Crowdsourcing projects and undergraduate education

While we're getting started:

- Have you ever participated in a crowdsourced project? (e.g. voluntarily tagged, described, transcribed images, documents or other media)
- What did you enjoy about it?
- Were you motivated to continue? Why/why not?

Crowdsourcing projects and undergraduate education

Mia Ridge, Open University @mia_out http://openobjects.org.uk

NITLE Shared Academics 8 May 2013

Overview

- Definitions
- Example crowdsourcing, citizen science and citizen history projects + discussion
- Motivations for participation, levels of engagement, ethics + discussion
- Discussion: applying what you've learnt to undergraduate teaching

Who am I?



http://bit.ly/13JqWpr Tool from http://neatline.org/

Donald's detective puzzle



"Hello, Holmes! Thank goodness you'r here!

Can you help us solve The Case Of T le Myste dastardly Moriarty has left behind these objectively. Can you use the information on this printeresting fact or link about one of the the below?

You may need to hunt around for some relevant facts, try internet. Then **report back** to Headquarters by filling in the succeed, you'll get **250 merit points** towards a promotion

I've selected some objects at random – take your pick. I kn so this link will open a new window and show you some <u>pr</u> reports submitted.

Toy motor car of a Vanguard Estate



Toy motor car, 'Micro Models', Vanguard E (Australia) Productions Pty Ltd, Australia, : vanguard estate car with a diecast zinc tw The body of car has a dark green enam...

Object from: Powerhouse Museum. (Acces

Image credit: Powerhouse Museum.

Take the fa

Toy fish by Mettoy



Toy fish, tin plate, made by Mettoy, Great with a yellow and green body and scales p coloured in red, green, black and white ac of fish There is a clockwork motor t...

Object from: Powerhouse Museum. (Acces

Image credit: Powerhouse Museum.

Take the fa

Optical instrument for measurement of astronomic



Optical instrument, for measurement of as metal / glass / wood, used at Sydney Obs Turner, made by Troughton and Simms, L An optical machine for measuring astrono

Object from: Powerhouse Museum. (Acces

Dora's lost data



"Hi, my name is Dora, and I'm a junior curator. It's my first day and I've made a big mistake – I accidentally deleted all the information we were going to add to our collections online. I need to re-label them, and quickly...

Can you help? Add words about the thing in the picture that would help someone find it on Google – how it looks, what does, who might have used it – anything you can think of."

Scale model (1:10) of Swift gamma-ray burst satellite

Object from: Sch. 50 Museum.

Date: c. 2000 Place: University of Leicester



Add words ('tags') to describe this object

Tags

Tip: separate each tag with a comma, like this: tag, label, a phrase, name, names.

Tag!

Not sure about this object? Get a different object. (It won't affect your points.)

Tip: save this URL if you want more time to think or research: http://museumgam.es/dora/?obj_ID=225

Over to you...

- Have you ever participated in a crowdsourced project? What did you enjoy about it?
- Has you set crowdsourced tasks (like transcription or tagging) for their students?
 Any tips to share?
- Let me know if you have a potential crowdsourcing project in mind

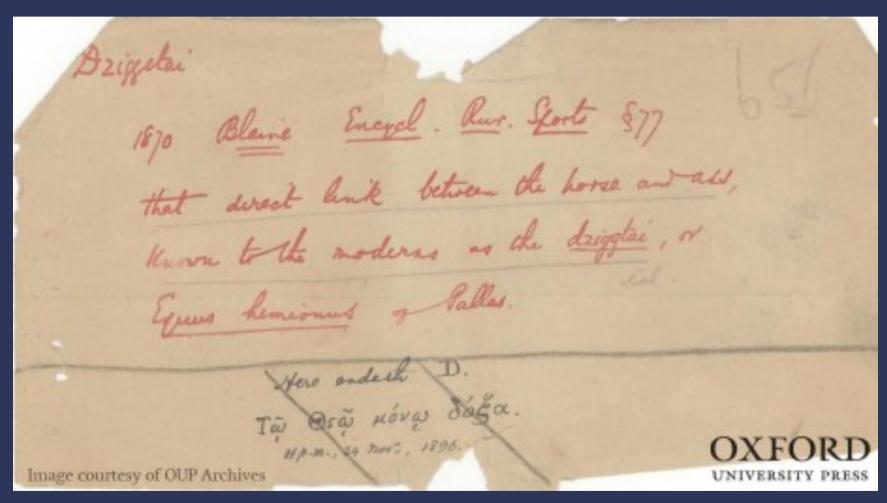
What is crowdsourcing?

