Open Kitchen:
A Learning Objects Repository for Teachers
by Teachers

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work in progress

a contribution to community

culture

content
The context

- ‘Reform’ in Turkish curriculum
- Teachers ‘learning’ constructivism
- Textbooks are not enough
- Need for new materials
- New teacher skills, roles, ethos
The context

Source of information

What is ‘knowing’?

challenge

Notion of ‘instructional design’

Notion of learning materials

Learning process

What teacher does
The context

-- Authority changing hands
-- Community of practice
-- Network value
-- Production >> consumption
-- Multiple realities
-- Add, shake, mix, remix
-- Experimentation
-- beauty of the incomplete
-- Self evaluation
In a school context where teachers are ‘learning’ constructivism

School intranet

School web

Turkey

world
The existing situation

+ Google

— hit or miss

— too many clicks

— takes too long

— not efficient

— consuming > producing
Ottoman Wooden Ship Building
Brief History of Ottoman Ship Building. A city at the crossroads of East and West, Istanbul has been capital to the Roman, Byzantine and Ottoman empires. ...
www.turkishculture.org/naval/ship_building.html - 7k - Cached - Similar pages

Mavi Boncuk: Brief History of Ottoman Ship Building
Brief History of Ottoman Ship Building. 19th century ship drawing. Mavi Boncuk Full Skylife Article from Mavi Boncuk Archives. posted by MAM at 10:54 AM ... maviboncuk.blogspot.com/2006/03/brief-history-of-ottoman-ship-building.html - 19k - Cached - Similar pages

Turkish Naval Ships, Ottoman Empire
History of the Turkish Navy, from the Osmanieh class Broadside Ironclads of the Ottoman Empire to the Turkish naval ships of today's Navy. ...
www.battleships-cruisers.co.uk/turkish_navy.htm - 157k - Cached - Similar pages

Battle of Navarino - Wikipedia, the free encyclopedia
While the fleet was still anchoring, the captain of the British frigate Dartmouth sent a boat to an Ottoman ship anchored close by in order to demand that a ...
en.wikipedia.org/wiki/Battle_of_Navarino - 34k - Cached - Similar pages

Ottoman Invasion of Mani (1803) - Wikipedia, the free encyclopedia
In 1784, Zanet was lured onto an Ottoman ship and was given the choice of his life or to except the title of bey and Ottoman vassalage. ...
en.wikipedia.org/wiki/Ottoman_Invasion_of_Mani_(1803) - 19k - Cached - Similar pages
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The goal

- Something with added value
- Help teachers’ search, use, reuse more efficiently
- Create a repository of LOs that are easily searched, found, used, and reused
- Structure for teachers’ input
- Sustain community of practice
LO Repository ‘successful’ and teachers happy
LO Repository 'successful'
LO Repository ‘succesful’

Good Quality LOs

Users aware of resources and potential of repositories

Users can find LOs easily
Users can use LOs easily

Users are motivated to come back
Good use+reuse

LO authors/designers understand

Standard practice
Users’ purpose
Who the user is

How ‘good quality’ is defined by the user

Users can use LOs easily

Users are motivated to come back

Users can find LOs easily

Users aware of resources and potential of repositories
LO Repository

LO Repository ‘successful’

Good Quality LOs

Good use+reuse

Users motivated to come back

Search strategy needs
- How LOs are presented
- How LOs are categorized
- How LOs are made searchable

Users find LOs easily

Users can use LOs easily

Users are aware of resources and potential of repositories

User aware of learning paradigm
- Who the user is
- Users’ purpose

User can match LO and expected design

LO authors/designers understand
- Standard practice
- How ‘good quality’ is defined by the user

Users aware of learning paradigm

User can find LOs easily

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Good use+reuse
LO Repository ‘successful’

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- Standard practice
- Users’ purpose
- Who the user is

Search strategy needs
- How LOs are presented
- How LOs are categorized
- How LOs are made searchable

Sustainability
- Appeal, engagement in use/reuse
- Help define/set categories
- Provide input (review and on use)

Ownership

Contribution

LO Repository ‘successul’
LO Repository

Good Quality LOs

Users aware of resources and potential of repositories

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Help define/set categories

Provide input (review and on use)
- Creators/developers, distributors, and users of LOs are working independent of each other and they don’t have shared standards
  - What exists as standards are mostly defined by distributors and they are mostly ‘technical’.
- Standard setting bodies do not take into consideration learning or instructional design related characteristics
- Standard setting bodies are not familiar with user search needs and strategies
- No relationship has been identified between LO characteristics, use, and reuse
- Metadata should include learning related categories and users need to input into that.

