exploration. It is concentrated on: specific projects, "achievements day", social integration events, workshops, informal conversations, etc. (Note: post-primary motto "school is community and community is school") (Gallego, L.H and R. Ospina, 1998). PEI (Institutional Educative Project) contains clear objectives and achievements aimed at evaluation; community appropriates it.

- *Teachers*: the *role of teachers* changes from directive and conditional to orientation, advisor and promoter of teaching-learning processes; knowledge constructor; "attracts" community level processes (Gallego, L.H and R. Ospina, 1998; interview CDCC, 2001).

Organizacional structure:

In General:

- Ministry of Education: establishes policies, designs and develops legal provisions
- Department: Implements Ministry's policies in its jurisdiction; conducts policies at the department level through the Departmental Development Plan.
- Municipality: adopt and adapts policies to municipal level and its Education Office "approves" the PEI.
- Community: present and develop the PEI
- School Directive Councils: in charge of *constructing* the PEI; it is formed by a the School Director (president), two representatives from students' parents, a teacher, a productive sector representative, a student, and an ex-student

At the Model level:

- Technical Committee: formed by Coffee Producers Committee; two officials from the Department's Education Office (training coordinator; supervisors team coordinator); Department's Education Office Director and a New School teacher. The committee's main function is to follow MEN and government's legal and technical guidelines; planning and implementation of training activities; supervise the activities of different teams.
- New School sponsor team: formed by teachers, supervisors, nucleus directors, information and farming specialists; supports the Technical Committee and designs and implements action plans.
- Training team: provided by the Alliance; works for the model at the departmental level.

At the school level:

- School government: formed by
- Directive Council: authority; manages the institution
- Academic Council: formed by teachers and the school's director; responsible for academic activities planning and supervise the school's quality standards
- Parents Association:
- Student Government:
- Personero: senior student; democratically elected; in charge of enforcing students' rights and obligations chart.

Resources:

CDCC and Ministry of National Education invest in the model's implementation and teachers training activities. Caldas and Manizales governments provide material resources. Confamiliares, a savings union, provided furniture; Unicef provides some school materials (World Bank-PNUD, 1998). Almost 59 percent of CDCC investment was for training, educative materials, and infrastructure improvement.
CDCC provided the school building for Colonia Escolar "La Enea", and municipalities, schools and communities provided land for farming projects

Institutions
Territorial:
⋎ Departmental Education Office: provides legal support; supervises program implementation and requirements complying by schools; evaluates schools performance; provides supervisors and directors to support school's orientation, advisory and co-financing activities (Prodebas; 1995. World Bank; 1998).
⋎ Municipalities: confirms that schools have sufficient staff; pay for schools improvements and participate in co-financing activities (Prodebas; 1995. World Bank; 1998).
⋎ Universities: participate in teachers advisory and training; provide interns for academic areas' strengthening (Prodebas; 1995); promote educative materials and self-learning guides production, implementation and correction (World Bank-PNUD, 1998); University of Caldas designed self-learning guides for mathematics, Spanish, natural and social sciences (interview CDCC, 2001).
NGOs:
⋎ Departmental Committee of Caldas Coffee Producers (CDCC): provided school building for Colonia Escolar "La Enea". Supports children from coffee producing zones; implements the model in other schools; participates in co-financing activities; provides resources for teachers training and administrative expenses (World Bank-PNUD, 1998).
⋎ Colonia Escolar la Enea: provides services, in charge of feedback work (Prodebas, 1995)
⋎ Family savings union "Confamiliares": provides school furniture
Government:
National: the Ministry of National Education provides training, updating and teachers education(World Bank-PNUD, 1998. Interview CDCC, 2001).
International:
International organizations like UNICEF and the World Bank have provided financial resources for specific programs or components, but they are not part of the Alliance.

Methodology

Strategies:

