

TEACHER TRAINING IN ELEMENTARY SCHOOLS OF HIDALGO THROUGH THE  
USE OF COOPERATIVE LEARNING METHODOLOGY AND ITS JOINT WITH THE  
INTEGRAL REFORM OF BASIC EDUCATION (MEXICO)

Rosamary Selene Lara Villanueva

[rosamary@uaeh.edu.mx](mailto:rosamary@uaeh.edu.mx)

Alejandro de Fuentes Martínez

[geeko77@gmail.com](mailto:geeko77@gmail.com)

Tiburcio Moreno Olivos

[tiburcio34@hotmail.com](mailto:tiburcio34@hotmail.com)

**Universidad Autónoma del Estado de Hidalgo, México**

**Forum 5. Cooperative learning: theory and practice for equity in education**

**Introduction**

The paper presented here summarizes part of the work advances done for the research project called "*The Development of Academic and Social Skills Through the Use of the Cooperative Learning Methodology (CLM) in Primary Education Classrooms at the State of Hidalgo.*"

So this paper focuses on explaining the development of teacher formation as one of the first stages of the project which was essentially oriented on teacher training in the use of cooperative learning and its linkage with the development of teaching skills which are a must have in order to work with elementary students, according to the instructional guidelines that the Integral Reform of Basic Education in Mexico sets. In this sense, the initial purpose was primarily to enhance the skills among teachers through the use of Cooperative Learning Methodology (CLM) during their training, which represented itself a very first moment to live the experience of cooperation between colleagues. Therefore the strategy in primary teacher training was conducted in two modes: face to face and virtual mode. Also, for this full paper, we considered to present some important results of the project, since the implementation process of cooperative learning in their classrooms, must ended in January 2011.

### **Rationale and Methodological Approach.**

We believe that “if schools are treated as learning spaces, intellectual opportunities and stimulation would greatly increase and they would reach a real development for the understanding and for acquiring the skills, meeting different personal and cognitive needs, which are rooted in the different experiences of the students. From this perspective, cooperative learning emerges as an innovative approach for students to achieve specific academic purposes and better socialization in order to develop their school activities and skills; to achieve them, careful planning is needed. In this process, it is up to the teacher to strategically design the activities where collaboration / cooperation predominates as it is he who is responsible, because he is familiar with the own characteristics of their students. This process demands the curricular decision-making not only as an isolated activity, typical of the teacher, but also as an inherent responsibility of the educational institution to plan properly the construction learning process. To achieve these purposes, the intervention model of cooperative learning, provides a response to the objectives that have to do with the development of interpersonal and intellectual skills. Also, for the configuration of a methodological framework governed by cooperation, the educational context must be studied carefully to structure communication and cooperation transactions that are intended to promote.

The educational intervention of cooperative learning proposal in the classroom is justified alike to meet three great specific requirements: First, research regarding the outcome of innovative teaching strategies that encourage the development of cognitive and social skills in students when they work together to structure higher-order thinking by sharing their knowledge and skills, besides that it enhances socio affective capacity, the development of attitudinal aspects... reflecting this work feature in the classroom as a factor that can increase academic achievement. Second, the training of teachers, which is a controversial issue to improve the quality of teaching, the challenge is that teachers live themselves experiences of collaborative ways so they can incorporate that assimilated experience in their classrooms. This would also be a good opportunity for teachers, as education professionals, to do a culture of teaching reconceptualization. Finally, working with cooperation in the classroom addresses the heterogeneity of students, facilitating a better interaction with students with different social, cultural, ethnic, gender or other characteristics. This is important because when seeing this diversity of the population, in both students and teachers, it would be considered the possibility of establishing a network for educational experiences exchange for further successful teaching practices" (Lara, 2010).

