

# **Brazil's National Award for Innovation in Education Management: An Incentive for Local Education Authorities to Improve Municipal Education Systems toward the Goals of the National Education Plan**

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### **Abstract**

The Ministry of Education and its Anísio Teixeira National Institute for Research and Educational Studies (INEP) in Brazil have launched the National Award for Innovation in Education Management focused on local education authorities and how they are developing innovative education policies to promote the main objectives of the National Education Plan. This initiative has been developed as part of PRADIME (Programa de Apoio aos Dirigentes Municipais de Educação) a support program created to offer professional development, exchange of experiences and managerial tools to assist education municipal leaders in improving quality in basic education systems. This paper will describe the design of this new effort and its implementation in Brazil as part of a national strategy to advance the promotion of National Education Goals, as well as the main basic concepts and frameworks in the innovation arena, which have shaped the basis for this new initiative. Particularly relevant is the Laboratory for Innovative Experiences in Education Management, a systematic and analytical framework to identify, register, assess and follow up municipal experiences in education management in order to reward and disseminate promising experiences based on their tangible results and potential for creating new knowledge in education management. Therefore, the Ministry of Education has created an apprenticeship network and has started paving the way for a knowledge management system in education management.

**Key Words:** innovation award, education management, local education systems, knowledge management, learning network.

### **Introduction**

The education system in Brazil is highly decentralized, with municipalities providing the bulk of it. The 5562 municipalities hold a significant share of basic education enrolments, mainly by offering places in childhood education (0-6) and primary and low secondary education (7-14), although some 500 still offer upper secondary education (15-17). According to the Anísio Teixeira National Institute for Research and Educational Studies (INEP), in 2005 53% of students attending primary and low secondary education and 68% of children attending early childhood education were enrolled in municipal schools. As a whole, Municipalities offer 25.3 million enrolments in basic education (45%), states 23.6 million (42%) and private schools are responsible for 7.4 (13%). Since the 1988 Federal Constitution, municipalities have assumed increasing degrees of financial, administrative and normative responsibilities and were given legal autonomy to organize local education systems.

Municipal education leaders are in charge of education policies and education systems management under a new framework of responsibilities, and are continually challenged to make progresses towards the Goals of the National Education Plan. The National Education Plan was approved by a National Law in 2001 and aims to solve the main problems faced by the country in terms of increasing population schooling levels, improving quality in all levels of education, overcoming social and regional inequalities related to access, permanence and conclusion and democratizing public education management. The main priorities are to guarantee primary and low secondary education for all; to enlarge school attendance for the other levels – early childhood education, upper secondary and tertiary education; to develop information and evaluation systems for all levels of education and; continuously value, train and recognize teachers and other education professionals.

The first goal is to increase population schooling levels. According to the 2004 National Survey per Household, the average number of schooling years in Brazil is 6.8 for people over 15 years of age and this figure ranges from 5.5 (Northeast) to 7.6 (Southeast). It is far behind those presented by peer countries such as Argentina (8.8), Mexico (7.2) and Chile (7.6).

The second goal is to improve quality at all levels of education. Improving quality is the major challenge faced by local administrators in Brazil. According to the Basic Education Evaluation System of 2003 (a national sampling), 60% of 4<sup>th</sup> grade students have poor proficiency in Portuguese Language and 56% have poor performance in Mathematics. In 2005 the Ministry of Education launched a new methodology of testing students' performance which will provide all municipalities with a school level apprenticeship diagnosis in Portuguese Language and Mathematics, thereby giving administrators a feedback on a schools' effectiveness.

The third goal is to overcome social and regional inequalities related to access, permanence and success in schools. Inequalities in Brazil are strongly present in education indicators. While the net enrolment rate for childhood education (4-6) is 50% for the poorest 20%, the upper 20% holds a 78% rate. For upper secondary school (15-17), the first quintile holds 17.9% net enrolment rate while the fifth quintile holds a 74,5% rate.

The fourth goal of the National Education Plan is to democratize public education management. If these foremost national goals are to be achieved, then sound planning and action must be taken at local and state levels, since basic education school systems are almost entirely governed/managed by those tiers of government.

