

Collaborative Development of International Learning Modules

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Abstract

Working together, U.S. universities (led by Oregon State University) and Chinese partners (primarily the China Central Broadcasting and Television School) will create a new form of bilingual learning modules that can be used by individual learners and institutions worldwide to provide information, education and training in agriculture and natural resources.

Background

American Distance Education Consortium (ADEC) members, led by Oregon State University, are working with partners in the national China Central Agricultural Broadcasting and Television School (CABTS) to plan and develop a new type of distance education learning module that will be bilingual and culturally correct. The modules will be built from existing foundational academic credit courses and non-credit workshop information.

CABTS Background

CABTS, established in 1980, is administered by the Chinese Ministry of Agriculture and jointly sponsored by 21 ministries and commissions of the central government. CABTS, with 2,560 branch schools at provincial, prefecture and county level, and 11,930 training stations in townships and villages has formed a comprehensive educational system for rural people with multiple functions of education, training, extension, science popularization and information dissemination.

In 2003, with the approval of the staffing office of the central government, CABTS was given another title as National Farmers' Science and Technology Training Center.

In 30 years of operation, CABTS has become a well-established school system that uses rich media resources for education and training. At CABTS, farmers learn by using radio, television, a satellite network and the Internet as well as text, audio and video materials, computer courseware and Internet courses. CABTS uses flexible and diversified approaches to deliver education, training and special features courses, which has had a broad, positive effect on society and is warmly welcomed by farmers.

ADEC Background

ADEC is made up of 25 active member universities from the ranks of U.S.-based land-grant universities and a growing number of regional community college members. ADEC international members include the International Institute for Cooperation in Agriculture (IICA) and the

University of Costa Rica, both in San Jose, Costa Rica. Oregon State University is the lead member institution in this collaborative international initiative.

U.S. land-grant universities have a mission-based commitment to provide people, especially rural residents involved in agriculture and natural resource management, access to the knowledge of the university. Because the CABTS mission is focused on training of farmers and rural residents in China, the opportunity for collaboration is logical.

CABTS and ADEC Program Details

Drawing on years of experience providing training and education for farmers, CABTS launched a series of programs in the past decade:

- Outreaching Villages
- Science and Technology Training Program of New Types of Farmers
- Business Startup Training for Farmers
- Training of Rural Labor for Transfer Employment: Sunshine Program

CABTS brings information and learning outreach to rural villages by using instructors, media resources and local training. These activities promoted new techniques, new results, new varieties and new methods of modern agriculture and enabled farmers to become technology literate.

CABTS has reached 4.14 million rural residents with secondary vocational education and about 760,000 people with postsecondary vocational education. And 1.4 million people have received collaborative higher education vocational skill certificates. CABTS agricultural practical technical training has reached about 0.24 billion person-time.

Universities that are part of ADEC generate more than 3 million student credit hours of instruction and non-credit workshops each year. ADEC member universities target learners in agriculture, natural resources management and technology. This is similar to the CABTS target audience.

In 2007, CABTS and ADEC representatives met in Beijing and began to discuss possible collaborative work. In 2008, ADEC and CABTS signed a memorandum of understanding that identified several opportunities for collaboration. To date, the ADEC/CABTS partnership and relationship has included training in ADEC member institutions, a U.S. study tour for key CABTS instructors, a study tour and training for U.S. professionals in China and distance training provided by ADEC experts.

While these opportunities have focused on training and professional development exchanges, what we propose in this paper is a focus on jointly developing basic learning modules on fundamentals in agriculture and natural resources.

Why Focus on Learning Modules?

Modules provide building blocks that allow customization of course development and, therefore, more effective learning by diverse audiences. Learning modules are smaller portions of a learning opportunity such as a course or workshop. A well-developed learning module follows

the same pedagogical guidelines as a full course, but it may focus on only one or more learning objectives. In some cases, learners can build a full program by choosing modules that address their unique needs.

