

Seamless access to OER with mobile technologies

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Welten Institute

Research Centre for Learning, Teaching and Technology

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Contents

- Focus of my research
- My research on OER
 - OER in the Mobile ERA
 - Authoring of OER in authentic learning scenarios
 - The lifelong learning hub (3LHUB).
 - Seamless support across learning environments
 - Seamless access to OER with mobile technology
- Future research



Ubiquitous support of lifelong learners with mobile technologies

Lifelong learning is the ongoing, **voluntary**, and **self-motivated** pursuit of knowledge for either **personal** or **professional** reasons. Therefore, it not only enhances social inclusion, active citizenship, and **personal development**, but also **self-sustainability**, rather than competitiveness and employability.

*Commission of the European Communities:
"Adult learning: It is never too late to learn".
COM(2006)*

1. Communication in the mother tongue
2. Communication in foreign languages
3. Mathematical competence and basic competences in science and technology
4. Digital competence
- 5. Learning to learn**
6. Social and civic competences
7. Sense of initiative and entrepreneurship
8. Cultural awareness and expression

Commission, E. (2007). Key competences for lifelong learning. An European reference framework.

Objectives of the research

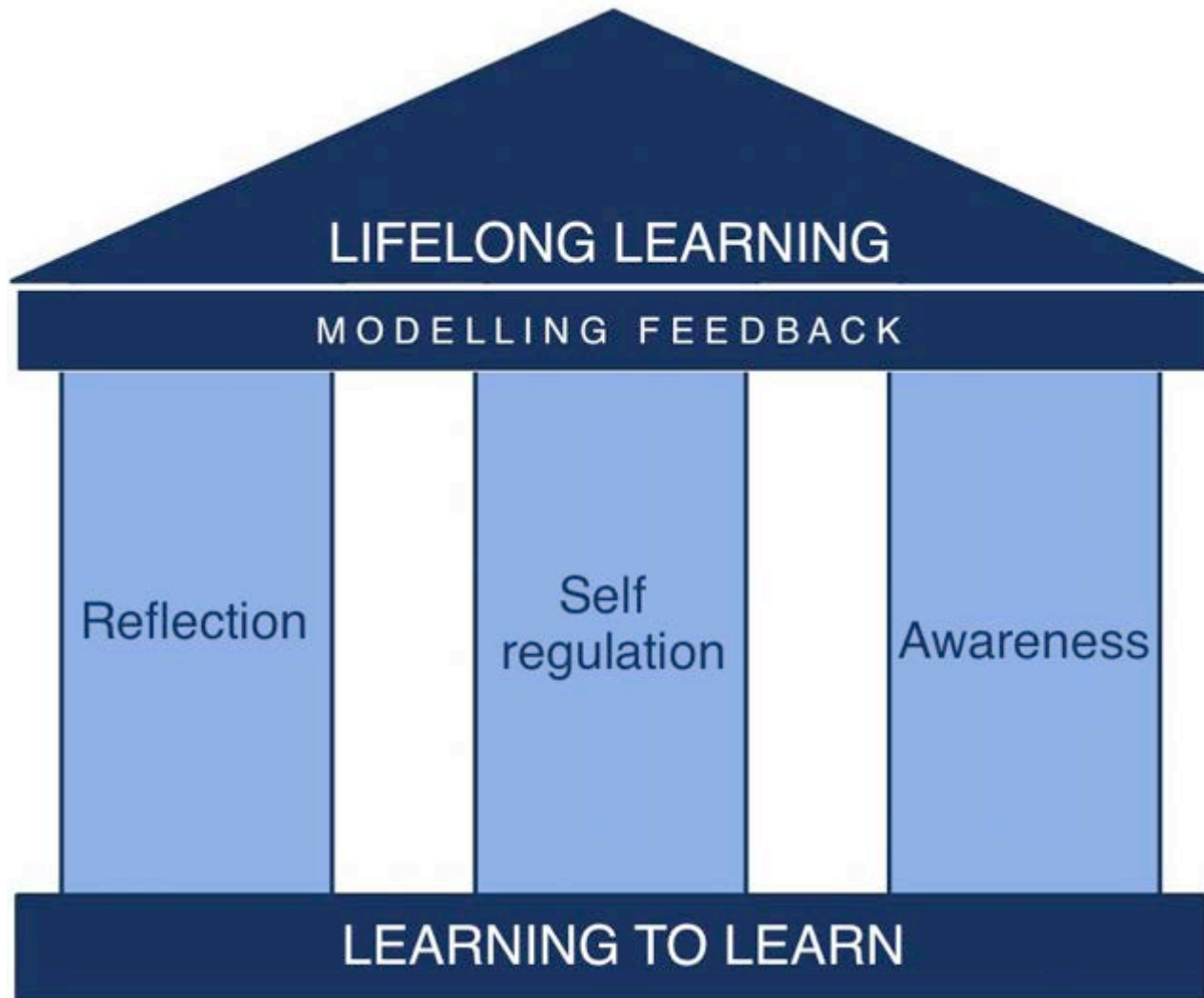
1. Develop artefacts and software prototypes that allow the implementation of educational designs in which the learners connect experiences across contexts.
2. Providing suitable combination of multiple devices to foster creation of personal learning ecologies.