INEP has made a significant effort to measure and follow educational indicators to assess progress towards those goals. However, some questions remain unanswered. How are municipalities coping with education national goals? What kinds of initiatives towards those goals are taking place at the local level that deserve attention and must come under close scrutiny? How innovative are those experiences? What results do they produce? How efficient are they? How informative and formative are these innovative experiences in order to build new knowledge in education management and influence other municipalities? To help Federal Government to deal with all these questions INEP has launched the Laboratory for Innovative Experiences in Education Management, a systematic and analytical framework to identify, register, assess and follow municipal experiences in education management in order to reward and disseminate

promising experiences based on their tangible results and potential to create new knowledge in education management which can be adopted by other municipalities. The Laboratory is part of PRADIME (Programa de Apoio aos Dirigentes Municipais de Educação – Municipal Education Leaders Support Program) a support program created by the Ministry of Education to offer professional development, exchange of experiences and managerial tools to assist education municipal leaders in improving quality in basic education systems.

Knowing municipal education management by identifying and assessing innovative experiences might contribute to new knowledge building and improve the capability of local education administrators to cope with the national challenges in education. Recognizing and valuing local authorities' initiatives by using the concept of innovation calls the attention of the Ministry of Education to the good deeds/measures which municipalities are implementing, and which produce positive results on education system structures and processes, outputs and social outcomes. Rewarding and disseminating successful initiatives that bring about progress to basic education may create incentives and feed/foment a permanent innovation process, which can improve education management and promote the Goals of the National Education Plan.

It is patent that innumerable innovative experiences with positive results can be found at the local level, albeit little known and much less disseminated. To gather these experiences, the Ministry of Education has also launched the National Award for Innovation in Education Management. A call for participation is planned to take place biennially, starting in 2006, and a National Committee has been gathered to judge and select up to 10 experiences to be rewarded and disseminated. Knowing, assessing, publicly recognizing their merit and disseminating those experiences, sets conditions for other municipalities to use them as references and inspiration to innovate their own action/measures/models. By so doing, the Ministry of Education intends to create an apprenticeship network and start paving the way for a knowledge management system in education management.

### **The Nature of Innovation and the Utility of an Operational Definition of Innovation in Education Management**

The elusive quest for a theoretical and single concept of innovation as well as an unified theory of innovation seems to have been in progress for a long time and to be ended in a faraway future time, if ever. Perhaps a major reason for that is the variety of studies on innovation covering as many fields as human action can muster. Since the early studies performed in the macro-economic domain by economists such as Adam Smith, Karl Marx, Joseph Schumpeter and Nicolai Kondratiev, innovation, initially thought of as a link to economic growth and development, has been the object of interest in sociology, philosophy, political science, psychology, technology and, more recently, in organization and management studies both in the private and public sectors. Osborne and Brown (2005) for instance, working basically with organization and management literature found twenty-three different definitions of innovation. Light (1998) alludes to innovation as one of the concepts at the same time more used and more undefined in organization life. Wolfe (1994) recognizes the underdevelopment state of innovation literature despite the numerous studies and reviews due to its complexity and context-sensitive nature as an institutional phenomenon.

Among innumerable ideas about innovation, some seem to be recurring in literary works. Innovation represents newness whenever one does something significantly different from the past action either by actually making first use of a new knowledge or adopting somebody else's idea in a new context, space or time. Whereas it represents newness it is not necessarily preceded by an invention (although it can be), which means the creation of new ideas. On the other hand, it requires implementation. There is no innovation without implementation. Innovating goes much further than creating a new idea. It means to put into practice the new idea or invention. There is also intentionality towards change as consequence of using a new idea or implementing a new practice. Not in terms of merely incrementing what already exists (more of the same), but, instead, it suggests discontinuity with a past course of action (Osborne and Brown, 2005), rupture with a past wisdom and defiance to the traditional practice (Light, 1998). As expected, innovators in search of meaningful change also look for positive impacts on reality (organizations, structures, processes, goods, services, social outcomes). In this sense innovation necessarily involves values, political options and ethics. It must be evaluated and judged by its ultimate consequences on peoples' lives.

According to Light (1998), in the public sector innovation should not be simply identified as good deeds, things that work well or "doing the right things right". All these are desirable and are already a major step for having a good public service. Nevertheless, a distinctive feature of innovating in the public sector is the public value (Moore, 1995) it is able to add, measured in terms of the real impacts on society and environment. It means that a touchstone of innovation, in the public sector differs from those usually heralded in the private sector (gains to competitiveness, profit and wealth). The touchstone should be the progress made towards social goals which a society might happen to value and cling to.