ADEC member universities and CABTS have many courses, workshops and full programs made up of multiple courses that provide information and learning to our target audiences. Together, ADEC and CABTS can draw from these existing courses and workshops to develop sets of learning modules that can be used individually or together to promote a more customized approach to learning that reaches the needs of individual learners.

As an example, people in both arid and humid areas of Asia or the Western Hemisphere could use a learning module about the basic biology of growing plants. However, to address the specific needs of people and plants in these regions, the next set of learning modules will need to branch into separate information on growing practices in each area. Both CABTS and ADEC universities have programs that use the branching technique in their learning process.

As learning modules are aggregated into complex learning opportunities, such as courses or workshops, and become focused on detailed content, they will attract more specific audiences. General modules may attract large audiences who need to know the basics of a particular process or subject (e.g., plant biology). More specific modules (e.g., growing plants hydroponically) would attract smaller but more intensely engaged audiences.

Collaborative learning module development has unique value for international partnerships. Collaboration between CABTS and ADEC will allow the development of learning modules that have bilingual and cross-cultural content.

The learning modules we are suggesting range from simple demonstrations to more complicated learning opportunities that lead the learner to a specific learning objective with multiple parts. A successful learning module will include alternative branches that allow people with different learning styles to understand and use the information. For example, if learners understand a certain part of the information, they can move more rapidly through that portion of the module. However, if learners need additional resources or information or a different explanation or example, they can choose a different path. The technology available to develop learning modules allows for branching, and that branching is what allows us to plan truly bilingual and cross-cultural presentations in an individual module. The learner can choose the English or Chinese pathway, or the Asian or Western examples, or in some cases both.

Conclusion

Effective international partnerships are based on the ability to jointly meet the needs of partners and their target audiences, and on relationships built through shared expertise and trust. CABTS, ADEC and Oregon State University have developed a model partnership initially based on shared professional development. The partnership is now evolving to the next level of joint module development.

Rather than try to compete in the already full arenas of credit courses and university student exchanges, this partnership is focused on the CABTS target audience of 900 million Chinese

farmers and rural residents and the ADEC audiences of professional and adult learners around the world.

Based on these target audience numbers, CABTS is arguably one of the largest distance education organizations in the world. ADEC universities, also from multiple international Western Hemisphere locations, all have active outreach programs designed to provide information directly to producers and managers in agriculture and natural resources. There are fundamental similarities in information needs for the common agriculture and natural resources target audiences in the Western Hemisphere and in China and all of Asia.

Resources

ADEC Guiding Principles for Distance Teaching and Learning
http://www.adec.edu/admin/papers/distance-teaching_principles.html

Advanced Learning Technology: Linking U.S. and Chinese Experts for Enhanced Food Safety and Phyto-Sanitary Digital Learning Modules and Training, People's Republic of China, November 17-27, 2008
<http://extension.oregonstate.edu/eesc/sites/default/files/documents/china1.pdf>

China Central Agricultural Broadcasting and Television School
<http://www.crdenet.net.cn/about.htm>

Chinese Language OpenCourseware (OCW) Learning, Massachusetts Institute of Technology, USA
<http://www.south-china-travel-guide.com/chinese-language.htm>

King, David A., Purdue University, *The Challenge of the Knowledge Marketplace: How Will the Land-Grant System Compete?* California Polytechnic University/San Luis Obispo, June 29, 1998
<http://www.adec.edu/admin/papers/knowledge-marketplace.html>

Turgeon, Alfred J., Pennsylvania State University, *Learning Module Development and Utilization: A Multi-Institutional Program*, <http://www.adec.edu/ag-telecom/funded/3-19.html>

Wang Guilin, China Central Agricultural Broadcasting and Television School, *CABTS Workshop Presentation*, national presentation to ADEC members, originated from Oregon State University, Corvallis, Oregon, December 2, 2011
http://extension.oregonstate.edu/eesc/sites/default/files/documents/cabts_2-2011.pdf