

BRIDGEIT CHILE: PUENTES EDUCATIVOS 2010 – 2012

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February 2010

Papers from The World Bank and Stanford University³ in the field of Economics of Education, strongly suggest that improvements in the quality of education are highly correlated with individual and national economic growth. This research has shown that only two interventions improve the quality of education: teacher development and reduce class size. After successful experiences in this area in other countries (Philippines and Tanzania) Nokia, Pearson Foundation, Telefonica, the Chilean Association Pro United Nations and the Chilean Association of Municipalities, together with an important private commitment decided to carry out the *BridgeIT* initiative in Chile, whose local name is Puentes Educativos. This project belongs to the field of ICT4E⁴ and its main goal is to contribute to the improvement of the educational quality for the poorest children studying in public schools in Chile, using downloaded digital educational resources provided through Nokia mobile phones. Puentes Educativos lasts three years with an estimated coverage of 210 schools, 660 teachers and 22,000 students benefiting from the program.

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⁴ Information and Communication Technology for Education

BridgelT

In 2002, Nokia, Pearson, the United Nations Development Programme (UNDP) and the International Youth Foundation (IYF) felt the need to create an initiative to contribute to the improvement in the quality of education of children in developing countries, taking advantage of advances in digital technology. Each of these partners made fundamental contributions to make this idea a reality, but in turn facing a major challenge: the need for the private sector to contribute to the social development goals. Consequently, the result of this commitment become an educational intervention called BridgelT whose vision is "to decrease the digital divide by supporting the local curriculum with high quality educational content delivered via a quick digital connection and integrated training of teachers⁵".

BridgelT offers a cost-effective platform to deliver digital educational materials to a large number of educational schools using mobile technology. This digital educational material can include video, audio or text, delivered via the cellular network to a TV or projector. In practice, the teacher accesses the digital content that needs to be taught in class using a cell phone, from which he downloads the educational content. After loading the video in a memory card, the teacher can project images through a television or projector.

In 2003, the Philippines developed the first pilot program BridgelT. For this exercise, isolated schools were selected with a high number of students per class, some without electricity or adequate infrastructure. The results of this first pilot were more than satisfactory: increased attendance, increased motivation of pupils and parents, reducing the workload of

⁵ Cfr. International Youth Foundation. *BridgelT in Tanzania: Increasing the Quality of Education through the Innovative Use of Digital Technology*. August, 2007. p.8.

Puentes Educativos

Puentes Educativos became the Chilean version of the BridgelT initiative. It is part of the Education and Technology field (ICT4E). Puentes Educativos is a project whose main objective is to contribute to improve the quality of education of children belonging to poorest and public schools across the country, using downloaded digital educational resources through mobile technology (Nokia N95). In regards to the specific objectives, the project has:

- 1) Verify that Puentes Educativos and their implementation, methodological, pedagogical and evaluative strategies works in Chile.
- 2) Encourage the use of information technologies, specifically mobile technology within the classroom.
- 3) Increase teacher's knowledge of ICT.
- 4) Making the digital educational resource as a supplement and effective support in the classroom.
- 5) Reduce the workload of teachers and improve efficiency in time management.

The project began its implementation in Chile in 2008 and it was fully operational starting in 2009.

teachers, and a significant increase in learning, among others. A similar situation occurred in Tanzania in 2007, where schools, teachers and students were in similar situations before the implementation of the intervention. After two years of program implementation, Tanzania has experienced comparable results in the same direction as those obtained in the Philippines.

Since then, members have been added to this initiative. Thus, Nokia, Pearson, Telefonica, the Chilean Association Pro United Nations and the Chilean Association of Municipalities in 2009 began the design and implementation of the third BridgelT project, in this case in Chile, becoming the first country in Latin America to participate in this initiative.

BridgeIT Chile, whose local name is Puentes Educativos, is the pioneer in Latin America experience of implementing this initiative.

Social Impact of Puentes Educativos

When aiming to improve the educational quality poor children receive, the program BridgeIT Chile focuses on one of the weakest aspects not only of the Chilean education system but of South American as a whole.

In the same manner, the impact of the program can be really significant, considering the fact that if Chile succeeded in raising the quality of their education at the same level of its per capita income could increase growth by up to two percentage points (Brunner and Elacqua, 2003). Additionally, if Chile would reach the international average in math and science performance as measured by the TIMSS⁶, it could increase its total factor productivity (TFP) by 0,7 percentage points.

BridgeIT Chile will cover five regions of the country, Coquimbo, in the north, the Metropolitan Area of Santiago, Araucanía, which contains the highest percentage of indigenous population in Chile, Los Lagos and Aysén, on the south.



⁶ Trends in International Mathematics and Science Study

In total, the scheme will benefit over 210 public schools, 22,000 children from urban and rural 5th and 6th grade (primary education), and 660 public school teachers in these regions.

