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Suggested Talk:

Human Capital Development, Active Competition and Efficiency of Labor: Significance of Modern Web-Based E-Learning and Training Services and Recent Standards Developments

Aim:

This talk features an overview of recent directions for modern e-learning, human performance and standards developments and their rising impact for research, growth and societal changes. It will examine the interoperability of learning content and systems, the use of personal information for individual performance and the results of learning interactions with an eye toward maximizing an organization's investment in people and technology.

Background:

The strategic use of Information and Communication Technologies (ICT) puts the responsibility on individuals (to build on their e-skills and take advantage of new employment/learning opportunities), on enterprises (to be more receptive to knowledge, more responsive to changes in the environment and able to restructure accordingly), but also on regional and local policy makers (to facilitate interaction with and among socio-economic actors, and to formulate and implement policies better reflecting the needs of the territory) to improve regional performance.

This regional capacity is crucial given that local stakeholders contribute to growth and competitiveness at regional levels. Key determinants appear to be regional level networks that produce social and human capital, the capacity of the education/training and research systems to supply innovation, the provision of a productive environment for entrepreneurships, and the establishment of a participative, inclusive and learning society able to meet the challenges of globalization.

The policy challenge is to encourage companies to support industry dialogue and knowledge sharing; especially, because outsourcing and off-shoring affects employment and skills requirements. There is a pattern in the industrial sector in the way ICT and competition interact: More competition forces companies to use innovative ways of doing business, increase efficiency and productivity. ICT helps them achieve these aims while also increasing the pressure to stay innovative.

Human capital is a key source of competitive improvement. Maximizing its potential and value to the organization requires a systematic process to identify the competencies essential for greater job performance, as well as the discovery of the knowledge, skills, attitudes and behaviors required by a person to be excellent in a job. Applying competencies represents a driving force for outlining the future performance potential, and integrating processes into challenging Human Capital Management Systems. To ensure these aims, common standards and interoperability are required.

Standards play a vital role in the advancement of innovation and technology. Commonly, the development of standards points toward a certain process or technology that becomes a technology trend and has reached a degree of marketability that requires a need for particular consensus-based agreements. Learning and performance technology standards are usually developed to be used in the processes of learning and competency management system design and implementation. They aim to ensure mainly interoperability, portability and reusability. These attributes shall apply to both the learning and competency management systems and the content. An additional requirement concerns the metadata that describe the content and are managed by those systems.

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Topics in the focus:

- Evolution of learning and performance technology standards and specifications
- The matter of interoperability
- The impact of formal standards for learning technology, developed by the IEEE and ISO
- The force of specifications: SCORM, and LETSI – the new SCORM stewardship
- The power of competency definitions and upcoming performance standard
- The impact of formal standards for performance technology and competency management, developed by the IEEE and ISO
- Experience from implementations based on the learning object approach and recent standards and specifications
- Consequences for Human Capital Development Departments and organizations

IEEE standards development and services

- IEEE Standards Association and the IEEE Learning Technology Standards Committee chartered by the IEEE Computer Society
- IEEE Education Society Activity Board and the recent initiative "IEEE Standards in Education"

Impact:

Standards make learning and performance technologies interoperate in a global network. They contribute to factors such as portability and scalability of the systems. Additionally, they can assure better maintenance due to modular design and durability of instructional content after significant technology changes. Educational content and learner information can be shared. On the other hand, standards have also impact on the end user as they allow learners to address target competencies and certification and help learning become more valuable through making results portable and relevant to work context.

The hope is that widespread acceptance of learning and performance technology standards will foster shared resources among institutions and provide new efficiencies for program administrators. Therefore, standards will play a larger role in institutional planning and program development discussions in the near future.

In addition, economic competition and employability are in fact the key words all over the world. The main challenges of the knowledge and learning society, the responses of industry to cope with them and the consequences for learning and performance technologies, indicate company-specific qualification requirements and more options for the individuals. Thus, learning performance standards move into the focus of recent developments. Currently most learning and performance technology stakeholders have a vague notion of their existence and utility. In order to illustrate the development and adoption of the recent learning and performance technology standards, it may be useful to stress on few points that are reflected in the main topics of this talk.

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Short Bio:

Dr. Fanny Klett

Lead Business Area Data Representation and Interfaces,

Fraunhofer Instituite Digital Media Technology, Germany

- Chair IEEE R8 Educational Activities
- Secretary 'IEEE Learning Technology Standards Committee'
- Member Sponsor Executive Committee 'IEEE Learning Technology Standards Committee'
- Member Sponsor Executive Committee 'Learning, Education & Training Systems Interoperability' (the new SCORM stewardship)
- Member IEEE delegation for ISO SC36 liaison (Standards for learning, education and training)
- Head of Delegation IEEE 2008 delegation for ISO SC36 liaison
- Chair Germany Chapter IEEE Education Society

Dr. Fanny Klett has been with IDMT since 2004 and represents its most recent research and business area Data Representation and Interfaces. She holds a Ph.D. in Electronic Media Technology from Technische Universität Ilmenau. Her thesis: “Development of Usable Interfaces for Virtual Environments” addresses novel developments in the fields of user-centered interfaces. Prior to her current position, she was for five years with the Institute of Media Technology, Technische Universität Ilmenau. Fanny Klett was a visiting scientist in the Institute for Computer-Supported New Media, Graz University of Technology, and visiting lecturer in several European universities. Her application-based research focuses on user-centered system design, multimedia and natural interfaces, needs assessment, and monitoring technologies. She actively works in the IEEE framework of standardization in liaison with ISO SC36 for learning, education and training (IEEE Leartning Technology Standards Committee, IEEE Standards Association) and the IEEE Task Force on Human Centered Information Systems.

Fanny Klett actively participates in conferences of UNESCO, the Institute of Electrical and Electronics Engineers (IEEE), etc. She chaired and served on more than 20 planning and program committees (IEEE, EAEEIE, ICL, IMCL, etc.) and is currently serving on the reviewer board of IEEE Transactions on Education, and IEEE Educational Technology and Society Journal. Fanny Klett is Senior Member IEEE and Chair of the German Chapter of the IEEE Education Society. Recently, she has been invited to chair the Program Committee of the IEEE Education Society Chapters. As Chair EASC she is responsible for the IEEE Region 8 educational activities in Europe, Middle East and Africa. She is also Member of the Sponsor Executive Committee and Secretary of the IEEE Learning Technology Standards Committee chartered by the IEEE Computer Society Standards Activity Board. Fanny Klett is also Member of the Council and the Academic Board of the European Association for Education in Electrical and Information Engineering. She has published more than 50 technical and invited papers and book chapters and organized several Special Sessions on various digital media research topics at important international conferences.