From these basic premises, the research project “*Development of Academic and Social Skills Through the Use of the Cooperative Learning Methodology (CLM) in Primary Education Classrooms at the State of Hidalgo*”, (Lara, 2010), focuses its analysis and

reflection on the processes of change in teacher education, which aims to achieve the following:

In this research work they are addressed two primary objectives:

- a) To implement the Cooperative Learning Methodology (CLM) in elementary school classrooms, as an innovative experience that will develop academic skills, such as cognitive and socio-affective ones (values, attitudes) considering the joint of this knowledge and skills with the new approaches of integrated curriculum in basic education.
- b) To provide to primary school teachers from psycho-educational skills that allow them to develop the CLM in their classrooms meeting the diversity of their students.

### **1. Teacher training in cooperative learning and its joint with the Integral Reform of Basic Education in Mexico.**

The issue of teacher training, has now become more relevant because of the growing demand in developing teaching skills which teachers are required to have for the achievement of educational quality. This issue has become a concern in educational reforms and the case of Mexico is remarkable, where the education system is facing strategic changes about how to incorporate academic skills that students must acquire in their learning process inside the classroom. According to Villegas-Reimers (in Vailant, 2002:5), this interest in teacher training is based on three interrelated premises a) the quality of an educational system of any country depends largely on their teachers, b) the correlation between the teachers professional preparation and their classroom practices and c) the teaching practices and their relevant effect on academic performance and learning of students. The same as Imbernón (2008), we think that the skills that teachers must accomplish are related to the tasks they have to perform, so they are in an interdependent relationship, which is an attribute of cooperation: a) the teacher in connection with the community, b) the teacher in relation to the school as an institution c) cultural background: critical analysis, thinking capacity, technical knowledge, adaptability, teamwork or cooperative competence, organizational ability. However, the most important attribute which also distinguish the cooperative learning methodology and according to Imbernón, is the ability of the interrelationships that the teacher has with the student and the class group, since he is responsible for most of the activities that pretend to maximize teaching-learning relationship, that is, the better the teacher knows his/her group of students, the better he or she can adapt his/her pedagogical interventions according to the maturity, the needs and the interests of their students.

On the other hand, Serrano, Moreno, Pons and Lara (2009), suggest that educators themselves demand this training because despite the intrinsic and extrinsic value that they attach to these techniques, they do not seem to be well informed and even less, well prepared to implement them with the required effectiveness. In this sense, there have been proposals derived from teachers themselves, which specify the need of taking into account that in the initial or permanent training, at least two issues must be addressed.

First and in relation to lifelong learning, it should be work the three types of classroom structure, while providing information about which of these types is the most desirable in certain circumstances.

It should be emphasized also the cooperative structure reward, being very clear the following three issues: how to group students?, how to create positive interdependence between them?, and finally, what should be the role and behavior of the teacher? Second, and related to initial training, cooperation must be modeled in the classes of future teachers, which can be done without any difficulties, since it is a powerful form of learning with young as with adult people. The cooperation modeling will not only provide to the future teacher, a deeper understanding about the use of these strategies, but will help him/her to apply them to his/her work and with his/her fellow staff.

This situation should also be applied in the case of lifelong formation, in other words, teachers in cooperative learning methods should be trained from a cooperative organization itself of the training activity.

It was considered the participation of teachers who are in schools where there is at least one or two computers or teachers that have a computer with internet access at home, in order for these technologies to allow them to communicate their experiences without geographical and time limitations that may involve their location. This will lead to develop the teamwork capacity or to experience collaboration, in spaces where interrelationships will first occur face to face, and then, the individual/team work using the computer in interaction with members of the learning network; will produce to have these two types of learning modes which will be alternated in a systematic way. In this sense the virtual network learning, will be done enhancing the creation of effective interaction channels between teachers, in order to exchange information and ideas that arise during the training process and from the instructional design of cooperative lessons as part of the educational intervention. To achieve this, training for teachers on using a virtual platform has been developed primarily.

