Outcomes of the EU-Asia Link Project

Standardisation in Companies and Markets
Curriculum Development – eLearning based

Joint ITU-GISFI-DS-CTIF
Standards Education Workshop

on October 8, 2012 Aalborg, Denmark

Prof. Dr. Ing. em. Wilfried Hesser
Department of Standardisation and Technical Drawing/CAD (www.pro-norm.de)
Helmut Schmidt University / University of the Federal Armed Forces Hamburg, Germany
Standardisation in Companies and Markets

Contents

1 Introduction, some historical remarks

2 EU-Asia Link Project - Establishment of an organisation structure

3 Didactic preparation of teaching materials and implementation

4 Content sharing – for lecturers

5 Summary
   Important criteria for success and sustainability
Phase 1  2000 until 2003
EURAS members have been trying to stimulate standardisation education and have actively
tried to promote the inclusion of education in standardisation policies at the national and at
the European level for more than a decade (e.g. Hesser 1999, Hesser 2000). This report is an
example of a contribution by EURAS itself. Initiatives to stimulate standardisation education
have been coming from EURAS members for more than 10 years and include:
International Workshop on Telelearning: Standardisation for academic and business
communities within the EU. Universität der Bundeswehr, Hamburg 28 June 2000.
(Participants AENOR, AFNOR, DIN, DKE, PKN, SIS, UNI, CEN, ETSI, Siemens, Thyssen
Krupp, HAUNI, etc.)

Phase 2  2003 until 2006  EU-Asia Link Project
EU Asia-Link project 2004-2007: Curriculum and book entitled Standardisation in Companies
E-learning platform: Standardisation in Companies and Markets developed by Prof. Hesser,
Helmut Schmidt University, www.pro-norm.de

Phase 3  2007 until 2010
EURAS members have been trying to stimulate standardisation education and have actively
tried to promote the inclusion of education in standardisation policies at the national and at
the European level.
The EURAS board makes the decision to write a report, 2010:
White Paper, Academic Standardisation Education in Europe;
by Prof. Dr.-Ing. em. Wilfried Hesser and Prof. Dr. Ir. Henk J. de Vries, published 2011
http://www.pro-norm.de  NEWS 2011 White Paper: Academic Standardisation Education in
Europe.
Standardisation in Companies and Markets

2 EU-Asia Link Project - Establishment of an organisation structure
EU-Asia Link Project - Overview

2003 until 2006

- Title of Project: Development of a curriculum
- Standardisation in Companies and Markets
- Programme Component: Asia-Link Curriculum Development
- Duration of the project: 33 months / max. 36 month
- Project Budget: EUR 407.086,00 /
- funded by the EU: EUR 300.000,00
EU-Asia Link Project - Overview

University of Moratuwa, Sri Lanka
Prof. Dr. R. Gunawardena
Dr. Perera

Institute of Technology Bandung, Indonesia
Dr. R. Gautama, Dr. Sukirno

Hanoi National Economics University, Vietnam
Dr. Bui Anh, Mr. V.T. Anh, Mr. Hung Pham

China JiLiang University, PR China
Prof. Dr. Lu, Prof. Song, Mr. H. Wu

Erasmus University Rotterdam, The Netherlands
Prof. Dr. Albert Feilzer, Prof. Dr. H. de Vries
EU-Asia Link Project Structure

Functionality

- Kick Off
- Curriculum Profile
- Virtual Library
- Qualification & Mentoring Programme
- Curriculum Structure
- Guidelines
- Teaching Units
- Mentoring and PR Tour
- Content
  - 1st half 04
  - 2nd half 04
  - 1st half 05
  - 2nd half 05
  - 2nd half 06

Content
- 10 units as drafts
- 22 units as drafts

Text Book
- eCurriculum

Time

1st half 04
2nd half 04
1st half 05
2nd half 05
2nd half 06

Prof. Dr.-Ing. W. Hesser | info@pro-norm.de
The Curriculum Units for the textbook and web content