What is lifelong learning?

“Lifelong learning is like a never ending personal revolution.” ~ @BryantMcGill , Voice of Reason

Three pillars for lifelong learning



Authoring of OER in authentic learning scenarios

Tabuenca, B., Kalz, M., Ternier, S., & Specht, M. (2014). Authoring of OER in authentic learning scenarios. (submitted)

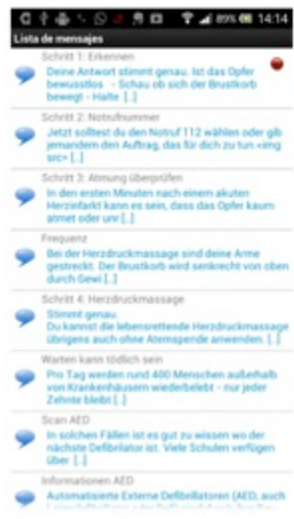
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Pagina 7

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Mobile Authoring in Authentic scenarios



Kalz, M., Lenssen, N., Felzen, M., Rossaint, R., Tabuenca, B., Specht, M., & Skorning, M. (2014). Smartphone Apps for Cardiopulmonary Resuscitation Training and Real Incident Support, *Journal of Medical Internet Research*



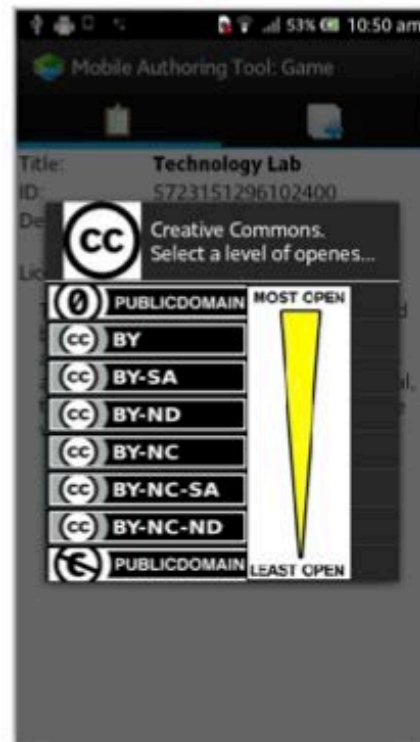
Ternier, S., Gonsalves, A., Tabuenca, B., De Vries, F., & Specht, M. (2013, August). Supporting Crisis Simulations with the ARLearn Toolkit for Mobile Serious Games. *The Quarterly Journal*, 12(1), 19–29.



*Mandela's Memorial City Hall, Cape Town
06/12/2013*



Authoring of OER in authentic learning scenarios



Mobile usage habits in lifelong learners

Tabuenca, B., Ternier, S., & Specht, M. (2013). Supporting lifelong learners to build personal learning ecologies in daily physical spaces. International Journal of Mobile Learning and Organisation, 7(3), 177–196.

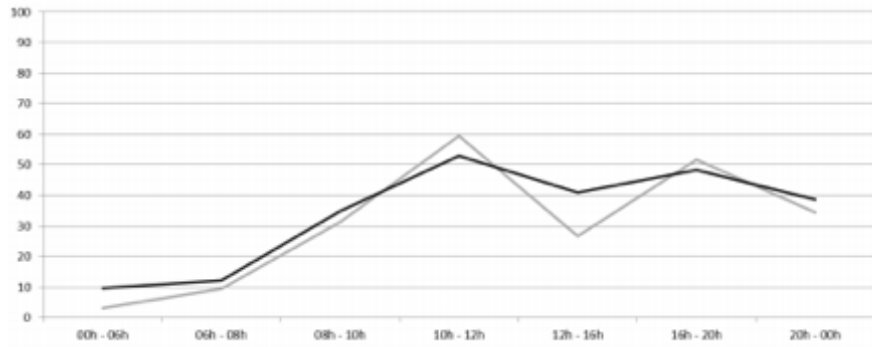
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Pagina 10

