

# **GLOBE 2.0**

## **An International Consortium for Sharing Quality Learning Content**

*Center of ICT and Distance Education (CODE)  
The Open University of Japan (OUJ)*

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# Global Learning Object Brokered Exchange (GLOBE)



- An international broker
- To reach “Critical Mass” (originally)
- Focus on educational/learning resources
- All levels
- **Federated search** and **harvesting**
- Harmonizing with international standardization organizations (e.g. IEEE, IMS-GLC)
- Finding scalable and interoperable infrastructure and sustainable business model

# Global Learning Object Brokere Exchange (GLOBE)



September, 2004



February, 2007

September, 2007



April, 2008

September, 2008

March, 2009

February, 2010



# GLOBE 1.0

## Cross-institutional Search

The screenshot displays the NIMEglad website interface. At the top left is the NIME logo and the text "NIMEglad English Gateway to Learning for Ability Development". A "JAPANESE" link is visible. On the top right, there are icons for a computer, a printer, and a question mark, with links for "I'm glad", "Sitemap", and "Contact".

The main content area is divided into two columns. The left column features a "Keyword Search" section with a search input field and a "Search" button. Below this are radio buttons for "Universities in Japan", "e-Learning", "OCW", and "All Categories" (which is selected), and a link for "Advanced Search". Below the search section is a "NIME-glad Categories" section with several expandable menu items: "Top Pages of Universities in Japan" (with sub-links for "Alphabetical List" and "Geographical List"), "Faculty and Department in Japan" (with sub-links for "Alphabetical List", "Geographical List", and "Disciplinary List"), "International Distance Learning" (with sub-links for "USA", "Canada", "Australia", "Singapore", and "All"), "Learning" (with sub-links for "OCW", "e-Learning Courses", and "Materials"), and "Specialized Fields" (with sub-links for "Electrical Engineering and Computer Science / Philosophy / Psychology / Social sciences / Anthropology / Political science").

The right column features a "Federated Search" section with a search input field and a "Search" button. Below this are four checked checkboxes for "NIME", "MERLOT", "LORNET", and "edna", and a link for "ARIADNE". A paragraph explains that federated searching is a data retrieval service that performs a cross-sectional search on multiple search engines and displays results collectively. It notes that implementing this capability requires a federated search server program and a client program on each of the servers. A "more..." link is located at the bottom right of this section.

At the bottom right of the page, there is a "Sign In / Register" button and a "Study List" link.

# GLOBE 1.0 Search Results: Location and Abstracts



## NIME-glad Federated Search

NIME  MERLOT  LORNET  edna  ARIADNE



Japanese Words & Phrases

A collection of basic Japanese words and phrases for the beginner.



Writing About Race, Spring 2003

In *The Souls of Black Folk* (1903), the great cultural critic W. E. B. Du Bois wrote that "ithe probl..



Japanese Language Teachers Association of Victoria

The Japanese Language Teachers' Association of Victoria Incorporated aims to promote the teaching and learning of Japanese in Victoria Australia, offe



Department of Physics

Order is decided by local rules.

# Federated Search (NIME-glad)

## SQL: Simple Query Interface

① Search keyword  
「Science」



⑥ display after the merge of search results



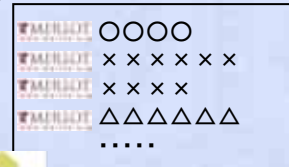
② query learning object include keyword "Science"

③ return search result



④ query learning object include keyword "Science"

