

# Open Archives and Institutional Repositories for Open Educational Resources: Challenges Ahead for Turkish Universities

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### **Outline**



- Definitions (OA, IR, OER, LOR)
- Turkish OA, IRs and OERs
- OER Issues
  - Metadata
  - Interoperability
  - Resource Discovery and Retrieval
- Challenges for Turkish Universities
- Conclusion



### Open Access



- 1. "... free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly . . .
- 2. A complete version of the work . . . is deposited (and thus published) in at least one online repository . . . maintained by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, inter operability, and long-term archiving."

Source: Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

http://www.zim.mpg.de/openaccess-berlin/berlindeclaration.html

### Institutional Repository

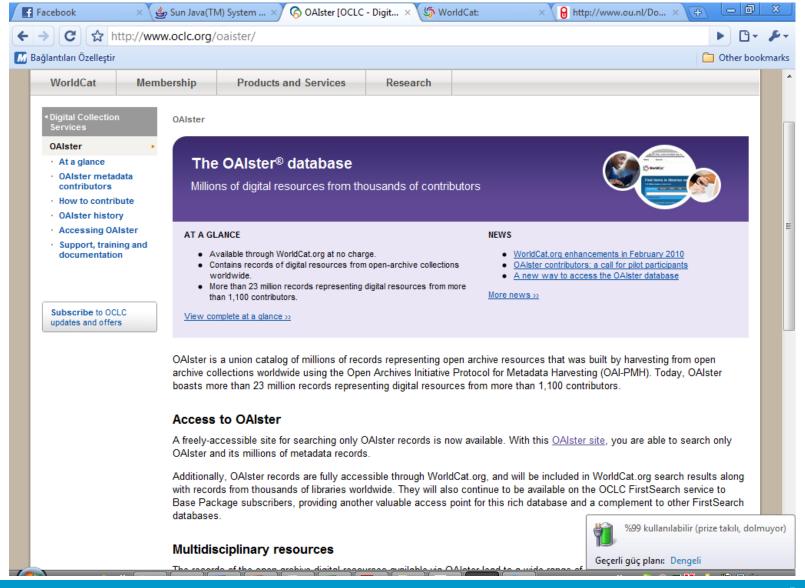


- "digital collection capturing the intellectual output of a single or multi-university community"
- Accessible to end users both within and outside of the institution
- IRs:
  - Institutionally defined;
  - Scholarly;
  - Cumulative and perpetual; and
  - Open and interoperable.

Source: Crow, 2002, p. 16.

### c. 1,100 archives & 23M records . . .







### OA Archives (as of November 10, 2009)



- USA (300)
- UK (151)
- Germany (112)
- Japan (71)
- Brasil (70)
- Spain (58)
- Canada (51)
- India (50)
- France (50)
- Italy (48)

- Australia (48)
- Sweden (35)
- Netherlands (27)
- Belgium (19)
- South Africa (15)
- Denmark (14)
- China (11)
- Hungary (9)
- Turkey (8)
- . . .

http://archives.eprints.org/eprints.php?action=browse#country

### Turkish OA Archives and IRs (as of Nov. 2009)



- METU Library E-Theses (2247 records, OAI-compliant)
- Ankara University Open Archive System (3441 records, OAI-compliant)
- Sabancı University Research Database (9069 records, OAI-compliant, Eprints software, Not 100% OA)
- Gazi University Open Archive (2057 records, OAI not registered)
- Atatürk University Open Archive (578 records, OAIcompliant)
- Atılım University Open Archive (218 records, OAI not working)
- And other non-registered web-accessible ETD archives



### Turkish OA Archives & IRs: Timeline



- 2003: METU Library ETD Archive becomes the first NDLTD member
- 2005: OA in Academic Informatics and Library Week meetings
- 2005: First experimental OA archive (Hacettepe Univ.)
- 2005: First operational OA archive (Ankara Univ.)
- 2006: OA Declaration
- 2006: Working Group on OA and IRs (ANKOS)
- 2006: OA & IRs Advisory Board (TLA, ÜNAK, ULAKBİM)



### Open Educational Resources



- "digitized materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research."
- "The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for noncommercial purposes."



