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Using Open Education Resources for Teaching and Learning

Nurbiha A Shukor

Center for Academic Leadership, UTMLead

Purpose of Life

2015 United Nations Sustainable Development Summit

SDG 4: Quality Education

- ***ensure inclusive and equitable quality education and promote lifelong learning opportunities for all***
- "Everyone has the right to education"
- Recommend:
  - Foster awareness on the use of OER
  - enabling environments for use of Information and Communications Technologies
  - ….
- 2012 Paris OER Declaration

Summary

- Introduction to OER
- Where to find OER?
- Giving Attribution to OER
- Evaluating OER

ONLINE POLL

Please look at the questions and simply click Yes or No

Open Education Resources

Sharing your lecture notes in UTM eLearning

YES **NO**

Open Education Resources

Allow access to your teaching materials via a given password

YES **NO**

Open Education Resources

People can do whatever they want with your teaching material

YES **NO**

Open Education Resources

You can use my teaching materials but attribution is necessary

YES **NO**

Open Education Resources

Using my teaching materials requires my permission

YES **NO**

Open Education Resources

My teaching materials are copyrighted

YES **NO**

Open Education Resources

My teaching materials are protected by common creative license

YES **NO**

Open Education Resources

Videos and images that I draw/produce are not part of OER

YES **NO**

Not blocked

Free

Accessible

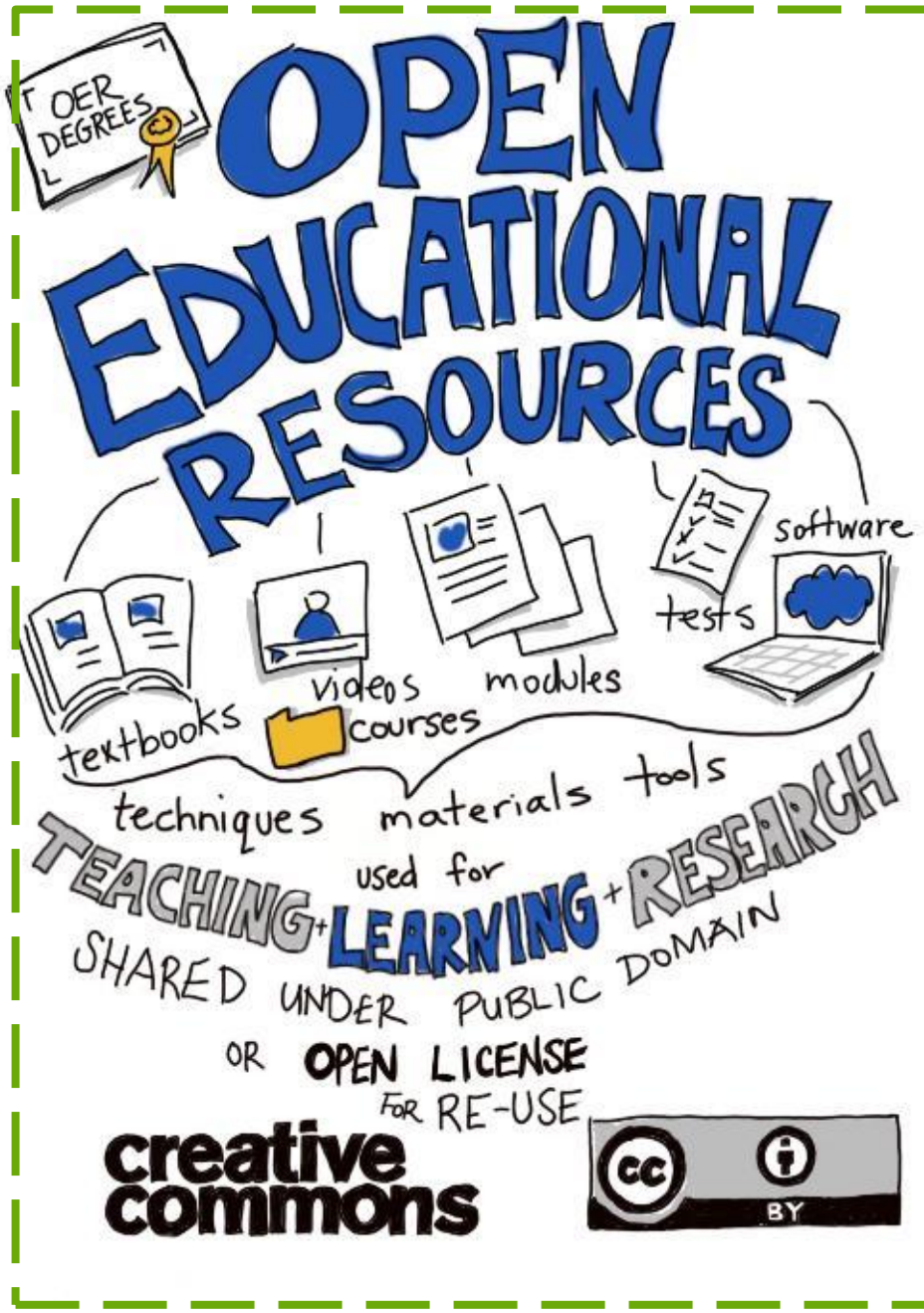
What is OPEN to You?

