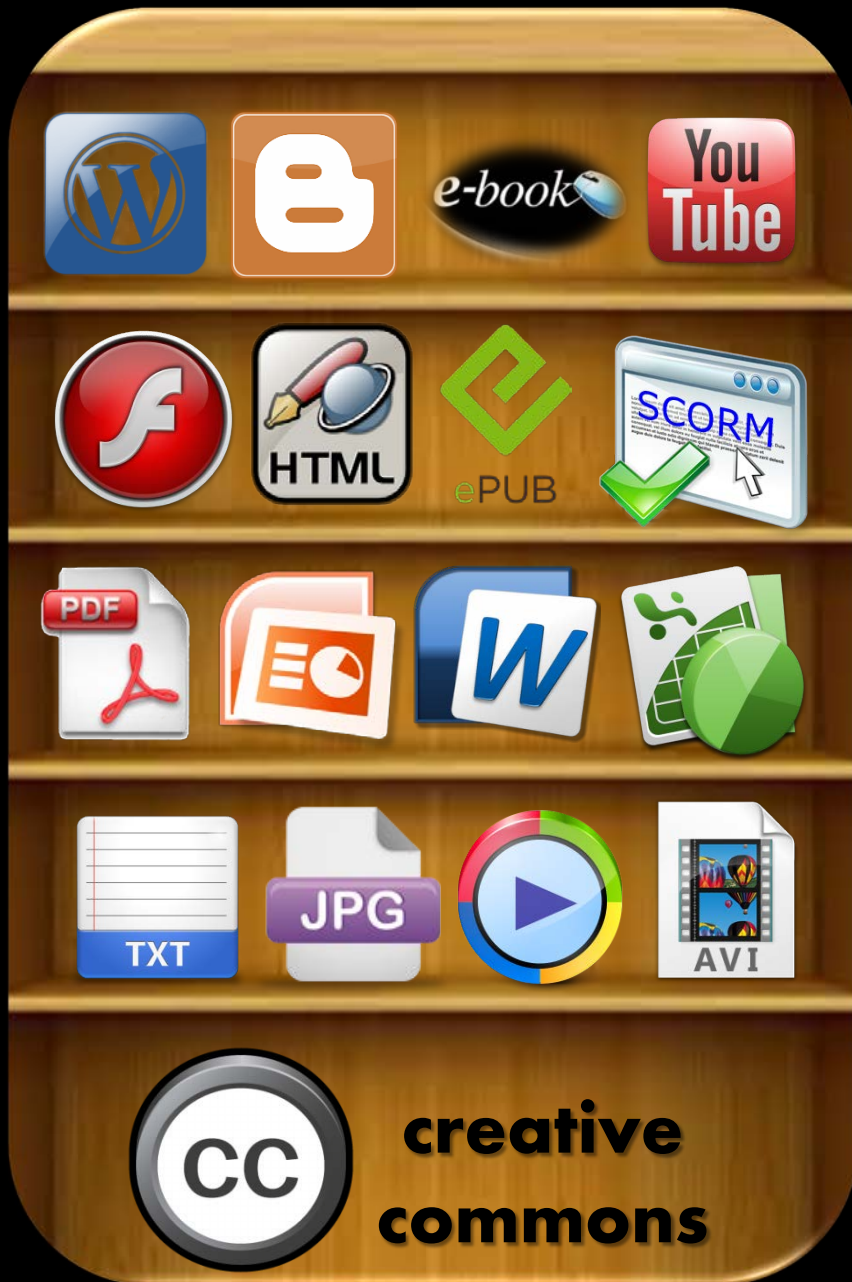


Learning through Generating Open Educational Resources



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What are Open Educational Resources?

Atkins, D.E., Brown, J.S., & Hammond, A.L. (2007). A review of the open educational resources (OER) movement: Achievements, challenges, and new opportunities. Report to The William and Flora Hewlett Foundation.

