



## THE EDUCATION REVOLUTION

The education revolution is the policy that the current government has designed and implemented in education matters, with the purpose of accelerating and strengthening the process of social and economical development in our country. The national government has started a series of strategies in order to expand coverage, improve quality, pertinence and efficiency in the rendering of the education service to all Colombians.

The most important achievements of this higher education policy, which are framed within the five actions that are transforming education in Colombia, during the last eight years have been:

### 1. INCLUSIVE EDUCATION ALONG ENTIRE LIFETIME

To offer all Colombians and especially most vulnerable ones, the possibility of gaining access to greater education opportunities all through their lives, starting from the integration of all educational levels, including efforts from the early childhood, to the articulation of the education for work and the human development to the formal education is the challenge with children, young people and adults of the country.

#### 1.1 Extension of higher education coverage (17 to 21 years)

The gross registration rate in higher education has grown substantially, going from 24.4% (1.000.148 students) in 2002 to 35.5% in 2009 (1.570.447 students). This coverage increase in the education has allowed consolidating a higher education focused in the student, with a diversified educational offer that responds to regional diversity and that allows overcoming economical barriers for its access.

#### *Strategies*

##### 1.1.1 Financing of the demand and improvement of the equity

- **Registration and Maintenance Subsidies:** the National Government through ICETEX recognizes a subsidy of 25% of the value of the registration (or 1,15 current monthly minimum legal wages for maintenance), to students of low economical resources. Between 2002 – 2009 there have been 56.325 subsidies given and 101.879 subsidies were renewed from previous validities.
- **Credits:** through the ICETEX credit, 18.4% of higher education students are financed, having low economical resources students the priority.
- **Strategic Alliances with Territorial entities:** With the aim of extending the capacity of attention to the demand of the poorest people for their access to higher education, ICETEX promotes and maintains strategic alliances with higher education institutions and public and private entities so that they contribute resources to co-finance education credits.
- **Scholarships**

##### 1.1.2 Promotion of student stay in higher education

Statistics show a decrease in student dropout rates in a university level measured by cohorts, by going from 46.4% in 2007 to 44.9% in 2008. However, the annual dropout rate for 2008 showed an increase by going from 10.7% in the year 2007 to 12.1%. This increase is due to the effect of extending coverage which has allowed access to higher education to the poorest students who have more dropouts because of their socioeconomic and academic conditions: while in 2002 32% of the population which entered into the system came from families with an income lower than two minimum wages, in 2008 said proportion was close to 50%.

This follow-up of the character of the population that registers for a higher education level and of the student dropout is updated each period through the System of Prevention and Analysis of Dropout rate in Higher Education Institutions (SPADIES), which allows doing a follow-up of the determining factors for dropout, the estimate of dropout risk for each student and the evaluation of the results of the promotion strategies to stay carried out by the higher education institutions. As of November of 2009, the



SPADIES has done a follow-up of the socioeconomic and academic conditions of 2'489.402 students registered in higher education programs between 1998 and 2009, of which 634.974 students entered the system in the last year.

### 1.1.3 To adapt and make the offer for higher education flexible

- **Regional Centers of Higher Education, CERES:** they are alliances among education institutions, territorial entities and the productive sector, to generate a new offer of higher education relevant to the community and appropriate to the productive vocation of the area. Up to 2009 there are 139 CERES in operation with a total of 162 created. Currently, this program has coverage of 31 departments with an influence area of 535 municipalities, benefiting thus 28.165 students through the offer of 748 academic programs, of which 85 are Technical, 291 Technological, 358 professional and 14 postgraduate programs.
- **Demand mobilization:** to mobilize demand, the student meetings ¿Buscando Carrera? are being held, a strategy to provide trustworthy and timely information to young people that are next to ending their high school studies and wish to continue their formation in higher education.

### 1.1.4 Education for work and human development (14 years and more)

- **Articulation of high school studies with higher education:** In the development of specific labor competitions the strategy of articulating middle education with the National Learning Service – SENA, higher education and work formation and human development is being promoted. To guarantee the stay of high school students in the system with relevant academic offers to the development of the regions, articulation of tenth and eleventh grade students with professional technical programs offered by SENA and by higher education institutions through the promotion fund for high school education are being promoted. Through this fund, in 2008 the registration of 2.329 students of high school of 73 institutions located in 32 education secretariats were financed; in 2009 there have been given 6.509 subsidies to new students to start their higher education in professional technical programs that, with quality and appropriateness, respond to the innovation and competitiveness bets of the country; through SENA in 2008 coverage of 263.127 students was achieved and 9.529 students through higher education institutions.