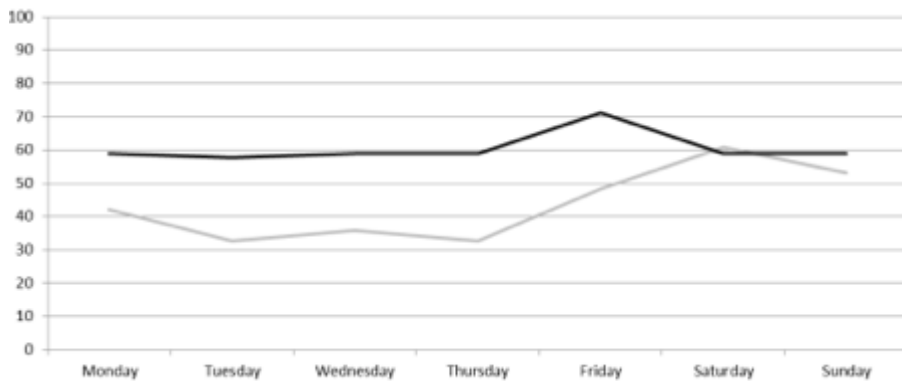
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Habits in lifelong learners



Along the day



Along the week

	Percentage			
	Listen	Watch	Write	Read
In the living room				
Having breakfast	12.24	8.16	8.84	29.24
Cleaning	37.4	1.36	0.68	2.04
Sitting in the sofa	34.01	44.89	50.34	62.58
Having lunch	11.56	10.88	8.84	20.4
During cofee/time	19.72	11.56	27.2	38.77
Watching TV, during advertisement time	12.92	15.64	32.64	47.61
In the bathroom				
Having shower	23.12	0.68	0	0.68
Sitting on the toilet	11.56	10.2	21.08	33.33
Making up / shaving	18.36	1.36	1.36	2.72
Brushing your teeth	16.32	2.04	2.04	4.76
In my room				
Waking up in the morning in bed	18.36	2.72	7.48	25.84
Getting dressed	19.72	0.68	1.36	2.04
Sitting at my desk	37.41	29.92	51.69	54.42
Lying on bed anytime	34.69	34.01	33.32	50.33
Going to sleep at night and in the bed	28.56	21.76	23.12	42.85