Open Educational Resources



THE WILLIAM AND FLORA
HEWLETT
FOUNDATION

JHSPH**OPEN**COURSEWARE

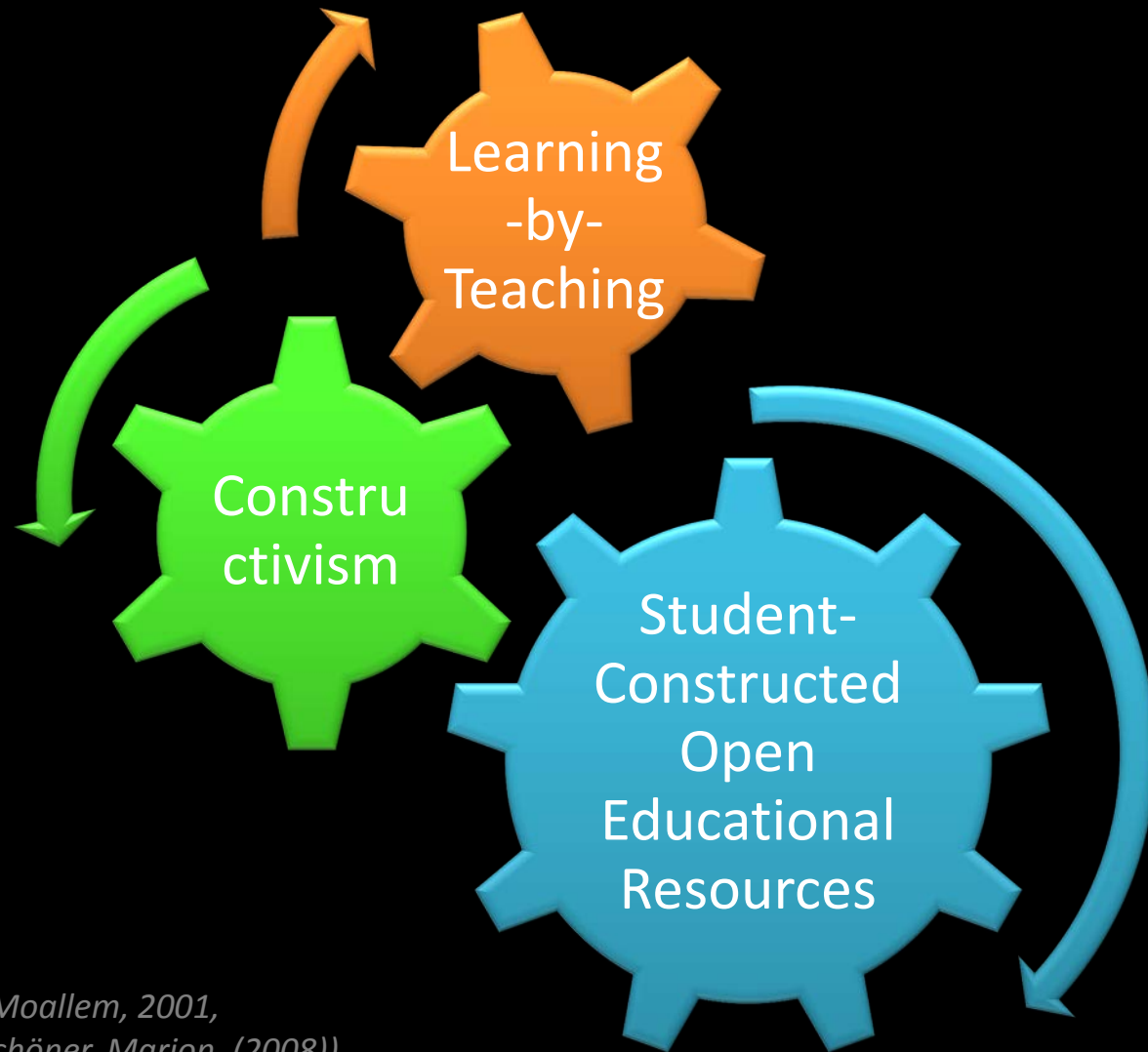
Johns Hopkins Bloomberg School of Public Health



The Open
University

MIT**OPEN**COURSEWARE

Learning through generating OER



*(Applefield, Huber, & Moallem, 2001,
Grzega, Joachim, & Schöner, Marion. (2008))*

