

edX XBlock vs LTI:

And the winner is ... Both

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UQx Course Catalog



UQx
Essential Tools For The Low
Carbon Economy

Current
Starts: May 16, 2017



UQx
Introduction to Psychological
Research Methods

Current
Self-Paced



UQx
Making Sense of Climate
Science Denial

Starting Soon
Starts: May 30, 2017 - Self-Paced



UQx
Deep Learning through
Transformative Pedagogy

Current
Starts: May 15, 2017



UQx
IELTS Academic Test
Preparation

Current
Self-Paced



UQx
Introduction to Social
Psychology

Current
Self-Paced

30 MOOCs



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Learn to Select Optimal ETS Options

Scenario:

Your company's Scope 1 carbon footprint is 2,300,000 tCO₂e, making it liable under the Tasland Emissions Trading Scheme. You must purchase one (1) allowance or offset for every tCO₂e of your company's liability, otherwise the government will fine you a penalty price (\$50) for every tCO₂e of your shortfall. You also have the option of implementing emissions abatement projects in order to lower your carbon footprint and therefore your compliance liability.

Goal:

- Achieve the lowest possible Average Cost of Compliance (\$/tCO₂e); and
- Achieve a Penalty Cost of \$0.

Instructions:

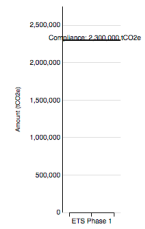
1. Drag the options into ascending order (i.e. lowest to highest) based on their cost per tCO₂e. This will help you to prioritise the lowest cost options.
2. Select the cheapest options by clicking on the checkbox next to the option name.
3. If allowances or offsets are selected, you will need to decide on the amount to purchase (a limit may apply).
4. If an abatement project is selected, the amount of avoided CO₂e will be fixed.
5. The selected options will be added to the Compliance Activities and Total Cost graph to help you visualise if compliance has been met. The Penalty Cost and Average \$/tCO₂e are also displayed, to help you meet your goals.

<input type="checkbox"/> Auction allowances Cost per tCO ₂ e: \$22, (Limit: 1,500,000) Amount: <input type="text"/>
<input type="checkbox"/> Carbon offsets Cost per tCO ₂ e: \$4, (Limit: 500,000) Amount: <input type="text"/>
<input checked="" type="checkbox"/> Motion sensor lighting retrofit Cost per tCO ₂ e: \$10 Avoided tCO ₂ e: 250,000
<input type="checkbox"/> Electric car fleet Cost per tCO ₂ e: \$250 Avoided tCO ₂ e: 200,000
<input type="checkbox"/> Plant equipment upgrade Cost per tCO ₂ e: \$5 Avoided tCO ₂ e: 200,000

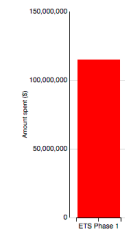
Penalty
\$115,000,000

Avg \$/tCO₂e
\$32.86

Compliance Activities



Total Cost



Carbon101x Essential tools for the low carbon economy



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Ranking Poll (External resource)

[Edit LTI Activity](#)

Your saved rankings:

* Applicant 4
* Applicant 3
* Applicant 2
* Applicant 1

Overall course average rank for each applicant is displayed below:

* Applicant 2 (Average Rank: 1.6)
* Applicant 1 (Average Rank: 1.87)
* Applicant 3 (Average Rank: 3.25)
* Applicant 4 (Average Rank: 3.28)

JOURNAL REFLECTION TASK (External resource) (1.0 points possible)

[Edit LTI Activity](#)

■ Surface and Deep Learning

Having now reflected upon your own understanding of deep learning and surface learning, and then considered the views of other learners, as well as neuroscientific, researcher, and educational perspectives, respond to the following questions:

1. List three features of each approach.
2. Has your understanding of the nature of, and differences between, deep learning and surface learning changed? If so, how?
3. Describe a situation in which either you or your students were engaged in deep learning. What features of deep learning that you identified in question one were present in this example?
4. Do you intentionally incorporate deep learning processes in your teaching? If so:
 - How do your learners respond?
 - What do you find rewarding and challenging?

Journal Entry



Surface learning is shallow - things that I my learners won't recall. Deep Learning has the following features:

- critical thinking
- social learning

Save

Feedback:

The reflective journal entry has been saved. Have you considered how you could improve your use of deep learning processes both as a teacher and as a learner? Have you thought about what might motivate a learner to engage more deeply with an idea now that you have considered the different perspectives?

Tag Cloud

learning



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edX XBlock or LTI

Challenge

- As an edX partner, UQx builds a lot of tools for courses
- Mainly LTI's because we can immediately add to course on edx.org
- XBlocks however can be deployed on any OpenEdx installation

edX XBlock vs LTI: And the winner is both

Solution

- Embed an XBlock runtime in an LTI container
 - More lightweight than OpenedX as a LTI Provider
- Can deploy on edx.org immediately
- Functionality available as XBlock
- XBlocks can be deployed to other LMSs

Implementation

- Django LTI Tool Provider (<https://github.com/Harvard-University-iCommons/django-auth-lti>)
 - MultiLTILaunchAuthMiddleware
 - LTIAuthBackend
 - @lti_role_required(['Instructor', 'Student'])
 - request.LTI.get('user_id')
- XBlock Dev Workbench (<https://github.com/edx/xblock-sdk>)

Implementation

Change xblock activity

Activity Name:

Description:

LTI Resource Link ID:

Course ID:

Xblock selection:

Xblock xml:

```
<poll tally="{ 'long': 20, 'short': 29, 'not_saying': 15, 'longer' : 35}"
question="## How long have you been studying with us?"
answers='[{"label": "A very long time", "img": null, "img_alt": null},
{"short", {"label": "Not very long", "img": null, "img_alt": null},
{"not_saying", {"label": "I shall not say", "img": null, "img_alt": null},
{"longer", {"label": "Longer than you", "img": null, "img_alt": null}]'
feedback="### Thank you&#10;&#10;for being a valued student."/>
```

[Edit XBlock](#)

POLL

How long have you been studying with us?

- A very long time
- Not very long
- I shall not say
- Longer than you

In Progress

Code Available Soon on Github

- XBlockState JSON is stored in a text field.
 - Moving to Postgres Database (NoSQL) & using JSONField for state storage
- django-auth-lti needs grade sending
- Get correct or incorrect from Block
- Can I get the Studio XBlock UI?
- CSS

THANK YOU

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