

# Collaborative Bi-lingual Cross-cultural Online Learning Module Development: Partnerships, Production and Pedagogy

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## RESUMEN

El Consorcio de Educación a Distancia Americanos (ADEC) universidades miembros han estado trabajando en el diseño y desarrollo de módulos bilingües interculturales de aprendizaje en línea con los socios de la Central de Agricultura de Radiodifusión y Televisión de la Escuela (CABTS), dependiente del Ministerio de Agricultura de China en Beijing durante tres años. Los primeros prototipos de módulos de aprendizaje se completará en Noviembre de 2013. La propuesta de la ADEC para EDUTECH Costa Rica es presentar estos módulos de aprendizaje prototipo para la primera demostración pública, y abrir el debate para ampliar alianzas para el desarrollo de módulos con universidades americanas, las universidades y las organizaciones Latinas. Los módulos culturales bilingües y cruz prototipos se están desarrollando en Inglés / Chino e Inglés / Español. Dominación de estos tres idiomas a nivel mundial nos guía en este sentido.

Los prototipos de módulos de aprendizaje que se están desarrollando en este momento son módulos diseñados para incorporar el aprendizaje interactivo que se centra en un solo objetivo de aprendizaje. Los módulos prototipo incluirán introducción y antecedentes sobre el tema—¿Por qué usted necesita saber esto—y luego usar el vídeo y simulación, junto con texto y audio con el paso del alumno a través de los conceptos. A lo largo del diseño del módulo será oportunidades de evaluación que ayudan a indicar el dominio del concepto. Si se necesita una revisión adicional, el módulo guiará al nuevo alumno a la mancha o de referencia adecuado para la interacción adicional sobre el tema. Los temas se centrarán en: 1) los procesos de riego y 2) el uso del nitrógeno por los cultivos alimenticios.

**PALABRAS CLAVE:** aprendizaje en línea, módulos de aprendizaje, bilingüe, transcultural, asociaciones

## ABSTRACT

The American Distance Education Consortium (ADEC) member universities have been working on the design and development of bilingual, cross-cultural online learning modules with partners in the Central Agricultural Broadcasting and Television School (CABTS,) part of the China Ministry of Agriculture in Beijing for three years. The first prototype learning modules will be completed by November 2013. The ADEC proposal for EDUTECH Costa Rica is to present these prototype learning modules for the first public demonstration, and to open the discussion for expanding module development partnerships with Latin American universities, colleges and organizations. The prototype bilingual and cross cultural modules are being developed in English/Chinese and English/Spanish. Dominance of these three languages globally guides us in this direction.

The learning module prototypes being developed at this time are modules designed to incorporate interactive learning that focuses on a single learning objective. The prototype modules will include introduction and background on the topic—why do you need to know this—and then use both video and simulation along with text and audio to move the learner through the concepts. Throughout the module design will be assessment opportunities that help indicate mastery of the concept. If further review is needed, the module will guide the learner back to the appropriate spot or reference for additional interaction on the topic. The topics will focus on 1) irrigation processes and 2) nitrogen use by food crops.

**PALABRAS CLAVE:** online learning, learning modules, bilingual cross-cultural, partnerships

## *Definition of the study purpose or problem*

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According to Francisco Marmolejo, Tertiary Education Coordinator, Human Development Network, at The World Bank, speaking at the Latin America Focus session at the UPCEA meeting in Boston recently, between 2025 and 2050, half the world's population will speak Mandarin Chinese and the other half will speak either English or Spanish, with English as the predominant second language. (Marmolejo, 2013)

The American Distance Education Consortium (ADEC) has been working on two international fronts to develop collaborative, bi-lingual, cross-cultural online learning modules. These modules will provide basic online access for learners to individual learning objectives with the ability to work through the modules in English and Spanish, or English and Chinese, or possibly Chinese and Spanish.

Clayton Christensen from the Harvard School of Business has clearly identified learning modules as a way to allow for customizable and individual learning experiences. Modules are emerging as a disruptive force in education. The proper use of technology for learning offers a chance for modularization and customized learning (Christensen et al, 2008.) By also utilizing the technology to add bilingual and cross-cultural examples, we increase the value of the customizable framework.

Also, according to the US Department of Education in a meta-analysis published in 2010, blended learning, where some learning occurs in a classroom environment and some occurs online, is more likely to get students and learners to understand and incorporate their learning into action because in the learning process they spend more time on task. (US Department of Education, 2010) In the case of the ADEC program, this blended learning happens using individual learning modules.

## *Contextual framework*

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ADEC is a consortium made up predominantly of Land-Grant and Public Universities in the United States. Among the U.S.-based members are University of Florida, University of West Virginia, Oregon State University, Ohio State University, University of Minnesota, Michigan State University, Washington State University and others.

Over the past years, international members in ADEC have included Zamorano University in Honduras and the International Institute for Cooperation in Agriculture (IICA) with headquarters in San Jose, Costa Rica. IICA has led ADEC representatives on a visit to EARTH University and the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) in Costa Rica to discuss possible collaborations. ADEC has also been a sponsor for workshops at the Universidad Nacional Agraria in Managua Nicaragua, and the College of Agriculture at the University of Costa Rica.

At the same time, since 2007 ADEC has been developing a partnership relationship with the Central Agricultural Broadcasting and Television School (CABTS) in Beijing China. ADEC, and the lead institution, Oregon State University, have implemented two Memoranda of Understanding with CABTS for collaborative professional development, module development, and sponsorship of an international conference tentatively scheduled for Beijing in fall 2014.