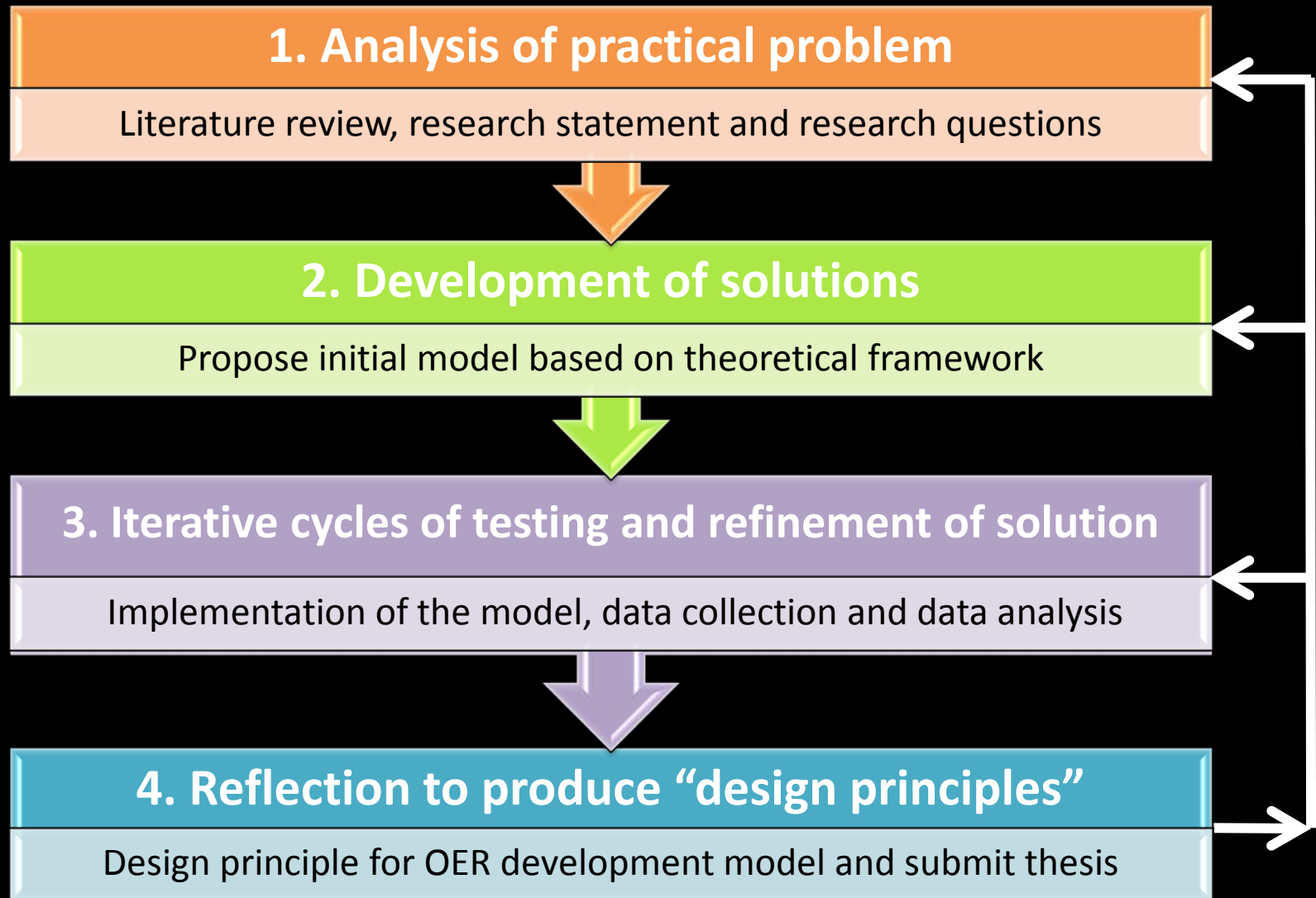
OER Research Gaps

1. **Expertise:** Finding new learning resources developers (Wiley,D., 2007).
2. **Quality:** Quality of OER that is based on learning design (Hodgkinson-Wiliams, C., 2010; Hylén, J., 2006; Bates, T., 2011a,b).
3. **Reusability:** Reusability of learning resources of different forms (Kozinska, K. et al., 2010; Wiley,D., 2007).
4. **Participation:** Lack of effective examples of quality students' generated content (Bull, G., 2008; Sener, J., 2007).

Thus, the goal is to find a sustainable OER model for higher educational Institutions that addresses these areas.



Design-based Research



DBR1: Analysis of practical problem

- **Literature review**

- Open Educational Resources (OERs).
- Open licenses.
- Student-generated content under:
 - Cognitive surplus
 - Digital Natives
- Evaluation of online learning resources.
- Learning Theories (Constructivism and Learning-by-Teaching (LdL)).

- **Identify the problem**

- *Finding a new sustainable OERs development for HEI that; runs as a service, encourages students participation to generate quality learning resources and advances knowledge construction of OERs.*

