Development of a MOOC in a Japanese open university

Tsuneo Yamada,
The Open University of Japan (OUJ)
OUJ: Identity

- **Semi-governmental** institution
- National center to promote **Open Education** and **Lifelong Learning**
  - “Higher education for all”
- **Distance education** institution
  - “Anytime, anywhere”
  - Broadcasting and Printed Materials plus Internet delivery
- **Liberal Arts** institution
  - Cope with the growing needs for Practical Abilities
Univ of Tokyo joined Coursera, February 2013
京大、無料オンライン講座参入 教育レベルを世界にPR

【佐藤則憲、金成隆一】京都大学は21日、米マサチューセッツ工科大（MIT）とハーバード大学が設立した非営利の教育機関エディックスに参加し、教育を通じた国際協力の強化を図ると発表した。

京大は、21日、米ハーバード大学や米マサチューセッツ工科大が講師をインターネットで無料配信する非営利の教育機関エディックスに参加し、教育を通じた国際協力を進める方針を決定した。エディックス参入の意義などについて会見で述べた松本英昭（左）と上杉善則（右）京大の学術院区の京都大学
To keep traditional teaching style and content delivery system

or

To be a MOOC provider
# Open Education in Japanese Higher Education

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1983</td>
<td>the University of the Air (currently, OUJ) was established</td>
</tr>
<tr>
<td>May 2005</td>
<td>Japan OpenCourseWare (JOCW) Alliance was established</td>
</tr>
<tr>
<td>April 2006</td>
<td>Japan OpenCourseWare Consortium was established</td>
</tr>
<tr>
<td>October 2006</td>
<td>JOCW Search was started-up (by NIME)</td>
</tr>
<tr>
<td>October 2010</td>
<td>OUJ-OCW was launched</td>
</tr>
<tr>
<td>February 2013</td>
<td>The University of Tokyo joined Coursera</td>
</tr>
<tr>
<td>May 2013</td>
<td>Kyoto University joined edX</td>
</tr>
<tr>
<td>November 2013</td>
<td>Japanese MOOC launched</td>
</tr>
<tr>
<td>April 2014</td>
<td>The first 3 courses released from JMOOC</td>
</tr>
</tbody>
</table>
(Japan Massive Open Online Course consortium) was launched in November 2013
J MOOC Establishment (October, 2013)

http://www.jmooc.jp/
Multiple Platforms

- NTT Docomo Platform
  - edX-based
  - Video Lecture + LMS

- OUJ-TIES Platform
  - Multimedia e-textbook + LMS
  - iBOOK / epub 2.0/3.0
  - Video Lecture/CAI

- Net-Learning Platform
  - Domestic Integrated Learning Support Platform
<table>
<thead>
<tr>
<th>Course</th>
<th>Lecturer</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer System: A primer (Japanese)</td>
<td>OUJ President Yoh’ichi Okabe</td>
<td>Regular Course (15 lessons, full asynchronous) Based on OUJ TV course</td>
</tr>
<tr>
<td>にほんごにゅうもん NIHONGO STARTER A1(English)</td>
<td>OUJ+JF Project Team (PI: T. Yamada, OUJ)</td>
<td>Short Course (10 lessons, 2 lessons/week, 5 weeks) CEFR based</td>
</tr>
</tbody>
</table>

- {Multimedia e-textbook + LMS} + SNS
- Released on 14th April 2014
OUJ-TIES Platform

- Mashup-oriented
- Multimedia e-textbook
  - iBook/ePub3.0 (Powered by TIES / Chilo Book)
- Backend LMS
  - Moodle
- Big Data/Learning Analytics
  - Need more time (based on IMS Caliper or other int’l standards)
学習方法 / How to Learn

Step1
Visit the course’s Facebook page you want to lean.
学習したいコースのFacebookページにアクセスします。

Step2
Join the course’s Facebook group.
コースのFacebookグループに参加します。

Step3
Download CHiLO Books.
CHiLO Booksをダウンロードしてください。

Step4
Learn and share the experiences with your friend in FaceBook
Facebookの仲間と共に学習しましょう。