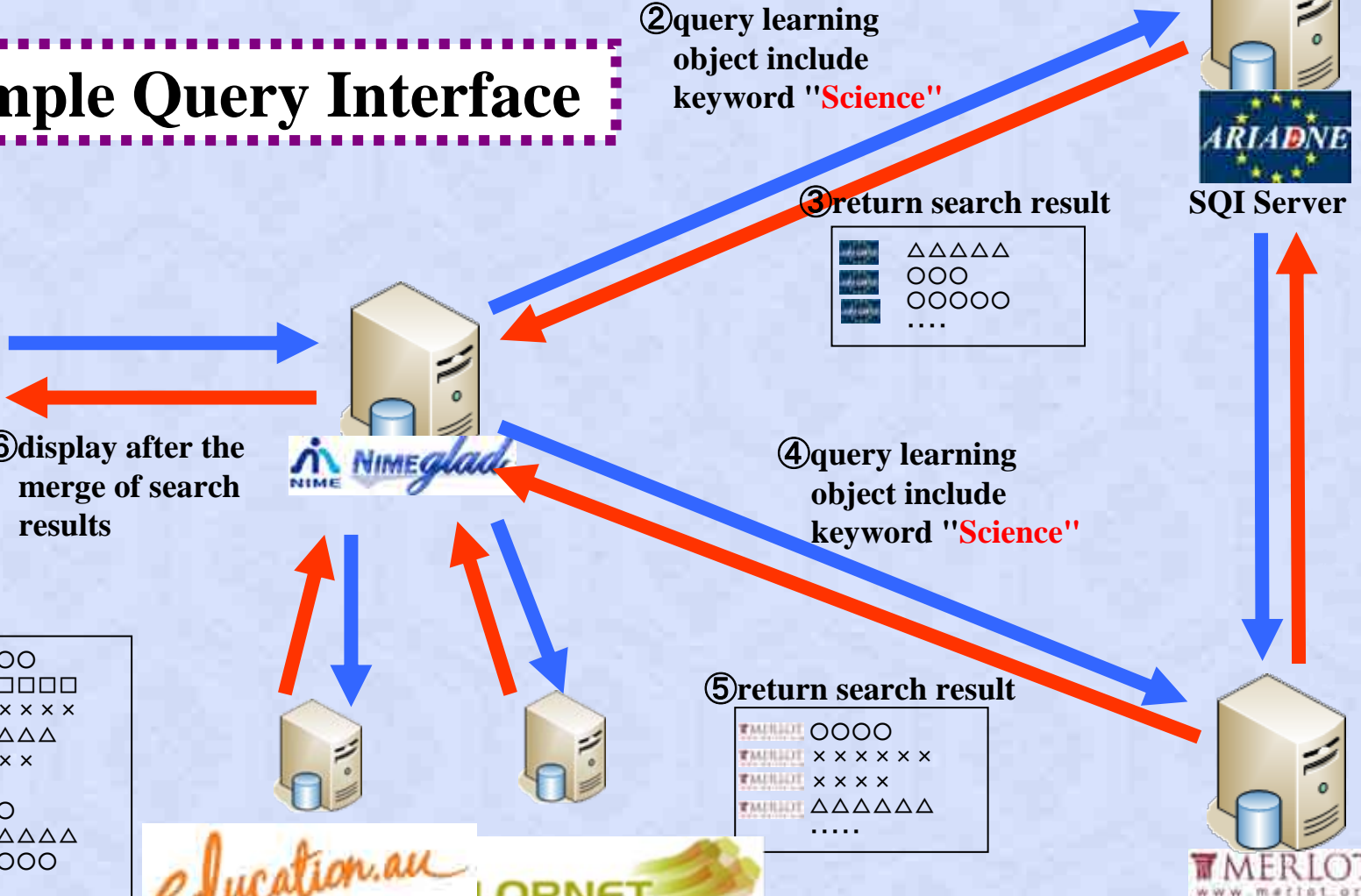
⑤ return search result



MERLOT API



SQL Server



# Harvesting (GLOSS)

## OAI-PMH Harvester

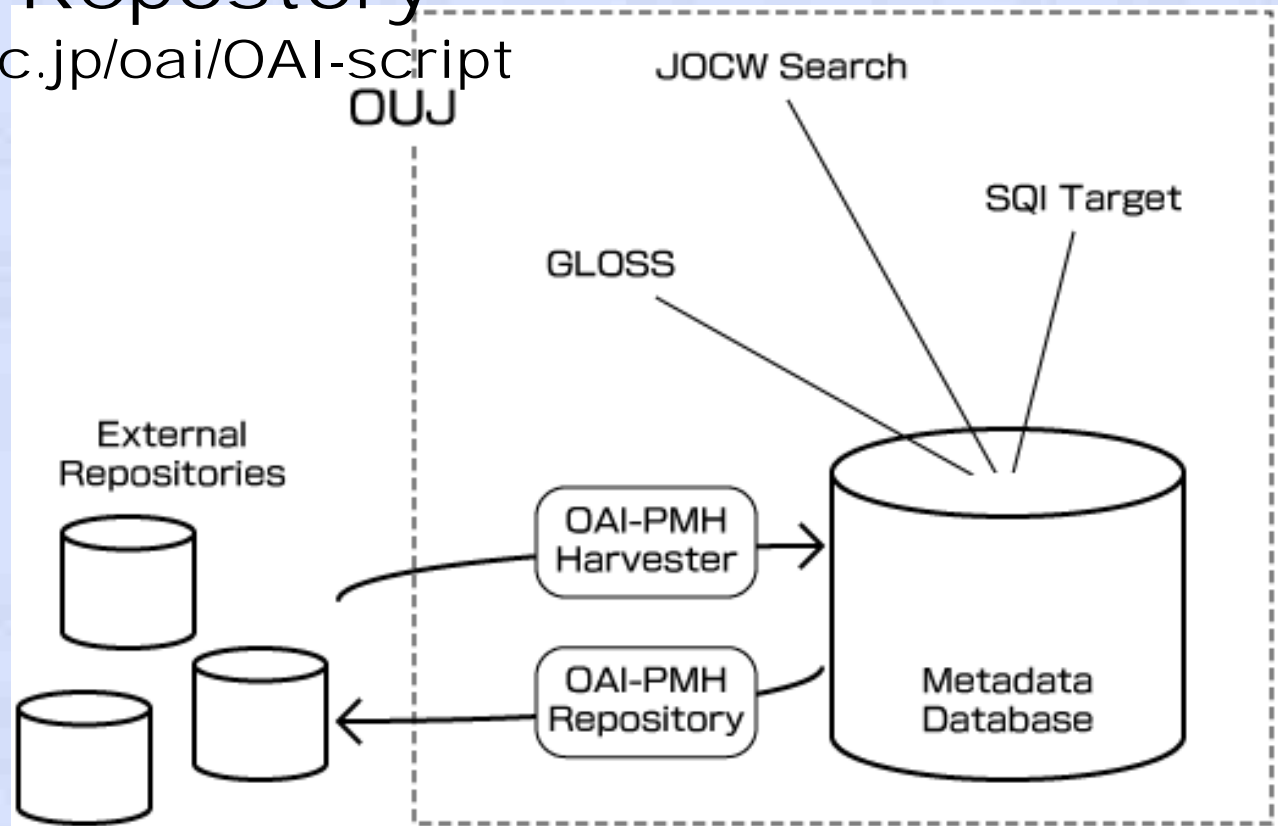
from ARIADNE 300K

European Schoolnet 190K

OER Commons (ISKME) 30K

## OUJ OAI-PMH Repository

<http://lor.code.ouj.ac.jp/oai/OAI-script>



## Use Cases : Tomorrow

- ◆ Lifelong Learner  
A learner need not consider the optimality of the learning content. By referring to learner's profile (including, e-portfolio) and contexts, the computer finds the most appropriate modules from the content repositories from the world.
- ◆ Teacher  
A teacher can find the most appropriate materials which he/she uses at the classroom by consulting with the knowledge-base on the pedagogy, quality, right and other information.

They can concentrate in learning and teaching in various contexts (incl. Social)



# GLOBE 2.0 for the new value-added services

- advanced global search
- quality assurance
- optimization / recommendation
- right management / processing
- localization

Next-generation int'l standards of metadata and infrastructure for the discovery and delivery of content/metadata are indispensable  
e.g. IMS/GLC LODS, SCORM....

# Technologies and architecture

- ◆ Federated search and Harvesting (OAI-PMH)

*plus*

- ◆ Federation of registries
- ◆ DRM
- ◆ Metadata auto tagging
- ◆ LOM 2.0
- ◆ Taxonomies in disciplines
- ◆ Control vocabularies bank across languages and cultures

# GLOSS: Global Learning Object Search System (GLOSS)

- ◆ New framework in open education and lifelong learning
- ◆ New value-added services, e.g.
  - ◆ copyright management and processing
  - ◆ educational guidance and recommendation
  - ◆ quality assurance
- ◆ Federation of Japanese domestic repositories and referatories