- **Barriers and challenges**

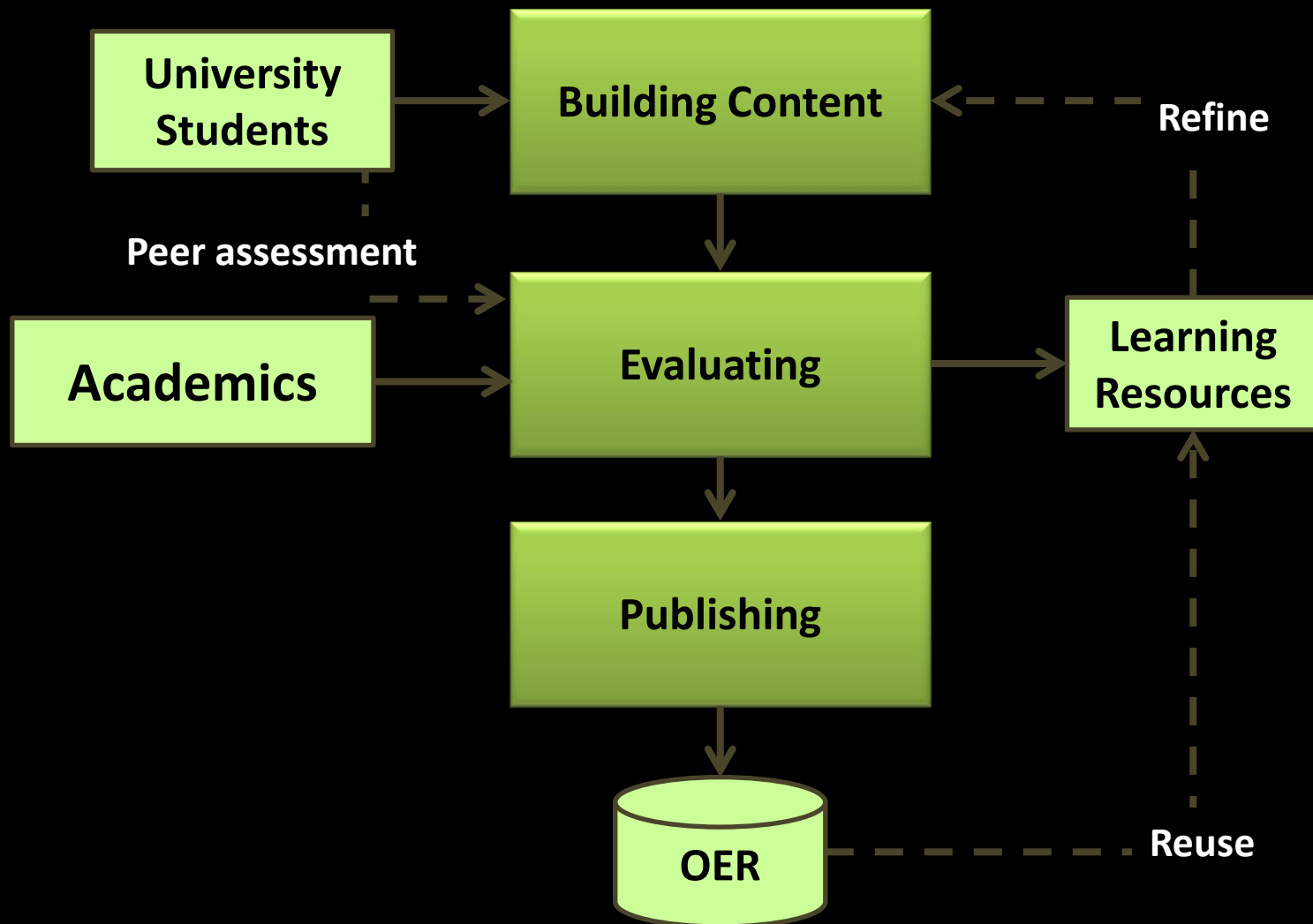
- Raising awareness of Open Educational Movement and open publishing.
- Scaffolding student in generating learning resources.
- Assessing fitness of student-generated content to OER.
- Evaluating student learning performance through generating OER.

- **Propose a solution**

- Tapping into student-generated content through engaging them in generating learning resources as they go through their university years.



DBR2: Development of solutions using existing design principles and technology innovation



DBR3.1: Iterative cycles of testing and refinement of solution in practice

1. Engaging University Students

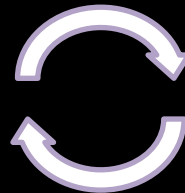
- Roles of students, teachers and researcher.
- Relationships between all stakeholders .
- Communications via LMS services and face-to-face mode.

2. Producing Learning Resources

- Integration of OER development model to unit learning design.
- Setting up workshops to raise awareness and developing skills.
- Utilizing Web 2.0 tools.
- Feedback from peers and teaching team.

3. Refining Design and Method

- Refining the model and methods based on Data Analysis of data collected from participants.
- Starting a new iteration based on recommendations from previous iteration(s).



4. Evaluating Learning Resources

- Assessing fitness of student-generated Learning Resources to OER by looking at:
 - Technical dimension.
 - Educational dimension.
 - Openness dimension.

DBR3.2: Tools used in research practice

Program of
integration of OER
development model
into undergraduate
study unit at UWS



Workshops
Introduction
and Content
authoring tools



Learning
Resource
Card

Learning Management System (Discussion forums,
messages, announcements, content repository and
course services (i.e.: send email))



Quality criteria to
evaluate student-
constructed
learning resources

Technical

Educational

Openness

Learning Resource Card

Design

Content

Reusability

Package

License

Publish

DBR4: Reflection to produce “design principles” and enhance solution implementation

- **Principle 1:** teachers need to be skillful and experienced in generating online learning content.
- **Principle 2:** the learning design should provide tools to scaffold students' learning.
- **Principle 3:** units learning design need to accommodate OER development model.



Students' Experience in Learning Through Generating
OER

Online survey


Assessment and Learning Performance



Quizzes



Students' presentation
Data Mining Spring 2013



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