
[The Luces para Aprender programme: how electricity can improve the quality of learning](#)

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Rural education

Educational facilities

Since 2011, the [Organization of Ibero-American States' \(OEI\) Luces para Aprender \(LPA\)](#) (Lights to Learn) programme has contributed to improving the quality of teaching and learning in rural schools throughout Latin America through multi-sectoral cooperation in the areas of electricity supply, Internet connection, teacher training and community strengthening. We spoke to Angélica Páez, head of the LPA programme at OEI to find out more.

Origins of the programme

One driving factor was a request put forward by the government of Nicaragua, which described the educational reality in the country's rural schools. Based on what the Nicaraguan ambassador told the OEI, we learned that the schools in question were located in isolated areas with inadequate infrastructures, classes were mainly multi-grade, which is in itself a pedagogical challenge. These schools also had a high teacher turnover rate, it was very difficult to prevent pupils from dropping out and absenteeism levels were high. The geographical isolation of these schools leads to certain problems: such schools are the worse off in terms of the quality of teaching, and around 6,040 schools in the country are without electricity.

Unfortunately, this is also a reality in other Latin American countries, such as Peru and Colombia, which respectively have over 14,000 and 4,000 schools with no electricity, and also in Honduras, a smaller and less densely populated country compared to Peru and Colombia, where 6,500 schools are without electricity. The Secretary of the OEI decided to scale up efforts to give greater visibility to the issues in order to develop an initiative that could address the challenges of improving the quality of education by bringing together and empowering the

different stakeholders.

Gradually we began to gather information, which was no mean feat as the statistics in our countries are not up to date: this work helped the individual governments do this. The research phase lasted several months and during this time we learned of similar projects being carried out in the region, and the difficulties they encountered.

Commissioning: fundamentals and technical design

The *Luces para Aprender* programme was approved in 2011 at the [21st Ibero-American Education Conference](#) by the ministries of education of Ibero-American countries: "The launch of the programme was endorsed on a political level, and this green light was essential. We then came up with a technical definition of what we wanted to achieve, as well as the main objective of the LPA programme." It was agreed that the main goal of the programme should be to improve the quality of education in rural areas through five approaches:

1. Installing photovoltaic units in rural schools
2. Providing IT materials
3. Providing internet connectivity to tackle geographic isolation
4. Training teachers to move forward in terms of quality, e.g. digital literacy, methodological and pedagogical suggestions, etc.
5. Raising awareness and community support: "The LPA is based on the principle that schools are the beating of heart of community life. Thanks to the technology, schools can now be used for additional purposes, such as adult education or letting community members recharge their mobile telephones or electric lamps."

This implementation goes hand in hand with the OEI's financial commitment: "In parallel to all the political and technical decisions, the OEI created a Solidarity Fund, which remains in place today not only for the LPA programme but for many of the organization's other initiatives. This Fund was used to finance a pilot LPA project in each country that requested it, and this first step enabled us to coordinate our efforts, particularly with ministries of education. We then worked with other public and private stakeholders. To do this a significant amount of autonomy was granted to each country while respecting their idiosyncrasies and different realities. Individual countries were responsible for choosing which schools would take part in the pilot project."

When designing the project, initial responsibility was assumed by the General Secretariat, with advice from the Spanish foundation [Energía sin Fronteras](#): "According to the methodology we had adopted, over time we were able to develop recommendations and technical guidelines to support the implementation of the LPA programme. These recommendations were drawn up by the national offices in charge of implementing the projects. At the end of this process, a technical intervention model bringing together all the project recommendations for each stage and each main component, was created. Today, this technical model is a great source of pride as it makes it possible to standardize the experience, which is often the most costly part of a project. This 'manual' was enhanced with an [impact study](#), which we conducted last year with independent evaluators."

Coordination between the various stakeholders was initially carried out by each national office and the OEI, as well as the General Secretariat in Madrid. It is one of our strong points as it means we don't have to rely on intermediaries as we already have offices and technical personnel in 19 countries. The coordination with the ministries of education, other ministries and private companies is governed by institutional cooperation agreements. The commitments were of a technical and financial nature. In many cases, these were financial contributions in cash or other types of in-kind contributions including infrastructure and resources. The OEI created an overall project organization and management plan, which set out the position and role of each stakeholder based on their skills. In addition to providing funding, the OEI also contributed content. In some cases, the LPA joined up with other governmental initiatives in order to create synergies. The LPA programme was adopted as the model but it was essential to capitalize on what already existed in the countries.

