

Student facing learning analytics

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what is learning analytics? (LA)

Learning analytics is the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs

SoLAR definition



Who is learning analytics for?



who gets LA at your institution?

Course Activity Overview

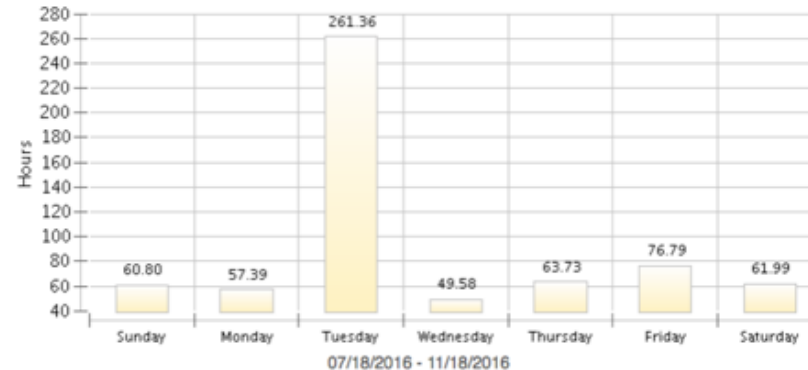
Course Name Operations Research 3
Course ID MXB334_16ae2
Number of Students 13
Number of Users 16
Date Range 07/18/2016 - 11/18/2016

Report Options

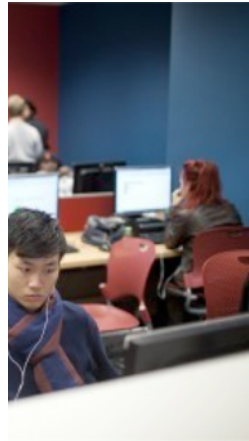
Activity is shown for enrolled users only.

Course Overview

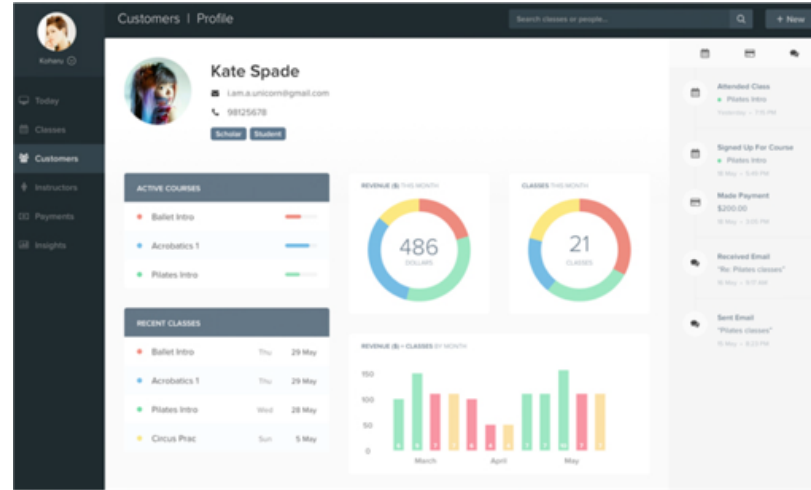
User Activity By Day



Total Time in Course 631.65
Avg Time Per User 39.48



LA \neq identification of At Risk students



At least not only!

What does student success look like in the coming age of workforce disruption?



we should give students access to rich LA

In principle this should help to promote:

- *learning to learn more effectively*
- *metacognition and reflection*
- *interpretation and sensemaking*
- *data literacy*

And ethically... is it reasonable not to give students access to the data that they themselves generate?

7

7

- 7



ID14-3821: ENABLING CONNECTED LEARNING VIA OPEN SOURCE ANALYTICS IN THE WILD: LEARNING ANALYTICS BEYOND THE LMS

This project is supported by the Australian Government's office for learning and teaching

QUEENSLAND UNIVERSITY OF TECHNOLOGY:

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UNIVERSITY OF SOUTH AUSTRALIA

Shane Dawson, Dragan Gašević (Uni of Edinburgh)

UNIVERSITY OF TECHNOLOGY SYDNEY

Simon Buckingham Shum (and now Kirsty Kitto!)