- Teachers training, advisory, and monitoring component: for new school methodology i) teacher to teacher through micro-centers (implemented at municipal level; teachers have a monthly meeting with the sponsoring team); ii) supported by specialists and focused on specific areas (includes internships and successful school visits).
- Curricular component based on self-learning guides: includes logic sequence of activities or phases: on-site (prior skills); scientific base (new skills); practice; new skills implementation (projects); complementary (orientation and reference)
- Systematization and control of students' achievements: use of a *progress control table* for each unit (guides or sub-topics). Students have a record of their achievements (already know the goals for each unit). Teacher supervises and validates the students' achievements.
- Learning corroboration: *projects* development for each unit or area; the projects are focused on family or community-level life quality, productivity, etc. (Gallego, L.H and R. Ospina, 1998; interview CDCC, 2001). This strategy is related to what Gomez (1993) calls NS model administrative strategy based on monitoring and supervision.
- Flexible promotion: respects the students' learning and work capacities (due to farming and home duties) (Gallego, L.H and R. Ospina, 1998). Repetition is not permitted. There are promotion options for areas or school year. Promotion means constant progress. Group differences are considered.
- Student government: students participate in the school's democratic life and in community activities. The implementation of this concept demands orientation, motivation, promotion, dissemination and "government" election activities, and control and evaluation of government's activities as well. Each classroom has its own government. This concept teaches students responsibility and autonomy values and show them their school rights and obligations; students develop oral and written skills, develop a stronger relationship with the community; they feel motivated with their achievements and develop a co-responsibility concept during learning processes.
- School government activities: weekly activities planning (Week Plan); "Students journal", school attendance self-control; "*suggestions and compromise box*", contests and rewards table, the community's notebook (the traveler), "my creations", "the classroom mail".
- Group Activities: start with the school day; directed by teachers and conducted by students (readings, contests, etc.); they include Committees formed by a directive board (president, vice president, secretary, classroom assistant and a leader. Resources and learning centers, sports and recreation, journalism, well being and environment (Gallego, L.H and R. Ospina, 1998; interview CDCC, 2001).
- Projects: the student and school governments work together with communities through projects (farming, specific areas, and government) aimed at proposing immediate or long term solutions to community problems (Gallego, L.H and R. Ospina, 1998; interview CDCC, 2001).
- Community culture rescue: included within the curriculum through the "Rincón Veredal". Hymn, community profiles, community maps (shows distances between the student's house and school), agriculture calendar (shows agriculture cycles), family profiles (in order to be acquainted with Students' family conditions); community monography (cultural identity development based on local history information); and institutional life sheet (Gallego, L.H and R. Ospina, 1998; interview CDCC, 2001).
- Infrastructure improvement for active learning: libraries, trapezoidal tables, farming, community spaces, etc (Gallego, L.H and R. Ospina, 1998; interview CDCC, 2001).
- Learning Resources Center ("Rincones"): resources needed for the guides' development are classified by topic in each classroom (interview CDCC, 2001).

Contents:

According to the 115th Act of 1994, there are nine topics: humanities, Spanish and foreign language, natural sciences, environmental education, artistic education, information technologies, ethics and human values, mathematics, religious education, social sciences, and sports and recreation. Also, there are optional topics (20 percent of each area according to necessities) and transversal pedagogic projects in different areas: disaster prevention, culture, recreation and sports, environment, democracy, sexuality education.

Tools:

Trapezoidal tables, self-learning guides, classroom libraries, learning "rincones" (places)

MATRIX 3: OBJECTIVES, CHARACTERISTICS AND COMPONENTS OF MEN NEW SCHOOL

Context

Context:

Ⅴ According to the basic diagnosis of the *Plan de Apertura Educativa* of the "Pacific Revolution" development plan (Prodebas # 1, 1995 and interview with MEN-U. of Pamplona), the positive results of the New School Program secondary school demand increased to 300 thousand places in rural areas.

Ⅴ The MEN-UNESCO research work "School desertion in basic primary education" shows the problem of primary students who were not able to continue their education beyond this level (Prodebas #10, 1995)

Ⅴ Ⅴ Definition of a new concept of basic education based on the Education for All World Meeting–Jomtien's criteria (Gelvez, 1997)

In order to meet basic education demand:

- There were not sufficient teachers and infrastructure (Ramírez and Ramón, 1998)
- Educators were not prepared to teach 6th - 9th grades rural students (Ramírez and Ramón, 1998)
- Poor links between primary and secondary education
- Insufficient coverage in rural education schools (Ramírez and Ramón, 1998)

Ⅴ Required alternatives:

- Active methodologies for rural schools implementation based on New School methodology
- New School needed to increase school grades coverage
- Offer new alternatives for secondary education
- Seek for alternatives in existing secondary schools (Prodebas #1, 1995)

Previous models:

Between 1990 and 1995, the Multinational Basic Education Project-Prodebas (OAS-MEN Agreement) supported the implementation of rural post-primary education alternatives based on active pedagogies in four municipalities: Balboa (Risaralda), Pamplonita (Norte de Santander), Supía (Caldas) and Fómeque (Cundinamarca) (Prodebas #1, 1995)

Theoretical framework

Conceptual aspects:

- Involved innovation, integral education, basic education, organization, autonomy, self-management and democracy, research, quality, educative context, evaluation and pedagogy.
- Characteristics of post-primaries developed within the Prodebas framework:
  - Works as a continuation of primary education. Uses existing infrastructure and some of its conceptual and methodological experiences.
  - School grades addition to existing schools. Flexible schedules and curricula for working students (Prodebas, 1995)

- Post-primary schools necessities:
  - Improve schedules, educative spaces and calendars
  - Pre-established subject development
  - Educative agents
  - Community participation (Podebas, 1995)