Crowdsourcing (Jeff Howe and Mark Robinson, Wired, 2006):

'the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call'

 Or, 'the spare processing power of millions of human brains'

'A thousand readers are wanted, and confidently asked for'



Citizen science, citizen history, and other participatory projects

- Citizen science: 'the engagement of nonprofessionals in scientific investigations'
- Citizen history: as above
- Humanities crowdsourcing: 'leveraging public participation in or contributions to projects and activities'
- All potentially a form of engagement that contributes towards a shared, significant goal or research question by asking the public to undertake tasks that cannot be done automatically

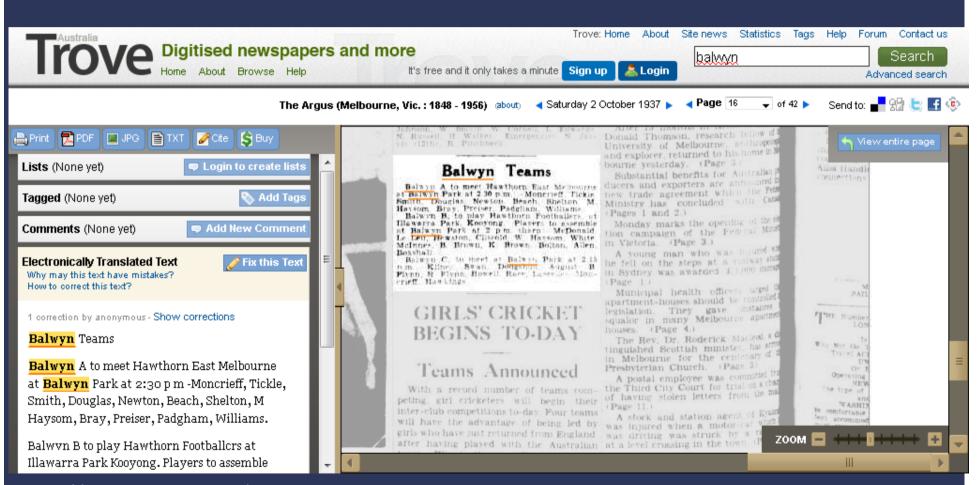
...and related terms

- Niche-sourcing
- Community-sourcing
- Micro-volunteering

- User-generated content
- Human computation
- Collective intelligence
- The wisdom of crowds

Examples

National Library of Australia: Trove



http://trove.nla.gov.au/

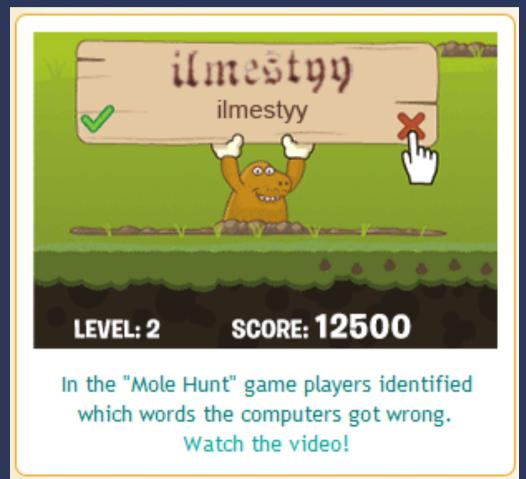
FamilySearch

FAMILYSEARCH. INDEXING	INDEXING NEWS PROJECTS	Sign In Register Languages: English						
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	Field Name Image Type State of Birth County of Birth City or Town of Birth Child's Given Names Child's Surname Gender Color or Race Month of Birth Day of Birth Year of Birth	2012 Statistics Total records indexed: 534,108,416 Total records arbitrated: 263,254,447 Total volunteers contributing: 348,796 Total estimated hours contributed: 12,764,859 On "5 Million Name Fame" event day, July 2012:						
JESUS CHRIST OF LATTER-DAY SAINTS	milysearch.org	Indexed Records: 7,258,151 Arbitrated Records: 3,082,728 Total Records Worked: 10,340,879 Volunteers participating: 46,091.						