Particularly relevant from what has been said thus far is to make a distinction between innovation as an instrumental concept and innovation as a policy goal in its own right. If public value is a distinctive character of innovation in the public sector, then the policy goal must be something different from the innovation itself. Rather it must be found on the outcomes side. Therefore innovation in public education management shall be recognized by its contribution to policy goals that must orient education management.

What emerges is not a disruptive scenario though. Rummaging through the given multiple meanings of innovation, however, one can find some core elements to build on and select key ideas about innovation which can be taken to forge what we call here an operational definition of innovation - a definition that can be of one's choice and used for a practical purpose and so have utility on a specific context to respond to specific challenges. So we did. Valuing and selecting definitions, ideas and characteristics of innovation that can fit into the urgent need of building new knowledge in public education management in Brazil, we have chosen to adopt, in this document, the following definition:

Innovation in public education management means initiatives taken by authorities of education that generate public value by contributing to solve local education problems and challenges and thus promoting progress towards the Goals of the National Education Plan.

This definition is instrumental for what is taken as a major question in public education in Brazil: to perceive progress towards the Goals of the National Education Plan mentioned in the introduction of this paper. Education management is where innovation is sought and where new knowledge is needed.

Why is innovating so important to the achievement of those goals? Approved by the National Congress in 2001, the National Education Plan was expected to have its goals achieved by 2011. Evaluations on its performance since last year indicate that it will be hard to reach some of its important objectives and priorities. It means that current trends in education management are insufficient to cope with within the time frame fixed by the Plan. Nevertheless, on the other hand new knowledge has been developed at state and local levels without being acknowledged either by national scholars or governmental bodies. Knowing this is promising in promoting significant steps towards national education goals by disclosing this practical knowledge and managing it within an apprenticeship network built with local secretaries of education.

### **Laboratory for Innovative Experiences in Education Management**

While Brazilian basic education assessments show poor results in terms of students' learning, revealing the low quality of education, it is true that innovative experiences have been occurring at the municipal education systems, with positive results. Nevertheless, there is no record of them and few people know these cases and their potential for application in other contexts.

As a Ministry of Education cooperative project, the Laboratory for Innovative Experiences in Education Management was launched by the INEP – National Institute on Educational Studies and Research Anísio Teixeira, an independent branch/autarchy of the Ministry, to strengthen the capabilities of the Public Education Manager to create and use educational innovations towards achieving the Goals of the National Education Plan.

The Laboratory is a systematic and analytical framework to identify, register, assess and follow experiences in public education management in order to promote, recognize, reward and disseminate promising experiences based on their tangible results and potential which can be adopted by education systems in municipalities other than those that developed them. It also aims to create an effective knowledge network to exchange experiences, ideas and best practices among public managers, teachers, school principals, academics, experts and policy makers, enlarging and generating new knowledge in education management. It combines a wide range of talents and resources to foster identify and formulate solutions to the most pressing educational challenges.

In this sense, INEP is developing the Laboratory website, which will function as a knowledge management tool and open up the field for gathering, researching and stimulating new efforts in education management development. By analyzing and disseminating the development of new and innovative practices that can be deployed in schools throughout a municipality or state and beyond, it is expected to help their educational managers find creative, thoughtful and effective answers and solutions that address some of the key challenges that they face as policy-makers, educators, and citizens.

The Laboratory serves as a catalyst to successfully address many of the most pressing concerns of the public management education. It does this by engaging a broad community in which knowledge is shared, generating and supporting research on education management, and highlighting exemplary innovative policies and programs, and, in turn, promoting the national education goals. To achieve its objectives the Laboratory takes advantage of the use of Information and Communication Technologies (ICT), recognizing that the use of ICT in education, both as a tool for learning and as a lever for change, is of great importance, specially in Brazil, with 5562 municipalities spread over a large territory. Appropriate application of the technologies available may give them the opportunity to ‘leap-frog’ into the future and greatly improve their educational systems. Therefore, the Laboratory focuses as its main audience: public education managers and policy makers, at national and regional/local levels, but can also be a tool for democratizing education management knowledge among school principals, teachers, students, parents, institutional leaders and so on. education and related research communities,

***The Laboratory’s main purposes are:***

- to stimulate and facilitate innovative activities for achieving equity and quality in basic education;
- to assist managers of public education in enhancing capacities for undertaking innovative actions in related programs areas;
- to promote technical cooperation and transfer of innovative experiences amongst municipal managers;
- to encourage the highest standards of professional educational practice for the public;
- to expand and exchange knowledge about management in public education;
- to contribute to the resolution of key issues in public education;
- to promote the education and professional development of public administrators.

