Development and Highlights of E-Learning in Taiwan Higher Education

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December 3, 2010
Outline

• Overview
• The development of e-learning in Taiwan higher education
  – Foundations
  – Implementation framework
• The current status and highlights of e-learning in higher education
• Conclusions and future prospects
Overview—Higher Education in Taiwan

By 2009-2010 school year

- 164 universities and colleges
- 50,000+ full time faculty
- About 1.3 millions of students

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<tr>
<th>Item</th>
<th>Number</th>
<th>Total</th>
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<td>Undergraduate</td>
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Overview—E-Learning in Taiwan Higher Ed

From 2001 to 2009

- 80 universities and colleges have provided 4,900+ e-learning courses (blended, entire online).
- About 530,000 students/times have taken the e-learning courses.
Overview—Computer Center of MOE

Computer Center of Ministry of Education
- leading the development of E-Learning in Taiwan by providing vision, technical supports, and funding.
The Development of E-Learning in Taiwan

Foundations

• Taiwan National information infrastructure
• Taiwan Information technology industry
• Ratings in the networked readiness index

Implementation Framework

• Educational belief and pursuit of excellence
• Policies regarding e-learning in higher education
• The Digital Education and E-Learning Project (DEELP)

Current Status and Highlights
The Foundation of E-Learning in Taiwan

1. Taiwan National Information Infrastructure
   - Internet users (age 12 and above) of 23 millions
The Foundation of E-Learning in Taiwan

1. Taiwan National Information Infrastructure
   - Percentages of Households in Taiwan with Internet Access

(Taiwan Network Information Center, 2010)
The Foundation of E-Learning in Taiwan

1. Taiwan National Information Infrastructure
   – Completion of Taiwan Academic Network (TANet)
The Foundation of E-Learning in Taiwan

2. Taiwan information technology industry
   - Taiwan is well-known for the high productivity in information technology industry.
   - The White Paper on Science and Technology (2007-2010) by the National Science Council
     - increase R&D spending to 3% of GDP
     - increase the number of researchers
     - lift academic standards at local universities
     - establish world-class research centers
     - maintain Taiwan’s status as a top recipient of U.S.
   - Provide abundant, lower-cost, and state-of-art IT products for educational use
3. Ratings in the network readiness index

- **E-Government Performance** (Brown University): Taiwan ranked **2nd** in 2008

- **Digital Opportunity Index (DOI)** (ITU): Taiwan ranked **7th** in 2007

- **Global Competitiveness Report 2009-2010** (WEF): Taiwan ranked **12th** worldwide amongst 134 countries surveyed

- **Global Information Technology Report 2008-2009** (WEF): Taiwan ranked **14th** worldwide in Networked Readiness Index (NRI)

- **World Competitiveness Yearbook 2010** (IMD): Taiwan ranked **8th** worldwide
The Development of E-Learning in Taiwan

Foundations
- Taiwan National information infrastructure
- Taiwan Information technology industry
- Ratings in the networked readiness index

Implementation Framework
- Educational belief and pursuit of excellence
- Policies regarding e-learning in higher education
- The Digital Education and E-Learning Project (DEELP)

Current Status and Highlights
The Implementation Framework

1. Educational challenge and pursuit of excellence

Challenge for our education system:

- Leverage technology to create relevant learning experiences that mirror students’ daily lives and the reality
- Learning can no longer be confined to the years in school or in the classroom
- Learning must be life-long, life-wide, and available on demand
- The opportunities, access, and information must be limitless, borderless, and instantaneous.
1. Educational challenge and pursuit of excellence

Pursuit of a new model of 21st century learning:
- Student-centered, performance-focused learning
- Flexible progression based on individual needs
- Collaborative work on authentic, real-world projects
- Creative thinking for innovation and original solutions
- Digital literacies and communication skills
- Expanded vision including digital global citizenship
- Integrated and diversified assessment for learning
1. Educational challenge and pursuit of excellence

Higher education for cultivating student competency in the 21st century:

- Technology concepts and operations
- Creativity and innovation
- Communication and collaboration
- Critical thinking, problem solving, and decision making
- Digital citizenship
The Implementation Framework

2. Policy regarding E-learning in Higher Education
   - The Implementation Regulations Regarding Distance Learning by Universities (2006)
   - Operation Directions Regarding Accreditation for On-line Learning Master Courses (last modification: May, 2009)
The Implementation Framework

2. Policy regarding E-learning in Higher Education
   - Acknowledge the legitimacy of e-Learning in higher education.
     • Allow college students and master program students to take accredited distance courses and get credits up to half of graduation credits.
   - Specify the criteria of e-learning curriculum.
   - Require institutional commitment and leadership.
3. The Digital Education and E-Learning Project (DEELP)

- Aims to engage teachers, students, and the general public in e-learning.
The Implementation Framework

3. The Digital Education and E-Learning Project (DEELP)
   - A sub-project of “Taiwan e-Learning and Digital Archives Program” (TELDAP)

   The 1st phrase: 2003-2007
   The 2nd phrase: 2008-2012
3. The Digital Education and E-Learning Project (DEELP) – Develop e-learning curriculum for general education at college level
The Development of E-Learning in Taiwan

Current status and highlights of e-learning in Higher Education

Educational challenge and pursuit of excellence
Policy regarding e-learning in higher education
The Digital Education and E-Learning Project

National Information Infrastructure
Information technology industry
Networked society readiness
## Current Status and Highlights of E-Learning

1. The Program of College E-Learning Promotion and Cooperation
2. The Program of Online Tutoring to Disadvantaged Students
3. The System of E-Learning Accreditation
4. The Development of E-Learning Curricula and Learning Materials for General Education
5. The Development of Taiwan OpenCourseWare
Current Status and Highlights of E-Learning