Digitalkoot

Less than two years, almost 110,000 participants completed over 8 million word fixing tasks





http://www.digitalkoot.fi/

Transcribe Bentham



UCL Home » Transcribe Bentham » Transcription Desk

Log In / Create Account

transcribing after registering your user account? see here &; New material available to transcribe: see here &

★ Transcribe Bentham wins Award of Distinction in Prix Ars Electronica 2011 &: View manuscripts in full screen &: Are you having trouble

Navigation

- Transcription Desk
- Transcription Guidelines
- Select a Manuscript
- Blog
- Discussion Forum
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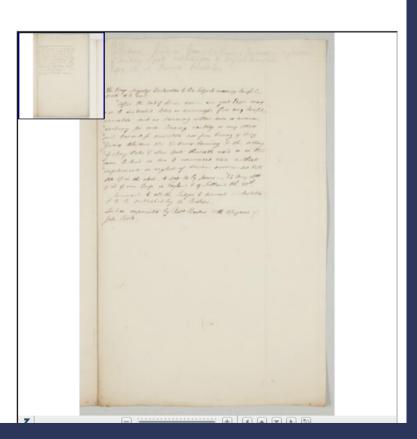
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Click Here To Edit @

The King's Majesty's Declaration to his subjects concerning lawful sports to be used.

"After the end of divine service our good People may "not be disturbed letted or discouraged from any lawful "recreation such as dauncing either men or women. "archery for men, leaping vaulting or any other "such harmless recreation nor from having of May "Games Whitsun Ales & Morris dauncing & the setting "of May Poles & other Sports therewith used so as the "same be had in due & convenient time without "impediment or neglect of divine service pp 10.11. pp 17 in the whole to page 14 by James - "24 May 10th year of our Reign in England & of Scotland the 50th command to all the Judges to prevent molestation & to be published by the Bishops.

London imprinted by Rob^t Barker Xth[?] Assignees of John Bell.