Those schools educate 70% of the students who are in the poorest socio-economic group⁷.

Teachers and students will have access to an extensive library of educational videos produced by Pearson Foundation, translated and adapted to the Chilean curriculum for Math, Science and English. The teachers can download the content for their classes using the mobile phone Nokia N95. Internet access for downloading videos it will be subsidized by Telefonica, decreasing connectivity costs for schools and municipalities (local governments).

Mobile technology and digital resources will also be used as an educational tool aimed at creating an environment amenable to participatory learning, which implies a greater interaction between teacher and student, and a class that promotes the implementation of practical activities. The BridgeIT methodology provides, in effect, a rigorous annual planning of each of the classes to be undertaken by each teacher, in which the digital resource figures prominently, as well as the participation of students and the teacher's work as facilitator.

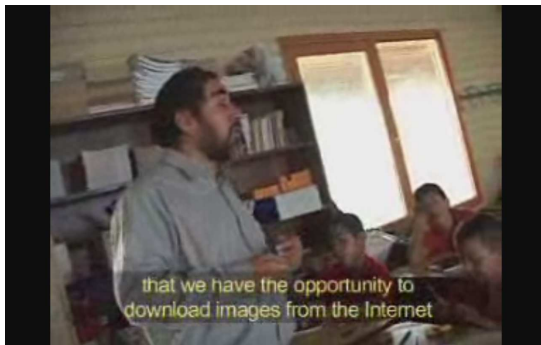
Current Status

In January 2010 we developed the first Curriculum Development Workshop *BridgeIT Chile* in Santiago. The workshop trained 19 teachers from urban schools of the Metropolitan Region in methodology and technology issues.

⁷ In Chile, the condition of poverty is derived from 30% of students from lower socioeconomic status.

84% of teachers said she was "very satisfied" with practical learning achieved during the workshop regarding the use of Nokia cell phone in the classroom, 10.5% reported feeling "satisfied" and 5.3%, "quite satisfied".

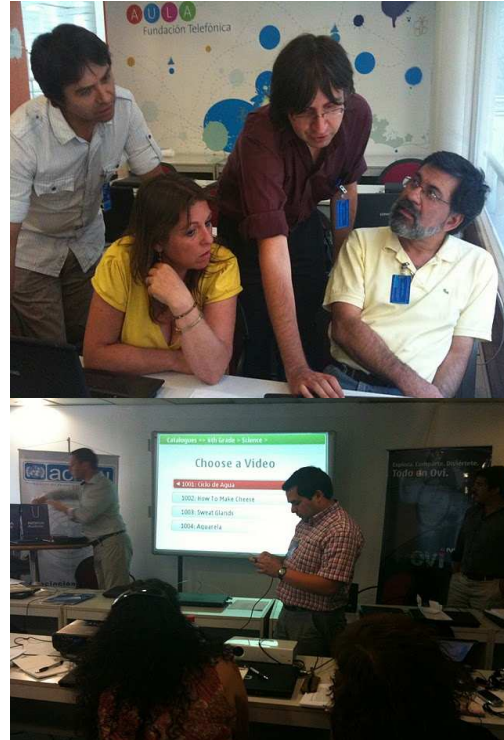
Based on past experiences, among these first teachers there will be a select group of them, who act as *curriculum leaders*, being in charge of training - with the *Bridget Chile* team – other teachers who will join the program later this year and during 2011.



The result of this first workshop was measured through a satisfaction and evaluation survey applied for teachers, getting positive feedback on their first approach to Puentes Educativos.

The majority of teachers reported high satisfaction with the achieved level of knowledge about the program and its objectives, and also with respect to the contribution that the program means for their personal and professional development. They also provided positive feedback about their understanding on how the video is integrated into the content of the curriculum of primary education.

Similarly, they expressed high satisfaction with the skills developed to incorporate technology into lesson planning and knowledge of the practical use of Nokia mobile phone in the classroom.



Based on the previous results and the agenda, starting in March 2010, *Bridget Chile* will target the classrooms of Chilean public schools mainly in the poorest districts of Santiago.

The following schedule shows in a simplified way the phases of the Project.

Puentes Educativos Schedule								
	Year 0		Year 1		Year 2		Year 3	
	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 3	Sem. 4
Phase 1								
Phase 2								
Phase 3								
Phase 4								
Phase 5								
Phase 6								

Phase 1: Resource Management, Phase 2: Design and Planning, Phase 3: Training and Development of Lesson Plans, Phase 4: Implementation, Phase 5: Monitoring and Tracking, and Phase 6: Evaluation.



Starting in June 2010, the project will be implemented in other regions of the country. During that month we will also hold the first training for one hundred teachers from the Region of Coquimbo and rural schools in the Metropolitan area. Additionally, teachers trained by the program will receive a book with the complete record of class schedules, educational materials and other recommendations for proper implementation of the *BridgeIT Chile*.