***Its main goals are:***

- to research, identify, evaluate, recognize and disseminate educational solutions that contribute to the achievement of the Goals of the National Education Plan;
- to contribute to the strengthening management capability of municipal authorities to frame education policies and manage education systems;
- to encourage fundamental democratic principles – including participation, partnership, responsiveness, accountability, justice, efficiency, equity - through ethical attitude in research and critical analyses of educational practices;
- to create better links between practice, research and policy innovation;
- to achieve its purposes and goals, the Laboratory has created a structure using a combination of its own staff and outside experts to develop tools, indicators and frameworks for analyses of carrying out studies of key education systems and practices, as well as educational issues. It will offer a thoughtful balance between face-to-face approaches – by promoting policy debate through publications, workshops and conferences – and inventive, dynamic possibilities unfolded through innovative use of technology – as electronic discussion – and cross-sector collaboration, always seeking and respecting diverse perspectives. In short, it strives to advance the theory and practice of public education management, disseminating the ideas presented in its website, newsletter and magazine, books, case studies, conference events and awards to stir innovation and the creative exchange of ideas and best practices among an interested audience (or interested parties).

## **Strategic Axes**

The Laboratory for Innovative Experiences in Education Management has two big strategic axes, as described below. It is embedded in a framework based on four principles – quality, democratization, adequacy and collaboration (Gomes and Souza, 2006).

**Quality:** any relevant innovation explored by the Laboratory must be related to the students' outcome in terms of educational achievement and quality.

**Democratization:** the Laboratory's methodology must consider those municipalities with low institutional capability and be able to recognize all possible innovative experiences coming from their efforts to implement changes.

**Adequacy:** Recognition and transferability of innovative experiences are context-sensitive so that any potential innovation cannot be promptly universalized as a “big-truth” to be exported to all contexts and would require thoughtful analysis of circumstances in which they are embedded.

**Collaboration:** Innovations to be shared must take the necessary collaboration mandate established by the Constitution between the three tiers of government (national, state and local) into account, so that cooperative work can be encouraged or discouraged by methodological approaches undertaken by the Laboratory.

### ***The two main axes are described below:***

Axis 1 – to seek, identify, register and evaluate innovative experiences in public education management, as well as to develop mechanisms to support and to foster innovation in this area.

## **Its main projects are:**

### ***Identification of Innovative Educational Practices***

Continuous efforts have to be made in identifying and disseminating appropriate adaptations of successful innovations and best practices to the main audience and the society as a whole, with the intent of encouraging experimentation and innovation, especially those leading to solutions that incorporate new knowledge and technologies. Networking and information-sharing are important contributions to this aim.

### ***Brazil's National Award for Innovation in Education Management***

As a catalyst to, identify innovative experiences the Ministry of Education has also launched the biennial National Award for Innovation in Education Management focused on municipal experiences. It is also an incentive for local education authorities to improve municipal education systems towards the Goals of the National Education Plan. It has started this year, with a call for participation of education authorities. The Laboratory received 257 experiences and a National Committee has been gathered to judge and select 10 experiences to be rewarded and disseminated among municipalities.



### ***Project Funding***

To support and stimulate innovative policies and programs the National Fund for Educational Development (FNDE) - a federal funding agency linked to the Ministry of Education – is considering funding innovative projects clearly related to the national education goals.

### ***Database***

A data-base/inventory of development-oriented educational innovations was built with the Laboratory website where the selected and evaluated experiences are input and submitted to a monitoring system.

## **Evaluation, Monitoring and Quality Control**

In order to help managers continually evolve and improve their innovative policies and programs, which are registered in the database of innovative educational experiences, an evaluation monitoring system is being built to follow all its methods of work and activities.

### ***Research and Development***

Fostering educational innovation and research is an important function of the Laboratory which will develop educational research, opening up new fields for exploration and combining rigorous analysis with conceptual innovation.

Efforts have to be made to collect exemplars of innovative work and to disseminate relevant and problem-oriented research findings. This requires close co-operation between INEP and the internal coordinating bodies in each Municipality, as well as its representative associations.