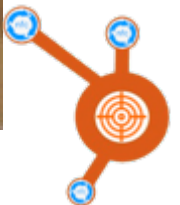
In physical spaces

The Lifelong Learning Hub

3LHub



Identify your learning goals



Identify daily learning environments



Daily physical spaces



Waiting times



Transitions



Frequently used devices



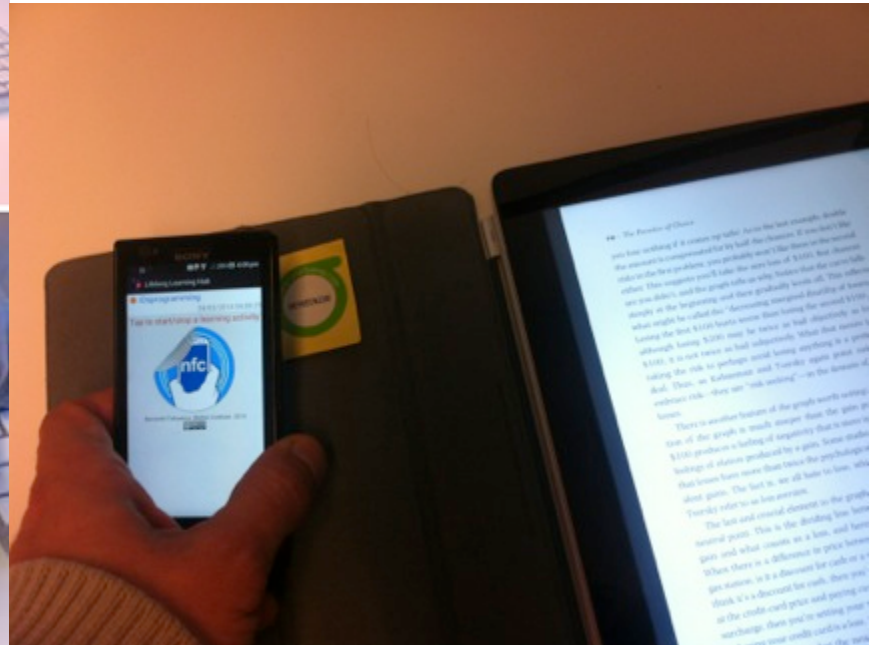
Daily physical spaces



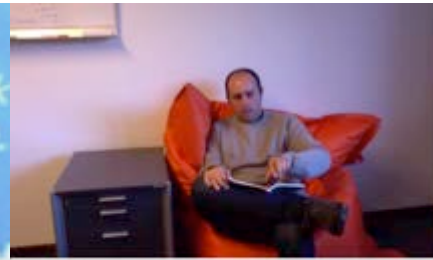
Transitions



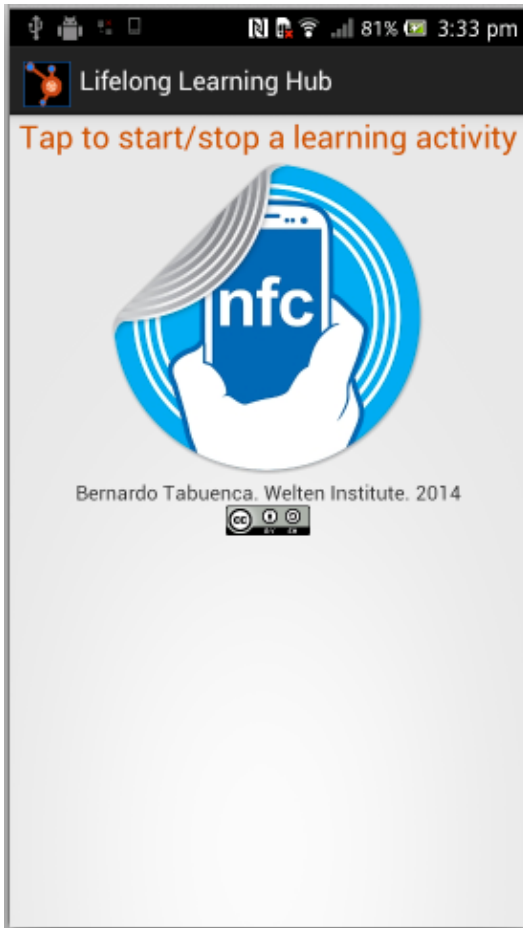
Frequently used artifacts



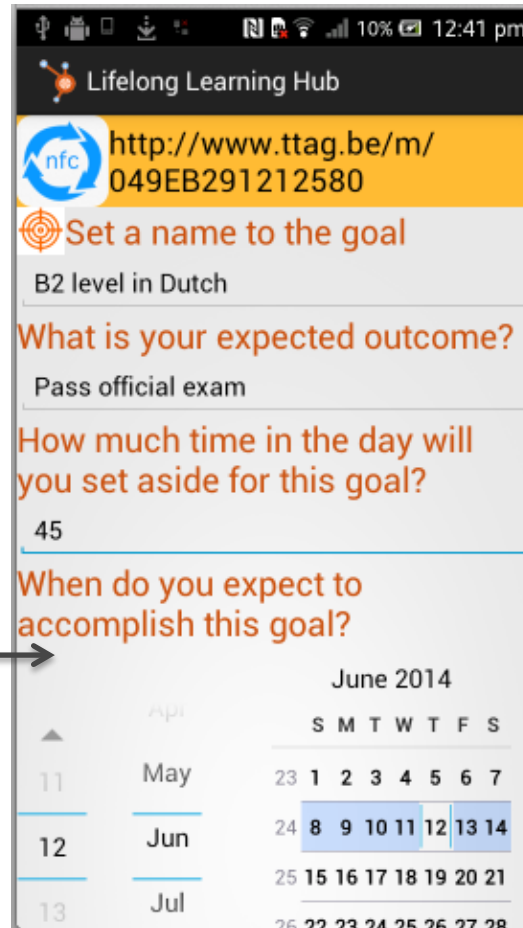
Waiting times



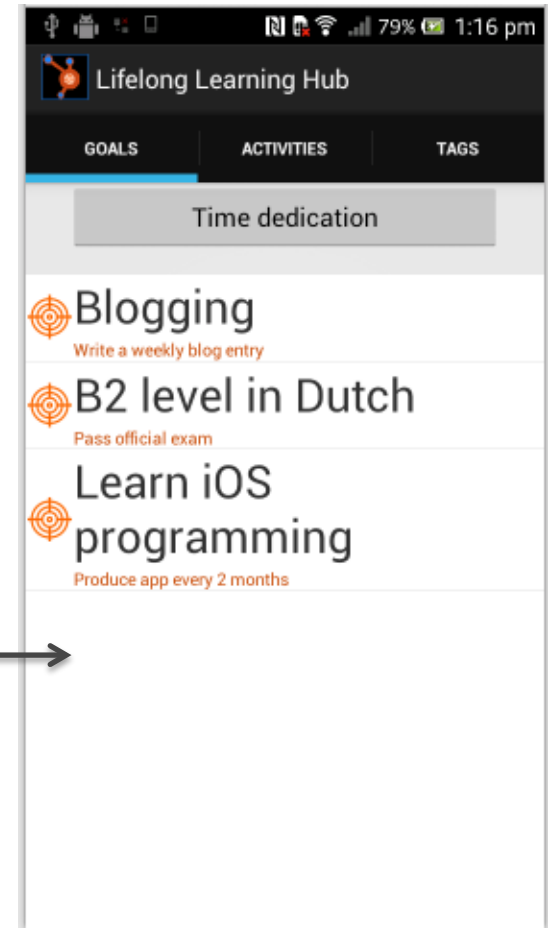
