

Development, Distribution and Publishing of Cross-media Learning Content for Lifelong Learners

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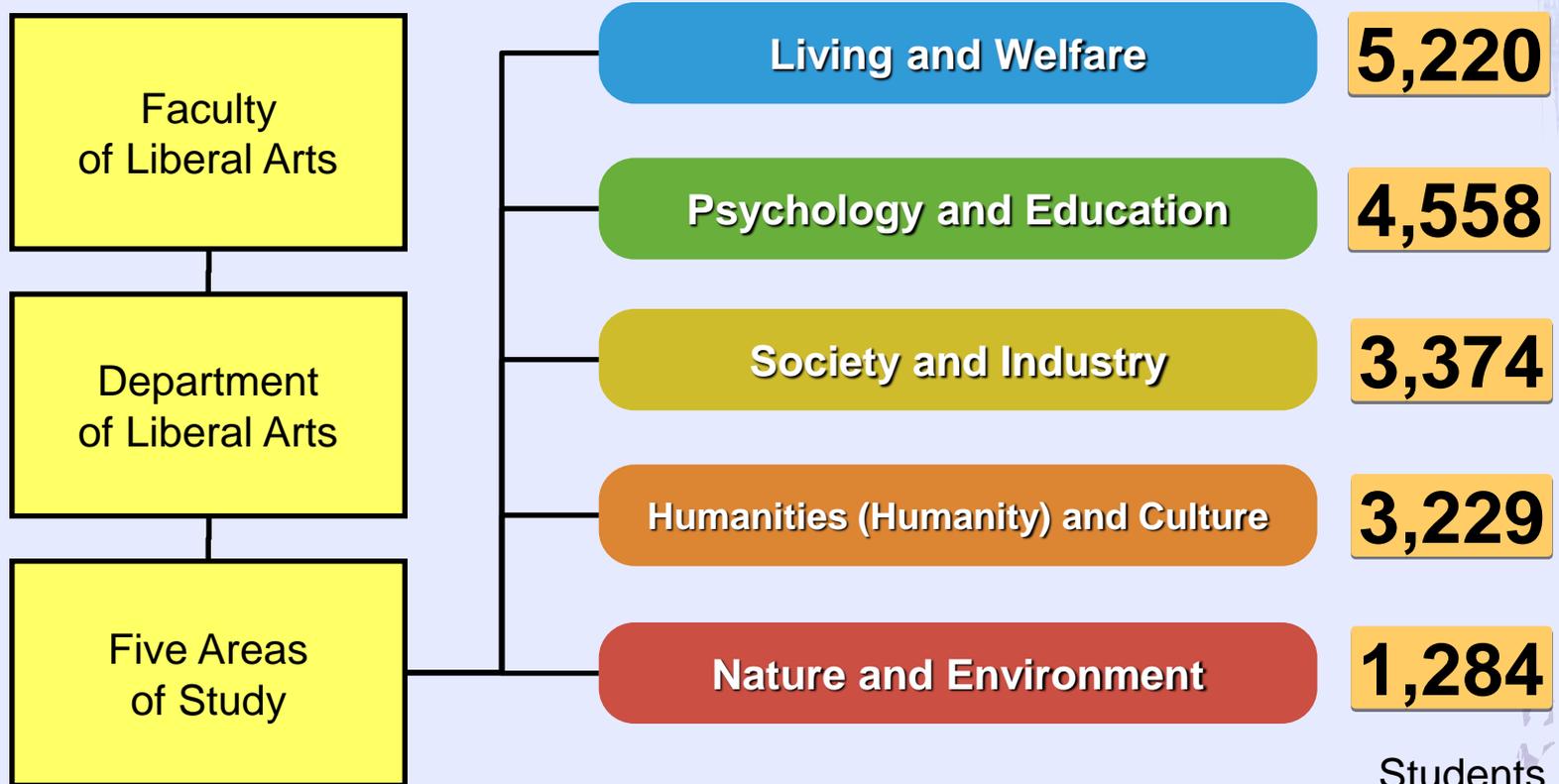


The Open University of Japan (OUJ)

- **Semi-governmental** institution
- **Distance education** institution
 - “Anytime, anywhere”
 - Multi-delivery channels(**public digital broadcasting**, printed materials, **Internet**)
 - F2F mode schooling (2,600+ courses/year)
 - Online supports (telephone/Web)/offline (F2F) supports at **regional study centers**
- National center to promote **Open Education** and **Lifelong Learning**
 - “Anyone is welcome”
 - No entrance exam (undergraduate courses)
- **Liberal Arts** institution
 - Growing needs for Practical Abilities

Faculty of Liberal Arts

The Faculty of Liberal Arts comprises five areas of study unconstrained by conventional academic fields, enabling subject selection from a broad range of academic disciplines.

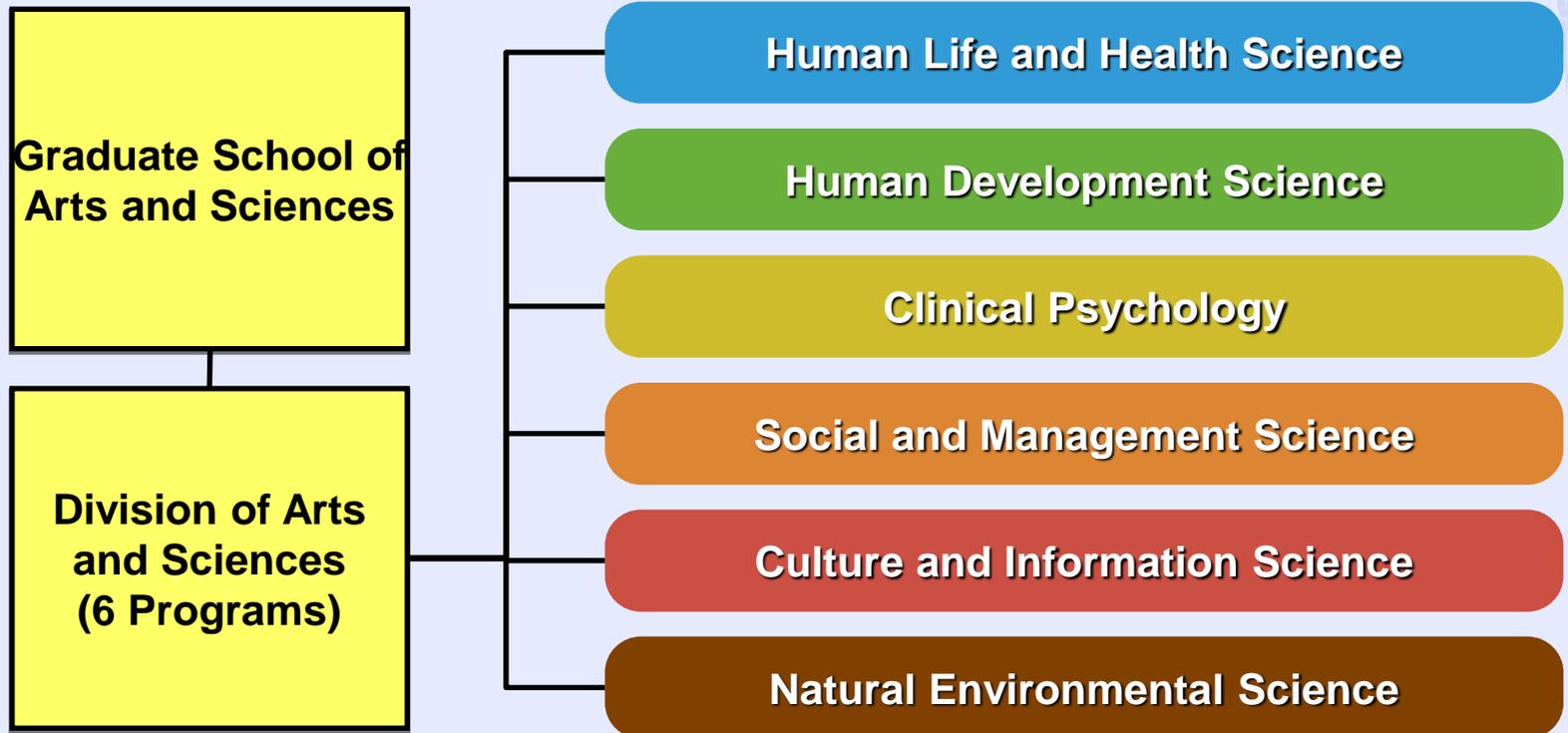


Students
(2009 New Undergraduate Enrollment by major)