### Learning Object Repositories



- Repositories that contain OERs of educational institutions
- They provide resource discovery, metadata enhancement, and social network tools as well as interoperability

### Core Attributes of OER definitions



- Free access to open content (including metadata)
- Content is liberally licensed for reuse;
- Open content standards and formats are employed to facilitate easy reuse of content;
- Open source software is used, along with open Application Programming Interfaces (APIs), and authorizations to reuse Webbased services (e.g. RSS feeds).

Source: Fleming, C & Massey, M. (2007). Jorum Open Educational Resources (OER) Report, p. i-ii.

### Drivers and Enablers for OERs



- Policies emphasizing educational innovation and organisational change;
- Promotion of ICT-based lifelong learning needs
- The Bologna Process
- Global competition in Higher Education and decline in student numbers in Europe due to demographic trends;
- Creative Commons licensing is firmly established and is being used increasingly;
- Open content repositories will increasingly surface from the Deep Web;
- New systems for creating and handling group-based learning designs may become more widely used;
- Semantic applications will provide new ways to access knowledge resources.

Source: Fleming, C & Massey, M. (2007). Jorum Open Educational Resources (OER) Report, p. 19-20.

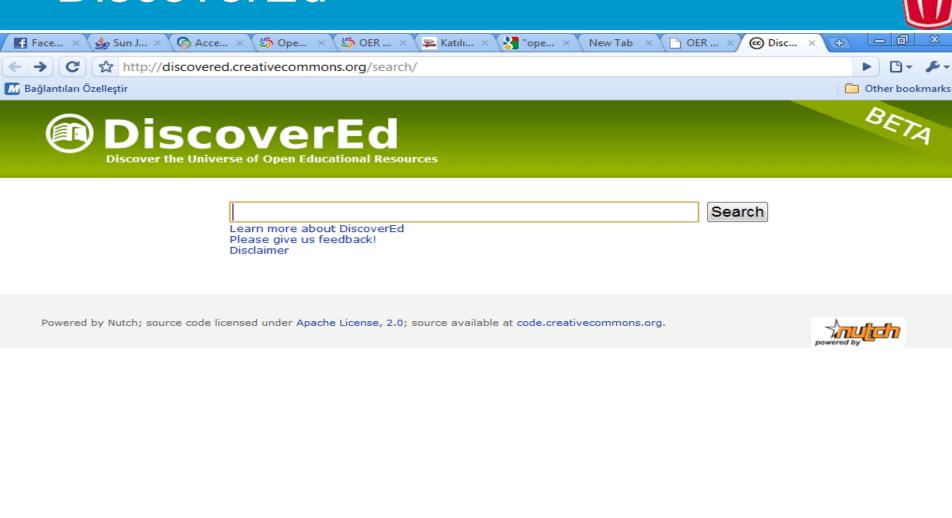