Setting goals with 3LHub



Tap a new
NFC tag



Set aside
time



Goals are
listed

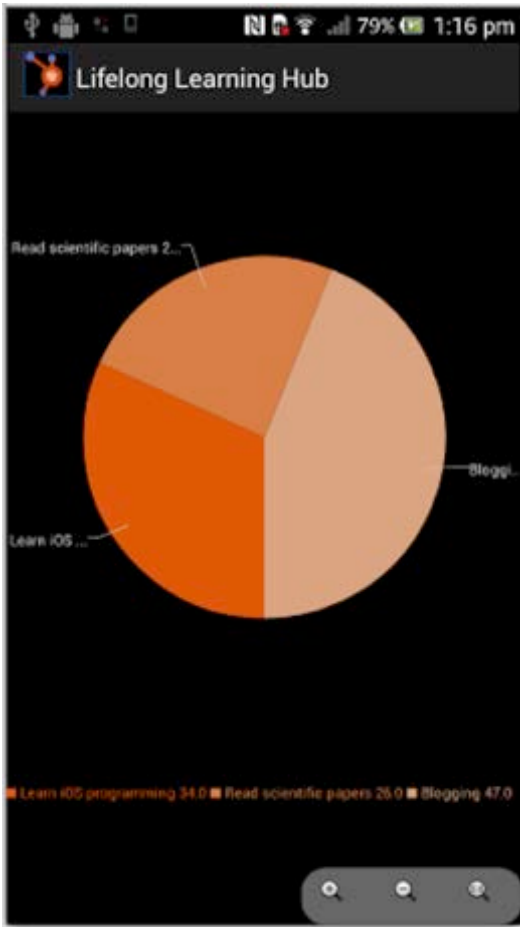
Track learning activities with 3LHub

Tap to start

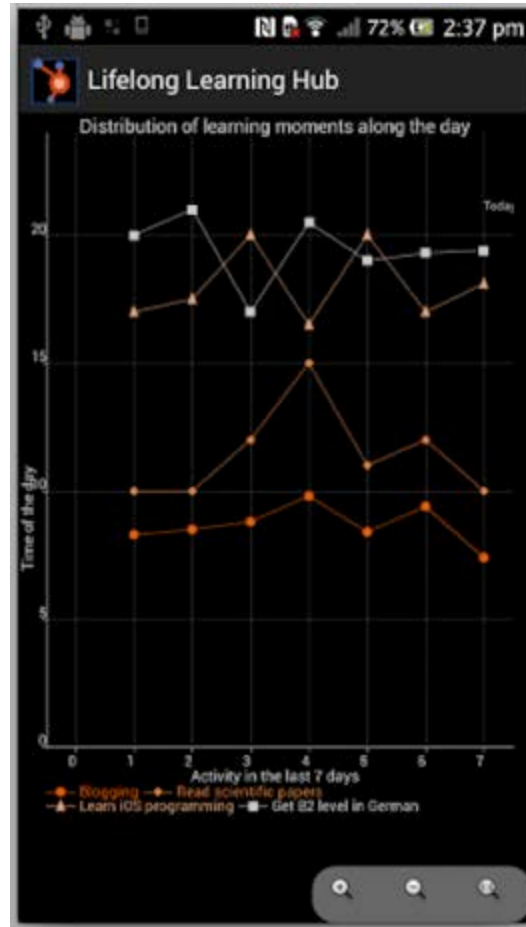


Tap to stop

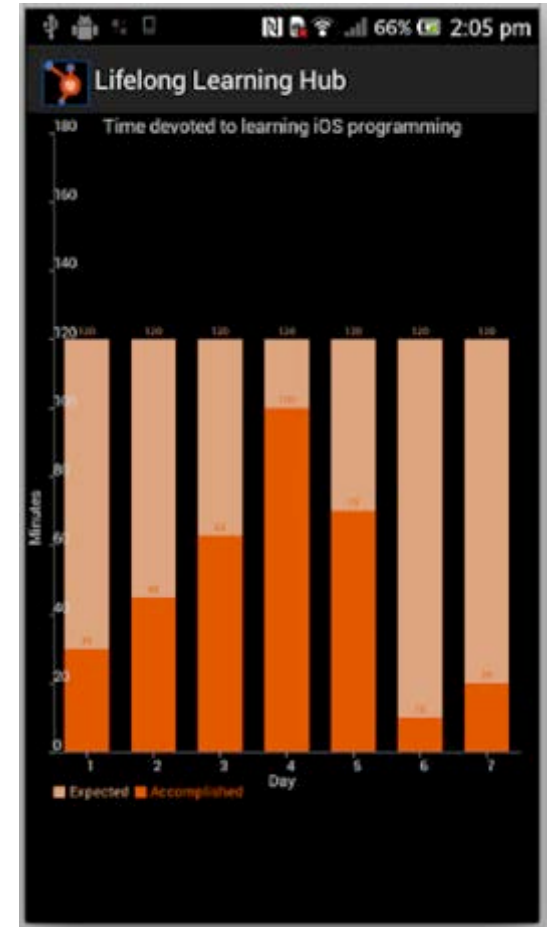
Visualize learning analytics



Percentage of time for learning



Learning patterns



Estimated VS accomplished



The LifeLong Learning Hub (3LHub)

Free BETA app



Open source code



Extensions



<http://bit.ly/3LHubProject>

What I am doing now?