Bachelor's degree: 124 credits (20 credits in F2F mode)

School of Graduate Studies

**Created for those seeking to become
“highly skilled 21st century professionals”.**





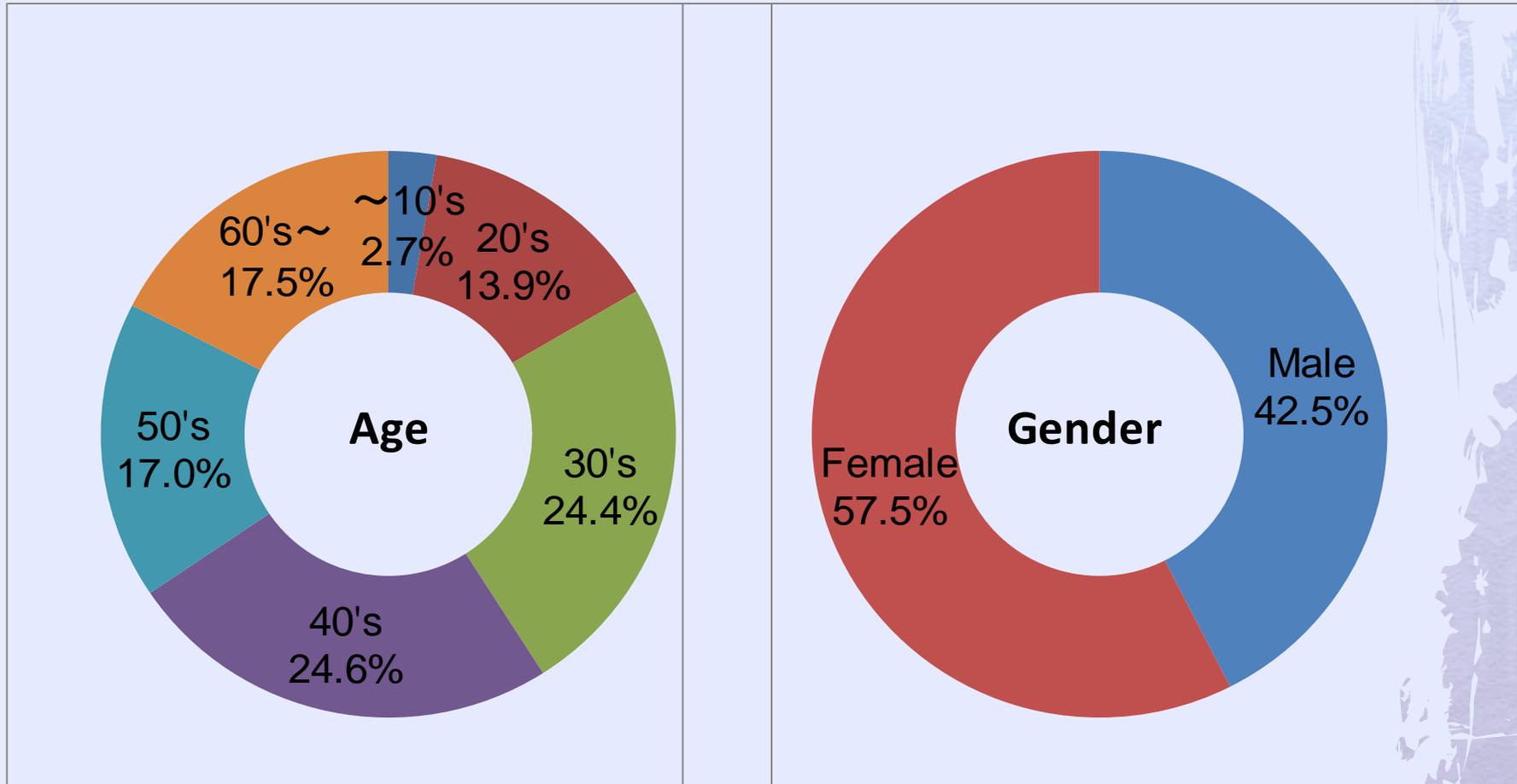
BACKGROUNDS AND CONTEXTS: DIVERSITY AND VARIABILITY

Students / Learners

- ◆ Vast learner spectrum
 - ◆ 1/3 of OUJ students are 50 years old +
 - ◆ Full-time to part-time
 - ◆ No requirements for admission on academic backgrounds
- ◆ Different comfort zone in learning spaces
 - ◆ Delivery channels
 - Printed materials to smart phone
 - ◆ Learning styles

Attributes of Enrolled Students

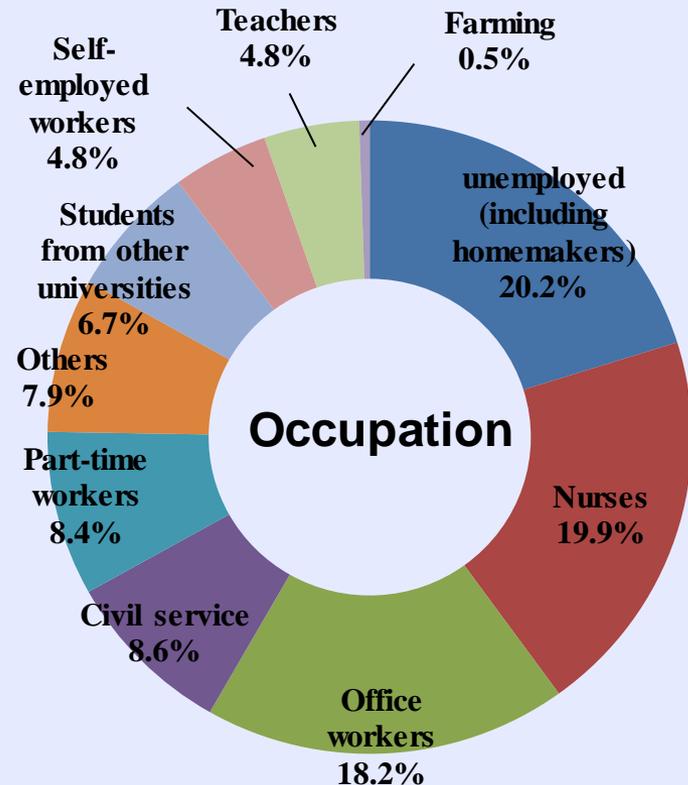
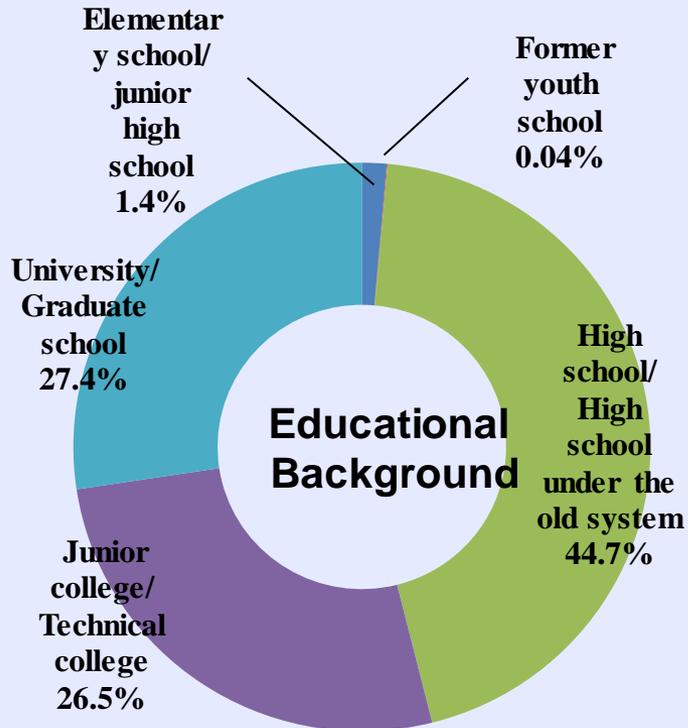
at Faculty of Liberal Arts including Special Auditing Students:



as of the 1st semester, 2009

Attributes of Enrolled Students

at Faculty of Liberal Arts including Special Auditing Students:



as of the 1st semester, 2009

Study Centers in 50 Locations Nationwide



Fukui Study Center



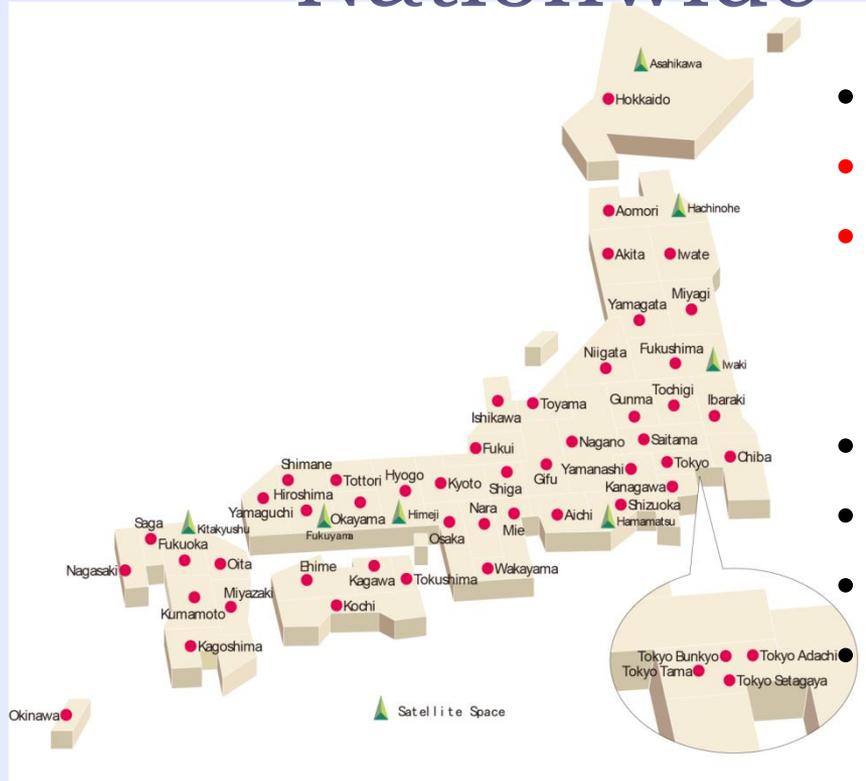
Tottori Study Center



Tokushima Study Center



Nagasaki Study Center



- Schooling
- F2F mode courses
- Credit certification examinations
- Library
- AV room
- Student supports extracurricular activities

The total number of F2F mode courses was 2,645 (1st semester: 1,313, 2nd semester: 1,332 in 2010)

Delivery of course materials: Broadcasting Courses

- ◆ Main delivery media
 - ◆ TV/Radio broadcasting (Terrestrial & BS Digital, open content)
 - ◆ Printed textbook (proprietary content)
- ◆ Supplementary media (closed)
 - ◆ Video/Audio streaming
 - ◆ PDF version of textbook (pilot)
 - ◆ DVD package



Number of broadcasting Subjects in FY2011

	1st Semester		2nd Semester	
	TV Subjects	Radio Subjects	TV Subjects	Radio Subjects
Total	169	157	169	157
	326		326	
The Faculty of Liberal Arts (Undergraduate)	139	120	139	119
	259		258	
The School of Graduate Studies	30	37	30	38
	67		68	

Number of courses available online (streaming) in FY2011

	TV Subjects	Radio Subjects
Total	71 (ca. 40%)	199 (100%)
Undergraduate	67	119
Graduate	4	38
Special Lectures	0	42

Interactiveness: Critical requirement for distance education

- ◆ Some prototypic practices
 - ◆ Internet-based teleconference system for online seminar
 - ◆ Combination of SNS and Web-based teleconference system for supervising the graduation thesis studies
 - ◆ LMS (moodle)

Online student supports: Campus portal

✓ “System WAKABA”

Administration system/Personal record (e-portfolio-oriented)/Class registration

✓ “Campus Network”

Announcements / G-mail / Video-Audio streaming of broadcasting content /LMS /Learning tips and reference information (past graduation study....)

✓ Online library services

✓reference services / e-books / e-journals and ...)

✓ Campus life Q/A

One of our main purposes of ICT applications is *to prepare for the diversity of learners and their learning processes.*



NEW LEARNING SPACE

M-LEARNING

UPONET: Remedial courses for independent learners

リメディアル化学 教科書準拠の問題集(東京書籍)を素材とした中学・高校レベルの学習内容です。
iPadでも学習できます。 iPad

リメディアル物理 教科書準拠の問題集(東京書籍)を素材とした中学・高校レベルの学習内容です。
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iPadでも学習できます。 iPad

TOEIC® スタート TOEIC®に挑む学習者のためのTOEIC®教材です。桐原書店「Over the TOEIC®」NETではTOEIC®500、600、700の教材を学んだ後、ステップアップに取り組んでください。
iPadでも学習できます。 iPad

The screenshot displays a web browser window with the URL "リメディアル物理: 波動とはなにか(1)". The page content is titled "波の性質 時空に満ちる波 波動とはなにか(1)". A sidebar on the left lists navigation options: "教科書" (Textbook) and "チェック問題" (Check questions). The main content area is titled "波の基本式" (Basic Formulas of Waves) and includes the following text and diagrams:

波の性質 時空に満ちる波 波動とはなにか(1)

- 波動とは
- 振動の要素
- 波の基本式

波の速さ v [m/s], 波長 λ [m],

振動数 f [Hz], 周期 T [s]

の間には次の関係が成り立つ。

$$v = f\lambda = \frac{\lambda}{T}$$

波にともなうある点の振動

波がやってきた (時刻 $t=0$)

	$t = \frac{T}{4}$
	$t = \frac{2T}{4}$
	$t = \frac{3T}{4}$
	$t = \frac{4T}{4}$
	$t = \frac{5T}{4}$
	$t = \frac{6T}{4}$

The interface also shows a progress bar at the bottom with "0:06 / 2:23" and navigation buttons for "停止" (Stop), "前へ" (Previous), and "次へ" (Next).