UNIVERSITY OF SYDNEY

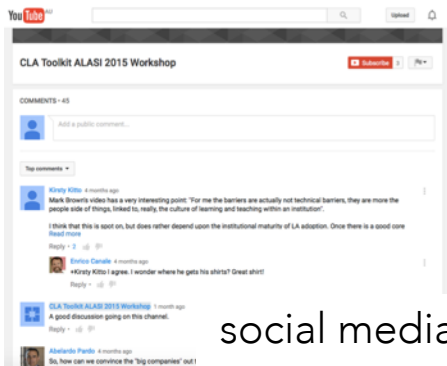
Abelardo Pardo

UNIVERSITY OF TEXAS (ARLINGTON)

George Siemens



the connected learning analytics toolkit



social media

Learning
Record Store



scraping

analysis

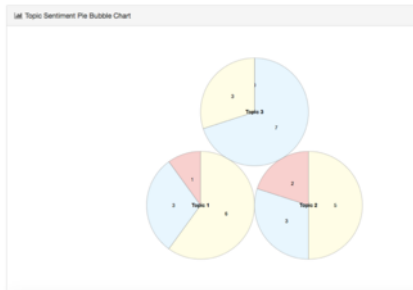
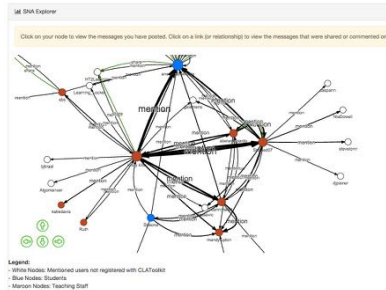
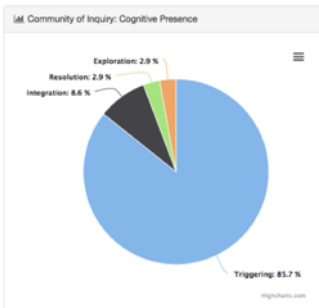
```
330 class TOPICNODEView(DefaultMixin, APiView):
331
332     def get(self, request, *args, **kw):
333
334         course_code = request.GET.get('course_code', None)
335         platform = request.GET.get('platform', None)
336         start_date = request.GET.get('start_date', None)
337         end_date = request.GET.get('end_date', None)
338         num_topics = int(request.GET.get('num_topics', None))
339
340         result = json.loads(get_LDAPV350N(platform, num_topics, course_code))
341         response = Response(result, status=status.HTTP_200_OK)
342         return response
343
344 class MECLASIFY(DefaultMixin, APiView):
345
346     def get(self, request, *args, **kw):
347
348         course_code = request.GET.get('course_code', None)
349         platform = request.GET.get('platform', None)
350
351         result = classify(course_code, platform)
352         response = Response(result, status=status.HTTP_200_OK)
353         return response
354
355 class MULTINAG(DefaultMixin, APiView):
356
357     def get(self, request, *args, **kw):
```