1. The Program of College E-learning Promotion and Cooperation

Goal:

- Promote high-quality e-learning teaching and learning on campus
- Provide e-learning training for faculty and staff
- Consolidate and share e-learning knowledge and experiences
- Establish the collaborative mechanism among colleges and universities
- Build up an international e-learning partnership.
1. The Program of College E-Learning Promotion and Cooperation

Implementation strategy:
- Train e-learning designers, media specialists, and programmers needed.
- Hold workshops for e-instructors and e-tutors.
- Provide consultation services through multiple channels.
- Share e-learning course materials and resources.
- Establish cross-school e-learning course enrollment system.
1. The Program of College E-Learning Promotion and Cooperation

Accomplishment:

- 1000+ university faculty and staff have participated in e-instructor and e-tutor programs.
- 1600+ e-learning related professionals were trained.
- Over 167 on-site visits and consultations were provided.
- Manuals, pamphlets and websites were published to share knowledge and experiences in e-learning.
- Inter-institution cooperation mechanism were developed.
2. The Program of Online Tutoring to Disadvantaged Students

Overview:

- Project initiated since 2006
- Support the educationally disadvantaged elementary and middle school students in remote areas
- Allow university students to provide 1:1 real-time after-school on-line tutoring service through a video conferencing platform.
2. The Program of Online Tutoring to Disadvantaged Students

An on-line tutoring model:

- teams up the university professors, students, and school teachers
- reinforce and support college students to perform the adaptive remedial instruction of Chinese and Math to the remote rural school students in Taiwan.
2. The Program of Online Tutoring to Disadvantaged Students

Accomplishments:
- 1600+ students from 28 universities were involved.
- 1000+ students from 85 elementary, junior high schools, and Digital Opportunity Centers (DOCs) have participated.
- This program helps to increase disadvantaged students’ digital opportunities, and thus help decrease the digital divide.
3. The System of E-Learning Accreditation

Overview:

– Currently, more than 80 universities and colleges offer more than 4,900 online credited courses.
– Nearly 530,000 students have taking the courses.
– More and more students are enrolling in on-the-job programs, extension education, and overseas schools programs through e-learning.
3. The System of E-Learning Accreditation

Purpose:
– To raise the quality and quantity of e-learning materials, courses, platforms, programs

Related policy and guideline:
– Operation Directions Regarding Accreditation for On-line Learning Master Courses (last modification: May, 2009)
– Application and Requirement of e-Learning Content and Course Standard (last modification: May, 2009)
Current Status and Highlights of E-Learning

3. The System of E-Learning Accreditation

Accreditation Type:
- Teaching material
  By June 2010,
  56 sets of teaching materials (64.4%)
- Course
  117 courses (45.7%)
- Master Program
  9 master's in-service degree programs from 6 universities
4. The Development of E-Learning Curricula and Learning Materials for General Education

Purpose:

- To develop high-quality exemplary (18 units, 36 hours) curricula for general education at college level
- To help teachers prepare their online courses, blended courses, or face-to-face courses.
- To set curriculum-development models between university and e-learning enterprise.
Current Status and Highlights of E-Learning

4. The Development of E-Learning Curricula and Learning Materials for General Education

Courses related Information Literacy:

- Library and Information Applications
- Information Literacy and Ethics
- Information Laws
4. The Development of E-Learning Curricula and Learning Materials for General Education

Accomplishment:
- Curricula and learning materials are used in more than 30 universities and colleges.
- Help to raise students’ information fluency and digital citizenship.
- Help students get used to future lifelong learning style through the Internet.
5. The Development of Taiwan OpenCourseWare (OCW)

Overview:

– first launched in 1999 by MIT in USA.
– A knowledge sharing program, authorizes courses to be published online under the Creative commons (CC) rules.
  • People can use these resources as long as they remain non-commercial, equally shared, and with the source indicated.
5. The Development of Taiwan OpenCourseWare (OCW)

Current status:

- 2006 the first OCW in Taiwan
- 2007 Taiwan OpenCourseWare Consortium (TOCWC) established
- 21 university members and more than 300 courses on the TOCWC website available
- Assist colleges and universities to develop and publish OCW
Current Status and Highlights of E-Learning

5. The Development of Taiwan OpenCourseWare (OCW)

Future work of TOCWC:

– Establish Taiwan OCW material meta-data standards.
– Verify and document of all Taiwan OCW intelligent property.
– Promote Taiwan OCW and international cooperation.
## Conclusions and Future Prospects

### Current status and highlights of e-learning in Higher Education

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Conclusions and Future Prospects

The College E-learning Promotion and Cooperation

Online Tutoring to Disadvantaged Students

e-Learning Accreditation

e-Learning Curricula and Learning Materials

Taiwan OpenCourse Ware
Conclusions and Future Prospects

• Looking forward to an innovative learning environment and technology-enabled strategies for students learning...

Howard’s Daily Life
Conclusions and Future Prospects

• Keep creating high quality e-learning environment for colleges and universities to help cultivate students’ competency in the 21st century.
• Continue developing effective e-learning materials and curricula.
Conclusions and Future Prospects

- Inspire more college faculty and staff to engage in digital-age professional growth and leadership, and facilitate them to design e-learning experiences and assessments for students.
- Promote broader and tighter inter-collegiate and international collaboration in e-learning resources and knowledge exchanging.
- Share e-learning resources to all Chinese-native students to obtain Taiwan experiences and degrees.
Thank You
for Your Attention!!

http://www.edu.tw