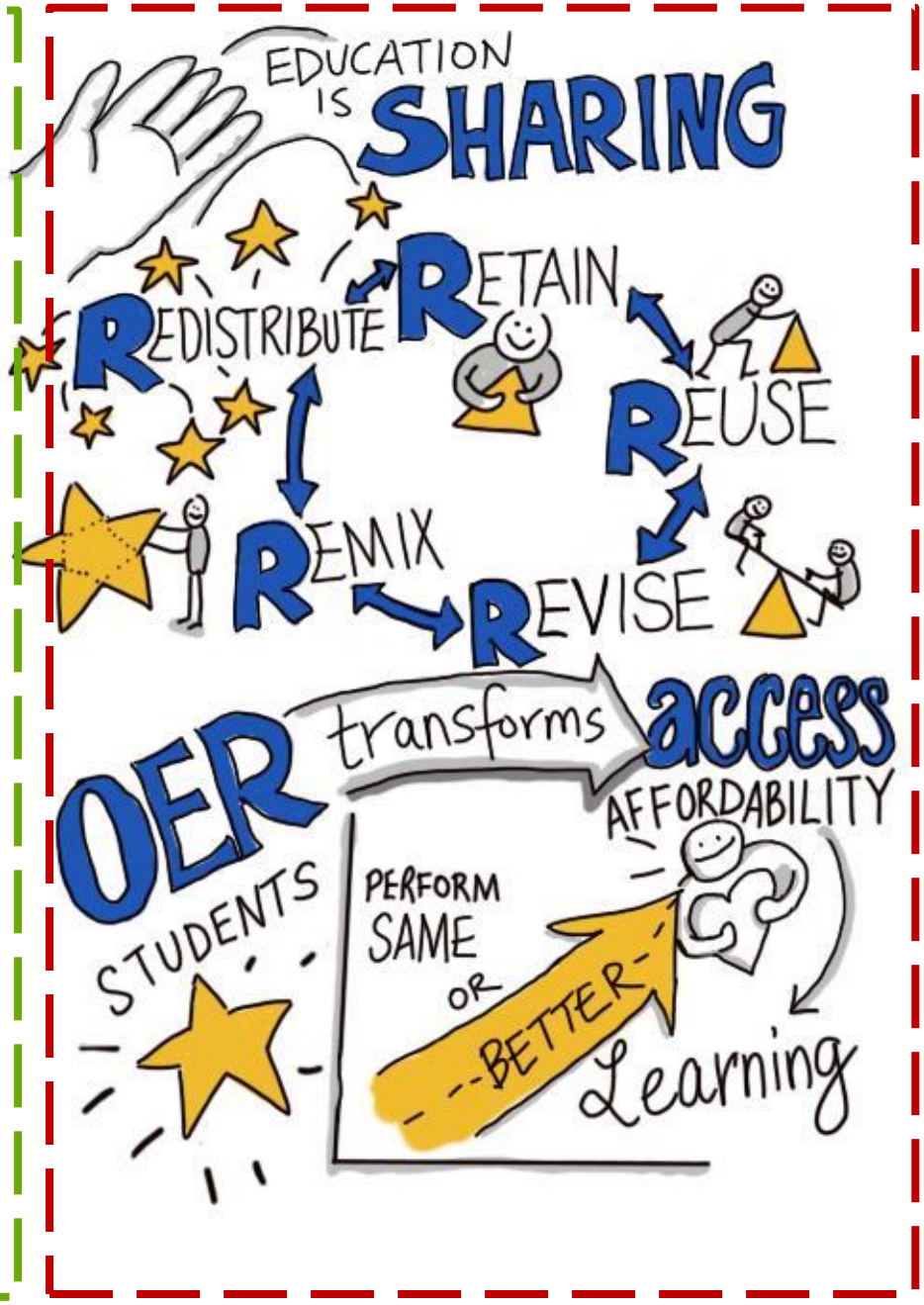
Exposed

Copy & Paste

Anytime Anywhere

Unlocked





Copyright vs Common Creative

- Exclusive
- Legal right,
- Originator
- Number of years
- To print, publish, etc

Copyright vs Common Creative

- Legally Grants permission
- Licensors get the credit
- Grant additional permissions when deciding how they want their work to be used

Paris OER Declaration: products of publicly funded work should carry such licenses

OER & 5Rs Activities

- **Retain** - the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)
- **Reuse** - the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)
- **Revise** - the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)

OER & 5Rs Activities

- **Remix** - the right to combine the original or revised content with other material to create something new (e.g., incorporate the content into a mashup)
- **Redistribute** - the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

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OER, MOOCs, OCW

EDUCATIONAL RESOURCE MANAGEMENT SYSTEM MPT1173

Lecturer : AP Dr. Noraffandy Yahaya
Dr. Norazrena Abu Samah
Dr. Megat Aman Zahiri Megat Zakaria
Mr. Abdul Razak Idris

Semester:Semester 1 2013/2014

Synopsis :

This course provides exposure and experience to students on application of Dewey Decimal Classification (DDC) coding system and Anglo American Cataloging Rules 2 (AACR2), Other topics discussed are on development of database system, application of coding and rules in the management of educational information and resources

Learning Outcomes

By the end of the course, students should be able to:

1. Explain concept of materials and information classification
2. Evaluate information retrieval systems for resource centre
3. Classify educational materials for resource centre using Dewey Decimal Classification
4. Develop automation system for school resource centre

Universiti Teknologi Malaysia (UTM-MOOC)

Universiti Teknologi Malaysia (UTM), an innovation-led and graduate-focused Research University. It is located both in Kuala Lumpur, the capital city of Malaysia and Johor Bahru, the southern city in Iskandar Malaysia, which is a vibrant economic corridor in the south of Peninsular Malaysia.

The divine law of Allah is the foundation for science and technology. UTM strives with total and unified effort to attain excellence in science and technology for universal peace and prosperity in accordance with His will.

All of them are OER

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› Supplemental Resources
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› Highlights for High School

FEATURED COURSE

Image courtesy of the RES.LL-003 students.

Seeing Through Walls

A team of Lincoln Laboratory researchers led by Dr. Gregory Charvat has developed radar technology that allows users to see through walls by detecting activity on the other side.

Check out Dr. Charvat's 3-week course *Build a Small Radar System Capable of Sensing Range, Doppler, and Synthetic Aperture Radar Imaging* (a recent user favorite) here at OCW.

A DECADE OF OPEN SHARING

On April 4, 2011, MIT celebrated the 10th anniversary of OCW's announcement. Learn more about our first decade of open sharing.