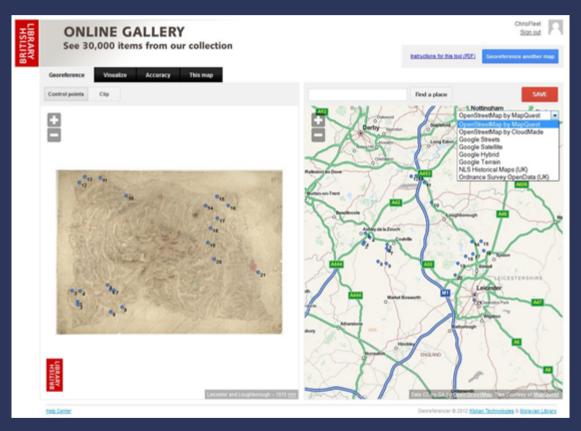


Snapshot Serengeti



http://blog.zooniverse.org/2012/12/11/snapshot-serengeti/

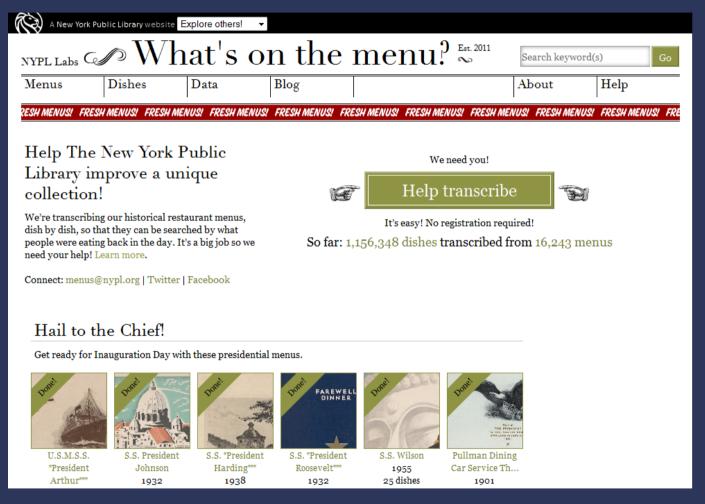
British Library Georeferencer



http://www.bl.uk/maps/

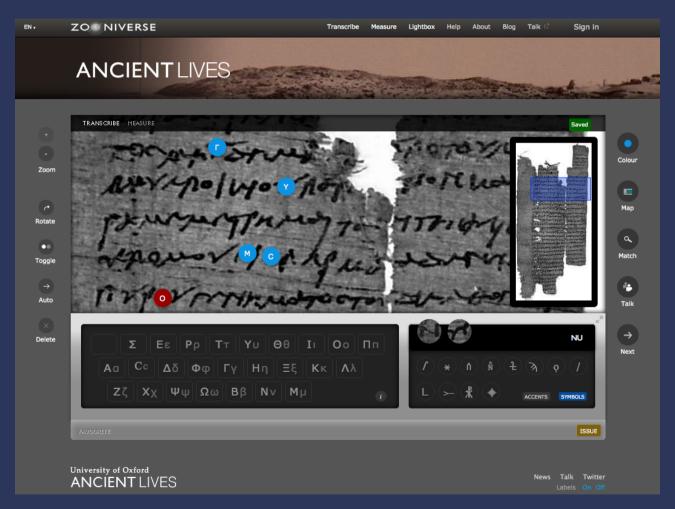
'Georeferencer: Crowdsourced Georeferencing for Map Library Collections'

NYPL 'What's on the Menu?'



http://menus.nypl.org/

Ancient Lives



http://ancientlives.org/

Old Weather

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http://oldweather.org/

From transcribing logs to maritime history

Naval History Homepage and Site Search

With thanks to OLD WEATHER, a ZOONIVERSE Project



United States Revenue Service/Coast Guard Log Books of the 19th and 20th Century

US Revenue Cutter MANNING - February to December 1916, Alaskan Waters

To be edited

USRC Manning (USCG, click to enlarge)

back to Log Book Home page

Revenue Cutter

(official name possibly Daniel Manning, 1831-87, 37th Secretary of the Treasury)

Type and Characteristics: Brigantine-rigged steam cutter, one of five of same class and almost the last cutters rigged for sail, served as design for USRC cutters for next 20 years (above, later in her career with two pole masts), built by Atlantic Works, East Boston, MA at cost of \$159,950, equipped with first electric generators in USRC vessels, commissioned 6 or 8 January 1898, 1,150 tons displacement, 205ft long x 32ft beam x 13ft 9in draft, triple-expansion steam engines, 2,181shp, maximum speed 17 knots, armed with 4-6pdr rapid fire guns, crew of 75 - 10 officers, 65 enlisted men. Rio later reduced to two pole masts.

Log Period and Areas of Service: 1898-1930, East and West Coasts of US, Alaskan waters, Spanish-American War and World War 1 service.

Summary of Service

8 January 1898 - Commissioned under the command of Captain R. M. Clark, and assigned to New England coast patrol duties.

24 March-17 August 1898 - Served with US Navy out of Norfolk as coastal patrol vessel, and from May to August on blockade and escort duty off Cuba. Took part in engagement off Cabanas, Cuba (*limage below*) on 12 May. Returned to Treasury Department on 17 August.

1898-1917 - Patrol duties off Atlantic and Pacific coasts. Initially transferred to Pacific coast and assigned to Bering Sea fleet.

10 October 1914 - One of her boats swamped in heavy surf off Sarichef, Unimak. Four crew and a Public Health Service physician lost.

6 April 1917 - USCG Cutter Manning rejoined US Navy, served with Squadron 2 of six USCG cutters, Division 6 of Atlantic Fleet Patrol forces, based at Gibraltar. Escorted trade convoys to UK and carried out anti-submarine patrols in Mediterranean.

28 August 1919 - Returned to Treasury Department.

Winter 1920-21 - International Ice Patrol restarted, with eight vessels taking part, including Manning.

Late 1920's - Operated out of Norfolk, Va.

Over to you...

Which examples did you like, and why?