### **JORUM**

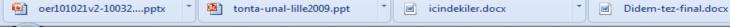




### DiscoverEd







### **OER Commons**





### Metadata for OERs



- LOM
- DC
- MPEG-7

## LRE Metadata Application Profile Query Types

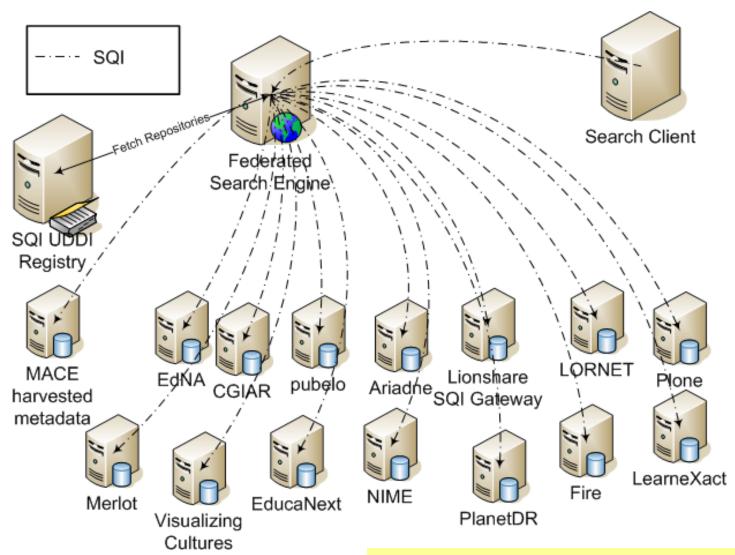


- in a given language (LOM 1.3)
- described by metadata in a given language
- of a given structure
- with a given status (e.g., draft)
- targeting an audience within a given age range
- licensed under a given creative commons license
- authored by a given author
- of a given "learning resource type"
- created at a given creation date
- of a given mime-type
- covering a given curriculum subject (competencies)
- described with a given LRE thesaurus descriptor

Source: Ternier et al. (2008). Interoperability for Searching Learning Object Repositories The ProLearn Query Language. DLib Magazine, 14(1/2).

### Architecture of LORs (GLOBE)

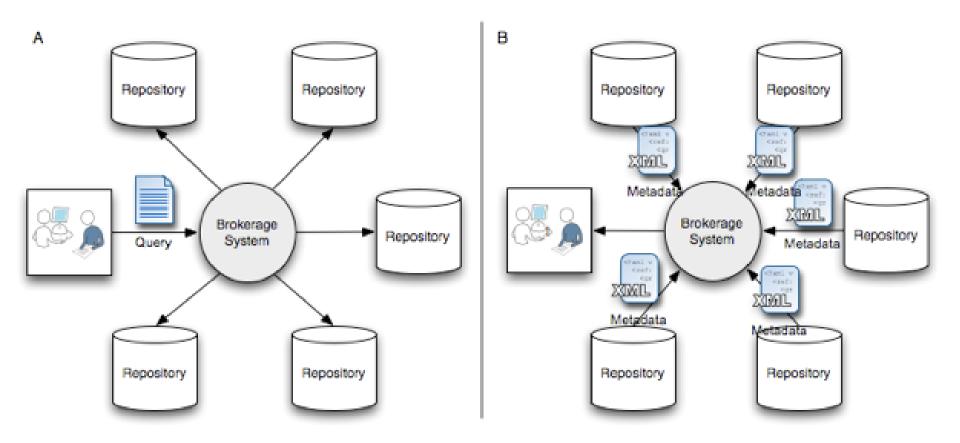




Source: Ternier et al. (2008). Interoperability for Searching Learning Object Repositories The ProLearn Query Language. DLib Magazine, 14(1/2).

### LRE Federated Searching





Source: Ternier et al. (2008). Interoperability for Searching Learning Object Repositories The ProLearn Query Language. DLib Magazine, 14(1/2).

### Interoperability





Programme Meeting was held in York at

the end of March. Here are a few of the

key points from the Programme findings

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JISC ITT: Study on Large-Scale e-