Strong points

- The LPA helped highlight the plight of rural schools, which lag behind on a social, economic and political level.
- The technical intervention model was accessible to all the governments and, more generally, encouraged international cooperation.
- The pilot experience was standardized and its results were published in an education impact study. Feedback collected over six years was validated.
- The programme can be replicated and extended to other countries.
- Alliances were created with the various stakeholders.
- Alternative uses of the schools' facilities/equipment provided by the LPA opens schools up to the wider community. These new activities can include leisure activities, training, adult education and even electricity charging points.

What needs to be improved

- The technical aspect in terms of connectivity was the most complex: it was not possible to connect all the 556 schools to the internet due their geographical isolation. Generally, to connect the most isolated schools to the internet, the only option was the most expensive one (satellite connection). We therefore plan to offer training solutions for teachers and the local population using offline computer equipment to avoid the need for an internet connection.
- Improving long-term support for teachers: once the initial intervention is completed, support must be provided, although in some cases this has proved difficult. It must be integrated with other government programmes or through strengthening teacher collaboration e.g. creating a network of LPA rural schoolteachers.
- Strengthening support for educational bodies at different levels: while we have a very sound strategy at the national level, it must be strengthened at the local level.
- Providing pedagogical resources to contribute to improving teachers' digital skills.

Outreach and consequences at the regional and international level

This programme was specifically designed for the Ibero-American region. It covered 556 rural schools serving 25,934 students and 1,197 teachers in 13 participating countries. As a first

experience, we have been able to validate a technical intervention model in these 13 countries: the validation aspect is sound. The scope is very broad not only quantitatively but also qualitatively: dealing with the very different and diverse realities of Latin American countries was a challenge as internal functioning and dynamics of cooperation with governments and ministries, and also the role of private enterprise varies from one country to another.

Over the six years, 13 countries in the region launched a pilot LPA project: Argentina, Bolivia, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, Peru, Panama and Uruguay. In Uruguay, thanks to the development of the LPA, 100 % of rural schools without electricity have been connected to the network thanks to the joint efforts of both public and private, national and international institutions, e.g. the [Fondation Elecnor](#), [UTE](#) (state electricity company) and the [Plan CEIBAL](#). For its part, the OEI has allocated around four million USD to implement the programme in addition to mobilising public resources, such as ministries of education and other public and private institutions. Moreover, adds Angélica: "The scope of the programme means that it is known outside Latin America: our participation in the [WISE \(World Innovation Summit for Education\)](#) summit was very beneficial in that we were observed by appraisers and experts for three consecutive years and finally rewarded in 2017 (among other projects). Another aspect that I consider important is a short film we made as part of the LPA programme entitled [Bienvenidos](#), which was a key part of the project's dissemination strategy. It's not a documentary per se but rather an opportunity to talk about rural education in our countries."

In 2018, an [external evaluation of the educational impact](#) of the LPA produced the following results:

- 88% of teachers think that the LPA has improved pupils' motivation.
- 75% of educational bodies say the programme has strengthened their country's education guidelines.
- A score of 8.5/10 was given in the evaluation of the OEI's contribution by educational bodies.
- Eighty-one promising education policies and practices were identified.
- The LPA reduced absenteeism and increased the commitment of families and pupils, as well as improving children's attention, the learning and development of basic digital skills, and the schools' environments.
- Overall, the programme contributed to overcoming the isolation of rural populations by reinforcing their capacity and by involving them in the project.
- Finally, thanks to the LPA programme niches and work challenges were identified for the OEI and other educational bodies.

Expanding the LPA programme

In recent years, steps have been taken to bring LPA to other countries, especially Lusophone countries in Africa, Angélica explains: "The OEI has a regional coverage in Latin America that includes Portuguese-speaking countries in Latin America and Europe (Brazil and Portugal). Some years ago it was decided to have much closer and more direct action with the Lusophone countries of Africa and Asia. As a result of this decision, opportunities were opened up and one of them has been to expand LPA in Mozambique, carrying out a first mission to meet with the country's educational authorities in 2018".

"Today", says Angelica, "LPA's expansion is entering a new context and is the result of COVID-19, the global pandemic that has been no stranger to the world of education. More than 177 million students throughout the Ibero-American region have been affected by an unexpected crisis and projects like LPA are regaining their relevance and importance for the population, especially the most vulnerable.

LPA will help to answer questions that are currently being asked by the region's education systems: how to reduce the gaps that have deepened with the pandemic, how to recover learning time for those students from rural populations who have seen their classes suspended without being able to go to school and without the possibility of having an online class from their homes, how many children from the countryside may not return to school?" OEI has created [a space for educational resources](#) that aims to provide freely available educational resources at all levels to the teaching community, students and their families. The objective is to mitigate the impact of the coronavirus pandemic on the interruption of classes and thus guarantee the continuity and quality of learning.

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