Types of content

- Links between content (relationships)
- Ratings/Votes
- Tags
- Corrections
- Transcriptions
- Descriptions
- Spatial coordinates



Types of content



Typical tasks in crowdsourcing

- Tagging (subjective, personal, factual)
- Transcribing (including OCR correction)
- Moderating (debunking, flagging for review)
- Writing personal stories or memories
- Linking, relationships
- Stating preferences
- Categorising
- Geo-locating
- Creative responses



UW Digital Collections
https://www.flickr.com/photos/uw_digital_images/
4498023042/

Over to you...

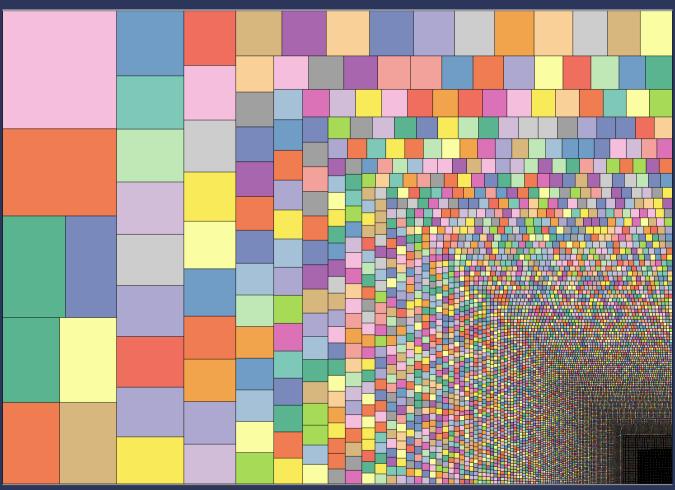
- Which of those tasks might be suitable for your students? Why?
- What other tasks could they help with?
- Looking ahead, how could you help your students move between levels of engagement?

Who participates in crowdsourcing?



UW Digital Collections http://www.flickr.com/photos/uw digital images/4476958262/

Super-contributors and drive-bys



'16,400 little boxes — one for each person who's contributed to oldWeather. The area of each box is proportional to the number of pages transcribed, between us all we've done 1,090,745 pages.' http://blog.oldweather.org/2012/09/05/theres-a-green-one-and-a-pink-one-and-a-blue-one-and-a-yellow-one/

Motivations for participation



Powerhouse Museum Collection https://secure.flickr.com/photos/powerhouse_museum/2633069104/

Motivations for participation

Altruistic

helping to provide an accurate record of local history

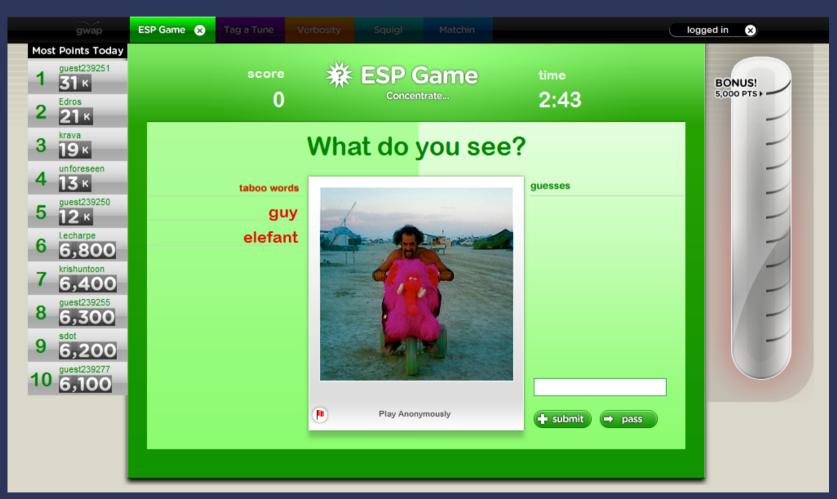
Intrinsic

reading 18thC handwriting is an enjoyable puzzle

Extrinsic

an academic collecting a quote from a primary source

Extrinsic motivations



http://gwap.com

Altruism



home based microvolunteer actions that benefit so many worthy causes 200+00000

Login

Everyone's completed actions: 2857

Search website Find

Home

All about us

Actions

Action Tracker

Projects

Campaigns

FAQ's

Feedback

Do More!

Contact Us

CHANGE THE WORLD IN JUST YOUR PYJAMAS!

What is Microvolunteering?