## 2. QUALITY EDUCATION TO COMPETE AND INNOVATE

The Education Revolution has located education as a fundamental tool for Colombia to innovate and compete. Through the implementation of quality strengthening policies and education appropriateness the aim is to consolidate a system based in a common competence approach that, starting from initial education to higher education, makes up the human resource required to increase the country's productivity and make it competitive in a global environment.

### 2.1 Consolidation of a quality assurance system starting from the development of competences

The development of competences is one of the policy purposes to guarantee the formation of the 21st century citizen. The different theoretical visions coincide in the importance of developing in students competences that would allow them to communicate effectively, to have scientific spirit, to resolve problems, to use information, to be critical and to learn how to coexist with others in a peaceful and tolerant way.

#### *Strategy*

#### 2.1.1 Strengthening of the national evaluation system and using its results

- **Competences evaluation in Higher Education:** Students are evaluated prior to their entrance into higher education and their graduation from undergraduate studies, through an evaluation plan of accumulated competences. In the last semesters of undergraduate formation, students take the Higher Education Quality Tests. Through these tests, the National Ministry of Education seeks to prove the grade of development of the competences of the students that are in the last year of undergraduate academic programs of higher education institutions. Through the tests, information on the current status of the formation in the different areas is obtained, which gives a global vision on the students, the programs and the institutions.

## 2.2 Programs for the promotion of competitiveness

### 2.2.1 Use and appropriation of media and new technology:

The relevance of the TIC was manifested in the bet for a national policy that considers its incorporation in the Colombian education, emphasized in each one of the topics discussed in the Ten Year Education Plan 2006-2016. This ratifies that one of the challenges of the country in the next years is to guarantee the access of all population to the TIC and to generate capacity so that people can benefit from the opportunities they offer.

To reach this goal the following work topics have been proposed: a) construction of quality infrastructure and development of contents, b) standards definition and formation of students and teachers for adequate use and appropriation of new education technologies and, c) consolidation of communities and virtual education networks that make the most of the advantages that the TIC offer and generate new knowledge from their exploitation.

In this sense, the Learning Object strategy of the Ministry of National Education has been strengthened, with 3.503 learning objects published and of free access for all the educative community. Additionally, with the purpose of strengthening the quality of the programs offered by the CERES and the Institutions of Higher Education of Technical and Technological levels, the Ministry has acquired collections of digital contents and their respective use licenses and regional workshops were carried out in order to promote the use of digital contents training 375 teachers. On the other hand, the pilot of the strategy for accompanying the formulation of the strategic plan of incorporating TIC in 30 Higher Education Institutions was carried out. Strengthening of the use capacity and TIC appropriation will allow that 35% of the IES will be implementing plans of use of media and information and communication technology by the end of the four year period.

The Education Portal Colombia Aprende continues to consolidate itself as the main meeting scenario for the education community. In the last year it reached an average of 1.000.000 monthly visits and it already has more than 20.000 educative contents of free access and that comply with international standards. The portal has 35 thematic sites where pedagogical proposals are developed, learning processes are explored and the development of competitions is promoted, which have allowed boosting initiatives such as the National story contest, the Bicentenary of the Independence, the Botanical Expeditions 21<sup>st</sup> century Buscando Carrera, English for all, among others. On the other hand, starting from August 2007 and up to August 2010 Colombia assumed the presidency of the Latin American Network of Educational Portals RELPE which currently counts with the participation of 22 portals in Latin America and the Caribbean and it developing incorporation projects of the TIC in school systems of the member countries.

Additionally, the development of the activities of the Virtual Network of Tutors and of the RENATA network (National Academic Network of Advanced Technology), [www.renata.edu.co](http://www.renata.edu.co) has been supported. The latter interconnects in turn regional networks comprised by more than 91 institutions of higher education. Through these networks and virtual communities, the higher education institutions have access to academic contents and of high quality investigation, at the same time they can exchange information and knowledge with others, with the purpose of bringing forward education, investigation and development projects which contribute to the competitiveness and the progress of the country.