### ***Axis 2 – Dissemination of Innovative Experiences***

This aims to publicize the experiences that really contribute to the achievement of the Goals of the National Education Plan. It also seeks to inform, share and integrate the new knowledge offered by these experiences among the network of the interested public, specially the municipal educational managers, school principals, teachers, policy makers and academics, through:

#### ***Website***

A website is being developed as the most important tool of dissemination of the Laboratory's activities. Its framework foresees a database of experiences, a monitoring system, a virtual library, an electronic magazine, an electronic newsletter, and electronic thematic forums for exchanging experiences, among others.

#### ***Seminars, Conferences and workshops***

Periodically meetings will be organized in partnership with collaborative municipal educational authorities to discuss issues related to successful innovations, exchange of experiences, studies and research results, etc. Distance learning activities have to be combined with face-to-face programs, to facilitate the comprehensive dissemination and communication among the target audience.

### ***Publications***

Experiences that have been recognized and rewarded or those ones that have good possibilities to be adopted in other contexts, research, studies and cases related to innovation on management education will be published in books in both printed and electronic version.

### ***Network***

The Laboratory will promote regional co-operation by forming a network of partnership with municipal secretariats of education, universities, NGOs and institutions across the regions to facilitate the identification and dissemination of educational innovations experiences and, thus, contribute to, and benefit from, the exchanges of insights, skills and expertise promoted under the program.

## **National Award for Innovation in Education Management**

The National Award for Innovation in Education Management is one of the components being developed under the Laboratory initiative. Planned to take place biennially, starting in 2006, it was created with four main objectives: (a) to encourage innovative experiences in municipal education management to be developed towards the main goals and targets of the National Education Plan; (b) to mobilize municipalities to publicize their innovative experiences; (c) to reward municipal education systems administrators for their initiatives and achieved results and; (d) to disseminate local innovations in education management. Therefore awarding municipalities and their local authorities of education is not an end in itself; on the contrary, it is a means, an incentive to stimulate them to take new initiatives, present, make known and share them within a network of peers.

### ***A four-step procedure is executed to select up to 10 innovative experiences.***

First, a technical team sorts out the inscriptions that fulfill the documentation and the one year minimum time of implementation requirements.

Second, a national commission comprised of notorious experts nominated to analyze, mark and elect up to twenty experiences, considering at least one by regions. Five criteria are introduced at this stage of the selection process: (a) relevance to the main Goals of the National Education Plan; (b) impact on local education settings; (c) innovation in relation to previous practices and policies; (d) partnership with local governmental boards, civil society organizations and other tiers of government; and (e) efficient use of resources. Based on these criteria, municipal experiences are marked (0-5 points per criterion) and up to twenty proceed to the next stage.

Third, the selected experiences are evaluated in loco by experts in education policy and education management specially hired for this purpose. A comprehensive report is produced by the evaluators to aid the national commission with complementary information and data gathered by observation, individual and group interviews, documental analyses and other technical procedures rooted in qualitative approaches. The local report encompasses four main topics: (a) Background information including diagnosis of the main problem/motivation for the implemented innovation, concepts underpinnings and main purposes for innovating, and a brief characterization of the innovators; (b) Innovation focus and implementation considering intended objectives, methodology of implementation, resources, stakeholders, consistency and coherence between

objectives and strategies and its links with the Goals of the National Education Plan; (c) Innovation results and impacts weighted against the local context and specific challenges as well as the perceptions of local beneficiaries and other stakeholders; and (d) Limitations, possibilities and challenges such as sustainability, replication and perspectives for the future. The main questions are depicted in Table 1.

Finally, after the field work is concluded, the reports are sent to the commission members and a new meeting gathering the national commission finally elects up to ten so considered innovative experiences in education management.

**Table 1 - Analytical categories and inquiry questions.**

Background information	
• Context analyses	Where does the innovation take place?
• Main reasons for innovating	Why innovate?
• Fundaments for innovating	What are the underpinning concepts and values of the innovation?
• Innovation ownership	Who conceived it? Who implements it?
Focus and implementation	
• Innovation object	What is innovated?
• Purposes and objectives of innovation	What for?
• Innovation target	Who is affected by the innovation?
• Innovation strategies	How to get innovated?
• Partnerships	Who are the main partners?
Innovation impacts	
• Results and effects achieved	What are the concrete effects perceived?

