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STANDARDS IN E-LEARNING:

Towards Enriching and Sharing Our Educational Heritage

Challenges & Rewards of Collaboration: an Australian Case–Study

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Overview

- **Historical context**

- **Key initiatives & projects**
  - **EdNA**
    www.edna.edu.au
  - **The Learning Federation**
    www.thelearningfederation.edu.au
  - **Australian Flexible Learning Framework**
    flexiblelearning.net.au
  - **COLIS**
    www.colis.mq.edu.au

- **Comments on collaboration**

Context

- **Federated system**
  - Shared responsibility for education & training (States, Territories, & Commonwealth)
- **Interoperability Standards agenda situated within**
  - an environment receptive to benefits of ICT
  - a history of delivering distance education
  - a well-developed collaborative framework
- **Online services & projects developed at national level**
  - EdNA → AICTEC

2001-2006

Aims

- To develop high quality reusable online curriculum content, suitable for Australian & New Zealand schools

- To support distributed access

- To stimulate commercial contributions to the pool of material

Agreed Specifications

- **Content quality**
- **Curriculum mappings**
- **Metadata application profile**
  - Administrative
  - Technical
  - Educational
  - Accessibility
  - Rights
- **Distribution chain**
- **Testing environment (BELTS)**

Agreed Specifications (2)

- IMS content packages
- LOM metadata (IMS XML binding)
- SOAP
- W3C Accessibility level double A
- XHTML 1.1

Agreed Specifications (yet to implement)

- IMS DRI
- IMS QTI
- IMS LIP
- IMS Simple Sequencing
- ADL SCORM runtime

Leadership, Innovation, & Collaboration in Higher Education

- University of Southern Queensland's Distance and e-Learning Centre the first such facility in the world to receive international quality accreditation to ISO9001. www.usq.edu.au

- COLIS (Collaborative Online Learning & Info Systems)
    - interoperability from a services perspective
    - demonstrator project for IMS DRI
  www.colis.mq.edu.au

- e-Infrastructure funding
  www.dest.gov.au/highered/research/sys_research.htm

Higher Education Programs

- ## Sector-wide programs a challenge
  - Consortia initiatives (COLIS, ATN, AARLIN, U21)
- ## Backing Australia's Future
  - Higher education reform policy
  - Informed by Knowledge & Innovation Review
  - Focused on e-Infrastructure (e.g., quality research output available via distributed repositories)
  - Supportive of better collaboration
- ## Systemic Infrastructure Initiative
  - High Performance computing
  - Bandwidth (AREN, GrangeNet)
  - Research Information Infrastructure
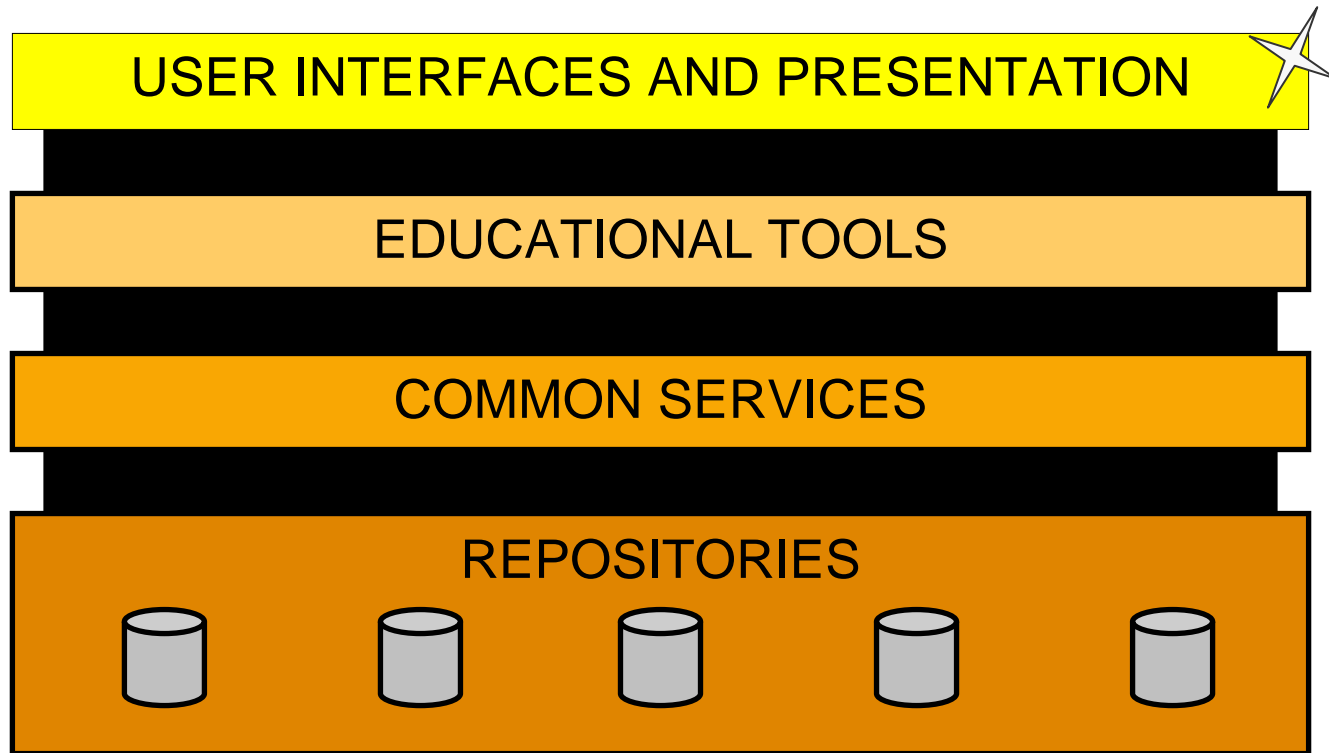 - Interoperability Standards (IMS)

Higher Education Programs

- **Demonstrator Projects important**
  - Within & across higher education institutions
  - COLIS
- **Distributed institutional repositories**
  - Scholarly information
  - Managing research output more effectively
  - Federated, interoperable, & accessible
- **Middleware development**
  - Next phase of interoperability standards agenda
  - Authentication & authorization – Identity management
  - Defining & developing common services and interoperable systems across institutions

Common Services

- A key emerging concept that describes a core layer to integrated learning architectures

- Major focus is on:
    - access management
    - identity management
    - search services
    - metadata services
    - digital rights management

Common Services

USER INTERFACES AND PRESENTATION

EDUCATIONAL TOOLS

COMMON SERVICES

REPOSITORIES

ANTA Flexible Learning Framework

- **Flexible learning within Vocational sector**
  - Creating & sharing knowledge about flexible learning
  - AUD$ 20 million per annum

- **Focus on five key areas**
  - People & professional development
  - Supportive technological infrastructure
  - 'world-class' online content development
  - Ongoing policy development
  - Problem-solving regulation

Interoperability & Collaboration

Interoperability

Political	Agreeing to common goals & ground rules for achieving mutual benefit
Jurisdictional	Mapping legal, regional interests
Semantic	Achieving common understanding, common terminologies & meanings
Cultural	Communities of Practice, workflow
Syntactic	Sharing grammars, templates, ...
Technical	Systems exchanging data & services