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Delft University of Technology

OER Africa

UNIVERSITY OF OXFORD

ITLA

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Universiti Teknikal Malaysia Melaka	Institutional Members
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Universiti Teknologi MARA	Institutional Members
University of Malaya	Institutional Members

Course Search
Courses by Institutions
Courses by Language
Courses by Category
OCW Search engines
Developer API

Universiti Teknologi Malaysia

Course Title	Language	Details
SKB5153 ARTIFICIAL INTELLIGENCE (KECERDIKAN BUATAN)	English	Details
SKF4153 PLANT DESIGN (REKABENTUK LOJI)	English	Details
SKM3413 DRILLING ENGINEERING	English	Details
SKPP1313 FUNDAMENTALS OF PETROLEUM ENGINEERING	English	Details
SLQ2422 METHODS IN TEACHING ISLAMIC EDUCATION	Malay	Details
Small and Decentralized Water Management System	English	Details
SME1203 STATICS (STATIKS)	English	Details
SPM1012 TELECOMMUNICATION AND NETWORKING (TELEKOMUNIKASI DAN RANGKAIAN)	English	Details
SPM2102 PROGRAMMING LANGUAGE I	English	Details
SPM3112 PROGRAMMING LANGUAGE II	English	Details
SPM4342 WEB BASED MULTIMEDIA DEVELOPMENT (PEMBANGUNAN MULTIMEDIA BERASASKAN WEB)	English	Details
SPN1022 LEARNING SCIENCE AND MATHEMATICS (PEMBELAJARAN SAINS & MATEMATIK)	English	Details

ocw.utm.my

UTM OCW

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UTM OpenCourseware

NAVIGATION

- Home
- Site pages
- Courses

MAIN MENU

Other Open Educational Resouces

1. Collection of video in UTM - http://utmotion.utm.my

2. Collection of UTM Research Paper http://eprints.utm.my

3. Collection of open college course that spans videos, audio lectures, and notes given

UTM is a leading innovation-driven, entrepreneurial research university in engineering, science and technology located both in Kuala Lumpur and Johor Bahru, Malaysia. It is renowned for being at the forefront of engineering and technological knowledge and expertise. UTM as the biggest postgraduate research university in engineering and technology has also established a reputation for innovative education and leading-edge research, with a vision towards the development of creative human capital and advanced technological innovation.

UTM OPEN COURSEWARE
OPEN EDUCATIONAL RESOURCES

Course categories

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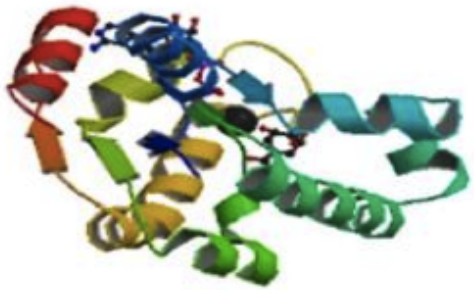
Administration

Enrol me in this course

Topic outline

APPLICATION OF COMPUTER IN CHEMISTRY
SSC3533



Lecturer: Prof. Dr. Mohamed Noor Hasan
Dr. Hasmerya Maarof

Semester: Semester I 2010/11

Synopsis

This course introduces the application of computer methods in chemistry. Topics discussed include computer representation of chemical structures, databases in chemistry, molecular modeling, pattern recognition, optimization, regression analysis, multivariate calibration, artificial intelligence and QSAR. Applications of these methods in data analysis, structural searching, prediction of molecular properties and drug design are discussed.