UPONET: USER platform

- ✓ Courseware for independent learners (no credits)
- ✓ Mainly, Moodle
- ✓ Mobile learning (from Autumn 2011)
 - ✓ Html5-based templates
 - ✓ Compatible with flash content of iPad/iPhone

Screenshot of iPad: text+AUDIO

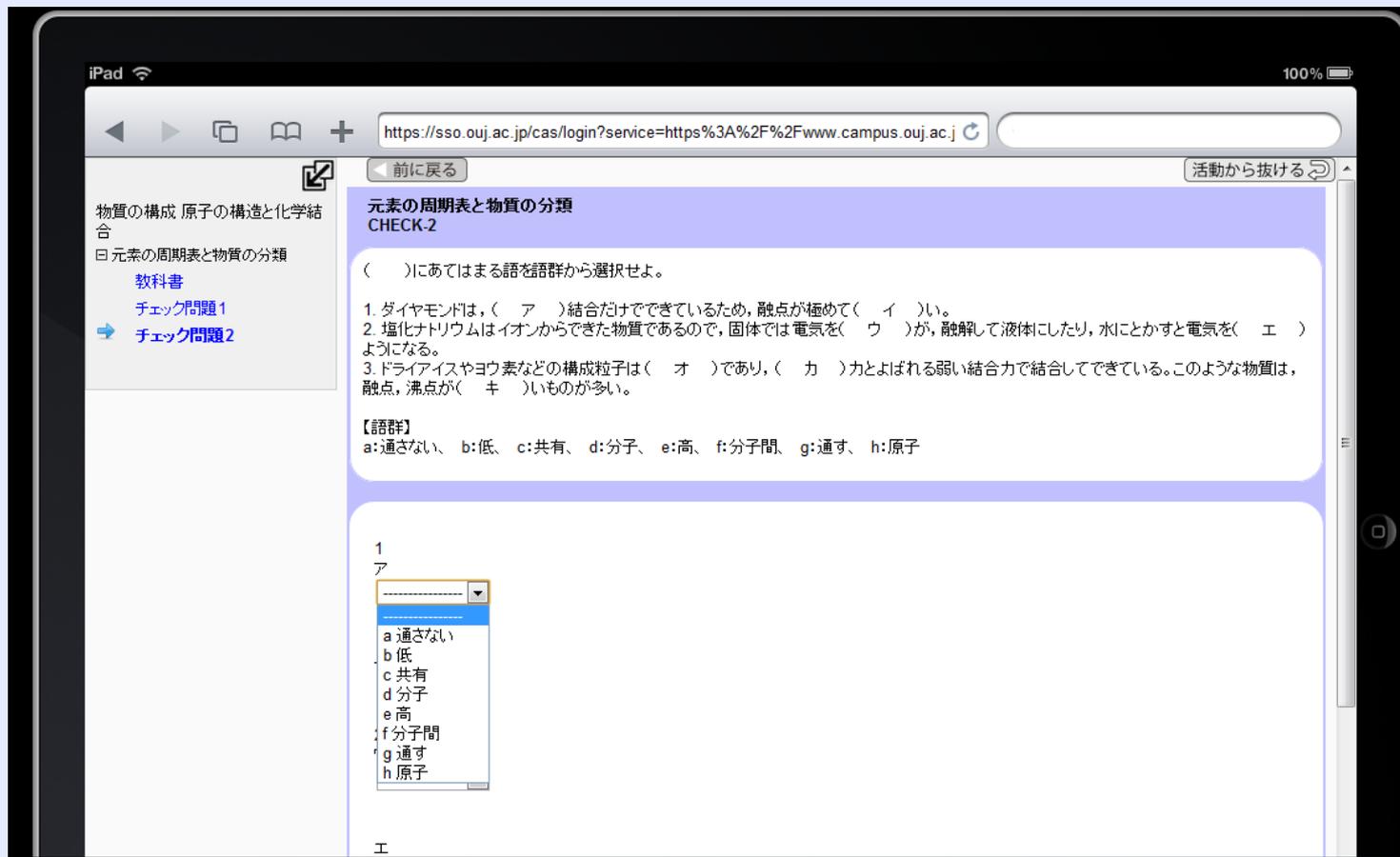
The screenshot shows an iPad displaying a web page from the University of Osaka Prefecture. The page title is "波の性質 時空に満ちる波 - 波はこうして進む(2) - ホイヘンスの原理 (1/3)". The main content is titled "波はこうして進む" and "ホイヘンスの原理". It explains that when a wave reaches a medium, the particles vibrate, and each particle acts as a source of spherical waves (elementary waves). The principle states that the wavefront at a later time is the surface formed by the overlapping of these elementary waves. This principle can be used to explain reflection, refraction, and diffraction. The text mentions that Huygens was a Dutch mathematician and astronomer.

Two diagrams illustrate Huygens' principle:

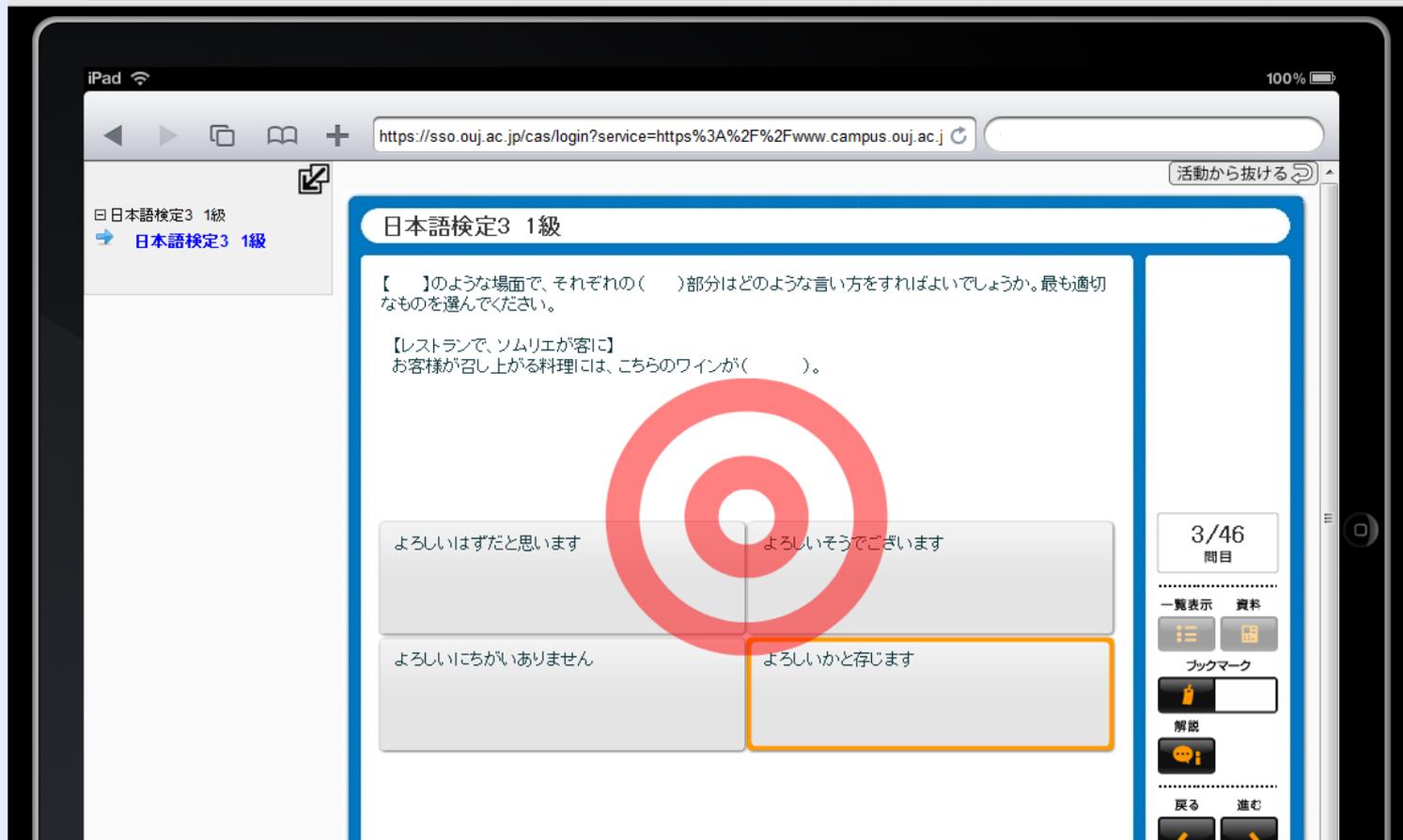
- (a) 平面波 (Plane wave): Shows a wavefront moving from point A to point B. At a later time t , the wavefront is at point B. The distance between A and B is $v \cdot t$.
- (b) 円形波 (球面波) (Circular/Spherical wave): Shows a wavefront moving from point A to point B. At a later time t , the wavefront is at point B. The distance between A and B is $v \cdot t$.