Pedagogic theories:

- Active pedagogy: centered on children's scientific and spiritual development according to social and cultural demands. Teachers are guides and play orientation roles. They work and use individualization, socialization, activity, intuition, creativity, and game principles (Gelvez, 1997)
- Use of new school principles and methodology in its curriculum designing: group work, self-evaluation and flexible promotion (Prodebas #12, 1995)
- New School principle: co-education, self-government, education in rural areas, relationship with communities, development learning. Teachers orientate learning. Permanent evaluation (Gelvez, 1997).
- Methodology: active, personalized, analysis exercises, group or individual work. Materials prepared by specialists (interview: MEN's rural school)

Intervention hypothesis:

- Post-primary as an educative innovation: alternative for rural basic education offer aimed at students who are not able to continue their education beyond 5ᵗʰ grade; post-primary school development aimed at improving rural youngsters' processes, centered on their learning necessities; it makes rural education projects feasible. (Interview: H. Gelvez)
- Centered on school-age students: 12-17 years old.
- Rural post-primaries' offer must respond to rural life necessities, expectations, and possibilities; it should be able to train better rural human capital (Gelvez, 1997). In order to achieve these goals post-primaries need to:
  - Represent a basic education alternative for rural areas based on innovative curricular strategies that make students *value their rural context.*
  - Rural post-primary school that pursues the implementation of a basic education proposal that *increases school coverage and enhances teaching quality*
  - Educative offers based on strategies that generates time and space flexibility *providing opportunities to people who left school because of financial and time reasons associated to traditional education demands*
  - Coordination between programs, sectors and institutions to provide *educative possibilities with an impact on social and regional development*
  - Coordination between formal and non-formal education
  - Curricular alternatives development in order to face *desertion, absence and repetition* problems (interview H. Gelvez; Prodebas #11, 1995).

Objectives

Objectives:

The objective of innovations undertaken by Prodebas was to develop international experiences. (Prodebas, 1995)

MEN Rural Post-primary objectives:

- Provide alternatives that offer formal and non-formal and education after primary levels (Parra, 1999).
- Implement a flexible and diverse curriculum adapted to different socio-economic contexts of rural areas.
- Respect rural areas educative diversity and learning mechanisms (Gelvez, 1997; Ramirez and Ramon, 1998; Parra, 1999).
- Contents and activities can be adapted to cultural and productive conditions based on natural and socio-cultural advantages (Gelvez, 1997; Ramirez and Ramon, 1998; Parra, 1999).
- Contents and activities should be based on social productive work (Gelvez, 1997; Ramirez and Ramon, 1998; Parra, 1999) aimed at solving practical, theoretical, ethical and moral problems that contribute to the students' integral education. Promote quality education principles that maximize Human Sustainable Development (Parra, 1999)
- Pertinent curriculum development according to basic education's obligatory subjects and productive pedagogic projects (U. of Pamplona, 2000).
- Teachers and directive staff training aimed at the administrative, pedagogic, community and productive project components (Gelvez, 1997).

Goals
Post-primary:

- Open one nine-grades school for every five five-grades schools (Gelvez, 1997)
- Provide libraries, laboratories and didactic materials to basic education centers (Gelvez, 1997)
- Provide self-learning material for mandatory and basic subjects as well as pedagogic and productive projects ordered by the Education General Act (Gelvez, 1997).
- Cover 1,000 basic education schools with 100 thousand post-primary students in 2002 (Interview H. Gelvez)
- Rural Education goals are based on Basic Education (not only on post-primaries); one of the goals is to provide 75% post-primary coverage in 2003 (Interview at a MEN school)

Organizational structure and resources

Actors:
Rural post-primaries operation does not have a specific administrative structure; they depend on PIER's guidelines (Interview MEN-U. of Pamplona).

Organizational structure:

General:
In order to be considered as an alternative for rural education expansion, municipal education councils, educative meetings and Municipal Educative Plans (PEM) should include post-primaries in their operations (Gelvez, 1997). There is a coordinated work between primary schools that host post-primaries and PIER-related schools.

At the model level:

National: formulates policy guidelines and programs through MEN (materials and model development).

Departments and Municipalities: coordinate their work with MEN and U. of Pamplona for model implementation purposes.

Administrative: coordinates educative agents activities; one "basic school" (nine grades) and five "regular" schools (Ramirez and Ramon; 1998). Facilitates coordination and continuity of educative service among different schools (Interview H. Gelvez)

Community: educative community participates by itself or through School Government representatives (Act 115th of 1993)

Teachers: school teachers are sent to different schools depending on the municipalities or communities' specific conditions (Interview H. Gelvez). Rural post-primary teachers are able to work in urban secondary schools. Coordinated work (between nearby schools) maximizes the *teacher resource*.