Portfolio Implementations

12 Apr 2010 JISC funding

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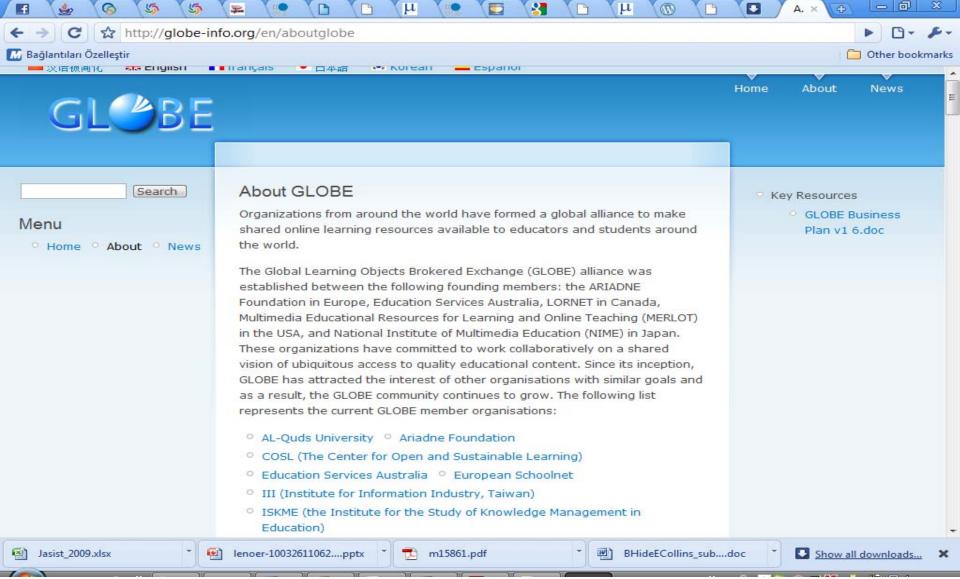
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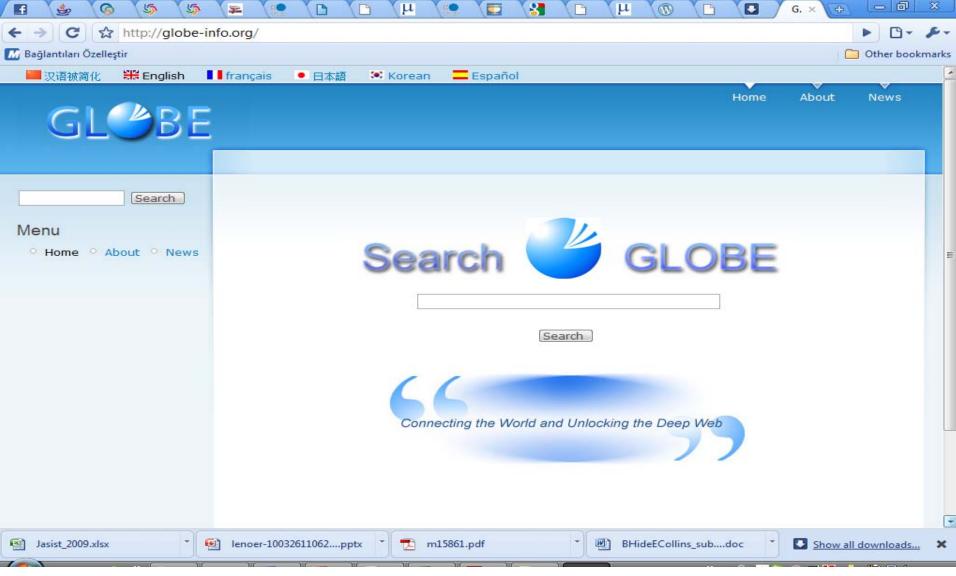
## GLOBE: Global Learning Objects Brokered Exchange