At the bottom of the page, there is a video player with a play button and a progress bar showing a duration of -01:37.

Screenshot of iPad: TEST



Screenshot of iPad: DRILL



Screenshot of a mobile phone

◆ for PC

- ◆ <https://nurse.ouj.ac.jp/pc/>

◆ for Mobile phone

- ◆ <https://nurse.ouj.ac.jp/m/>

◆ Content

Drill for National
Examination for Nursery
Licence

看護学習支援ツール

在宅療養者の自己決定支援

学習のポイント (参照問題：第98回午前46問)

在宅看護の原則について学習しましょう。在宅看護の対象と支える多職種チームについて理解することが大切です。

キーワード：在宅看護 自己決定 チーム

在宅看護の良さは、その方の生活習慣や価値観を大切にしたいその人らしい生活が送れることにあります。そのためにも、本人の自己決定が大切になります。

訪問看護の対象は、本人を介護する家族も含めて考える必要があります。在宅看護を継続するためには、病状の進行や急性増悪期など様々な段階において本人・家族がどうしたいかを意思表示できることが大切となります。多職種のチームで支えることで、より細やかな支援ができるのです。

本人の自己決定を支える在宅看護

本人・家族が望む生活を送れるように支援

本人の自己決定

家族の介護負担の軽減

在宅療養を支えるチーム

医師・訪問看護・ケアマネージャー・
訪問介護・訪問リハビリ・訪問入浴・
薬剤師・地域の人々・保健師・歯科医師

DEVELOPMENT AND DISTRIBUTION: TOWARDS PERSONALIZATION

Requirements

- ◆ Sustainable
 - ◆ Open philosophy/concept
 - ◆ Compatible with proprietary resources
 - ◆ Quality improvement
- ◆ Versatile
 - ◆ Reuse/Remix
 - ◆ Context free
 - e.g. Multi-lingual/cultural or Pluralistic contexts

OIJ contributions to JOCW community

- × As a JOCW(OCWC) member
 - + OIJ-OCW site
 - × Launched in October 2010
 - × Video streaming of courseware
 - TV(video) 4:
 - Radio (Audio) 8:
 - Special Lecture 5:
 - + JOCW Search and GLOBE
 - × From October 2006 (Started by NIME)
 - × 2804 metadata of JOCW content

JOCW-Search at JOCW HP

The screenshot shows the JOCW website homepage. At the top left is the JOCW logo (Japan OCW Consortium) with a language selector for English. Below it is the MIT OpenCourseWare logo. The main header features the text '日本オープンコースウェア・コンソーシアム' (Japan Open Courseware Consortium) and a navigation menu with links for 'OCWとは', 'OCWの歴史', 'JOCWについて', 'メンバー', 'イベントなど', and '人気コース紹介'. The main content area includes a paragraph about the site's purpose, a Google search box for JOCW, and a section for 'JOCW横断検索' (JOCW Cross-search) which is highlighted with a red box. This section includes a search input field, a search button, and the logo for '放送大学' (Broadcast University). To the right, there is a list of JOCW special sponsors: Uchida and NTT Docomo. At the bottom, there is a banner for the 'Asia Regional OpenCourseWare and Open Education Conference'.

JOCW
JAPAN OCW CONSORTIUM

English >>

MIT OPENCOURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

OCW CONSORTIUM

Google JOCW検索

検索

Google

JOCW横断検索

検索

放送大学

日本オープンコースウェア・コンソーシアム

OCWとは OCWの歴史 JOCWについて メンバー イベントなど 人気コース紹介

本サイトは日本でオープンコースウェア(OCW)を公開している大学を中心に設立された日本オープンコースウェア・コンソーシアム(JOCW)のウェブサイトです。

OCWとは「大学で正規に提供された講義とその関連情報のインターネット上での無償公開活動」です。

JOCWについての詳細は [<<こちら>>](#)

OCWについての詳細は [<<こちら>>](#)

<お知らせ> **New**

- ・ アジア地域OCW会議(AROC2011.2011 Asia Regional OpenCourseWare and Open Education Conference)は2011年11月7日(月)、8日(火)に東京で開催されます。
- ・ [詳細はこちら](#)
- ・ アブストラクト投稿期限を9月12日まで延長しました。
- ・ 会議登録サイトをオープンしました。

<JOCW特別賛助会員>

- ・ [株式会社内田洋行](#)

UCHIDA

- ・ [株式会社NTTドコモ](#)

docomo

ASIA REGIONAL OPENCOURSEWARE AND OPEN EDUCATION

JOCW-Search: Advanced Search

JOCWコンテンツ横断検索システム

keywords

course title

media

language

CC license

検索キーワード フランス語 [検索オプションを開じる](#)

検索オプション

コース名

メディアの種類

<input type="checkbox"/> HTML他	<input type="checkbox"/> 画像	<input type="checkbox"/> ビデオ	<input type="checkbox"/> オーディオ
<input type="checkbox"/> PDF	<input type="checkbox"/> Word	<input type="checkbox"/> Excel	<input type="checkbox"/> PowerPoint
<input type="checkbox"/> Flash	<input type="checkbox"/> その他		

URL

言語 日本語 英語 その他

ライセンス(クリエイティブ・コモンズ) 改変可 商用利用可

Global Learning Object Brokered Exchange (GLOBE)



September, 2004



February, 2007



September, 2007



April, 2008 September, 2008 March, 2009

February, 2010



October, 2010



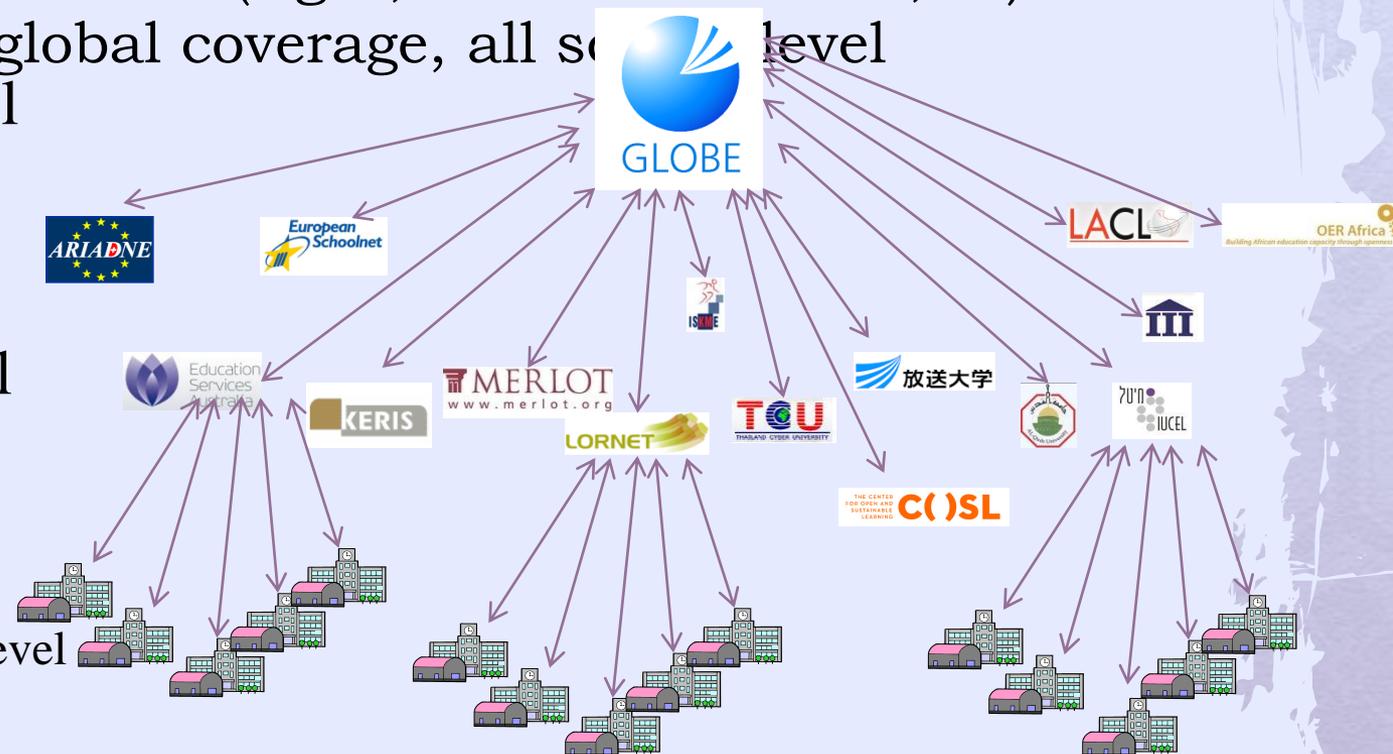
GLOBE: An international consortium for reuse and sharing