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Pagina 23

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OER in the mobile ERA

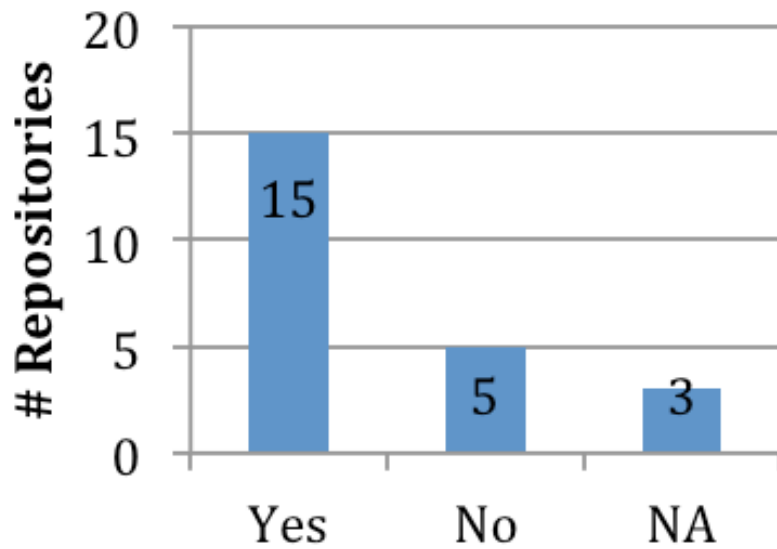
Tabuenca, B., Drachsler, H., Ternier, S., & Specht, M. (2012). OER in the Mobile Era: Content Repositories' Features for Mobile Devices and Future Trends.



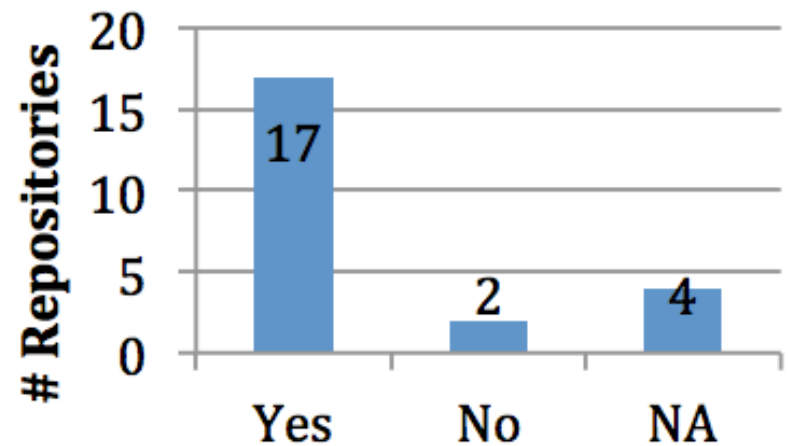
A questionnaire to repository owners

Open Discovery Space Project

Do you think an app could increase the access rates to your repository?