1 **Introduction**
Overview of computer, operating system and programming languages. Introduction to chemometric and cheminformatic methods and applications in solving chemical problems.
Introduction

2 **Representation of chemical structures**
Fragment code, linear notation, SMILES and connection table
Structure Representation

3 **Databases in Chemistry**
Chemical structure databases. Molecular similarity and structural searching.
Databases in Chemistry

4 **Molecular modelling**
Molecular mechanic (force field) and molecular orbital (ab initio and semi-empirical) methods.
Molecular Modeling

5 **Pattern Recognition**
Supervised and unsupervised methods, Linear discriminant analysis (LDA), K-nearest neighbors (KNN), Principal Components analysis (PCA) and Hierarchical Clustering.
Pattern Recognition

6 **Optimization.**
Methods of optimization, simple and modified simplex
Optimization

7 **Regression Analysis**
Simple linear regression, weighted least squares and nonlinear regression.
Regression Analysis

8 **Multivariate Calibration**
Multiple linear regression (MLR), principal component regression (PCR), partial least square regression (PLS).
Multivariate Calibration

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Carnegie Mellon University

Open Learning Initiative

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OLI presents at the SIGCSE Technical Symposium

OLI engineer Raphael Gachuhi talks on integrating custom activities

Learn More

Open Textbooks

- OpenStaxCollege
- BCCampus
- College Open Textbooks
- Kallipos
- LibreTexts

Other OER Resources

- Creative Commons Search tool
- Google OCW/OER search
- WikiEducator is an online community project for working collaboratively towards a free version of the education curriculum
- Open Courseware finder provides access to Open educational content of high quality provided by 6 institutions, among them MIT.

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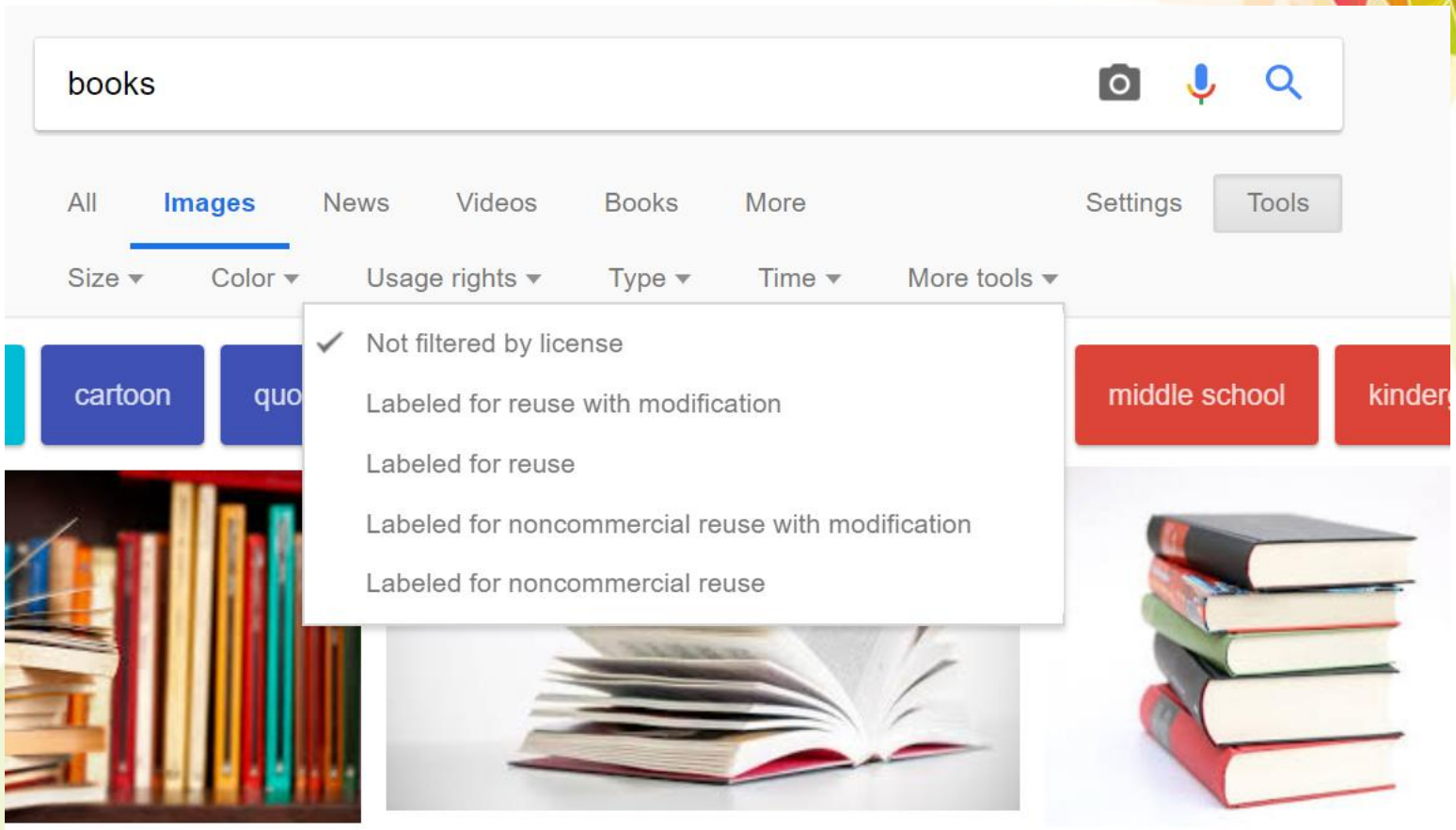
Other OER Resources