- Cross-Institutional search system of quality learning content and information beyond borders (minimum **quality** assured)
 - Exchange and Sharing of **METADATA**
 - Value-added services (right, recommendation, ...)
 - Movement of global coverage, all so level
- International level

Nation-wide level

Institution level

University repository level



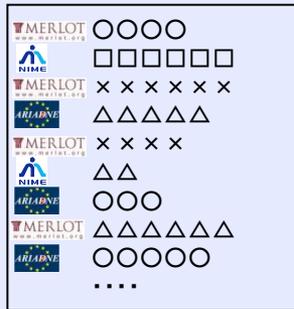
Federated Search (GLOSS)

SQL: Simple Query Interface

① Search keyword "Science"



⑥ display after the merge of search results



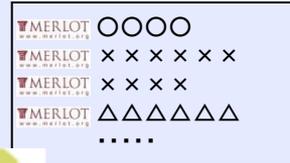
② query learning object include keyword "Science"

③ return search result



④ query learning object include keyword "Science"

⑤ return search result



edNA API

SQL

MERLOT API



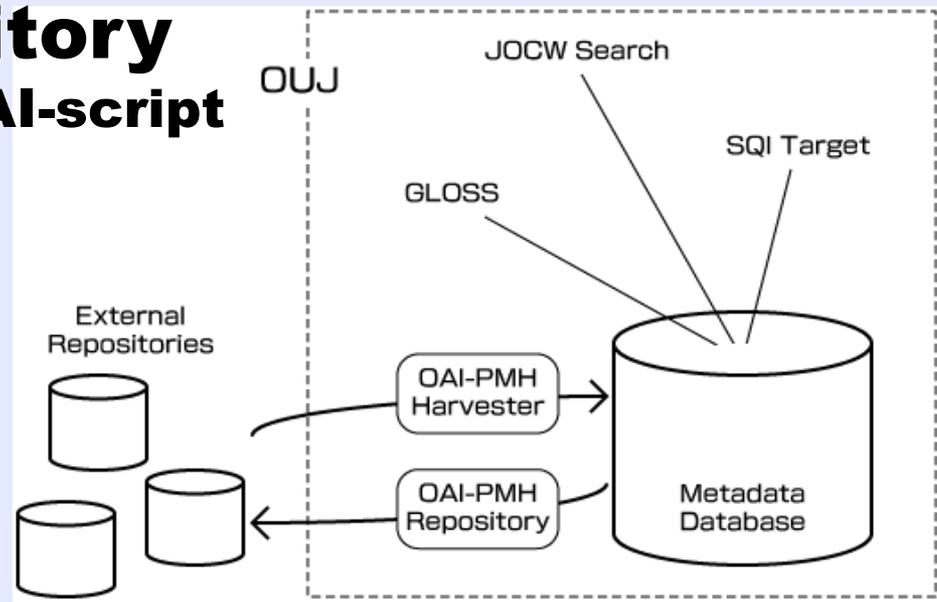
Harvesting (GLOSS)

OAI-PMH Harvester 894,430

From ARIADNE: 620,751
LRE: 187,722
ESPOL: 40,957
OERcommons: 30,903
Keris: 7,294
LORNET: 2,296
OU-Japan: 2,804
OER-Africa: 1,703

OUJ OAI-PMH Repository

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





**NEW CONTENT PRODUCTION
FRAMEWORK
MATERIALS REPOSITORY**

Why smaller granular materials?

- × Learning process
 - + Prepare courseware for **Localization and Personalization**
- × Development process
 - + Limited financial and human resources (Shrinking budgets, Decrease of enrollment...)
 - + Multiple media delivery (broadcasting, digital textbook, Internet,)
 - + **Reuse and sharing** of quality materials (Broadcasting quality)

Learning object: Granularity

	Learner (End-user)	Teacher Developer Provider
Preferable Unit	Courseware	Materials (Video, Photos, Sounds) Learning Object (Module)
Business / Distribution Model	B to C	B to B
Right Management	Attribution No Derivative Works	Derivative Works

“material” content repository

- ✓ **A repository designed for the materials for developing broadcasting program and course materials**
- ✓ **Broadcasting video/audio quality**
- ✓ **IEEE LOM metadata with extensions for describing right and quality information**
- ✓ **Global exchange framework of metadata under GLOBE initiative**
- ✓ **A pilot repository launched in an academic field**

metadata for reuse & Sharing

No.	Metadata element	Corresponding element to LOM (IEEE 1484.12.1-2002)
1.	ID of the metadata	3.1 Meta-Metadata - Identifier
2.	ID of the LO ¹	1.1 General - Identifier
3.	Title	1.2 General - Title
4.	Language(s) used within the LO	1.3 General - Language
5.	Description	1.4 General - Description
6.	Keyword(s)	1.5 General - Keyword
7.	Aggregation level	1.8 General - Aggregation Level
8.	Contributor to the LO	2.3 Life Cycle - Contribute
9.	Language of the metadata	3.4 Meta-Metadata - Language
10.	MIME media types of the LO	4.1 Technical - Format
11.	URL	4.3 Technical - Location
12.	Technical requirements to use the LO	4.4 Technical - Requirement
13.	Educational stages ²	5.6 Educational - Context
14.	Intended learning time	5.9 Educational - Typical Learning Time
15.	Intended user of the LO	5.10 Educational - Description
16.	Paid-for or free	6.1 Rights - Cost
17.	Restriction of usage	6.3 Rights - Description
18.	Classification ³	9. Classification
19.	Copyright ⁴	-
20.	Quality ⁵	-
21.	Permission to Harvesting	- (for GLOBE Harvesting)
22.	Permission to Federated Search	- (for GLOBE Federated search)

A pilot repository



- ✓ A series of short video materials
- ✓ On “International Volunteer Studies”
- ✓ Number of titles: around 1350
- ✓ Typical duration: 1-3 minutes
- ✓ Video format: two MPEG-4 format (720x480, 600x440) and two WMV formats (600x440 and 300x220).
- ✓ One of the MPEG-4 formats keeps the quality for broadcasting.