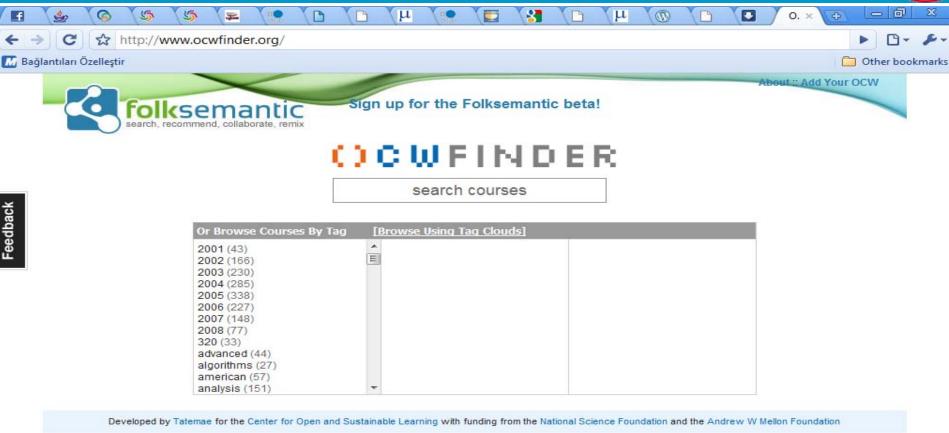
### Globe Initiative





### OCW Finder



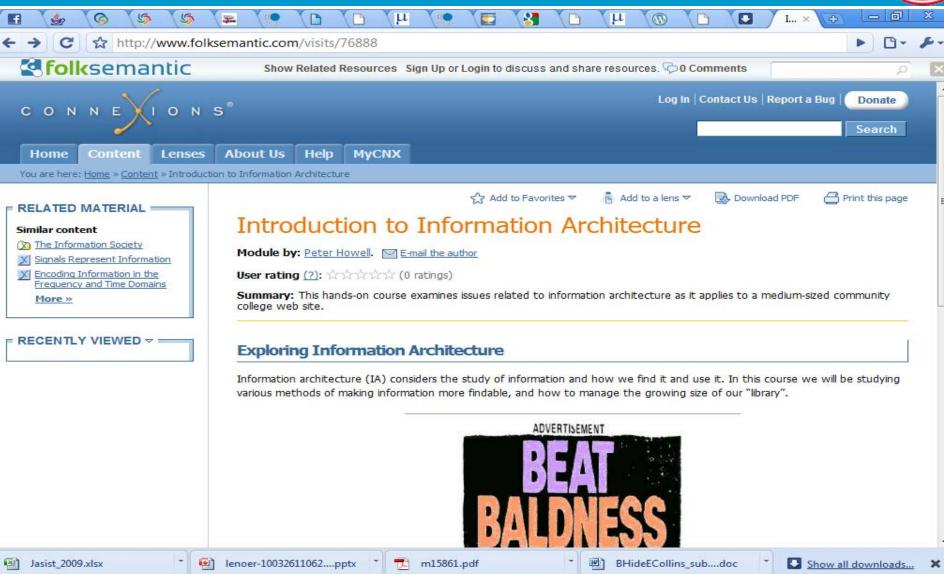


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### Connexions





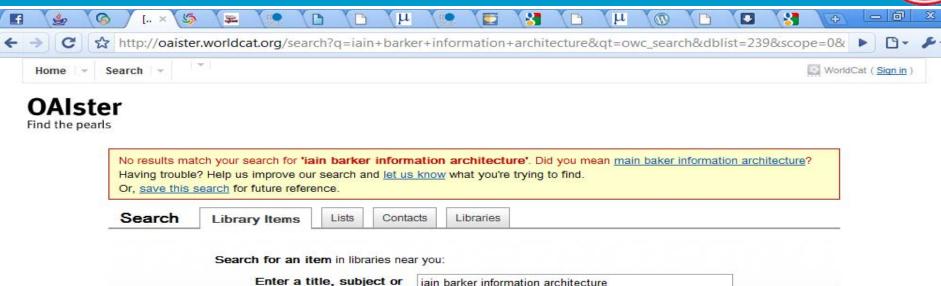
### Google Scholar





### **OAIster**





Search

Advanced Search

 Languages:
 Deutsch
 English
 Español
 Français
 Nederlands
 中文

 You:
 Sign In
 Register
 My WorldCat
 My Lists
 My Watchlist
 My Reviews
 My Tags
 My Saved Searches