Let you pass the course to get the badge!
コースに合格してバッジを集めよう！
Mashup Architecture

Electronic Book Store
Download CHiLO Books for free

Mozilla Open Badges

Learning Community

Lecture Video

Quizzes & Exercises
Demonstration
NHONGO STARTER A1
（英語）

放送大学  山田恒夫
＋国際交流基金
Our Lecturer
Our Lecturer
JAPANESE LANGUAGE
STARTER A1 LEVEL
JAPANESE LANGUAGE
STARTER A1 LEVEL
JAPANESE LANGUAGE
STARTER A1 LEVEL
JAPANESE LANGUAGE
STARTER A1 LEVEL
<table>
<thead>
<tr>
<th>Lesson 1</th>
<th>Hello  <em>Konnichiwa</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Would you say that again?  <em>Moo ichido onegaishimasu</em></td>
</tr>
<tr>
<td>3</td>
<td>Nice to meet you.  <em>Doozo yoroshiku</em></td>
</tr>
<tr>
<td>4</td>
<td>There are three people in my family  <em>Kazoku wa san-nin desu</em></td>
</tr>
<tr>
<td>5</td>
<td>What kind of food do you like?  <em>Nani ga suki desu ka</em></td>
</tr>
<tr>
<td>6</td>
<td>Where are you going to have lunch today?  <em>Doko de tabemasu ka</em></td>
</tr>
<tr>
<td>7</td>
<td>There are three rooms in my home.  <em>Heya ga mittsu arimasu</em></td>
</tr>
<tr>
<td>8</td>
<td>It's a nice room.  <em>Ii heya desu ne</em></td>
</tr>
<tr>
<td>9</td>
<td>What time do you get up?  <em>Nan-ji ni okimasu ka</em></td>
</tr>
<tr>
<td>10</td>
<td>When is convenient for you?  <em>Itsu ga ii desu ka</em></td>
</tr>
</tbody>
</table>
### Multimedia e-textbook

<table>
<thead>
<tr>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skit</td>
</tr>
<tr>
<td><em>Let's Watch the Skit!</em></td>
</tr>
<tr>
<td>Can-doXX : XXXXXXXX</td>
</tr>
<tr>
<td>Explanation</td>
</tr>
<tr>
<td>Exercise</td>
</tr>
<tr>
<td>Can-do Practice</td>
</tr>
<tr>
<td>Can-do Challenge</td>
</tr>
<tr>
<td>Can-do Check</td>
</tr>
<tr>
<td>Learn More</td>
</tr>
<tr>
<td>Language and Culture</td>
</tr>
<tr>
<td>資料</td>
</tr>
<tr>
<td>English Script</td>
</tr>
<tr>
<td>Romaji Script</td>
</tr>
<tr>
<td>Kana Script</td>
</tr>
<tr>
<td>Instruction Manual</td>
</tr>
<tr>
<td>Feature of This Book</td>
</tr>
<tr>
<td>Characters</td>
</tr>
<tr>
<td>Author &amp; Copyright</td>
</tr>
<tr>
<td>Copyright</td>
</tr>
</tbody>
</table>

**Skit**

- **Can-do1**: Exchange Greetings
  - *Talk briefly about your family*
  - *Tell someone about your family and a family photo*

- **Can-do2**: Recognise Japanese Characters
  - *Think for a moment before studying*
  - *What sorts of greetings do you have in your country?*
  - *What sorts of greetings are there in Japan?*
  - *What sorts of letters do you use in your country?*
  - *Can you tell which one is Japanese?*
  - *Now let's watch the skit.*

---

**Can-do Check**

- *How did you find the "Can-do Challenge" section? How much of it could you do? Try and check yourself online. Please write your comments.*

---

**Instruction Manual**

- **Feature of This Book**
- **Characters**
- **Author & Copyright**
- **Copyright**
Drama-taste skits
CLASS 1

Term: 14th April – 18th May

CLASS 2: Starting on June

CLASS 3: Starting on August

CLASS 1

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Course materials delivery</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1・2</td>
<td>14th April</td>
<td>14-20th April</td>
</tr>
<tr>
<td>3・4</td>
<td>21st April</td>
<td>21-27th April</td>
</tr>
<tr>
<td>5・6</td>
<td>28th April</td>
<td>28th - 4th May</td>
</tr>
<tr>
<td>7・8</td>
<td>5th May</td>
<td>5-11th May</td>
</tr>
<tr>
<td>9・10</td>
<td>12th May</td>
<td>12-18th May</td>
</tr>
</tbody>
</table>
Location

https://www.facebook.com/nihongostarter
Thank you very much!!