Gomes, C.A. & Souza, M.G.G (2006)

The ten selected experiences are certified and the municipalities awarded R\$ 50,000 to be invested in developing, enlarging or evaluating the initiative. The local education system administrators are also rewarded. The Ministry of Education invites the participants to present their winning experiences in a workshop in the capital (Brasilia) where they will be awarded and publicized. The ten award-winners are also invited and funded/supported to participate in a capacity building event either in Brazil or abroad to share their winning experiences and to acquire new knowledge and skills in education management. All the winning experiences are published and highlighted in MEC, INEP, Undime, Unesco and FNDE websites.

The catalyst effect of such a call for experiences to be assessed by the Ministry of Education based on the objectives pointed out in the previous section can be perceived by the great number of experiences received in the first edition of the National Award (2006), with 257 participants among municipal secretaries of education coming from different parts of the country as shown in Table 2.

**Table 2: Participation in Call for Experiences**

EXPERIENCES		
Region	Received	Approved in the 1st stage
North	14	9
Northeast	57	45
Middle-West	18	15
Southeast	105	82
South	66	53
Total	260	204

The National Award is expected to work as a “magnet” to attract interest and participants to take part in the Laboratory initiative. It is also a means to raise self-esteem among local education administrators by making public their efforts and recognizing successful initiatives which can contribute to enlarging and enriching national knowledge on education management at the local level. Knowing, assessing, and publicly rewarding the merits of such experiences sets the conditions for other municipalities to take the course of innovative action and step forward in defying local education challenges.

### **A Knowledge Management System in Education Management**

The microelectronic development that shaped what is called the knowledge economy and developed in a worldwide perspective the Information and Communication Technologies (ICTs), has caused business thinkers to propose models and tools that would be able to furnish organizations with the internal competences that would allow them to face the external challenges they must deal with, especially by a continuous process of innovation.

Just as the new competition paradigms spread and popularize the crucial role played by innovation, cooperative relationships and partnerships are other references that have become part of the organizations’ daily staple. Through them it is possible to gain easier access to resources such as knowledge, technology or new organizational processes that allow creating or assimilating innovative solutions.

Management and business literature has extolled three attributes that are common to innovative organizations and institutions. The first of these is that of pro-activity, the second is dreaming and designing the future while seeking to find the best combination of resources to continuously enhance competitiveness, and the third is team-orientation. The latter reinforces the crucial role played by teams in making up partnerships that support innovative ideas and creative people.

To the above, Stopford and Baden-Fuller (1994) have added two more attributes: the capability to solve dilemmas, and the capability to learn, which is central to the literature on innovation and change. A team that can learn is seen as essential to innovation-based change or to structural change, as it empowers managers to evoke new possibilities and to create new options and not to remain paralyzed by fixed mental structures that limit progress.

To Nonaka and Takeuchi (1997), as organizations deal with uncertain environments, not only through passive adaptation but also through active interaction, they can change themselves. The organization that wants to deal with changes in the environment dynamically needs to circulate information and knowledge and not only process them efficiently. From the authors' point of view, "an organization recreates itself by destroying the existing knowledge system and finding new ways of thinking and doing things." (Nonaka and Takeuchi, 1997, p.59).

Going deeper into this line of thought, some authors accept that in the era of the "knowledge economy", knowledge is geographically dispersed and can be found in little recognized and non-traditional sources. The capability to monitor, access, mobilize and combine new and varied sources of knowledge has become the main source of innovation, which demands mobilizing multiple resources and finding shared solutions through the various stages of the innovation process.

Thus, a growing number of organizations have come to incorporate a broad range of competences that were made feasible through multiple agreements and alliances. Powell and Brantley (1992) argue that, when knowledge is broadly dispersed, the locus of innovation will not be found within the boundaries of one organization alone/only but on a network of inter-organizational relationships. Alliances and partnerships among firms and learning networks (Powell, Koput and Smith-Doer, 1996) permit important gains in the process, in a positive relationship within which new resource supplying mechanisms are developed along with advancing knowledge. Ever more sophisticated and diverse, it cannot be easily captured or individually produced.

Theoretical approaches about innovation and cooperation refer to its learning effects. Organizations with different skills and knowledge bases benefit from unique learning opportunities in the context of strategic alliances (Croom, Inkpen 1998). In this sense, those that are involved in partnerships have made efforts to create an environment that promotes internalization and amplification of the knowledge that is accessible in the context of an alliance (Nonaka, 1994; Croom & Inkpen 1998). Ciborra (1991) argues that collaborations are institutional arrangements that allow organizations to bring in new expertise, tacit and explicit knowledge and know-how. Teece et al. (1990) consider cooperation a mechanism through which one can accumulate, combine and disseminate knowledge and complementary assets.

