Engineering South of the Border: A Librarian’s Experience in Nicaragua

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Engineering South of the Border: A Librarian’s Experience in Nicaragua

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ASEE Annual Conference,
San Antonio TX
Monday, 11 June 2012
Atlantic Ocean

Mexico

Guatemala, Honduras

El Salvador

Nicaragua

Costa Rica

Source: Alexrk2 (2010).
AGII / IGIA

Applied Global Innovation Initiative
of Grand Valley State University

**Iniciativa Global de Innovación Aplicada**

- **Vision:** Empowering people to change their world with their resources

- **Mission:** Through product innovation that is interdisciplinary, intercultural, and innovative in approach the Applied Global Innovation Initiative empowers individuals (communities, faculty, staff, and students) to address challenging environmental, economic, and social issues facing the world’s poorest populations.
AGII Partners

- Grand Valley State University
  - Dr. Paul Lane, Seidman College of Business
  - Dr. John Farris, College of Engineering
- UNAN-Managua & FAREM Estelí
- CENAC – Spanish language school, Estelí
- Tiger Studio Design – Industrial design, Zeeland, MI

Source: W. Beckmann
AGII – May 2012

• ~130 Participants:
  o 100+ students from UNAN’s campuses
  o 25+ UNAN faculty
    o Including various engineering disciplines, business administration, economics, computer science, psychology, anthropology, philosophy
• 4 Nicaraguan translators
• 5 AGII Project Coordinators and ~dozen project partners and volunteers with a range of skills and backgrounds
# Teaching Innovation in a Week

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Getting Acquainted

“Human Knot”
Brainstorming, Screening

**Grupo Café**
- Pino + Bambú + Material reciclable
- Lámpara que marque la hora y de una alarma
- Crear materiales de construcción a base de desechos
- Abanico solar
- Elaboración de jugos a base de aceite de cocina

1. Adaptación a lo húmedo en los cultivos
2. Tratamientos de líquidos (Lactosa)
3. Selección de residuos sólidos
4. Sustituir el gaseímetro de biogás por coque
5. Implementación de iluminación bidireccional

**Nº 21**

- Desarregrador de ropa
- Lavadora recicladora de agua
- Combustible natural para auto
- Energía renovable doméstica
- Lava plato económico
- Deshidratador de alimento

Grupo Amarillo...
- Utilización de energía en las zonas desérticas
- Idea de organización de las actividades de trabajo
- Productos no orgánicos
- Hábitos de alimentación
- Deseos de cambio de costumbres
- Estudio para medir la Sal
Making Models
“Taxi Pitch” aka “Elevator Pitch”

Source: P. Haynes
And having fun!

Recycling Plastic Bottles

Paper Airplane Competition

Hat-making Competition

Spaghetti & Marshmallow Towers
Receiving Recognition
Next?

- AGII staff, with input from Tiger Studio Design, will select 1-5 ideas from among those developed and presented in May.

- Program leaders Dr. Lane & Dr. Farris will return to Estelí with Tiger Studio staff for a week in August to provide support for further development.

- **AGII Goal:** At least 1-2 new product roll-outs reported by Nica participants in May 2013.
Engineering South of the Border: A Librarian’s Experience in Nicaragua

I will spend the first half of May’12 in Estelí, Nicaragua, as a volunteer member of a project to teach product innovation and development skills to students and faculty of the Nicaraguan national university system. The two leaders, Engineering and Business faculty members from GVSU, require no special expertise or language skills for volunteers, but are excited at the prospect of having a library professional among the support group in this year’s seventh annual iteration of the program. I look forward to sharing what I learn about engineering and academics in a culture eager to develop.

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Credits

• Photographs by D. Morrow (2012), unless otherwise noted.

For more information about AGII, contact:

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• Program website: http://www.gvsu.edu/agii/