Learning object-oriented Video Materials: Opening Title

シリーズ名 :

タイトル名 :

Series title: International Volunteer Education Video Material Series

Title: Thai Elephant Hospital 2004: Treatment 1



Learning object-oriented Video Materials: Opening

著作： 川嶋辰彦(学習院大学・GONGOVAプロジェクト)、
国際ボランティア教育プロジェクト(科学研究費補助金基盤研究A
(研究代表者：放送大学ICT活用・遠隔教育センター、山田恒夫)による)、
国際ボランティア学会

Copyright: Tatsuhiko Kawashiwa (Gakushuin University and GONGOVA project);
International Volunteer Education Project (IVEP, at Center of ICT and
Distance Education, the Open University of Japan, funded by Grants-in-Aid
for Scientific Research (A) to Tsuneo Yamada)
and The International Society of Volunteer Studies in Japan (ISVS);



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Right description under Creative Commons (Element 19)

License System	Value
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	Attribution-NonCommercial - No Derivative Works
	Attribution-NonCommercial
	Attribution-NonCommercial -ShareAlike
	Attribution-ShareAlike

Learning object-oriented Video Materials: Video



JOCW-Search: Search Results

<http://keyaki.code.ouj.ac.jp/mt/lorsearch.cgi?app=jocw&limit=&q=Japanese%E3%80%80language&btn=%E6%A4%9C%E7%B4%A2&ti=&u=&lc=>

JOCWコンテンツ横断検索システム

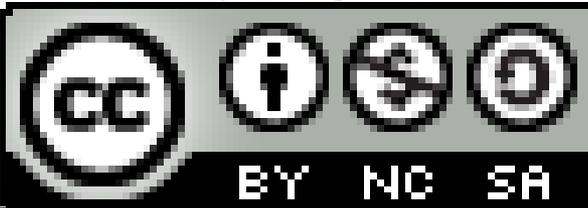
検索キーワード Japanese language

検索 検索オプションを表示

Japanese language の検索結果 6件中 1 - 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-grammatical markers that you know and like, (ii) reviewing markers such as datte, maa, nan(zyo), etc., and (iii) reviewing markers such as ne, yo, -janai, doose,



日本語の話しことばと言外の意味 (2007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

CC License

Reuse of video materials *for a TV lecture program*



CONTENT DELIVERY PLATFORM: TWO BASIC MODELS

Current Development at OIJ

OIJ course materials

1st yr: (Printed) textbook [TEXT]

2nd yr: Broadcasting program Lectures [A/V]

Supplementary materials [other]

using Internet and/or packaged media

3rd yr: Open the course

Academic content:

Directed by Principal Lecturer(s)

Production:

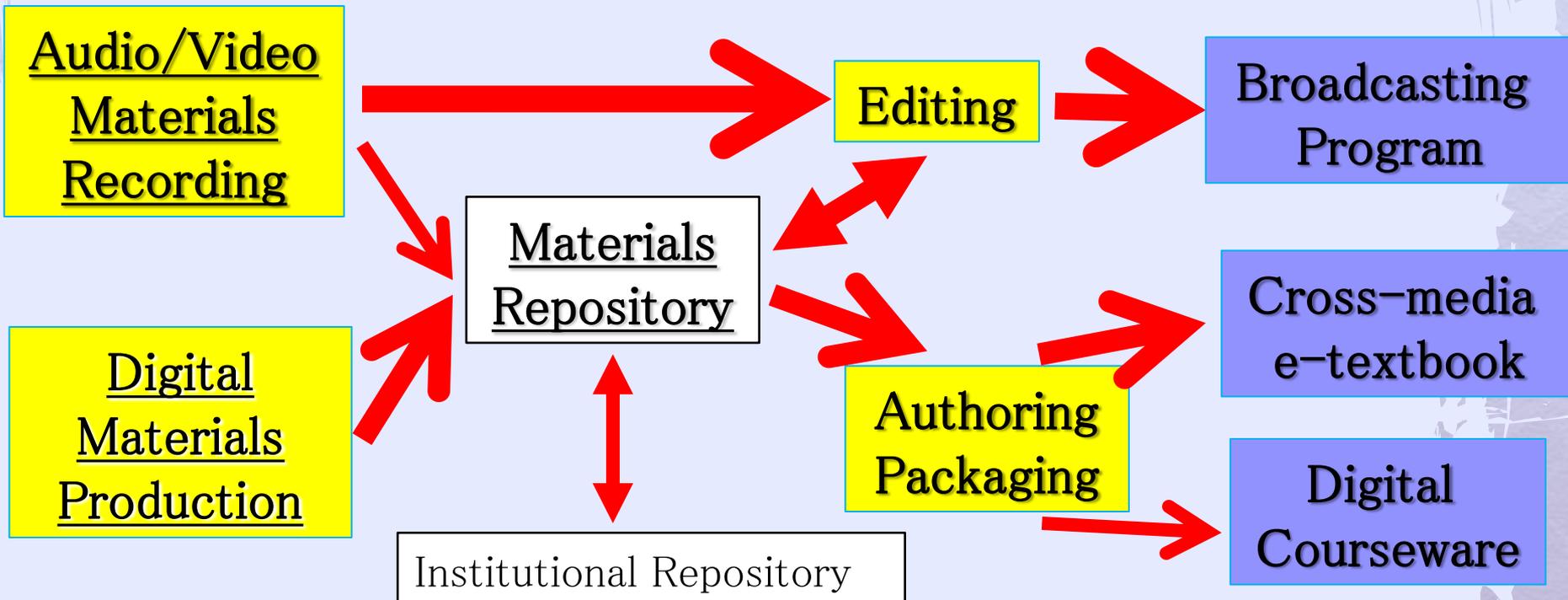
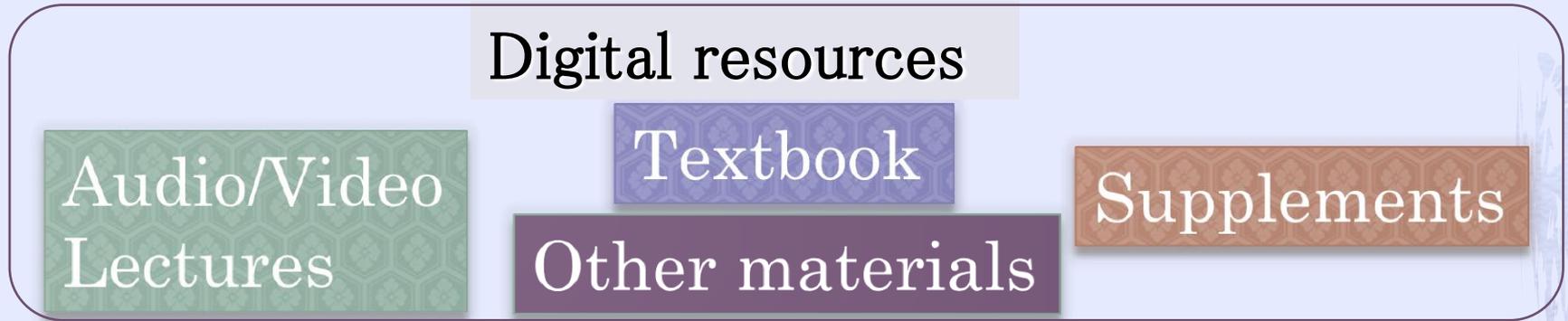
In-house broadcasting studios and production dept