Volunteer your time in bite sized chunks, from your own home and when you want to. Benefit worthy causes to suit your lifestyle at your own convenience. Dip in, dip out with absolutely no commitment. No specialised skills required. It's all FREE!

And, oh yeah, you can do them in your pyjamas!



http://helpfromhome.org/

Intrinsic motivations

- fun
- the pleasure in doing hobbies
- the enjoyment in learning
- mastering new skills, practicing existing skills
- recognition
- community
- passion for the subject



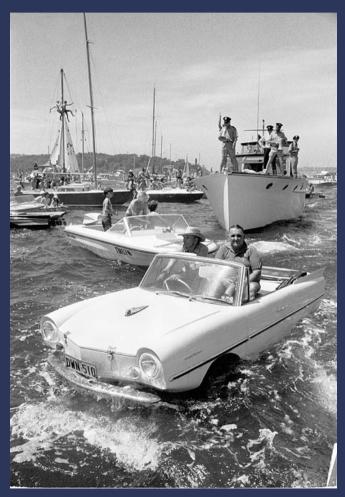
State Library of Queensland, Australia https://secure.flickr.com/photos/statelibraryqueensland/3198305152/

Intrinsic motivations

People crave:

- satisfying work to do
- the experience of being good at something
- time spent with people we like
- the chance to be a part of something bigger

(Jane McGonigal, 2009, on 'museums as happiness engines')



State Library of New South Wales collection https://secure.flickr.com/photos/statelibraryofnsw/2880982738/

Over to you...

- What impact does motivation have on undergraduate participation?
- Does it matter if student participants are externally motivated or is it more important to give them a chance to be engaged?

Engagement

- 1. 'attending'
- 2. 'participating'
- 3. 'deciding'
- 4. 'producing'

Department for Culture Media and Sport 'Culture and Sport Evidence', 2011



The U.S. National Archives http://www.flickr.com/photos/usnationalarchives/3678706327/

'Levels of Engagement' in citizen science

- Level 1: participating in simple classification tasks
- Level 2: participating in community discussion
- Level 3: 'working independently on selfidentified research projects'

(Raddick et al, 2009)



State Library of Queensland, Australia https://www.flickr.com/photos/statelibraryqueensland/4603281578/

FamilySearch 'stepping stones'

- Indexing as 'introductory, family history education' including:
 - Knowledge about Record Types
 - Genealogical Information
 - Handwriting Practice
- From indexing, can move to 'arbitration'
 - Invited after transcribing 2,000 records if 94% accuracy or higher
- Or onto your own family history research

Participatory project models

Contributory

 the public contributes data to a project designed by the organisation

Collaborative

both active partners, but lead by organisation

Co-creative

all partners define goals together

Center for Advancement of Informal Science Education (CAISE)

Who really has agency?



"I participate, you participate, he participates, we participate, you participate...they profit." (1968) Via A Ladder of Citizen Participation - Sherry R Arnstein

The ethics of crowdsourcing



NOBODY CAUGHT ON THAT OUR BUSINESS PLAN DIDN'T INVOLVE US IN ANY WAY— IT WAS JUST A DESCRIPTION OF OTHER PEOPLE MAKING AND SELLING PRODUCTS.

http://xkcd.com/1060

Sharing credit

S NCBI Resources ☑ How To ☑									
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Published in final edited form as: HHMIMSID: HHMIMS218516									
Nature. 2010 August 5; 466(7307): 756–760.									
doi: 10.1038/nature09304									
Predicting protein structures with a multiplayer online game									
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Seth Cooper, ¹ Firas Khatib, ² Adrien Treuille ¹³ Janos Barbero, ¹ Leehyung Lee, ³ Michael Beenen, ¹ Andrew Leaver- Fay, ^{2,4} David Baker, ² Zoran Popović, ¹ and >57,000 Foldit players ⁵									

Over to you...

- What are the challenges of collaboration, credit, attribution in scholarly crowdsourcing, and how might you start to solve them?
- Are there any ethical issues for undergraduate participation in crowdsourcing?
- What kinds of real, authentic tasks could you assign to improve knowledge of culture, global engagement and apply learning?

Thank you!

Mia Ridge
Open University
http://openobjects.org.uk
@mia_out



The Library of Congress https://www.flickr.com/photos/library_of_congress/2179923364/