Finally, the Ministry is working on the cooperation project with the government of South Korea. Its objective is to develop the capacity of production, circulation and use of the digital standardized educational contents to strengthen the use and appropriation of the TIC, through which the Nation would negotiate a loan with the Korean Government, through Korea Eximbank for an amount of 30 million dollars.

### 2.2.2 Bilingualism

The Ministry of Education is set out to create the conditions to develop communicative competences in English in Colombian people. For such effect the National Bilingualism Program was formulated, which seeks increasing the standards of teaching English in all the educational system, and has as challenge that the students develop competences in this language, establishing international standards for each one of its levels.

To make sure that the students in the country obtain basic knowledge of English as a second language, this Program has established three strategic lines of action: a) diffusion and application of the basic standards of English competences for basic



education and high school, b) definition of an solid and consistent evaluation system which takes into account the English level of both the students and language teachers, and c) development of training plans to improve teachers formation, and quality assurance of the programs and institutions that offer language courses. The goals in this sense are that starting from 2010 100% of the university students of last year reach as minimum B1 level (intermediate) in the English test of the State examination and of the ECAES, respectively. With respect to future professionals it is expected that 40% reaches as minimum B2 level (intermediate high).

### 2.2.3 Strengthening of the Technical and Technological Formation

It is clear that Colombia has necessity of having a greater number of professional technicians and technologists that can occupy positions of technicians of middle management, specialized technicians and qualified workers of the occupational pyramid that today are vacant or occupied by under qualified people or overqualified professionals, in such a way that impulse is given to the competitiveness policy and to the strategies to boost inversion and development. With this purpose the project of Strengthening of Technical and Technological Education was formulated, and its goal is that close to 200.000 admissions, of the 320.000 that are expected to be created for higher education during the four year period correspond to technical and technological formation, and that this allows that the participation of the technical and technological education in the total of the higher education registration goes from 25,7% in 2006 to 34% in 2010.

The project is based in the formation of local alliances among the education sector, the productive sector and local authorities, among other actors. These alliances define the necessities of technical and technological formation and design programs to respond to this necessity. Up to this date 38 alliances established for the strengthening of the technical and technological education offer have been supported, which benefit 26 departments, in productive sectors such as: Agro industrial (food, bio-fuels, sugar cane, agro-fishing and aquaculture, rubber and cacao, oil palm, blackberry, Quito orange and plantain); Industry and manufacture (ceramics, construction, electronics, mechanics, production and environmental management, mining, steel and gold, logistics and ports, manufacture, mining energetic, petrochemical and plastic, pulp, paper and graphic industry, craftwork); Services (software, tele-informatics, telecommunications, TIC, ecotourism and ethno-tourism, tourism in general, exportable health services, BPO&O, Biotechnology and Environment; farming (brown sugarcane, livestock, coffee, rice, cotton, guadua, fruit trees, poultry and porcine products); Agroforestry (forest and flower-growing).

### 2.2.4 Strengthening the innovation and investigation

In order to strengthen the national system of science and technology and to manage a productive model sustained in science, technology and innovation, Law 1286 of 2009 and the document of the National Council for Economic and Social Policy – Conpes No. 3582 were approved. In the development of such documents, there have been actions oriented towards the formation of human resources, specially masters, doctorates and international cooperation activities that allow mobility, exchange and formation of teachers and investigators. The registration for masters and doctorates has shown an increase between the years 2007 and 2009, by going from 14.369 students in 2007 to 18.260 students in the time elapsed for the year 2009, which represents an increase of 27,1% in the registration of programs of such levels of formation during the mentioned period.

The support to the transformation of programs has been an emblem for the Vice-ministry of Higher Education; in the year 2008, a grant fund was constituted to support the organization and the initiation of new masters projects starting from specialization programs, the projects presented were submitted for evaluation of academic pairs and 13 specializations that covered the following areas were selected: Human and social sciences, engineering, architecture, town planning and related areas and veterinary agronomy and related areas.