At the school level:

The model's administrative management is based on public schools provisions: a directive office is registered in the Ministry of Education, teachers are designated according to the director's advice and inspection (Prodebas # 12, 1995).
Community participates in pedagogic and productive projects, and in school government implementation (Gelvez; 1997).

Financial resources:

The implementation cost of one post-primary center is $15 million pesos (teachers costs not included)

Item	Value (pesos)
Training (5 teachers per school)	$ 2'500.000
Guide texts (420 texts)	$ 3'000.000
Library	$ 4'500.000
Laboratory	$ 3'000.000
Work tools	$ 2'000.000
TOTAL	**$ 15'000.000**

(MEN, 2001)

	Institutions
Physical resources: Rural school classrooms for 4 secondary education grades (Coffee Producers Committee; 2000) Basic library Laboratory Space to develop Productive Pedagogic Projects	**Territorial:** Official authorization from the Municipal Education Office and a project describing national, regional or local funding mechanisms is required (Coffee Growers Comm. 2000). **NGOs:** Local and regional organizations such as peasant organizations, community action councils, municipal governments and others are involved in the educative process through technical assistance for pedagogic productive projects (Ramírez and Ramón, 1998; Interview H. Gelvez). **Government:** MEN and U. of Pamplona provide advisory (Interview H. Gelvez). Municipalities or schools develop the project based on agreements with other institutions—e.g. U. of Pamplona (Interview MEN-U. Pamplona; Interview H. Gelvez). **International:**

Methodology

Strategies:

Y Pedagogic: security, autonomy and openness (Gelvez, 1997). Research projects, pedagogic and productive projects. Cooperative learning and productive pedagogic projects development (interview Gelvez, 1997). Creative dialogue among scholars, professors, texts, educative context and other pedagogic tools. Formal and non-formal education integration (Gelvez, 1997; Ramirez and Ramon, 1998).

Y **Institutional Project of Rural Education:** schools that adopted a rural post-primary system need to develop an Institutional Project of Rural Education PIER, which has five basic components:

1. Conceptual: institutions are asked to propose and develop concepts like quality, education, and student and to define the schools' mission and goals.
2. Organization, management and administration: context diagnosis; primary schools connected work; project management principles in municipalities (UMATAS), Coffee Producers Committees, universities, ITA's; school government, inter-institutional agreements, resource management and evaluation and coordination with the Municipal Educative Project.
3. Pedagogic: strategies and achievements integration. New School Methodology continuation. Active pedagogy.
4. Community's participation and interaction: educative community formation, community organizations and school articulation, media, and formal and non-formal education programs proposals.
5. Productive pedagogic projects: considered as educative community activities for goods and services production aimed at their social, economic and cultural benefit (Gelvez, 1997; Parra, 1999) The goal is to establish continuity and pertinence between fundamental subjects and practice (Parra, 1999)

Y Curricular sections of the studies' plan:
Y Basic and mandatory subjects
Y Support to pedagogic projects: environmental education, sexuality education, and education for democracy
Y Productive pedagogic projects

Teachers training: semi-distance education model (5 meetings in ten months) PIER development (8 modules: one for each PIER component and 3 related to productive pedagogic projects) or on-site education model: 3 five-day long teachers workshops on PIER components (Interview MEN-U. of Pamplona).

Contents:

Rural post-primary guarantees the development of basic education fundamental and mandatory subjects defined by the General Education Act (Act 115th of 1994): natural sciences and environmental education, social sciences, history, geography, Constitution and democracy, artistic education, ethics and human values education, sports and recreation, religion, humanities, Spanish and foreign languages, mathematics, information technology (U. of Pamplona, 2000). These subjects are complemented with pedagogic projects: environmental education, sexuality education and education for democracy and productive pedagogic projects (interview H. Gelvez).

Tools:

Guide texts (modules):
6th grade: mathematics, language, natural sciences, social sciences, sports and recreation
7th grade: mathematics, language (first and second part), natural sciences, social sciences, sports and recreation.
8th grade: mathematics, language, natural sciences, social sciences, sports and recreation.
9th grade: mathematics, language, natural sciences, and social sciences..
Transversal: English, music, art, creativity, food, environmental education, ethics and human values, health, sexuality education, education for democracy, school farm, and information technology (Coffee growers, 2000)

Basic library: 300 books to complement guide texts. Basic and mandatory subjects books and documents, children and teenagers books, books for productive projects (Coffee Producers committee; 2000. Interview H. Gelvez)

Didactic materials (Gelvez, 1997)

Biology and science laboratory: (Interview MEN-U. of Pamplona)

Post-primary regulating books:
- Minute books
- Inter-institutional agreements formats
- School evaluation registry
- Self-evaluation indicators (Gelvez, 1997)