Learning/instructional design relevant LO metadata need to be defined
Claimed relationship that exists between LO nonauthoritative metadata and user satisfaction needs to be shown
The effect of ‘type’, ‘design strategy’, and ‘learning process’ metadata on search, use, and reuse satisfaction should be shown
Impact of user satisfaction on sustainability, ownership and contribution should be shown
A common language among LO creators/designers, distributors, and users should be achieved
Sustainable LO communities of practice should be built
LO repositories need to be used in such ways to support the new learning paradigm and improve learning

Successful LO Repositories alligned with new learning paradigm
Preventing misuse and preventing development waste
Best use of technological developments and potential of communities of practice
Research Q:
How can we improve teachers/instructional designers’ search strategies?
What LO characteristics influence search, use and reuse of LOs?

**Hyp 1:** Non-authoritative learning/instructional design related metadata improve search, use, and reuse of LOs

**Hyp 2:** There is a positive relationship between LO non-authoritative metadata and user search, use, and reuse satisfaction

**Hyp 3:** LOs with ‘type’, ‘design strategy’, and ‘learning process’ metadata will be used and reused more

**Hyp 4:** LOs with ‘type’, ‘design strategy’, and ‘learning process’ metadata will increase user search, use, and reuse satisfaction
The Open Kitchen

Understood metadata important but not enough learning related metadata

No research showing relationship between learning related metadata and use/reuse

What would be the meaningful useful new metadata

Looked at traditional search methods of teachers
“I am looking for some **illustrations** of **Ottoman Empire** ship for my history class... to project them on the screen for a whole class discussion so that my students can practice... **observation skills and discussion skills**"
Define learning objects

- small
- raw material
- unfinished
- may be used in different paradigms
- meaningfully tagged
- optimized for use

LOs searchable by four categories

Community input
The Open Kitchen

- small
- raw material
- unfinished
- may be used in different paradigms
- meaningfully tagged
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Define learning objects

LOs searchable by four categories

Learning process

Community input
The Open Kitchen

- small
- raw material
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**Define learning objects**

- Subject matter
- Learning Object Type
- Learning Object Use
- Learning process

**LOs searchable by four categories**

- quality
- good practice
- initiation
- defining knowledge
- metadata decisions

**Community input**
Define learning objects
Statuette of a seated nude from Catalhoyuk, one of the earliest examples representing the Mother Goddess. Neolithic period, Museum of Anatolian Civilizations, Ankara

http://www.turkishodyssey.com/turkey/history/history1.htm
Women’s studies

Economics

Religion

Statuette of a Seated Nude, Catalhoyuk

Human rights
Excavation team Ian Hodder
Media type
(provided as metadata)

animation
applet/simulation
audio music/sound
audio text
clickable image
drawing/illustration
game
image
mixed media
multimedia
photograph
slide show, PP presentation
video
voice (original source)
written text/numerical data
other (template)
<table>
<thead>
<tr>
<th>Learning Object Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>classroom projection</td>
</tr>
<tr>
<td>discovery environment</td>
</tr>
<tr>
<td>experiment</td>
</tr>
<tr>
<td>game</td>
</tr>
<tr>
<td>homework</td>
</tr>
<tr>
<td>lecture/presentation</td>
</tr>
<tr>
<td>professional development</td>
</tr>
<tr>
<td>research/project</td>
</tr>
<tr>
<td>self-instructional</td>
</tr>
<tr>
<td>small group work</td>
</tr>
<tr>
<td>test/exam</td>
</tr>
</tbody>
</table>
Subject

Learning Object Type

Learning Object Use

Learning process

analyzing
answering a question
applying a formula
asking (question)
comparing/contrasting
completing
conceptual learning
creating/defining a problem
critical thinking
deciding
defining
describing
discovering
discussing
drawing
drawing conclusion
filling in the blanks
finding/creating relationship
giving reference
grouping
hypothesizing
imitating
implementing/applying
interpreting
justifying/proving/checking/validating
listening
making/creating/producing/constructing
map reading
matching
naming
narrating
observation
ordering
painting
playing a game
practicing
presenting
problem solving
questioning
reading
reading/interpreting a graph
reflecting on a critical incident
remembering
role playing
seeing/taking perspective(s)
simulating
testing/critiquing
trying/experimenting
understanding
understanding cause and effect
understanding procedural steps
visual reading
visualizing
AÇIK MUTFAK
İlkeler
Kullanım Kılavuzu
İyi Örnekler
Profesyonel Gelişim
Diğer Kaynaklar
Hakkımızda

Teacher’s work space
The Software

- Open source
- User-friendly drag and drop
- Allows teachers’ feedback and adding metadata
- IP
The Research

- Are metadata useful?
- Is there a relationship?
- Are these three the right ones?
- What do teachers think?
- Future goals (machine readable, semantic web, student as end user etc.)