Contact Information

tsyamada@ouj.ac.jp
OUJ MOOC: Learning Data and Analytics

- Still on the planning stage
- “Big Data” Database and the Federation
- Toward to a Compliant of some International Standards
  e.g. IMS Caliper
- Description of multi-layer learning processes
  - Population/Individual/Mental Function
  - Sensory-Motor/Brain Activity!!
OUJ MOOC: Learning Data and Analytics

- Still on the planning stage
- “Big Data” Database and the Federation
- Toward to a Compliant of some International Standards e.g. IMS Caliper
- Description of multi-layer learning processes
  - Population/Individual/Mental Function
  - Sensory-Motor/Brain Activity!!
IMS Caliper
Comprehensive IMS Service Orientation...

INTEROP + DESIGN

MEASURE

LCIS
Learning & Content Interoperability Services

Caliper
Learning Measurement Framework

Sensor Services API

LCIS
Learning & Content Interoperability Services

Reading Service / IM
Assess Service / IM
Media Service / IM
Message Service / IM
Course Service / IM
Learner Service / IM
Content Service / IM

Reading MP
Assess MP
Media MP
Message MP
ACTIVITY MP
PERF MP
ENGAGE MP

ASSIGNABLE
GRADEABLE
OUTCOMES

IM = Information Model
MP = Metric Profile

LTI
Learning Tools Interoperability

DETERM
IMS Metric Profile

- Activity Metrics
  - Lectures
    - frameset use
    - scrub marks
    - view time
    - weblink refs
  - Quiz
    - scores
    - attempts
    - remediations
    - assoc refs
  - Social
    - connections
    - assoc context
    - message profile
    - frequency
  - Messaging
    - assoc context
    - outbound Pool
    - attachment
  - Scheduling
    - event context
    - event patterns
    - event profile
    - time utilization
  - Discussions
    - post mark
    - frequency
    - participation
    - collaboration

- Activity Information Model

- Engagement and/or Performance metrics

- Foundational Metrics
  - Context
    - institution
    - course section
    - learner profile
    - course context
    - path/frequency
    - usage context
  - Engagement
    - activity usage
    - time on task
    - session time
    - task efficiency
    - activity affinity
    - content affinity
    - task patterns
    - correlations
  - Performance
    - grades
    - progress
    - rubrics
    - course grade
    - history
    - objectives
    - qualitative
    - quantitative
    - progress
    - patterns
    - correlations

IMS GLOBAL Learning Consortium
Joint MOOC

- Personalization
- Localization
- Contextualization
- Interoperability

- User-specific
- Context-specific
- Purpose/Goal Dependent

Cloud Computing + Big Data Analysis

Learner 1

Device1

Device2

Content1

Learner 2

Device2

Content1

Learner 3

Device1

Device2

Content1

Content2
Why smaller granular materials?

- Learning process
  - Adapt 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)
“Materials” Requirements

- Versatile
  - Reuse/Remix
  - Context free
    - e.g. Multi-lingual/cultural or Pluralistic contexts
  - Interoperability

- Sustainable
  - Based on Open philosophy/concept
  - Compatible with proprietary resources
  - Quality improvement
The Metadata Database System

“Materials” Repository System

GLOBE Registry + Referatories

LOM-based OAI-PMH Harvester

Metadata Management Tools for Content Holders

WEKO

Search Windows for Specific Field Users

SQL-based LOM Repository

Junii2-based OAI-PMH Harvester

“Learning Material” Extraction Filter

NII JAIRO Junii2 Repository
コンテンツ移設のお知らせ

このサイトは、科学研究費補助金（No.23240110）によって、放送大学、国立情報学研究所等によって、クラウド上に構築され、試験的に運用しています。
OER Asia Federated Repositories: Concept

AAOU member universities

Central repository

OAI-PMH Harvesting Service and Target

OAI-PMH Harvester

OAI-PMH Target for GLOBE Harvester

GLOBE Harvesting

AAOU member volunteer

OAI-PMH Harvester

OAI-PMH Targets for GLOBE members

GLOBE referatory @Japan (OUJ)