The success of the program is reflected in a new open announcement in 2009, of which panorama turned out to be more ambitious because it even contemplates transformation of master programs to doctorate programs; the balance that the announcement shows is of 44 specialization programs and 13 registered masters, of which a total of 13 specializations and 5 masters were benefited to be transformed.

Through the subscribed agreement with the governments of Germany, United States and France, operated through the Fulbright Commission, the DAAD and Ecos Nord respectively, which seek promoting advanced formation of the human resources in levels of master and doctorate, as well as joint investigation works among nations, it can be highlighted that within the period comprised between 2006 and 2009 there were a total of 131 beneficiaries.



Additionally, during the validity of 2008 the MEN with the support of Colciencias strengthened the investigation labor of 399 investigation groups consolidated in the Colombian IES.

## 2.2.5 Internationalization of higher education

In relation to the internationalization of the education two great actions are being brought forward: i) International positioning and acknowledgment of the Colombian system of quality assurance for higher education. There has been work done in the subscription of bilateral agreements of mutual acknowledgement of the systems of quality assurance of higher education, which imply acknowledgement of the Colombian degrees in the countries with which these agreements take place and vice versa. Up to this date we have agreements taking place with Argentina and Mexico (subscribed in 2008); and in 2009 the Ministry has gained contacts to subscribe similar agreements with Chile, Spain, Costa Rica and Ecuador. These countries have been selected, in agreement with the internationalization strategy of the CNA -National Council for Accreditation-, due to their advances in matters of quality assurance in higher education and high academic and professional mobility of Colombian population to those countries.

## 2.2.6 Promotion and follow-up of the appropriateness in higher education

### 2.2.6.1 Consolidation of the Labor Observatory for the Education

As a strategy to articulate the academy with the necessities of the productive sector, the information system of the Observatory has two fundamental components: work offer and demand of graduates. With respect to the offer component, the Observatory does a follow up of the work insertion of the higher education graduates through the integration of the information reported by the Higher Education Institutions with the data base of social security of the Ministries of Social Protection and Treasury. Up to this date there have been presented to the country the results of four integration processes carried out in 2005, 2007, 2008 and 2009. This last year the Observatory did a follow up on 1.174.297 graduates of higher education between the years 2001 and 2008.

Currently, an inter ministerial agreement is being prepared with the National Registry of Civil Status that will allow standardization between identity cards and citizen IDs of the high school graduates. This process will allow including for the first time doing a follow up on the labor liaison of the graduates of high school that pass directly to being part of the work market without going through higher education.

As far as income, measured by the average wage (Income Based Price) of the dependent workers, the data of the Observatory indicates that there is a direct relation between the remuneration and the formation level. For example, in average a specialization graduate received a salary 74,8% higher than the one of a university graduate.

On the other hand, data shows that there was, in general, an increase of the wages between 2007 and 2008 of a 0,9%, however this positive result was not observed for all formation levels. This is why, despite there being a real increase in work income of graduates of university formation and specialization from 0,5% and 1,6% respectively, the graduates of other formation levels presented a decrease in the average wage, due to the economical situation of the country.

### 2.2.6.2 Strengthening of the Bond University Company

To strengthen the bond between the higher education institutions and the production sector the Ministry has permanently supported the University Company State Committees in Antioquia, Bogota, Santander, Valle, Eje Cafetero, Tolima-Huila, Cauca-Nariño and Caribbean Coast, fulfilling thus the goal of consolidating 8 Committees. The activities carried out by the committees were directed towards elaborating service portfolios and inventories of capacities of the universities and the productive sector; formation in human resources in subjects related to negotiation, intellectual property, making and managing collaboration projects; generating diffusion strategies and communicating with the actors and productive sectors; organization and creation of capacities of the committees for their sustainability.



### 3. STRENGTHENING OF THE EDUCATIONAL INSTITUTION

The Educational Development Plan 2006 – 2010 has promoted a quality management system focused on the strengthening of the educational institution, its autonomy, its directives, its teachers, and its school government, with the participation of the entire educational community.

#### 3.1 Quality Assurance of Higher Education

The increase of the offer in higher education requires the development of strategies directed to guarantee the quality of offered programs. For such reason, the Quality Assurance System for Higher Education has been implemented, in which assurance is understood as a group of actions oriented towards promoting, managing and constantly improving the quality of institutions and programs of higher education, and their impact on the formation of students.