- OER Knowledge Cloud
- iTunesU
- Khan Academy
- Youtube
- Wikimedia Commons

SEARCHING FOR OER

Google OER

- Google Images < Tool < Usage Rights



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YouTube Videos

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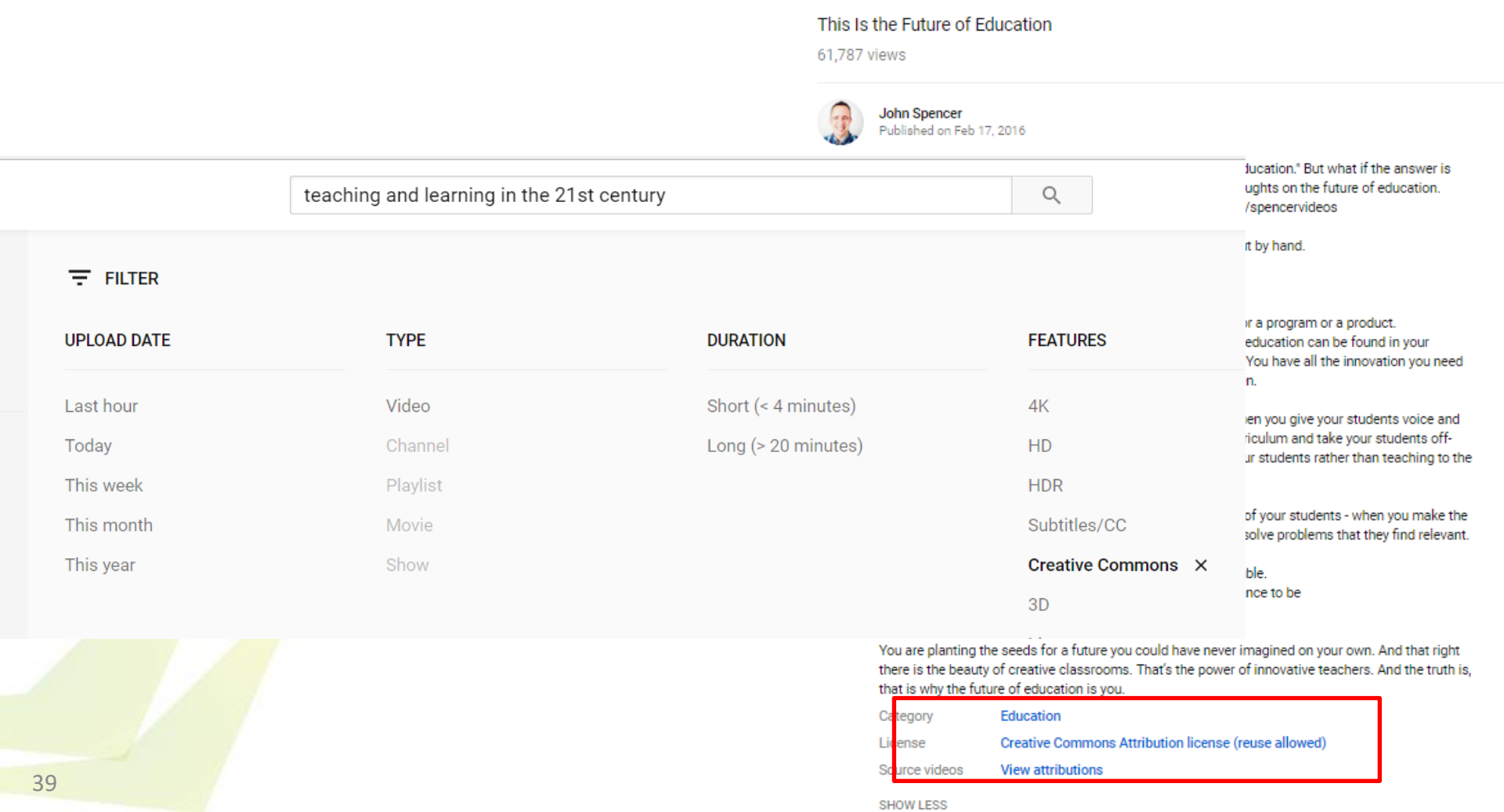