### **Methodological strategy**

The action-research methodology is presented as one oriented to the educational change and it is characterized among other issues to be a process as indicated by Kemmis and MacTaggart (1988); *(i)* it is constructed from and for practice, *(ii)* it aims to improve practice through its transformation, while pretending to understand it at the same time, *(iii)* it demands the participation of individuals in improving their own practices, *(iv)* it demands a group performance for which the individuals involved work in a coordinated way and in all the phases of the research process. *(v)* It is a form by which teachers can rebuild their own professional knowledge as part of the process of setting up public discourses joined to the practice, its problems and its needs. *(vi)* It cannot be never be a single task. It must be, however, a cooperative work.

The project has 4 research stages. 1). Diagnosis of academic and social reality of the school (that the teachers get involved in their reality from thinking and acting 2) Teacher training

in two modes, virtual and face to face mode, 3) Teacher training evaluation and 4) Implementation of cooperative activity in the classroom and experience assessment.

We are currently working on the stage 3 of the project (Teacher training evaluation).

### **Methodological procedure**

- An invitation to primary schools in the state of Hidalgo to participate in the project was done. They agreed to work on the project two schools located in rural environments and only one located in an urban environment.
- Construction of a course on a learning platform (network based in cooperative learning, through the use of ICT).
- An academic and social reality school diagnosis was made (so that the teachers get involved in their reality from thinking and acting)
- Design of the teacher training program: sections of content and teaching strategy based on cooperative learning.
- Training tracing in two modes: virtual and face to face.
- Training evaluation through socializing their activities using the virtual network and with face to face interaction.
- Exchange of ideas and points of agreement about the experiences on achievements in designing and implementing cooperative learning in primary classrooms, considering the integral skills based curriculum for basic education.

### **Stage description**

1. Educational situation diagnosis: we turn to contact schools with certain qualities: two public and one private school were considered, public schools are in rural areas of the Hidalgo state and the private one is in the city of Pachuca. Although they were not the only ones schools we invited, they were those that showed more interest in participating in the project. Peculiar characteristics of these two rural schools called our attention, since one is registered to the Quality Schools Program and the other one is registered in the Full-Time Schools Program. The private school has a little infrastructure and a profile of teachers with Educational Sciences Degree, and has educators and professionals from various disciplines, this one also caught our attention, since the initial training can be a substantial issue to carry out innovative teaching practices. Similarly, issues such as experience, seniority in teaching work and directive leadership have been factors that we have considered can bring together, qualities needed to support or not the collaboration such as the effort to create conditions to improve the classes and to generate a cooperative environment.
2. In the second stage, a teacher training program was elaborated considering two working modes: face to face and virtual mode, the first one takes place in every school and for the second one it was created a teacher formation virtual space at the Universidad Autónoma del Estado de Hidalgo virtual platform. So, five thematic sections were scheduled, in which four of them, theoretical, practical and reflexive aspects on the Integral Reform of Basic Education (IRBE) and its teaching

guidelines are developed. We did not want to deepen too much into this first issue (starting section), because most of the teachers were enrolled in the Skills Diplomat of the Ministry of Public Education (Secretaría de Educación Pública – SEP), however, we did analyze the joint of this proposal with cooperative learning. In the first section, we studied the topic: Creating conditions for improvement inside the classroom and at the school in order to generate a collaborative learning environment. For the second section we focused on skills development and cooperative learning and emphasized the theoretical perspective of these methods and the elements required for instructional design and its implementation. We have concluded these two thematic sections and we are now beginning the most practical part of the course which is a kind of workshop, so in this fourth section, referred to instructional design, the teachers need to articulate what the Integral Reform of Basic Education (IRBE) proposes with the cooperative learning methods. For the third section, *The Assessment as Learning* was given by an specialist in the subject, in a kind of conference sessions due to the inherent needs of teachers/participants. For this training, we have also invited experts in cooperative learning, from the University of Murcia.

3. Teacher training evaluation: During the course we have done data collection through field diaries, participant observations besides the teacher's activities, where their points of view on education reform in Mexico, their concerns about how to implement it with their students and about the structure of a planning class skills oriented allow us to analyze their practices.
4. Cooperative activity implementation in elementary school classrooms: (This stage will be performed during the months of December 2011 and January 2012.)