## Background

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In 2007, ADEC representatives also led by Oregon State University, met for the first time with the CABTS leadership in Beijing, China. CABTS, as part of the China Ministry of Agriculture, has a target audience of 900 million farmers and serves them through online and satellite system technology at 48,000 learning centers throughout China.

In October 2007, ADEC representatives gave an invited lecture for the instructional staff of CABTS (approximately 11,000 in attendance) that began to open the discussion on learning modules as a form of instructional support. (King, Gleason, 2007)

In September of 2011, ADEC and CABTS representatives teamed up to present at the US-China Distance Education conference in Nanjing. This was the first opportunity to explore possible Asian partners in module development. (King, Guishan, 2011)

Since then ADEC and Oregon State University representatives have met in China twice and in the USA two times also. These meetings have included professional development workshops similar to the Zamorano workshops, in Beijing, Xi'an, and Nanjing in China and Oregon, New Mexico, and Maryland in the United States.

Beginning in 1999, ADEC representatives began a series of workshops at Zamorano University in Honduras designed to develop faculty capability in online and distance learning. Workshop leaders from Oregon State University and the University of Florida traveled to Zamorano every other month for two and half years conducting three-day workshops for faculty. At the end of that time Zamorano faculty had developed the initial modules for a set of five online courses and had conducted evaluation of the modules.

After a year of additional work and fund raising, Zamorano faculty created an effective, size-neutral, world class distance education (e-learning) program for serving learners throughout Latin America through online and distance learning technology. The program is known as PAC @ D (Programa de Aprendizaje Continuo a Distancia or Life Long Learning Program at a Distance). It is administered by Zamorano's global center for distance learning and now has more than 40 fully online courses available for students off campus. (King, Poucher, 2013 submitted)

In addition, ADEC representatives from Oregon State University and the University of Florida have conducted workshops in Managua Nicaragua and University of Costa Rica College of Agriculture.

Working in Asia this year, ADEC representatives from Oregon State University, New Mexico State University and Pennsylvania State University will conduct a two-week workshop on "How to Teach Online" at the CABTS headquarters in Beijing beginning June 17, 2013.

### **METHODOLOGY**

The goal of the ADEC-based international project is to develop partnerships that will allow for the collaborative development of online learning modules that will be simultaneously available in multiple languages.

The initial effort has a dual focus; 1) on bilingual content development and 2) on the technology that can make the bilingual and cross cultural content available simultaneously.

Bilingual and cross-culture learning modules will require collaborative development among

multiple partners. These partners bring technical, content, and cultural expertise to the production efforts.

The production timeline calls for the development of two prototype bilingual online learning modules by November 2013. The prototypes will be developed by a team led by Oregon State University with support from instructional designers and technologists from CABTS, New Mexico State and Pennsylvania State Universities. The prototype modules will be in English and Chinese and in English and Spanish. The topics will focus on 1) irrigation processes and 2) nitrogen use by food crops.

Initial pilot work is focusing on agriculture sciences content because of the obvious interests of the CABTS partners and the potential interests at the University of Costa Rica and IICA. However once the technical framework has been developed, the templates will offer opportunities for any type of content.

Development of learning modules has begun with CABTS partners. Instructional designers at Oregon State University have drawn content from an existing fully online degree program in Agricultural Sciences. CABTS partners will continue development of the Chinese based text and culturally correct case studies for the modules during the June 16-28 workshop sponsored by ADEC in Beijing. In September 2013, CABTS will send two instructional designers to Oregon State University for two weeks to develop the modules and include the Chinese information.

## *Achievements attained*

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The learning module prototypes under design at this time and scheduled for initial release in November 2013 are modules designed to incorporate interactive learning, focusing on a single learning objective. The prototype modules will include introduction and background on the topic—why do you need to know this—and then use both video and simulation along with text and audio to step the learner through the concepts. Throughout the module design are assessment opportunities that help indicate mastery of the concept. If further review is needed, the module will guide the learner back to the appropriate spot or reference for additional interaction on the topic.

The outcome of the project will be to develop a repository of bilingual modules that a learner can access and work through in either or both languages. A learner may be fully bilingual but when the topic is sufficiently technical, he or she may want to switch to the other language for clarification and to be satisfied they understand the concept. In other cases, a learner could also use the modules for language exercises and practice. The ultimate goal is to provide the most robust and customizable learning environment of value to as broad a set of learners as possible.

## *Analysis of the experience*

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The effort to date has been focused on relationship and partnership building, as well as professional development. With current partners in Asia and potential partners in Latin America, the concept of using learning modules as building blocks for personalized and effective learning has been

discussed and expanded upon. Current partners have agreed that developing learning modules can be a foundation for a strong partnerships that are reciprocal and of equal value—perhaps in different ways—for each of the partners in the enterprise. As we explore the opportunities for international partnerships, the ability to work collaboratively in ways that provide equal value for all partners is the goal of the ADEC consortium effort.

## *Contributions of the experience*

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At EDUTEC Costa Rica in November 2013, we propose to offer a demonstration of the prototype bilingual learning modules, including a background discussion on the purpose and progress to date on the project.

This will also be the first opportunity to share actual prototype learning modules with possible Latin American partners for collaborative learning module development in Spanish and English. This will be the first public demonstration of the modules.

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