Independent in each medium

No senior producer responsible for all the
production processes

Sometimes out-sourcing

Toward New Development



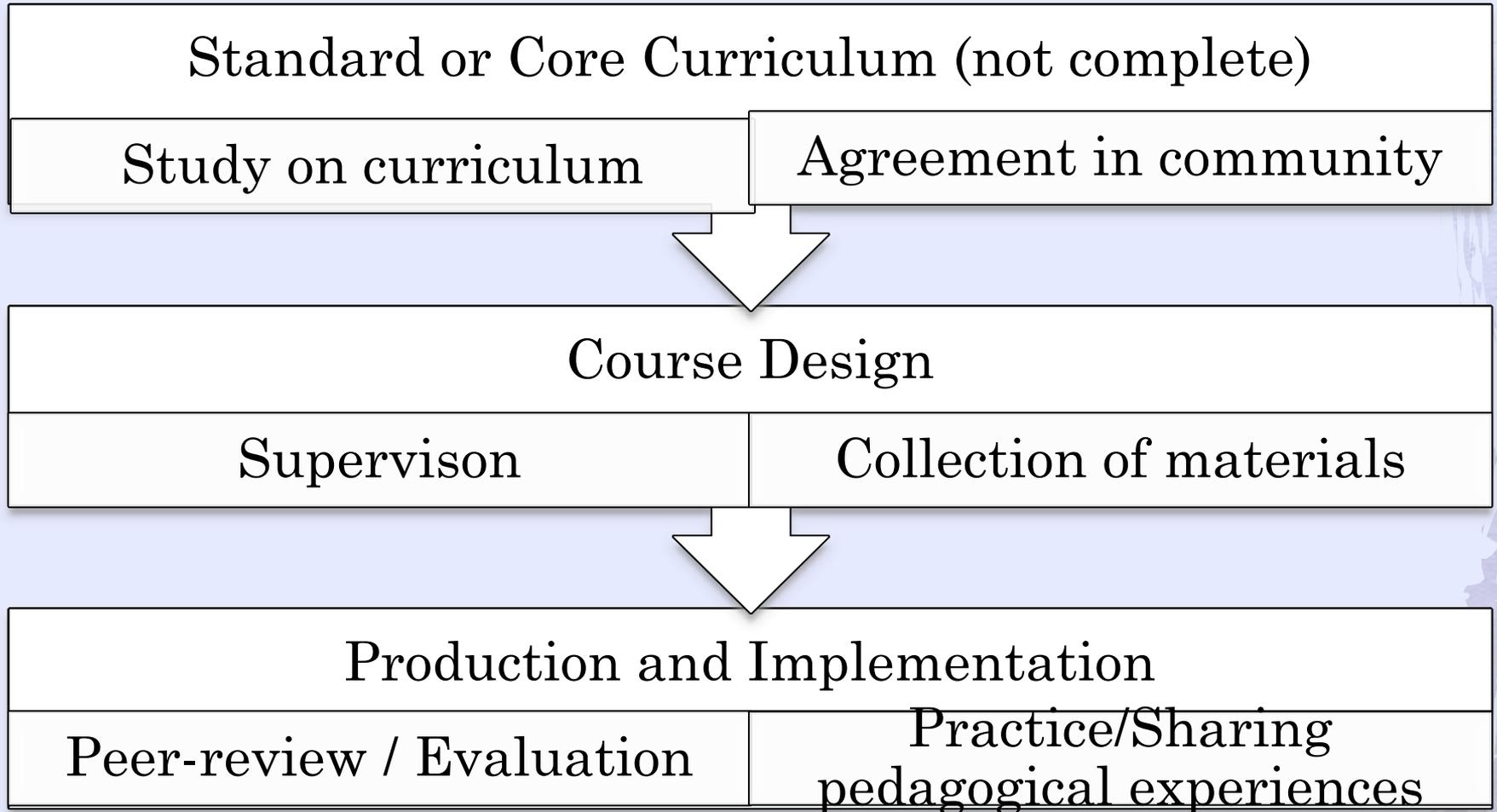
Content Delivery Platforms

Cross-media Digital Textbook	Traditional LMS
Familiar concept even to advanced age learners (Like Book)	Need Computer literacy education
Less interactivensess; SNS MAY complement the function	Interactive functions equipped
Weak course management functions; SNS MAY complement the function	Full course management system
Production process more similar to the current OIJ's system Mild restructuring possible	More drastic restructuring is necessary in production system
Delivery using E-publishing framework	
E-pub 3.0, ibook,....	SCORM



**QUALITY ASSURANCE
PROCESS:
COLLABORATION WITH
CONTENT-RELATED
ACADEMIC SOCIETY**

The roles of academia in Quality control



A purpose of content sharing and reuse is *to prepare for QUALITY personalized / customized learning under the limitation of financial and human resources.*

Prospects

- ✓ **Integrated framework for sharing and distributing both open and proprietary learning content in various granularity (from materials to course)**
- ✓ Demographic diversity and pedagogical innovation drive “localization” and “personalization”
- ✓ Optimized to learner’s technical environment
- ✓ Quality assurance under the collaborations with academic and learners community through SNS

- ✓ **OUJ ‘s challenges**
 - ✓ “Material” repository of “OPEN” smaller-granular and quality-assured content
 - ✓ Global federation of institutional repositories
 - ✓ Cross-media delivery of multimedia course materials consisted of open and proprietary content
 - ✓ Collaborations with various communities through SNS
 - ✓ Facilitate the vision sharing between academia and corporates

26th Annual Conference of Asian Association of Open Universities (AAOU)

Date: 16-18 October 2012

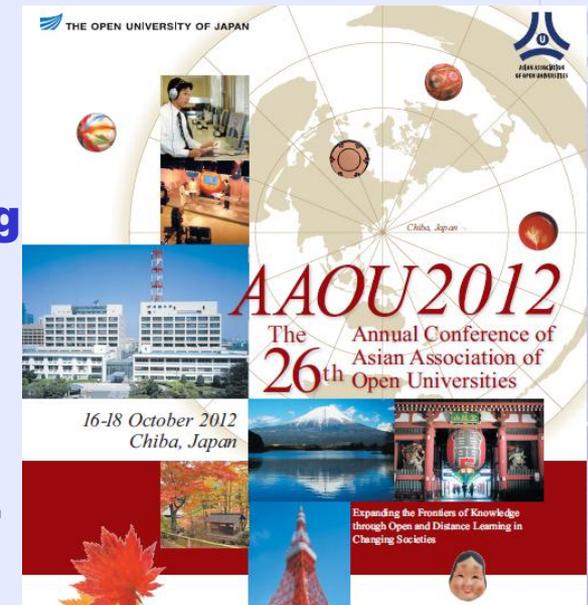
Venue: Makuhari Messe, Chiba, Japan

Main theme:

Expanding the Frontiers of Knowledge through Open and Distance Learning in Changing Societies

Sub-themes:

- 1. New trends of ODL studies and practices**
- 2. Organizational management and institutional leadership**
- 3. Technology-enhanced teaching and learning**
- 4. Innovation in curriculum development and pedagogy**
- 5. Student support and learning communities**
- 6. Quality assurance**
- 7. Open educational resources (OER) and ODL**
- 8. Crisis and risk management**



Keynote Speakers

Dr. Arne Carlsen

UNESCO Institute for Lifelong Learning, Germany

Prof. Asha Kanwar

Commonwealth of Learning, Canada

Plenary Speakers

Prof. Terry Anderson

Athabasca University, Canada

Ms. Kumiko Bando

**Ministry of Education, Culture, Sports, Science and
Technology, MEXT**

Prof. Tian Belawati

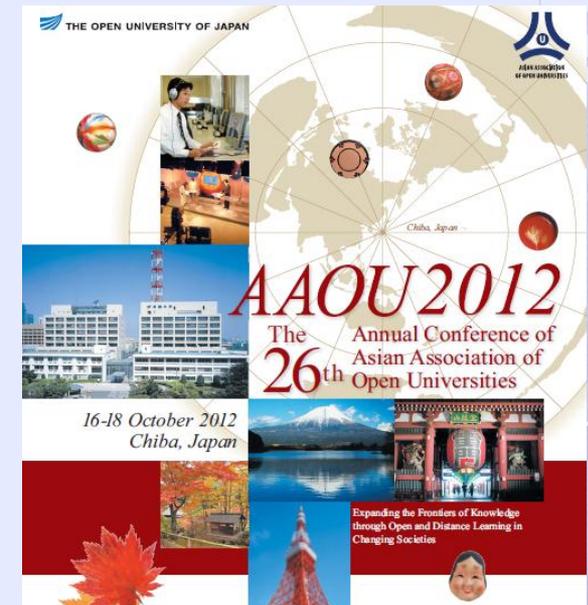
Universitas Terbuka, Indonesia

Prof. Gajaraj Dhanarajan

Wawasan Open University, Malaysia

Deadline for Abstract

Submission: 15 June, 2012



Thank you very much!!

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