Would you consider providing an application interface (API) for accessing to your repository from other sites and apps?



Application Programming Interface in Open Access Repositories

Playlists

`/api/v1/playlists/<path:topic_slug>/exercises`

Open Access

GET

`/api/v1/playlists/<path:topic_slug>/videos`

Open Access

GET

`/api/v1/playlists/library/list`

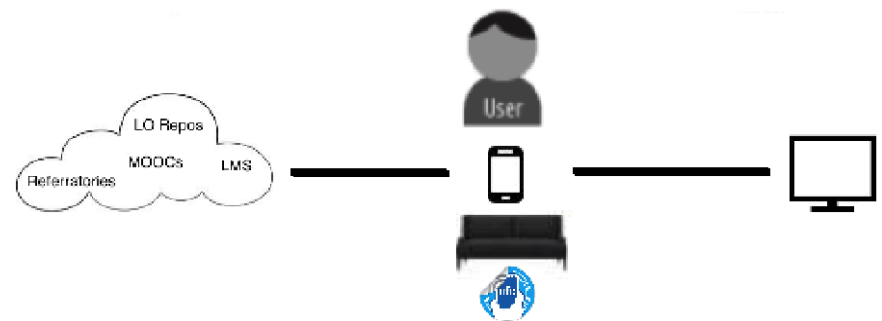
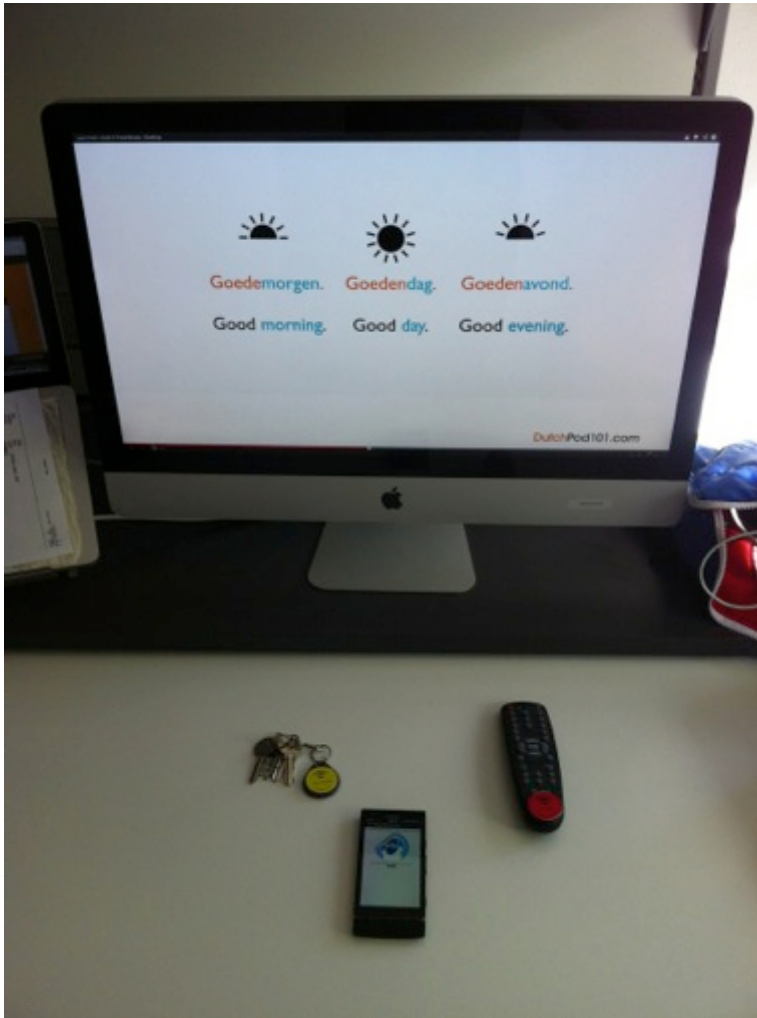
`/api/v1/playlists/library`