Authors like Brown and Duguid (1991) argue that learning is a social construction process and it is about becoming a practitioner, not learning about a practice. So, knowledge creation occurs in the context of a community, "one that is fluid and evolving rather than tightly bound or static". The degree to which organizations learn about new opportunities is a function of the extent of their participation in activities that link people from different entities and organizations.

Thus, when knowledge is broadly distributed, the locus of innovation can be found in a network of inter-organizational relationships (Powell and Brantley, 1992). Institutions then must have both internal and cooperative research, which cannot substitute each other. In this sense, a network serves as a locus of innovation because it provides timely access to new and complementary resources and, at the same time, tests internal expertise and learning capabilities.

Authors (Powell et al., 1996) pointed out that knowledge facilitates the use of other knowledge, because what can be learned is affected by what is already known. In other words, knowledge requires other knowledge and both skills and experience are required for a company to benefit from interdependencies across diverse collaborative ties. Accumulated knowledge leverages access, assimilation and exploration of new ideas and information. Collaboration is, thus, an admission ticket to an information network and a vehicle for the rapid communication of news about opportunities and obstacles. Collaborative projects open an organization's eyes to the need for accessing ideas and information from a variety of sources, to exploit research findings in a commercial context.

If competitive organizations in the market place can cooperate to acquire new knowledge and improve their performance, we argue that municipalities could do the same. Why can they not benefit collectively by integrating cooperative networks and partnerships? Many of the characteristics pointed out by the authors above are present in the Laboratory for Innovative Experiences in Education Management conception that has the purpose of fostering innovative practices in municipal educational systems through a network of partnership among them. The spirit of collaboration – translated into trust and close relationships among the parties involved – must be found by the interest in shared knowledge acquired during the innovation process.

Exchanging experiences is a means of propagating knowledge embedded in them and can be done in several ways. From electronic discussion, when one can ask about a specific experience, to using especial tools, which take into account that learning is a social process and that knowledge is created within the context of a community. In this case, the manager interested can use a virtual service in the Laboratory website to pose questions concerning doubts, difficulties or problems in the implementation or improvement an activity and then ask the partners for help in solving it. Those who have been successful in that, or who know the sources where ideas on the subject can be found, will make their suggestions. Other ways must be used, like visits to the locales where the experiences occur, technical meetings or workshops assisted by the Laboratory experts. These methodologies of sharing ideas and experience in implementing management methodology lead to a better understanding of each other's practices.

In sum, structuring a knowledge management system in education management is a supportive endeavor to promote cooperative networks among municipal administrators and so increase the probability of innovation by activating interaction and circulating information and knowledge. The challenges are huge in this field though, and new instruments and practices must be also created to support such an apprenticeship network. The Laboratory is a first step towards that end. But what is worth saying at/about this point is that this initiative recognizes that disseminating innovative experiences is a way to radiate knowledge in education management so that the whole society can benefit from it.

## **Final Remarks**

Final topic remarks can summarize what this paper has pointed out:

- Municipal autonomy requires education management capacity and innovation to cope with the main objectives and priorities of the National Education Plan by 2011.
- Innovation in this context was defined as initiatives taken by education authorities that generate public value by contributing to the solving of local education problems and challenges and thus contribute to the promotion of progress towards the Goals of the National Education Plan.
- Autonomy as a mandatory principle in the national organization of education systems also permits the endogenous rise of innovation among municipalities.
- Beyond the fact that municipalities are understandably politically competitive systems, in the national context of public education organization they can also cooperate and take advantage from a cooperative approach.
- Adopting a network theory perspective in which innovation is seen to arise from organizations' interaction instead of the competition between them, the Ministry of Education has launched a set of initiatives to create a cooperative environment and collaborative interchanges in order to promote education management capacity among municipalities.
- The two major initiatives are the Laboratory for Innovative Experiences in Education Management and the National Award for Innovation in Education Management as instruments and incentives for local education authorities to improve municipal education systems towards the Goals of the National Education Plan.
- The two initiatives however must be seen as strategies to lead the federal effort in creating a knowledge management system in education management to effectively contribute to the building of new knowledge and innovate in the public education management arena.

## **About the Authors:**

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