



Bridging the Digital Divide: Empowering Education in Nucchu, Bolivia through Open Education and Technology

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ABSTRACT

This honors thesis focuses on improving access to information and education for the students and teachers of Nucchu, Bolivia, by providing their school, U.E. German Busch, with a RACHEL device (Remote Area Community Hotspot for Education and Learning) and other educational technologies and supplies. The school currently lacks the funds and resources to access educational materials. Working through the World Librarians club at the University of Massachusetts Amherst, which provides openly licensed educational resources to six schools in Africa, I introduced the RACHEL device to Nucchu. Open Educational Resources (OER) are openly licensed materials that are freely available allowing users to modify, translate, and re-distribute them without any permission and at no cost. The RACHEL device, which has pre-loaded content such as Wikipedia, Project Gutenberg, and Khan Academy, provided an instant educational library for the school upon delivery.

BACKGROUND

As part of the World Librarians club at the University of Massachusetts Amherst we work to provide free, openly licensed educational materials to schools in Kenya and Malawi Africa. Our goal has always been to expand the schools we support and through my honor's thesis I have added the U.E. German Busch School which is located in Nucchu, Bolivia to the World Librarians program. The school currently lacks access and funds to internet connectivity and up-to-date technology, severely limiting the educational materials available to students. My project provided a RACHEL device—which acts as a remote area community hotspot for education and learning—to enable free access to OER and additional technology for the students and teachers. Within World Librarians, we aim to ensure equitable access to educational resources, empowering both students and educators with essential tools for enhanced learning experiences in parts of the world that lack resources and funds for education. Since adding the U.E. German Busch school I am working towards that goal of ensuring equitable access to educational resources to help both students and teachers succeed.

To learn more about
World Librarians, scan
this QR code! →



RESEARCH

- Extensive research on Bolivia's education system, including its historical inequities and the ASEP reform, helped inform my approach to provide them with material they want, not what we think they want.
- Communication with teachers also ensured that the resources provided matched their needs.
- This analysis highlighted the systemic barriers affecting rural education and guided the design of culturally relevant content.



METHODOLOGY

- On January 6, 2025, I conducted a 3-hour workshop at the U.E. German Busch school to train the director and a teacher on using the RACHEL device.
- Since then, I've maintained communication with the teachers via WhatsApp to ensure smooth use of the technology.
- The teachers have already received and found useful the resources they requested.



FUTURE GOALS & RESULTS

- By providing these technologies and openly licensed materials, I've increased access to information for both the teachers and students at the U.E. German Busch school.
- I am working with another student in the club to implement a survey for material assessment.
- I am in the process of creating instructional videos on how to upload to the RACHEL and how to utilize the resources that it offers. These videos will include Spanish captions so that the teachers in Bolivia can understand and teach the process to others.
- I also plan to return to Bolivia at the end of this year to check on the school and possibly return with more RACHELs for the other communities around that could benefit from it.

