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CONNECTING E-DAARA SCHOOL IN SENEGAL

PROVIDING THE FIRST INTERNET CONNECTIVITY TO A SCHOOL IN SENEGAL

E-daara of Thieyetou, Senegal. Photo credit: Internet Society

EXECUTIVE SUMMARY

The Senegalese Chapter of the Internet Society (ISOC) has provided connectivity and information and communications technology (ICT) equipment to the primary school in Thieyetou, a forest-encircled village of 1,800 inhabitants in the Diourbel region of Senegal. An ISOC Community Grant in 2017 facilitated the purchase of desktop computers, tablets, a printer, and long-range router, as well subsidized the significant travel costs necessary to reach the remote area. The project's goals for its implementation of connectivity include increased school retention rates, improved socio-cultural cohesion, and enhanced academic materials and methods for its pupils.

Keywords: Wireless, school, education, Senegal

CONTEXT

Senegal is a country located in West Africa with deep French colonial roots and a population that is more than 90 percent Muslim. Education in Senegal is split into two very different, and often competing, systems: secular education in the form of Senegalese state schools, and Islamic education in the form of Qur'anic schools (daaras). Senegalese state schools are modeled after the French education system and offer a standard curriculum of subjects like mathematics and grammar, while Qur'anic schools prioritize learning and memorizing the Quran along with values of obedience, respect, and piety.

For religious, ethnic, and cultural reasons, parents often send children to daaras for informal Qur'anic education to instill Muslim values before transferring them to the formal state schools. According to the Paris School of Economics, however, about a third of all boys and about a sixth of the girls continue through long-term Qur'anic schooling. These religious schools are tuition-free, resource-deprived, and do not have any set curriculum or timetables, often resulting in poor quality education. The high demand for Qur'anic schools is partially attributed to a struggling public education system. With widespread poverty and low prioritization of education, enrollment in the state schools is relatively low. In recent years, there has been an increase in school ICT initiatives throughout the country, but there are numerous barriers in place including maintenance of computer networks and connectivity due to untrained locals and poor electrical infrastructure.

Senegal			
Population (UN, 2015)	14,967,446	**Fixed broadband subscriptions (%) (ITU, 2016)**	0.64
Population density (people per sq.km) (UN, 2015)	76.08	**Mobile cellular subscriptions (%) (ITU, 2016)**	98.68
Median household income (Gallup, 2006-2012)	N/A	**Individuals using the Internet (%) (ITU, 2016)**	25.7
Education (Mean years of schooling) (UNDP, 2013)	Male: 5.6 Female: 3.4	**Individuals using the Internet by Gender (%) (ITU, 2016)**	N/A

PROJECT DESCRIPTION

The village of Thieyetou, while small and remote, is a cultural touchstone in Senegal, as it is the birthplace and burial site of Cheikh Anta Diop (1923-1986), a scientist and philosopher. Providing Internet connectivity to the primary school in Thieyetou, which also serves the children of the surrounding villages of Garame, Ndari, Koure, and Ndialigue, aims to empower and support students in pursuing their education by narrowing the resource gap between this school and better equipped urban institutions in Senegal.

An ISOC grant has made Internet connectivity available for the very first time in the village. In addition to enhancing the school's academic resources, the school functions as an Internet café for the community at-large. By charging a nominal fee for Internet usage and garnering the support of the community as a whole to protect, value, and maintain these newly available ICT resources, the project has made strong progress in developing a sustainable model of connectivity for the area.

Project details			
Technology	3G	**Training**	Only required training by the Ministry of Education for teachers
Year program started	2016	**Cost to users**	Free
Geography	Forest-encircled, remote village	**Total cost of program**	Fixed cost: US$ 10,000 Operational cost: US$ 3000 per year
User profile	220 students 4 teachers 4 classrooms	**Associated organizations**	Alioune Diop University, Internet Society, L'Ecole Supérieure Polytechnique de Dakar

PROGRESS AND RESULTS

The primary school in Thieyetou currently has four teachers, eight class levels, and 230 pupils. While the Ministry of Education provides standardized print materials, the school has a dearth of supplementary materials for learning and lacks so much as a library. Internet connectivity is helping students access a greater variety of learning materials and helping them to develop research skills. Further, schools in Senegal are split into two types: national/secular and traditional/religious. While the schools under the aegis of the Ministry of Education follow a French-influenced curriculum and aim to prepare students for university study and professional development, the daara (Islamic school) provides instruction in Arabic and mastery of the Qur'an. By providing an open center for Internet connectivity, the project hopes to bridge the gap between students from religious and secular schools, as well as provide resources for religious students to access information and learning materials that would enable them to pursue further education, professional training, and communication outlets and skills that the daara alone cannot provide. At the same time, this common center will allow these two very different kinds of pupils to interact.

The project also promotes social and cultural cohesion. Secondary school and university students must travel far from the village in order to continue their education. Returning to the village during weekends and holidays poses a difficulty to these higher-level learners, as without Internet connectivity they lack the ability to keep up with their assignments. Thus, when older siblings leave the village, they rarely have the opportunity to return, and often leave their younger brothers and sisters without learning support. With the advent of Internet

connectivity, older students are better able to return to the village to improve both family cohesion and provide support for their younger siblings to progress and stay in school.

The school will receive free Internet connectivity and antennae installation from Alioune Diop University in Bambey soon, as the 3G gateway currently provided the project faces capacity constraints. The new connection will improve the quality and speed of connection, as well as allow a larger volume of Internet users to connect at once.

CHALLENGES

Lack of locally relevant and local language content – Though the Internet provides a rich variety of information and materials, open-source school-specific content is not always suitable for Senegalese pupils. Much of the available material in French includes Western biases that makes the content unhelpful for the Islamic African population of Senegal. Well-developed materials from the national curriculum are available to the school, but only in print format. The lack of digital materials can pose obstacles to the integration of connectivity in the classroom.

High electricity costs – Uneven electricity supply and high utility costs have, at times, been prohibitive for the project's long-term sustainability. The project is soon planning to invest a further US$ 3,000 of its grant money into a solar kit, which will reduce costs and improve sustainability.

Lack of skilled manpower – Transportation has been the most challenging and expensive aspect of this project's deployment, with researchers and technicians needing to make installation trips across difficult-to-navigate roads with delicate equipment and bring days of their own food, water, and other personal supplies.

ISOC-SENEGAL'S SUGGESTIONS FOR FUTURE PROJECTS

Planning and remote monitoring can help reduce transportation costs – Because the transportation challenges are so prohibitive, the project found that planning and preparation as well as remote participation is useful. While their presence in the village is sometimes necessary and face-to-face contact is an important element of their successful creation of an Internet-friendly environment, technicians and project planners can often accomplish a lot without overspending time and money on travel back and forth to the site.

Engaging community leaders and the community is helpful to project take up – The project planners focused on reaching out to local community leaders. These figures, religious scholars, and clerics have the respect of the local community and a great deal of influence. Relatedly, the project has learned that the involvement of the community as a whole is beneficial. By communicating well to the entire population and providing opportunities for them to also use the facilities, the project increases not only ideological support for their mission, but also lowers the risk of equipment damage and theft.

SOURCES

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Project website: https://www.internetsociety.org/blog/community-grants-community-projects/2017/01/e-daara-de-thieyetou-internet-au-cœur-du-village