# New cross-institutional search: GLOSS's features

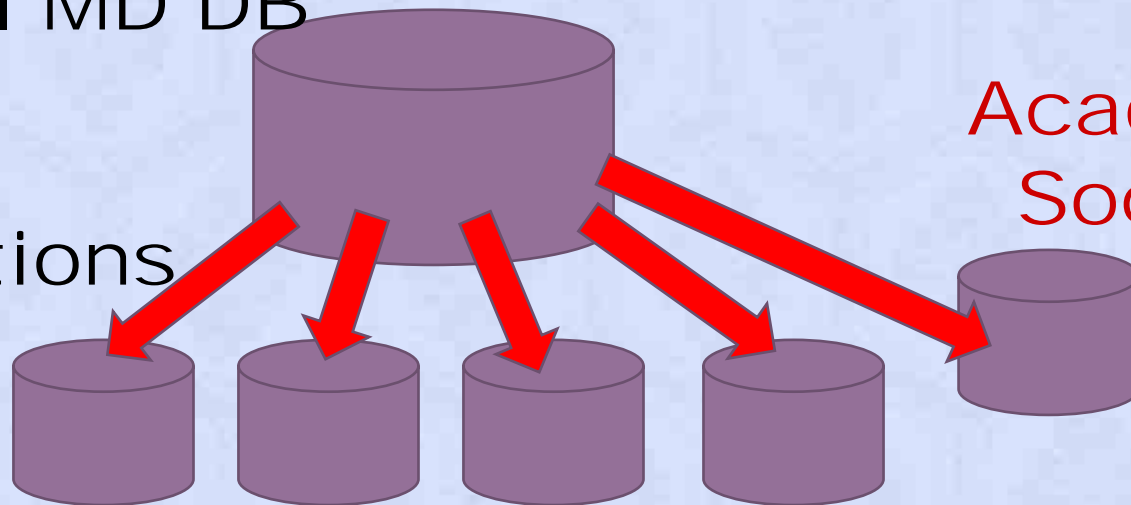
- ◆ Customized search engine
- ◆ Metadata extension
  - ◆ Covering both open and proprietary content
  - ◆ Quality evaluation
  - ◆ Pedagogical / learning information
- ◆ Domestic network for metadata
  - ◆ Harvesting

# New cross-institutional search: features

Central MD DB

Collections

Academic  
Society



JOCW

FOLC  
-ACPA

OUJ

GLOBE



JOCW\_HP



GLOBE Harvester  
/ Federated search

# A Collection

JAPANESE English

## GLOSS

グローバル学習オブジェクト検索  
Global Learning Object Search System

[詳細検索 | ヘルプ](#)

### GLOSSとは



GLOSS(Global Learning Object Search System)は、教育用コンテンツのサーチエンジンです。上記の検索ボックスではキーワード検索が行え、下部のメニューから各分野別に絞りこむことができます。GLOBEが提供する、海外の学習オブジェクトも検索することができます。海外の学習オブジェクトの検索は、データベースと行われる方法で、海外データベースの検索結果も検索結果に表示されます。Federated Searchと呼ばれる検索方法により、検索結果の絞り込みも可能です。

[詳細はこちら](#)

### お知らせ

2009年4月2日  
相模実業に伴いURLが変更されました。

2009年3月30日  
GLOSSを公開しました。

### リンク



### 専門分野からの検索



<a href="#">哲学・宗教・民族・文学(132)</a>	<a href="#">工学全般(338)</a>
<a href="#">歴史・考古学(19)</a>	<a href="#">医・歯・薬・生理学(42)</a>
<a href="#">法・政治学(124)</a>	<a href="#">農・林・水産学(44)</a>
<a href="#">経済学(254)</a>	<a href="#">美術・芸術(19)</a>
<a href="#">心理学(39)</a>	<a href="#">音楽(0)</a>
<a href="#">言語(67)</a>	<a href="#">体育(0)</a>
<a href="#">数学(320)</a>	<a href="#">学校・総合(01)</a>
<a href="#">情報・計算機科学(508)</a>	<a href="#">その他(292)</a>
<a href="#">理学全般(226)</a>	

このサイトの動作には、Cookieが必要です。Cookieを受け入れる設定にしてご利用ください。

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# GLOSS: Search Result

The screenshot shows a web browser window titled "GLOSS - Global Learning Object Search System". The address bar contains the URL "http://gloss.cdoe.oujao.jp/searchlist/?op\_ft=2&fe\_smatoss&mp=32Fsearchlist". The search input field contains "structural concrete" and the search button is labeled "Search". There are links for "Advanced Search" and "help".

Below the search bar, there are tabs for "LOM/OAI-PMH" and "Federated Search". The search results are displayed as "structural concrete search results" with "1\_20 of 39" items. A "Number to display" dropdown is set to "20 items".

The first result is titled "Mechanics of Structural Concrete". The description states: "The manufacture of precast steel-reinforced structures requires taking precautionary measures in both **concrete** technology and **structural** design in order to ensure the durability of the structural **concrete** members. One of these measures is to adhere to the  $n$  protection. In optimizing the thicknesses of the **structural** members, this criterion can impose limitations, as the thickness of **structural** members is frequently greater than necessary for b".