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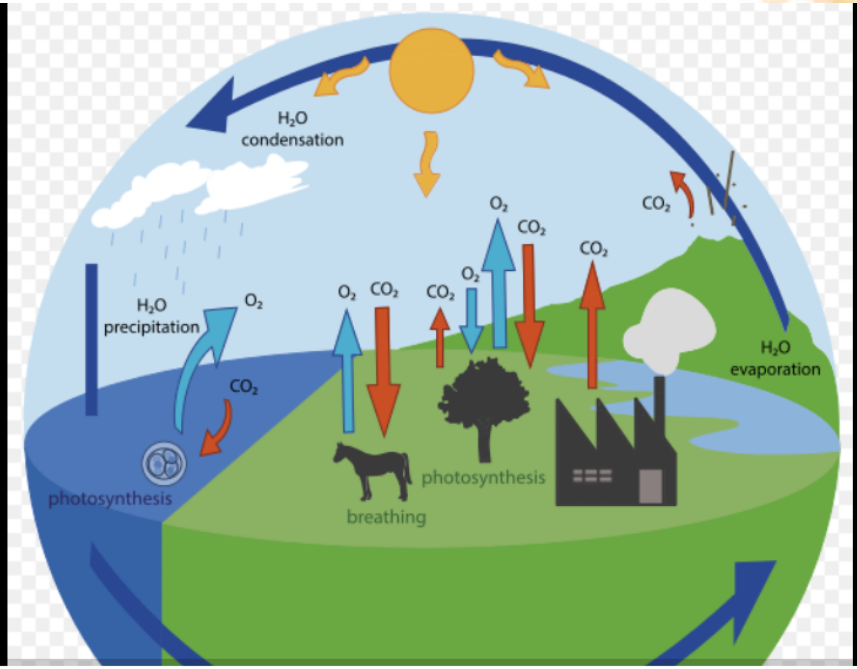

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Eme Chicano - Own work

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ACTIVITY 1

- Search for OER images in Wikimedia Commons, describe the CC licenses.
- Share on my padlet: http://gg.gg/h1o4q
- **15 minutes**