<http://www.ocwsearch.com/api/search>

<http://api-explorer.khanacademy.org/>

```
[
  {
    "date_added": "2011-05-04T06:01:47Z",
    "description": "An introduction to logarithms",
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    "ka_url": "http://www.khanacademy.org/video/introduction-to-logarithms",
    "keywords": "logarithm, math, khan, academy",
    "kind": "Video",
    "playlists": [
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      "My Top Videos"
    ],
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  },
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An Ecology of Resources for Lifelong Learners



What is next?

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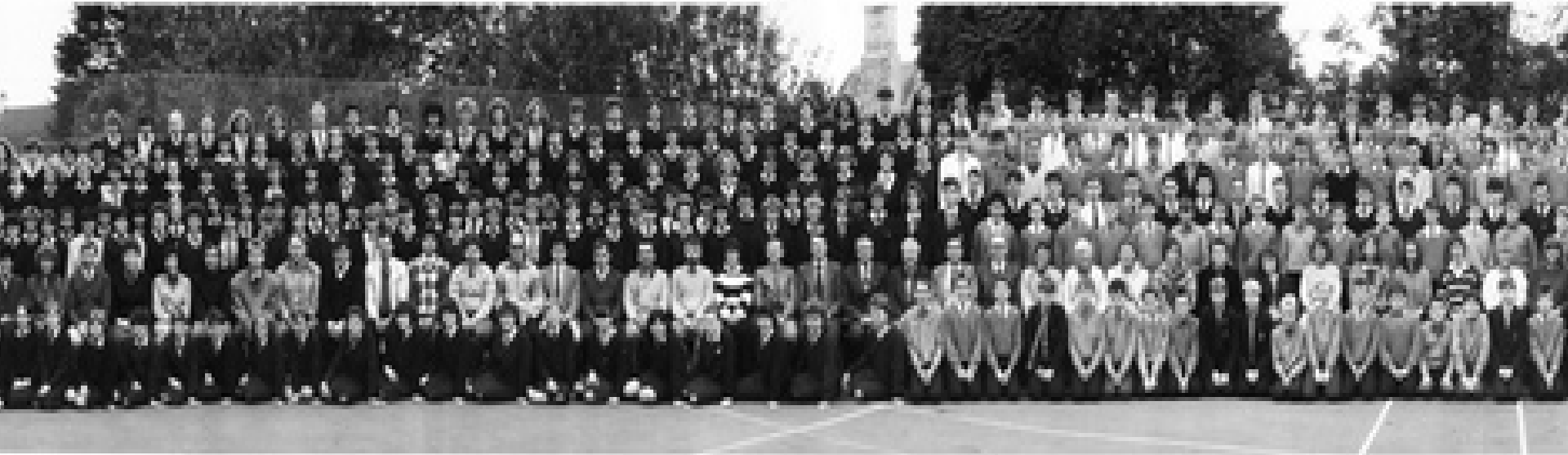
Pagina 28

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Traditional education

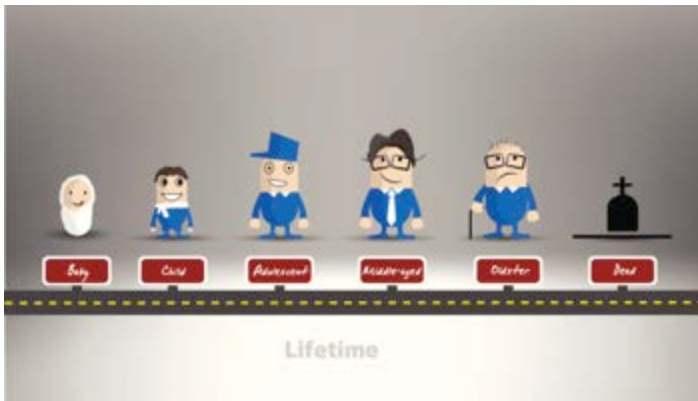
- Industrialized
- Built for Scalability
- Suited for the creation of „comparable” people



Can we really compare these students?



How long does it take you to complete an assignment?



<http://www2.johnabbott.qc.ca/~geoscience/ME/WorldLanguageFamiliesMap.htm>

<http://cache4.asset-cache.net/xc/460303485.jpg?v=1&c=IWSAsset&k=2&d=B53F616F4B95E55358E7C476BBFC6428D07E2F74803ACC350AB6F2134E92964F>

Experimental study

LACE | Learning Analytics Community Exchange



Control group. No treatment



Treatment 1. Makes estimation



Treatment 2. Measures with 3LHub

Questions?



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