2004 until 2006

01 Fundamentals of standards and standardization
02 History of standards and standardization – an introduction
03 Economic aspects of standardization
04 Development of standards
05 Product development and design
06 Standardization inside a company – a strategic perspective
07 External standardization as a company strategy
08 Standardization and innovation
09 International standardization
10 Standardization and international law
11 The European standardization regulatory framework
12 The European Union and its standardization policy
13 Standardization and law in the Federal Republic of Germany
14 The EU and its New Approach
15 Conformity assessment
16 Standardization issues in developing countries and countries in transition
17 Metrological measurement
18 ICT standardization
19 Case study: Mobile telecommunications in Indonesia
20 Case study: Quality management and ISO 9001 development
21 Case study: ISO 14001 implementation
22 Case study: Standardization in agriculture

2007 until 2010
23 Standards Consortia, Tineke M. Egyedi Delft University of Technology and Richard Hawkins University of Calgary
24 ICT Standardisation, Kai Jakobs RWTH Aachen
25 Challenges and Approaches of efficient Formal Standardisation, Nicole Riemer, Helmut Schmidt University
26 Standardisation strategies of firms, Axel Czaya and Wilfried Hesser, Helmut Schmidt University
Joint ITU-GISFI-DS-CTIF Workshop participants, please register FREE OF CHARGE on www.pro-norm.de and apply to be included in the selected course Standardisation in Companies and Markets (via the “Join” button)
3 Didactic preparation of teaching materials and implementation

Example: Standardisation in Companies and Markets
Portfolio of e-learning elements

Adoption of multimedia elements vs. degree of interaction

- Chat
- Forum
- Internet telephony
- Virtual Classroom
- Video conference
- Web collaboration
- Bulletin
- Wikis
- Multiple Choice Tests
- Interactive tests
- Teaching Software
- Powerpoint Slides, Documents
- Teaching Units
- Animations
- eBook
- Video
- Internet telephony
- Virtual Classroom
- Video conference
- Web collaboration
Different elements of our teaching units

- Pictures and animations
- Videos
- Teaching Units
- Interactive exercises
- Test FAQ’s
- E-mail function for tutoring
- Notice, Wikis
- Glossary
- Chat, discussions

Prof. Dr.-Ing. W. Hesser | info@pro-norm.de
learning scenario – 3-window technology

Complex of knowledge

Information in text form

Media frame with pictures, animations or video

Glossary

Figure: CE-mark with notified body identification

Buying the course "Standardisation in Companies and Markets"
Learning Scenario at www.pro-norm.de

EU-STANDARDIZATION IN COMPANIES AND MARKETS

Joint ITU-GISFI-DS-CTIF Workshop participants, please register FREE OF CHARGE on www.pro-norm.de and apply to be included in the selected course Standardisation in Companies and Markets (via the “Join” button)
learning scenario

Tests Standardisation in Companies and Markets

- Fundamentals of Standards and Standardisation
- An Introduction – The History of Standardisation
- Economic Aspects of Standardisation
- Development of Standards

Exercises Standardisation in Companies and Markets

- Fundamentals of Standards and Standardisation
- An Introduction – The History of Standardisation
- Economic Aspects of Standardisation
- Development of Standards
- Standardisation in Product Development and Design
4 Content sharing – for lecturers
Standardization in Companies and Markets

Members of this group receive unlimited access to:

1. E-learning units for Standardization in Companies and Markets (26 lectures)
2. PowerPoint presentations relating to the lectures for Standardization in Companies and markets (26 files with a total of ca. 800 PowerPoint slides)
3. Exercises for every lecture
4. FAQs (frequently asked questions) for every lecture
5. Multiple-choice tests for every lecture
6. Forum
5 Summary
Important criteria for success and sustainability
Important criteria for success

Success factors

• Publicity for lecture (internal in university)
• Teaching/study concept (lectures, seminars)
• Excellent documents for teaching concept
• Exercises (with practical examples, excursions)
• Supervision of exercises
• Guest lectures (representatives: industry, commerce, NSB)
• Ambitious, interesting Bachelor and Master theses
Important criteria for success

Success factors

• Develop a national research program for standardisation
• Develop a website: containing tools to teach standardisation and not only PowerPoint presentations, but excellent teaching material
• Develop a national network for teachers, who are interested in teaching standardisation
eLearning at Helmut-Schmidt University - open source ILIAS

- no contract dependency
- no licence fees
- freedom in cooperation
- free software development
- low investment volume
Sustainability of the project