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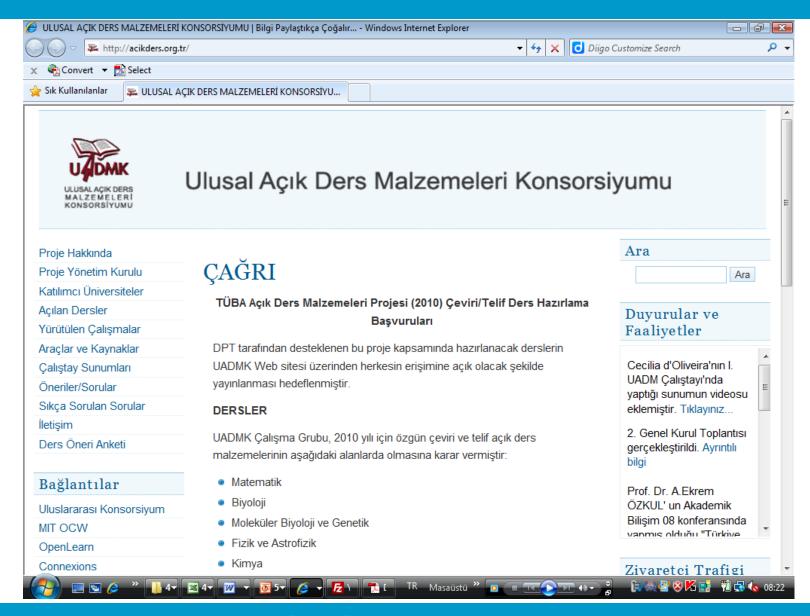
### Turkish Open CourseWare Consortium



- Founded in 2007 (TAS & HEC)
- Has about 60 members
- Provides free access to course materials (syllabi, slides, lecture notes, audio-video records, and so on)
- Some MIT's OpenCourseWare will be translated and made available
- Some members offer several courses through OpenCourseWare web sites.

