



# All Things Ignatian



## Confronting Social Justice of Water Quality and Public Health through a Service-Learning Program in the Dominican Republic

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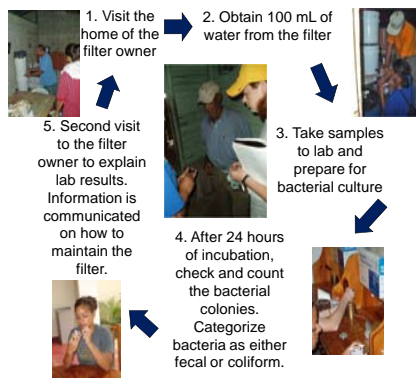
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### Abstract

Rural families in the Dominican Republic have limited access to a continued supply of potable water. Since 2003, the Institute for Latin American Concern (ILAC) has directed a public health program centered on social justice and human dignity that distributes low-cost personal water filtration systems, consisting of two 5-gallon buckets, ceramic filter, and a spigot that provide a reliable source of purified water. A major obstacle to creating a successful program to combat social and economic injustices is the lack of education about the role bacteria and pure water play in the cause and prevention of gastrointestinal disease. Our service-learning model is a combination of household visits and sampling and analysis of water from the filters and local water sources. With the aid of a community health provider, students conduct filter inspections and take samples to be cultured, testing for the presence of fecal bacteria. The educational aspect of the program is built upon the students returning to households and explaining the results to owners. The explanations include demonstrations of proper usage, maintenance and repair procedures. This has been a vital step in the project's sustainability. Approximately 90% of the filters sampled produce low or no risk water according to the World Health Organization standards. About 200 filters in 12 communities can be tested and revisited in a one-week period by using three teams. Sustainability is also maintained by a filter cost/payment model to enable a permanent employee to oversee the program and purchase supplies for new filters.

### Background

- Every year there are 1.6 million diarrheal deaths related to unsafe drinking water, inadequate sanitation, and poor hygiene.
- Each day, nearly 4,000 children die from diarrheal diseases resulting from contaminated water supply.
- More children die from water-related illnesses than AIDS, malaria, and measles combined
- The Water Quality Program works within the ILAC healthcare system to provide safe drinking water for rural families. Point-of-use water filters, bucket filters are supplied for purchase by rural Dominican households.



Social Justice In Action

### Water Quality Program

- CULTURAL AWARENESS
  - Students see through the label of a developing country to learn that, despite significant economic difficulties, Dominicans have a great sense of pride in their culture and identity.
- SERVICE AND IMMERSION
  - Students work, not for the community, but together with individual members of the community on service projects and water quality testing.
  - Direct cooperation creates a shared sense of dignity and accomplishment that is as uplifting to a community as the results of the service itself.
  - Latrines are built and concrete floors are installed to address improper sanitation issues.
- JUSTICE-CENTERED SCIENCE
  - Students construct point-of-use filters made from two 5-gallon buckets, a ceramic filter element and a spigot.
  - Microbiological analyses of source water and water from the filters are performed in a field environment. Usage of the filters is thoroughly documented through an interview with the owner. Results from the analyses are communicated directly to the user and reported to ILAC staff.

### Science & Justice Issues

- Attempts to address justice issues in developing countries develop most often from the humanities and rarely employ the physical sciences.
- Students develop a unique and valuable perspective on their science education as a way to improve the lives of others by applying chemistry and biology to real world problems.
- The program works to educate rural communities on contamination, the importance of clean water, maintenance and proper filter use. Creating knowledgeable community leaders has helped in the effort to establish self-sufficient communities

### Social Justice

- Provides an understanding of the need for safe drinking water to both the participants and the Dominicans.
- The filters are distributed to families accompanied by education on safe drinking water by displaying the resultant bacterial tests and explaining what unsafe drinking water looks and smells like.
- Dominicans take away education about proper personal hygiene and the association of gastrointestinal disease with bacteria in water.
- Participants gain an understanding of Dominican culture, poverty, the importance of family and relationships uninhibited by materialism.