### **Preliminary training results.**

The data collected during the training of elementary school teachers in the "development of academic and social skills through cooperative learning methodology and its joint with the Integral Reform of Basic Education (IRBE) in Mexico.", related to the thoughts done as part of the thematic sections (I, II and III) activities, it is analyzed this data to realize the concerns, needs and perceptions of teachers when they have to incorporate skills in the classroom. These reflections have been considered an essential part of this project, in order to identify how teachers are trained in developing skills and incorporating pedagogical strategies in their teaching process.

First section. Challenges of Integral Reform in Basic Education. We analyzed the teaching guidelines for working the curriculum of elementary education and we emphasized those teaching strategies that are necessary to apply with students in order to achieve skills for life. We noticed that collaborative learning is one way for organizing learning in the classroom,- within this new skills curriculum-, although the initial question that triggered the debate about these ideas was how to ensure that elementary students learn to cooperate when they are working skills in the classroom at the same time? The first analysis approach to answer this question is that cooperative learning represents a central procedure to create positive interpersonal relationships, promote a greater psychological health and welfare, including self-esteem as well as social skills required to interact appropriately with others,

they are useful at the same time to successfully face adversity and stress that may live elementary school students in the future. As a result, cooperative learning allows us a greater and better development of skills that traditional teaching methods do not boost and we refer not only to specific skills but generic, transversal ones and values.

In this sense, teachers worked through a discussion forum using the virtual platform to share their reflections on the challenges involved in educational reforms where they have been immersed during their own teaching.

Teachers found that the integral education plan for today, proposes the long-term knowledge development in a multidisciplinary framework and with the purpose of student's learning is turned into real application or actual implementation in different contexts.

*"In 93 and 09 it does not change neither the content nor the form, what really changes are the terms, because the objectives are now the expected learning, the contents are the topics for discussion and if we analyze the approaches of everyone, they simply tell us that they are in a training context, adding in 2009 the attitudinal and procedural ones. The only difference that I can mention is the simplification of teaching, because we have now the role as mediator, facilitator guide, and not a speaker... besides, what it proposes as projects to evaluate benefits us because it is an assessment of the expected learning where students express their abilities not only in front of the group but they have the chance to introduce those skills to the school and to the community".*

On the other hand, some teachers express these views about the benefits of the new reform:

*"it seems wonderful for me the 09 proposal because previously weekly planning represented more work while searching for content, shafts, activities, objectives and then creating the purposes of every class and every subject...it was annoying because I think we spent more time planning than working, especially when every Monday plans were asked to us and sometimes because of lack of time, we so them so quickly, so express, and sometimes I feel they just were not taken into account."*

*"Now it is a thousand times better because personally I do the task of planning my section, I find in the program all the proposals that I can use for my class, besides they give very good ideas in order to facilitate my student's learning. This plan is even more simple and flexible for me and my students."*

All these thoughts that are occurring inside the teachers when they implement the reform in the classroom, provide us qualitative elements to understand, from the logic of their formation and practices, how they view the changes produced in their classrooms. As noted, for some teachers the reform raises more meaningful work in their planning, because, although there is more "freedom" when doing so, it does demand a more careful job in order to achieve the expected learning outcomes. As a female teacher expressed when she hears Serrano's conference,

*"I begin to understand more about how cooperative work must be, it is not only teamwork as we have traditionally done, but there must be a goal in common which is the development of skills in all the members of the group, roles assignment, the use of the proximal development zone so that everybody work and this should be done with students*

*close to their level of development, that is, there should not be great distance between them. I did this with my students, I used to put together the less advanced students with the most advanced ones and in several occasions this did not work because the most advanced student is less tolerant. The work that Pd.D. Serrano plays cannot be applied at all in our groups, but I will take up some of his ideas to put them into practice and what I found most interesting is the roles assignment, which implies not only to teach but to raise learning situations for the development skills in our students. He told us that what is being proposed today in education is the most reasonable thing and I think so."*

However, they were also asked about what they meant by cooperate and how they would work the cooperation, (so we get a first version of this concept from them) and how they think they can develop it in their classrooms. The teachers said that "sometimes they organize their activities in teams, but not all students are involved, some of them assume the leadership role, and others collaborate minimally. Others, however, say that they do not use teams, but also stated that "attempts are made to involve students with more knowledge leaving aside those ones with less knowledge, heavily promoting, with this, individual work."

