

Virtual Schools: Safe Access to ICT by rural children in Colombia

Pablo Jaramillo,
Federacion Nacional de Cafeteros de Colombia-Comite de Cafeteros de Caldas
A member of Global Knowledge Partnership (GKP)
Submitted by GKP

1. *Background and history of the partnership*

Ten years ago, none of the rural schools of Caldas-Colombia had access to information and communication technology (ICT). The few schools that had computers did not have educational software, had no Internet and for most of the time, computers were kept turned off and out of children's hands as a measure of damage prevention. The teachers were also untrained. Several public and private organizations got together and initiated a very innovative ICT project called Virtual School. Up to 2007 these poor rural schools have been the winners of two ICT National Contests and the project has twice been the finalist in the Stockholm Challenge Award.

Rural public schools in Caldas are located in remote areas. Their students belong to poor families that mainly make their living from small coffee farms. Since most coffee growers have had only three years of schooling, the National Coffee Federation (NCF) has had many difficulties in trying to help coffee growers adopt new technologies that would significantly improve their income and therefore their living conditions. The NCF's joint efforts with the national, regional and local governments resulted in the development of several projects which aimed at improving the quality of education. A new strategy to help educate rural children emerged from these joint efforts.

Public education has usually been seen as a problem of the government's. Parents, students and private organisations rarely take proactive action over the state of public education, their role is normally limited to asking the government for improved conditions.

In Caldas we think that public education is mainly a public responsibility but all of us have something to say and do about it. We think that group interdisciplinary work, although it is usually more difficult to reach agreements and set objectives, surely leads to better results.

Ten years ago, the National Federation of Coffee Growers of Colombia (a private association of 500,000 coffee growers) sent a proposal to the regional government for the creation of an innovative ICT project for rural schools. They approved it and both the national and local governments were invited to join the project. Some technology providers such as Microsoft, Hewlett Packer (HP), Intel and others have provided computers, software and funds for teacher training. Other private organizations like RESURGIR FES (Regional NGO), Fundación Luker and the Autonomía University have contributed with new ideas, on-site work and funds.

2. Goals

General Goal

The overall goal of the project is to improve the learning process in rural schools of Colombia

Specific Objectives

In the context of the above overall goal, there are three specific objectives:

- To facilitate access to ICT for rural teachers and children,
- To develop skills among rural teachers and students in the use of ICT,
- To promote the use of the Internet for information search, communication with others, keeping the rural community informed (domestic coffee and plantain prices, input prices, international coffee price, technical information, general news).

3. Inputs: The Partners and Their Roles

There are nine main groups of partners:

1. *National Federation of Coffee Growers of Colombia*
Association of Colombian Coffee Growers (560,000)
Not-for-profit Organisation
Role: general coordination, fund raising, technical assistance, and fund provider.
2. *Department of Caldas-Secretary of Education*
Regional Government of the State of Caldas
Role: to provide computers and funds for teacher training.
3. *Municipality of Manizales*
Local Government
Role: to provide experts in pedagogy and technology.
4. *Ministry of Education of Colombia*
National Government
Role: to facilitate the access to all national projects such as World Links, Computers for All, among others.
5. *Microsoft, Dell, Intel and Others*
Technology companies
Role: to provide access to Technology and technical assistance.
Help to fund the project.
6. *Fundacion Luker, Resurgir Fes and others*
Regional NGOs
Role: these NGOs have joined the project and have funded it.

7. *Autonoma University and CRECE (Research Centre)*

Academic institution and research centre
Role: research papers, project evaluation.

8. *Teachers and Students*

Beneficiaries
Role: participation in the definition of goals and strategies.
Use the project facilities.
Feedback.

9. *Rural Communities*

Beneficiaries
Role: local evaluation.

4. Implementation

Although the initial idea of this Virtual School Project was developed by the National Federation of Coffee Growers, all members of the Partnership have the same rights and their suggestions and opinions are widely discussed and voted. We call this methodology Participatory Leadership. However, all members have different roles: regional and local governments and the Federation gather together every month in a Strategic Committee to see the advance of the project, project reports and partial evaluation. Their members also visit the schools, talk to the students and teachers and have a better understanding on how the project is doing and its impact on teachers, students and communities in general. Other partners are also invited to these meetings.

Additionally, there is a Technical Committee that meets every week in order to solve all the administrative and technical problems. This committee is responsible for setting the monthly programme and scheduling the trainings and school visits.

The Federation, as the general coordinator, has the responsibility for hiring and paying the administrative and technical staff. It also coordinates the Strategic and Technical Committees, does the fundraising and provides accurate and updated information to all partners.

Every year, the project asks a regional research centre called CRECE to do a comprehensive survey among teachers, students and members of the communities to see if the goals have been achieved and the expectations have been reached. They also ask the project beneficiaries for new expectations, new needs and new ideas to be analyzed by the Strategic Committee and probably decide to make changes in the project.