- **Qualified registry of programs:** During 2009, 2,489 programs of higher education were evaluated, with which students, parents and society in general have a basic public quality guarantee of 99% of the offer of undergraduate programs and 98% of postgraduate programs.
- **Accreditation of programs and institutions:** As far as high quality voluntary accreditation, it has become a self-evaluation, self-regulation and continuous improvement tool for programs and institutions. 16 institutions are accredited and 672 programs have been accredited and 199 programs were renewed. At the end of the four year period, the goal is to increase the number of institutions to 20 and that 440 additional programs have this recognition for their excellence, to achieve a total of 900.

### 4. MODERNIZATION OF THE SECTOR

In the framework of the 5 actions that have transformed education in Colombia, permanent modernization of the sector has been fundamental: “An education that incorporates better management practices in all levels of the educational system with adequate and innovating tools, capable of responding to the expectations of the country”. This is how the MEN continues to implement actions to strengthen their management, the management of the appointed and associated entities, the education secretariats and the institutions of higher education, in order to rationalize and improve efficiency of the processes, to modernize technological and communications infrastructure and to improve quality and opportunity of the sectorial information.

#### 4.1 Modernization of the Higher Education Institution

With respect to the modernization of the sector of higher education, it is fundamental to emphasize the importance of quality and opportunity of the information to support decision taking. In this sense, it is necessary that the higher education institutions have information systems that allow them to support their missionary, human resources and financial processes and in this way to strengthen the management of the institutions.

- **Support to public IES for quality certification:** Through training, consultancy and certification audits of the Quality Management System based in the Quality Technical Standard - NTCGP1000 as of law 872 of 2003 and decrees 4110 of 2004 and integrated with the Standard Model of Internal Control - MECI1000, Institutions of Higher Education are being supported, achieving that 16% of IES are certified in the standard.
- **Follow up and monitoring of the higher education sector:** Through the implementation of the SNIES in 2007, citizens can get to know the offer of institutions and programs approved by the Ministry of National Education, as well as the statistics consolidated since the year 2000, through the webpage [www.mineduccion.gov.co/snies](http://www.mineduccion.gov.co/snies). Currently 73% of the total number of IES perform the report of their information in an automated way. This advance in the modernization of the information systems of the sector allows that 85% of the registration to be reported by the IES in an automated way. As part of the SNIES, during 2009 the Ministry of Education, with the collaboration of Colciencias and the Observatory of Science and Technology, is being developing the subsystem of Science, Technology and Innovation which will allow consolidating a unique source of related information on the scientific production being developed in the country, as well as formation for highly qualified human resources, financing sources and investment underway on this matter on behalf of the higher education sector. There were also included in the SNIES the formats to start consolidating the information on the processes and the impact of the internationalization of the higher education.



- **Incentives to public universities to increase their management levels:** As an adjustment mechanism to the historical criteria of the Nation's transferences to the public universities and in compliance with the provided by article 87 of Law 30 of 1992 (Resolution 9230 of 2008), the Ministry of Education, with prior approval of the CESU, distributes resources to public universities in accordance to the efficiency results obtained by the Management Indicators Model. This methodology used since 2004 allows knowing the performance of the universities through time through 35 indicators related to formation results, academic production, science technology and innovation, extension and university welfare. Additionally, to explore new financing sources for higher education institutions to contribute to the promotion of greater investment levels, with the collaboration of the Financial Entity for Territorial Development – FINDETER S.A. was constituted a Credit Line with rediscount rates compensated by resources of the Nation, so that higher education institutions can make investments in physical and technological infrastructure, resources and equipment, that have an impact on improvement of coverage and quality. In October of 2008 the first announcement was made and the third was closed on October of 2009, up to this date there have been approved 30 projects of which 13 are from official universities and 17 are from private universities.

## 5. PARTICIPATIVE MANAGEMENT

An education which includes all voices, with common reference points and an operational model for social participation in the construction of a sectorial agenda. In the framework of this action there have been promoted scenarios of discussion, debate and negotiation on topics of the public education agenda. In this sense, the Ministry has developed mobilization workshops, regional and national forums.