This knowledge about teamwork give us precise guidelines to work under that conception which goes changing during the training course, when we pick up their plannings focused on cooperative learning and how they articulate it to work it on with life skills that the new elementary education reform requests.

On the other hand, regarding the elaboration of their teaching plans, we collected evidences on how they design their classroom activities and we observed these situations: When teachers plan their lessons, they do so in different ways, some of them plan by sections, others by themes or topics, also some point that they plan either weekly or every two weeks, which helps them not to plan every day because it represents a hard work.

Teachers also refer that they take some aspects of mainstreaming with other subjects and establish strategies such as teamwork. Some mention that within teamwork social skills to cooperate are highlighted.

*For example "in the past it was very limited, because there was only studied what came and was said in the books, and it was intended to go beyond, nowadays it is intended that students develop their abilities and skills, besides it is intended that they go beyond what books say, in order to be persons with the necessary skills to cope with society. Teamwork is really often, but instructional design worked help to convert the group activity into cooperative work. Besides I believe that teamwork helps to strengthen and enrich the students' knowledge with their fellows, ...now I think that this planning is better because you build knowledge together with the student and the student is able to identify a situation and for how you set an approach, you invite the student to explore, to ask questions and to hypothesize solutions to them, in short, a situation, task, or problem that can extend the life and cognitive experience of students, offer them opportunities to personally involved in those so everyone can draw or take different lessons from it.*

Finally, in the obtained evaluations by reviewing their daily planning, teachers point the elements of the reform like the name of the subject, the aspect to work, the skills and the



teaching situation, and some units of analysis, however they do not appear learning strategies with students, as it is inferred the individual classroom work.

While some point out their planning non in different ways and follow the sequences of their activities and the time or timing when they will work with their students the topics or the content. In general, there is no indication about how they will assess skills. This is an indicator pointing that it is not clear yet for some female teachers from private and public school about how they are going to assess skills so they continue treating evaluation aspects separately.

At last, we assure that it is in the fourth stage of the project where all evidences will be picked up about how cooperative learning is implemented in the classrooms and how it fits in the development of academic and social skills in elementary students.

### **Bibliography**

Imbernón, F. (2008). *La Formación y el desarrollo profesional del profesorado. Hacia una nueva cultura profesional*, Barcelona, Graó.

Kemmis, S. & McTaggart, R. (1998). *Cómo planificar la investigación-acción*, Barcelona, Laertes.

Lara, R. (2010). El Desarrollo de competencias académicas y sociales a través del uso de la metodología del aprendizaje cooperativo en aulas de primaria *Proyecto de Investigación de la Convocatoria SEB- SEP CONACyT*, (2008-01). México.

Vailant, D. (2002). Formación de Formadores. Estado de la Práctica, en *Revista de Programa de Promoción de la Reforma Educativa en América Latina y el Caribe* (PREAL) No. 25, Santiago.

Serrano, J. M., Moreno T., Pons, R. M. y Lara, R. S. (2008). Evaluación de programas de formación de profesores en métodos de aprendizaje cooperativo, basada en análisis de ecuaciones estructurales. *Revista Electrónica de Investigación Educativa*, 10 (2). Consultado el día 10 de octubre de 2011 en: <http://redie.uabc.mx/vol10no2/contenido-serranomoreno.html>

Sitio de la Reforma Integral de la Educación Primaria:  
<http://basica.sep.gob.mx/reformaintegral/sitio>