Top-Werte Hits  01.09. – 17.09.2912

<table>
<thead>
<tr>
<th>No.</th>
<th>Land</th>
<th>Anzahl Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>20.795</td>
</tr>
<tr>
<td>2</td>
<td>United States of America</td>
<td>11.708</td>
</tr>
<tr>
<td>3</td>
<td>Germany</td>
<td>8.561</td>
</tr>
<tr>
<td>4</td>
<td>Russia</td>
<td>4.076</td>
</tr>
<tr>
<td>5</td>
<td>Israel</td>
<td>2.122</td>
</tr>
</tbody>
</table>
Sustainability of the project

Short statistics for October 2011 - September 2012

<table>
<thead>
<tr>
<th>Month</th>
<th>Hits</th>
<th>Files</th>
<th>Pageviews</th>
<th>Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2012</td>
<td>60750</td>
<td>55788</td>
<td>46004</td>
<td>7856</td>
</tr>
<tr>
<td>August 2012</td>
<td>128699</td>
<td>117217</td>
<td>95938</td>
<td>16487</td>
</tr>
<tr>
<td>July 2012</td>
<td>139207</td>
<td>129262</td>
<td>107722</td>
<td>16413</td>
</tr>
<tr>
<td>June 2012</td>
<td>107976</td>
<td>99708</td>
<td>84202</td>
<td>13712</td>
</tr>
<tr>
<td>May 2012</td>
<td>90066</td>
<td>81179</td>
<td>66513</td>
<td>11550</td>
</tr>
<tr>
<td>April 2012</td>
<td>90465</td>
<td>81097</td>
<td>64510</td>
<td>11435</td>
</tr>
<tr>
<td>March 2012</td>
<td>96511</td>
<td>83851</td>
<td>60836</td>
<td>9828</td>
</tr>
<tr>
<td>February 2012</td>
<td>89561</td>
<td>79496</td>
<td>61628</td>
<td>9802</td>
</tr>
<tr>
<td>January 2012</td>
<td>88652</td>
<td>78167</td>
<td>57706</td>
<td>10840</td>
</tr>
<tr>
<td>December 2011</td>
<td>83666</td>
<td>74977</td>
<td>58203</td>
<td>10453</td>
</tr>
<tr>
<td>November 2011</td>
<td>84511</td>
<td>70801</td>
<td>46329</td>
<td>10956</td>
</tr>
<tr>
<td>October 2011</td>
<td>91956</td>
<td>75231</td>
<td>48011</td>
<td>11025</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1152020</strong></td>
<td><strong>1026774</strong></td>
<td><strong>797602</strong></td>
<td><strong>140357</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>96001</strong></td>
<td><strong>85564</strong></td>
<td><strong>66466</strong></td>
<td><strong>11696</strong></td>
</tr>
</tbody>
</table>
Thank you for your attention!

Univ.-Prof. Dr.-Ing. em. Wilfried Hesser
Department of Standardisation and Technical Drawing
Helmut Schmidt University

pro-norm
Wilfried Hesser
Nordmarkstr. 30-32
22047 Hamburg, Germany
Tel.: +49 (0)40/667 255, Fax: +49(0)40/667 255
Wilfried.Hesser@HSU-HH.de
e-learning elements

**e-Learning**

e-learning is defined as all forms of electronic supported learning and teaching, which aim to effect the construction of knowledge with reference to individual experience, practice and knowledge of the learner. Information and communication systems, whether networked or not, serve as specific media to implement the learning process. (cf. Tavangarian et al. 2004)

**Blended Learning**

Blended Learning refers to a mixing of different learning environments. A blended learning approach can combine face-to-face instruction with computer-mediated instruction. (cf. Graham 2005)

**Wiki**

A wiki ( /wɪki/ WIK-ee) is a website that allows the easy creation and editing of any number of interlinked web pages via a web browser using a simplified markup language or a WYSIWYG text editor. Wikis are typically powered by wiki software and are often used to create collaborative websites, to power community websites, for personal note taking, in corporate intranets, and in knowledge management systems.

---

**Learning Management System**

**Forum**

**Chat**

**Wiki**

**etc…**

**e-learning Elements**