

## **St. Denis Curriculum Development Project**

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by Dave Sommer

We are taught that the modern age has required of us, of its human benefactors, a reexamination of the self, of the role of the individual in the now global community. This is realized on many levels: in the classroom or the university, in the discourse of nations, in the parent teaching his or her child the cultural narratives that have been molded and transfigured by generations. It remains nonetheless apparent that the question still hangs in the air, that the role is unresolved, and that human necessity confronts us with the demand to choose. For the student, this confrontation is manifested in education itself. What we are taught must be distilled into something we can believe. Our classes, our projects, our ideas hinge on the resolution of the ideological confrontation. Often, when the matter is too pressing, we are content to let the question slide, to declare the point mute and meaningless. Yet, when the world demands a justification of our choices, we are at a loss for words. It is at this moment that we must choose.

Social institutions make a point of stating their purpose outright, of making the ideological choice that justifies their creation and perpetuation. One merely needs to search their websites to get a sense of this. It is interesting, then, when the individual must define his or her role within an institution. The problem becomes much more complicated than a one sentence mission statement. For the past two years, these dynamics have been at work in the National Science Foundation sponsored humanitarian engineering teams. A group of Mines students have been using their knowledge of math and science over the past two years, in coordination with Mines faculty, staff, and members of the community, to serve the global community in exactly this way. The students have been helping St. Denis Secondary School, a small school in a poor rural Ugandan community, improve its ability to educate its students about applied science. In this regard, the Mines students have developed lesson plans, designed to help Ugandan students pass the national exams of Uganda, as well as give the Ugandan students a deeper and more intuitive understanding of experimentation and science in general. They have also developed a LON-CAPA-like environment to help teachers improve their students' ability to solve numerical problems.

Maria Camp, founder of Into Your Hands, a group based out of Evergreen, CO dedicated to helping children and families in rural Uganda, first contacted Mines about St. Denis. After having lived in Uganda for a number of years and needing a community service project for a group she was involved in, she visited St. Denis. "I visited St. Denis and Makondo in 2004 and again in 2006. After visiting the school, the students, and their families, I knew I could not turn my back and walk away from their hopes and dreams," Camp explained.

With Into Your Hands, she has provided over 100 scholarships per year for orphaned secondary school students, helped complete construction of the school's library, and furnished the computer lab with computers, an internet connection, a printer, a scanner, and a copier. Furthermore, the group has provided beds and mosquito nets for the girl's dormitory at the school and is working on providing the same for the boy's dormitory. Working with CSM Humanitarian Engineering students and Dr. Dave Munoz, they helped implement a water system which benefits both St. Denis and the community.

Despite all this work, there is still much to be done. "Although the library building is completed, there are no books in the library! Last year, we collected funds for 100 required books...this year we are holding a rotary sponsored book drive to collect over 10,000 books that will be shipped to supply books for 5-6 school libraries." With this in mind, the Mines students have teamed with book publisher Pearson to supply textbooks related to the curricula they've created. Scott Day, a representative for Pearson, explained why they are eager to help the St. Denis. "[I]n a brain-powered world no job is more important than helping people to learn. That is precisely what these Colorado School of Mines students and the "Into Your Hands" organization are doing for the people in Uganda." The following books are being given to St. Denis' library. 4 copies of Biology 8th edition by Campbell, 4 Instructor resource CD ROM/DVD's for Biology 8th edition, 4 copies of University Physics 12th edition by Young and Freedman, 4 instructor resource CD ROM/DVD's for University Physics 12th edition, 1 copy of Five Easy Lessons: Strategies for Successful Physics Teaching by Knight, 1 copy of Biological Inquiry: a Workbook of Investigative case Studies by Campbell and teacher's guide. According to Day, "These are the tools that the teachers need to provide a world class educational experience for the students at St. Denis Makondo Senior Secondary School."

Mines teachers Dr. Barb Moskal and Dr. Bob Knecht are also involved in the project. Both believe the project will be beneficial to the students of St. Denis. "The world is increasingly becoming a global economy. In order to compete in this economy, all students need an appropriate education in mathematics and science," according to Moskal. "We don't believe that our curriculum is perfect. However, it is a start in the right direction," she added. Knecht feels similarly. "It is our responsibility to develop something appropriate for them. If you make it so they can use it...and can change it, it will grow...and they will start making changes and...it will be sustainable."

It seems fitting that the information revolution at the heart of globalization should be used to improve the lives of people now connected in a global community like the students of St. Denis. This is one approach to the ideological and sociological challenges posed by modernity. Improving the education of an interconnected world is one step toward resolving the problems of an imbalanced society. One accepts a stake in the world. One chooses a role.