The fund providers usually audit their funds and monitor the partial accomplishment of their goals. For this purpose they usually accompany us in the Strategic and Technical Committees.

5. Outcomes

After 10 years, we have learnt several important lessons, and now have a much better idea of what works and what does not:

Lessons at the school level

- ICT projects in rural schools should not be hardware centred. The provision of computers with poor training and software provision has no impact at all.
- Teacher training should be regular.
- Frequent visits to schools are mandatory. Teachers and students are anxious to show their progress and have on-site advice.
- The farther the better. Remote schools tend to take more advantage of the opportunities than schools that are close to towns. This happens year after year.
- Each school has its own learning pace. Not all schools should be pushed to be at the same stage of the project as some schools take longer to adopt what is being offered by the project.
- Students tend to learn easier and faster than their teachers. It is recommended that students should have access to many different sub-projects, where no teacher participation is needed.
- It is not a good idea for the schools to have a technology teacher or courses such as technology, computing, or systems. Computers, Internet and software are tools with which to better learn the traditional subjects like mathematics, social and natural sciences and languages, and therefore all teachers should be involved and trained.
- Internet is slow and expensive for rural schools. Its use should be precise so that most of the students can have access to it.
- Good schools may turn into schools with poor results, especially when teachers are transferred. However, schools with poor results may raise their outcomes and results in a short time when their teachers are committed to the project.
- The selection of the schools due to their proximity, infrastructure or special location is not a good idea. A public call for schools to become part of the project and then choose only those really interested is the best way.

Partnership lessons

- To work in partnership is more difficult, as it takes longer to reach agreements and it is hard to harmonize different organizational and personal cultures and styles. However, the results are much better in the end.
- All members should be considered as owners of the project and therefore when good results are shown, all members should be recognized.
- Visibility of the project is necessary. Therefore participation in ICT awards and contests is desirable. Research papers and newspaper articles are good ways to tell general public what the project is about and what impacts have been achieved.
- Permanent evaluation by an independent research centre or university is very important. Project leaders tend to lose objectivity.
- Although the schedules have been defined, budgets have to be spent and goals have to be achieved, the word 'flexibility' has to be always in our minds.
- A bottom-up approach to set realistic objectives and goals is a must.
- The key word in a successful partnership project is 'trust'. Permanent, accurate and trustworthy information must flow at all times.

Educational projects developed by MSPEs in developing countries tend to be difficult. It is not always easy to harmonize so many different interests, cultures and styles. Changes in educational systems usually take a long time, and governments in power are there for only a few years so they tend to invest public budgets in short term

projects. However, with patience, perseverance and clear long-term vision, the goals can be achieved. The government is responsible for public education but civil society has a very important role to play. After elections, a new government tends to underestimate the last government's projects, especially if that government belonged to a different political party. It is during the period of governmental change that civil society has the responsibility to 'save' these important projects and need to tell the new government how important the projects are, and show them all the outcomes, benefits and impacts such projects have had for the communities.

Another important role that civil society has played in our project is to help the government with the project management. Too many rules, slow performance and corruption are some of the problems a public institution has to face. Private management is sometimes the solution.

6. Evaluations

CRECE, the Regional Center for Social and Economic Studies, carried out a complete impact evaluation of this Virtual School Project in 2003. The main conclusions of this evaluation were:

1. *'This project has achieved its goal, in that students and teachers at schools use computers, educational software and Internet in a qualified manner'*. We read this conclusion as indicating that ICT is really involved in the learning process.
2. *'Internet is being used to develop collaborative projects among different schools and to exchange academic experiences among teachers and students'*. Our understanding of this conclusion is that the Internet is really used in a useful, innovative and academic way. The researchers did not notice any misuse of the Internet, such as playing games or use of inappropriate (pornographic) websites.
3. *'Virtual School has changed the previous perception that teachers had about ICT'*. The researchers noticed that rural teachers were not afraid of using computers, software and the Internet as they had been previously.
4. *'The Project has strengthened the relationships between public and private institutions and the community around the schools'*. The researchers highlighted this finding as an important conclusion. A Multi-Stakeholder Partnership in education has the potential to be a powerful support for schools, teachers and students.

7. Recognition

As highlighted above, it is important for such projects to gain external recognition, so that they can garner further support for their wider extension. This project has been selected as an innovative project for the following different awards and competitions:

- 2007 Recognition Educared-Telefónica use ICT in Schools
- 2007 First Prize. Digital Cities AHCIET
- 2006 Finalist Stockholm Challenge Award
- 2005 Winner Colombian Computer Science Award
- 2005 Special Mention INELAM Awar – OAS

- 2004 Finalist Stockholm Challenge Award
- 2001 Finalist Global Junior Challenge
- 2000 Finalist "ICT Stories Competition" IICD-Infodev.
- 2000 Winner Colombian Computer Science Award

Further information

<http://evirtual.recintodelpensamiento.com/escuelavirtual/index.htm>

Contact:

Pablo Jaramillo, pablo.jaramillo@cafedecolombia.com