### **TOCC Web Site**





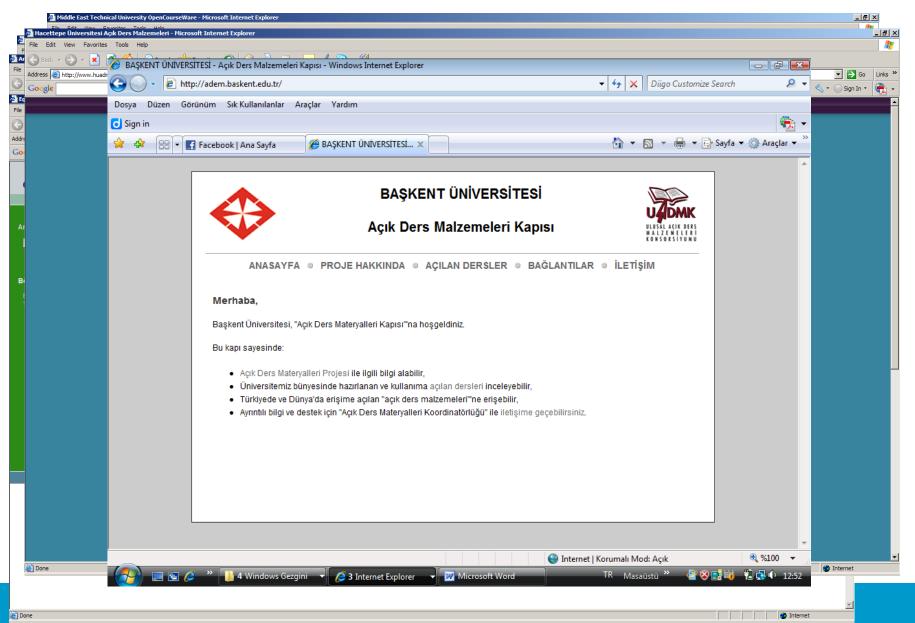
### Courses Offered





### Universities with OER web sites







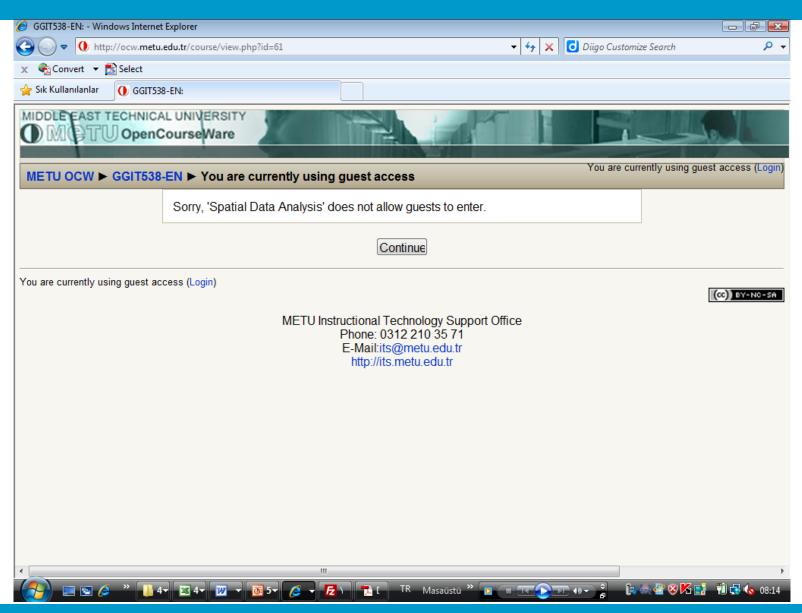
### MITOS Open Access System





### Free Access...





### Issues



- Organizational issues
  - Skills of planning, organization and administration of OERs
- Cultural and educational issues
  - "the concept of re-usable learning objects has hardly registered with the average "chalkface" academic in Higher Education."
- Lack of institutional commitment
- Intellectual Property Rights
- Adherence to metadata and interoperability standards (i.e., LOM, OAI-PMH)
- Lack of effective search mechanisms

Source for quotation: Davis et al. (2009). Bootstrapping a Culture of Sharing to Facilitate Open Educational Resources. IEEE TRANSACTIONS ON LEARNING TECHNOLOGIES.

### Barriers to OERs



- Business models
- Investment in training and support
- Lack of ontology-based educational Semantic Webs
- Library services may be slow to find their place in open learning environments – it is widely felt that libraries will need to adapt better to the considerable changes in information behaviour and Web-based environments.

Source: Fleming, C & Massey, M. (2007). Jorum Open Educational Resources (OER) Report, p.22

## The OLCOS Roadmap 2012 Recommendations for LORs



- Do not follow a 'top-down' strategy of delivering learning objects; instead empower teachers and learners;
- Support individual content creators and communities of practice with useful tools and services;
- Make licensing of content as easy as possible;
- Allow for easy discovery and access to resources;
- Assist open content initiatives in the creation of rich metadata and provide semantically enhanced access to resources.

Source: Fleming, C & Massey, M. (2007). Jorum Open Educational Resources (OER) Report, p.23

### Sustainability



- Intellectual Property Rights (IPR)
- Quality Control
- Bandwidth
- Cost

### Challenges for Turkish Universities



- Awareness of OA, IRs and OERs should be increased
- "Users see the value of sharing, but altruistic sharing is not a good enough incentive on its own."
- OA, IRs and LORs have to be dealt with on a higher level (i.e., TGNA, SPO, Turkish NSF and HEC)
- Visibility of LORs
- Interoperability of and record exchange among LMSs, VLEs, LORs, etc.
- Librarians to expand their thinking about IRs (institutional repositories), for example, to archive educational materials.

Source for quotation: Davis et al. (2009). Bootstrapping a Culture of Sharing to Facilitate Open Educational Resources. IEEE TRANSACTIONS ON LEARNING TECHNOLOGIES.

### Epilogue



"Stewardship is easy and inexpensive to claim; it is expensive and difficult to honor, and perhaps it will prove to be all too easy to later abdicate. Institutions need to think seriously before launching institutional repository programs".



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