***How to post on padlet: Double click on any surface of the screen to make a post**

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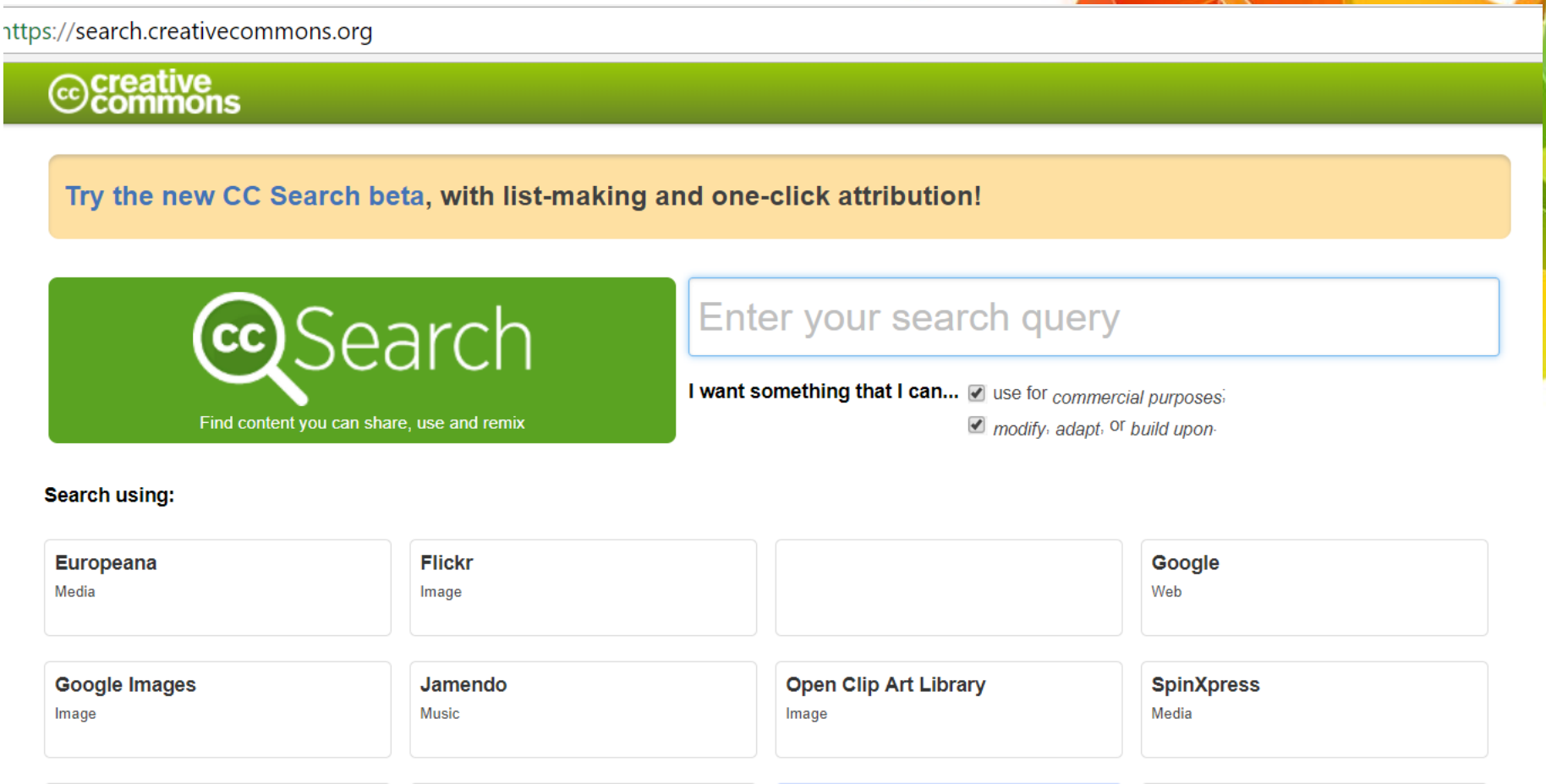

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- 15 minutes

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Evaluating OER Quality

- Content quality
- Accessibility
- License

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- http://guides.library.illinois.edu/ld.php?content_id=9830689
- https://www.achieve.org/files/AchieveOERRubrics.pdf
- https://www.achieve.org/files/AchieveOEREvaluationToolHandbookFINAL.pdf

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