Learning object repositories for novel, efficient knowledge creation and sharing

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About the presentation:

To make it easier:

• Portals/host application systems
  • learning management systems
  • other web portals/host systems
  => called LMS throughout presentation

• Dark purple = select proposed future developments
What is a learning object repository, LOR?

Common characteristics:
- **Networked collection** of digital learning resources
- Sharing, with descriptions (metadata)

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First generation:
- Open Access
- Internal access
- Storage

Second generation:
- Open Access
- Internal access
- Storage

Third generation:
- Open Access
- LMS
- DLR
- Internal access

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DLR overview (1:4)

• **Learning resources**
  - **Static** (aka “old school”):
    - Complex
    - Simple
    - Atoms
  - **Dynamic** (active): Interactive resources
    - Simulators (JavaScript), adaptive learning, comms tools, Applications (TS, virtual etc.)

• **Internal / external publishing**
  - **External** publication (Open Access)
  - **Internal** use, group sharing
DLR overview (2:4)

- **User Inspiring**
  - *Simplifies* production and use of learning resources
  - *Cross-application* “integrate and use whatever you’ve got of productivity tools”
  - **Intuitive workflow**
  - **Blends into** (“melts with”) LMS “look-and-feel”
  - **Multi-LMS support**
DLR – workflow example

- TeamSite + DLR – make resource
- Right-click publish to DLR, w/description
- Share with own students, governed by the SIS groups
- Polish resources
- Share with other DLR institutions, open access
DLR – future workflow example

- Grant European partner access
- Push to select OERs etc.
DLR overview (3:4)

- Production enhancing
  - Rewarding publication
    - Recognition – audience.
    - Big and small resources
    - DOI support
    - Statistics for rewards
  - Co-authorships
    - Derivates supported
  - Quality assurance
    - Peer reviews
    - Student reviews/recommendations
    - Other user acclaims/recommendation

Larger audience => stimultate publishing
Gives the opportunity to publish even «learning atoms» such as excellent illustrations

Cooperative writing, across institutions.
- Derivative support! («forking»)

Peer reviews- give three, get one?
Recognition, anyone? 😊

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DLR overview (4:4)

- Licensing and storage
  - Licensing
    - Self-service licence selection
    - Curation including license checking
  - Storage for descriptions (metadata) as well as data (optionally)
    - Third-party storage support
    - Disturbance-free storage swaps

NTNU licensing, abbreviated:

- All rights reserved for author
- For Internal NTNU use (ntnu-internt)
- Creative Commons:
  - by name (CC BY 4.0)
  - by name, share alike (BY-SA 4.0)
  - by name, non-commercial, no derivates (BY-NC-ND 4.0)
  - universal free (CC0 1.0)
DLR, sources, consumers
(helper applications not shown)

- At the core- DLR
- UNIT services sharing functionality and data
- DLR portal
- DLR plugins - in LMSs etc.
- Study information systems, LMSs + DLR
- Multitude of sources
- Potential consumers

*Figure 1: Present and future components of DLR as a LOR 3.0*
Prerequisites for a successful DLR deployment

Introducing DLR requires:

• Help /reward authors more/«better» learning
• Cross-departmental cooperation:
  • Research&education,library/AV/IT/other support functions etc.
• Someone in charge
• Adapting (to) the workflow of a highly integrated tool
• Willingness to learn to crawl before you walk!
• Organized support of the community dimensions of LORs
Thank you!

• Feel free to contact those participating in the abstract and paper
• Please visit the LOR at NTNU blog at https://www.ntnu.no/blogger/lor-ved-ntnu/

References
Excerpt, please see paper/abstract:
https://go.view.usg.edu/shared/.../9.../learningrepository/about_learning_repository.htm
http://edutechwiki.unige.ch/en/Learning_object_repository
https://www.ntnu.no/blogger/lor-ved-ntnu/2018/10/04/lor-3-0-paradigmaskifte-i-lærings-og-kunnskapsformidling/
https://www.lancaster.ac.uk/fss/organisations/netlc/past/nlc2006/abstracts/pdfs/04Margaryan.pdf