The "Type of Media" is listed as "PDF". The "URL" is: "http://www.ocw.btech.ac.jp/index.php?module=General&action=TO3006GakubUCD=2238&gakkaCD=224611&koupiCD=610038&Nendo=2005&lang=JA".

The second result is titled "MULTI-HIERARCHICAL DURABILITY ASSESSMENT OF EXISTING REINFORCED-CONCRETE STRUCTURES. Durability assessment of reinforced-concrete structures". It is marked as "Harvested from ARIADNE". The description states: "Lectures on the mechanics of **structural concrete**. Some recent topics related to fracture mechanics of **concrete** are included." The "URL" is: "http://www.ironet.de/daten/conds/C181837.pdf".

# Metadata item for New System

- ID of metadata\*
- Title\*
- Language of LO\*\*
- Description\*\*
- Keywords\*\*
- Aggregation level\*
- Language of metadata\*
- File format\*
- URL\*
- Technical requirements
- Educational context\*\*
- Typical learning time
- Intended level of learners
- Cost\*
- Restriction of usage
- Classification\*\*
- **Rights** ("Catalog" and its "Entry" of applied license)
- **Quality** ("Catalog" and its "Entry" of obtained certification)
- **Availability of harvesting\***
- **Availability of federated search\***
- **Collection**

**red item:** not based on IEEE LOM

(\*) mandatory item

(\*\*) recommended item

ID of LO is made of URL (Catalog is "URI" and Entry is URL of LO)



# Right description under Creative Commons (Element 19)

License System	Value
Creative Commons Version 3.0	Attribution
	Attribution- No Derivative Works
	Attribution-NonCommercial - No Derivative Works
	Attribution-NonCommercial
	Attribution-NonCommercial -ShareAlike
	Attribution-ShareAlike

# JOCW-Search: Search Results

<http://keyaki.code.ouj.ac.jp/mt/lorsearch.cgi?app=jo>  
language&btn=

## JOCWコンテンツ横断検索システム

検索キーワード Japanese language

検索 検索オプションを表示

Japanese language の検索結果 6件中 ↑ - 6件目

### LANGUAGE BEYOND GRAMMAR, Fall 2007

Mastering the grammar of a particular **language** does not guarantee a successful communication with a native speaker of that **language**. This is because **language** does not only function as a conveyance of information, but also has other functions such as expressing the **language** user's attitude/emotions. The objective of this course is to encourage a more profound understanding of the functions of **language** that exist beyond referential meaning, with particular attention given to markers and their uses in **Japanese**. An understanding of this aspect of **language**, and the function of particular markers, will lead to a deeper understanding of communication in **Japanese** in general. This course comprises three main parts: (i) general review of the non-referential function of **language**; (ii) the case of English briefly reviewing markers such as you know and like; and (iii) the case of **Japanese** which will include markers such as ne, yo, -janai, doose, datto, maa, nan(ka), mono, no, yappari etc.

[http://ocw.dmc.keio.ac.jp/International\\_Center/09B-017\\_e/](http://ocw.dmc.keio.ac.jp/International_Center/09B-017_e/)

慶應義塾大学

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### 日本語の話し とばと言外の意味 (200 / 春秋学期)

Mastering the grammar of a particular **language** does not guarantee a successful communication with a

[http://ocw.nagoya-u.jp/index.php?lang=en&mode=c&id=22&page\\_type=index](http://ocw.nagoya-u.jp/index.php?lang=en&mode=c&id=22&page_type=index)

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# Prospects

- ✓ Lifelong Learners
  - ✓ Independent, Autonomous, Self-directed
  - ✓ Broad spectra of personal characteristics
  - ✓ Plus Internationalization and Globalization
    - ✓ languages, social customs, school systems, curricula and standards, pedagogies, ICT environments, learner characteristics and so on
- ✓ New value-added Services
  - ✓ Localization for cultural diversity
  - ✓ Personalization and optimization
    - ✓ Recommendation, (Right, Quality, Pedagogical and so on)
- ✓ Collaborations to sustain quality content and learning communities
  - ✓ Sharing courseware materials for co-development
  - ✓ Sharing information for learners
- ✓ Global search system will be effective also in both OE and LLL frameworks.

# Contact Information

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