learning analytics

students

academics

admin & developers



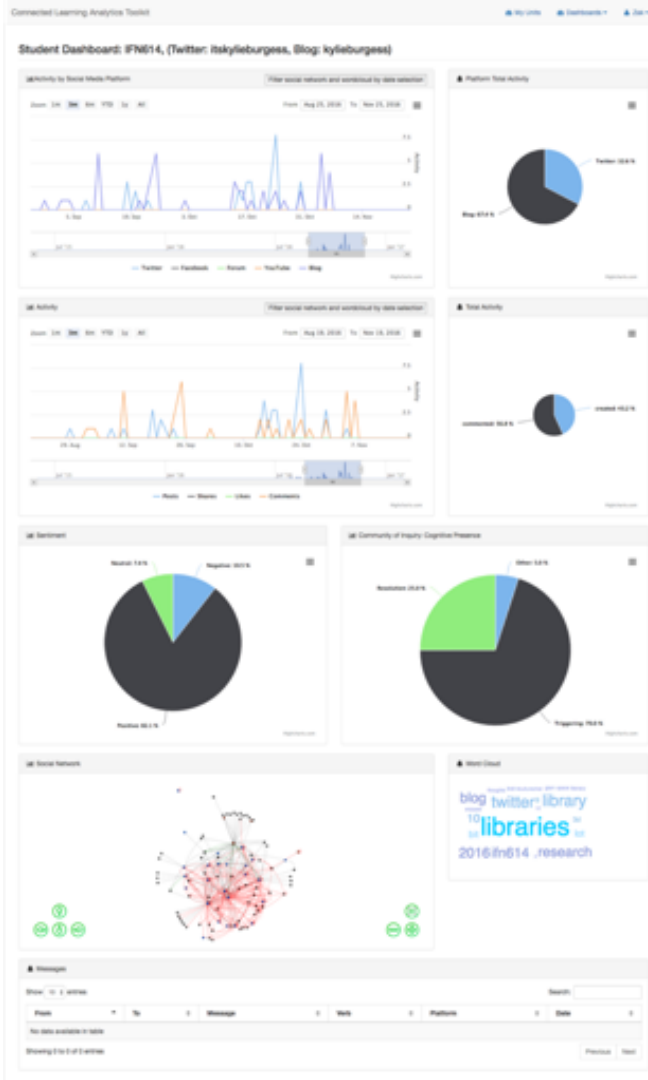
LRS List

Title	Description	User #	Created		
Kinley's LRS		1	2019-05-09 11:00:05	✓	✗
Mandy's LRS		1	2019-05-11 23:02:19	✓	✗
Jamie's LRS		1	2019-05-11 23:02:35	✓	✗
Abelardo's LRS		1	2019-05-11 23:03:00	✓	✗
Shawn's LRS		1	2019-05-11 23:03:49	✓	✗
Grace's LRS		1	2019-05-11 23:04:23	✓	✗
Zak's LRS		1	2019-05-11 23:05:00	✓	✗
Sam's LRS		1	2019-05-11 23:05:00	✓	✗
Simone's LRS		1	2019-05-11 23:05:35	✓	✗
Abelardo's LRS		1	2019-05-11 23:05:10	✓	✗

Help & Support

some details

1. Has a philosophy of going to the students where they are actually learning (rather than expecting them to come to us)
2. Can currently access data from: wordpress blogs, twitter, youtube, facebook, trello, github
3. Stores data in xAPI format (to ensure future interoperability)
4. Only retrieves data for specific learning activities and only if students sign up
5. And gives students access to their own analytics



go try it!

A simple learning activity is available on Trello: goo.gl/2hE1JL
Make sure you follow the instructions!

 CLAToolkit

CLAToolkit Class Registration

Enabling connected learning via open source
analytics in social media (QUT Ethics Approval
Number: 1500000398)

Register

Unit: CLAToolkit-demo

Your class data will be imported from the following locations:

• Twitter Hashtags: [#clatoolkit](#)



Username

Username for CLAToolkit

You are invited to participate in this project because you are enrolled in a subject where you undertake learning activities using social media. Agreeing to participate will lead to the creation of an account in a learning record store for you. You will then associate various social media accounts with that account (as your instructor suggests and you choose). This will allow for data to be gathered from your participation in learning activities using social media that you undertake in your class. You will then be able to see data and reports about your own engagement in the learning activities. This will give you information on your learning that you can use to gain a greater self-awareness of your learning.

Project Description

This project is being undertaken as part of a project for the Office for Learning and Teaching.

The purpose of this project is to design and evaluate new tools that will give you access to data and reports that describe your engagement in learning activities using social media.

CAUTION

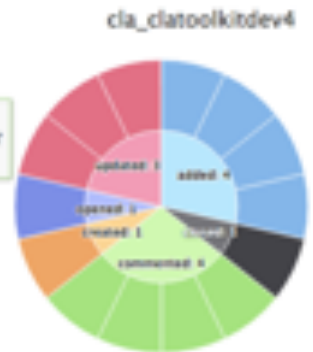
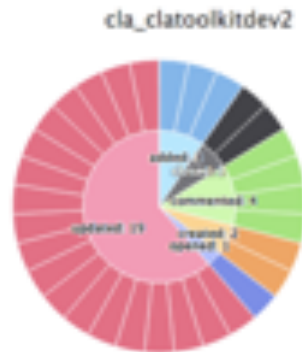
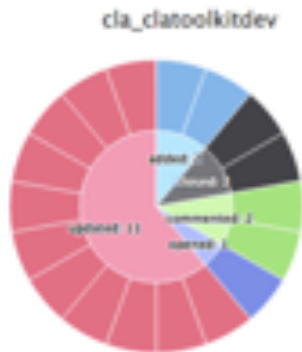
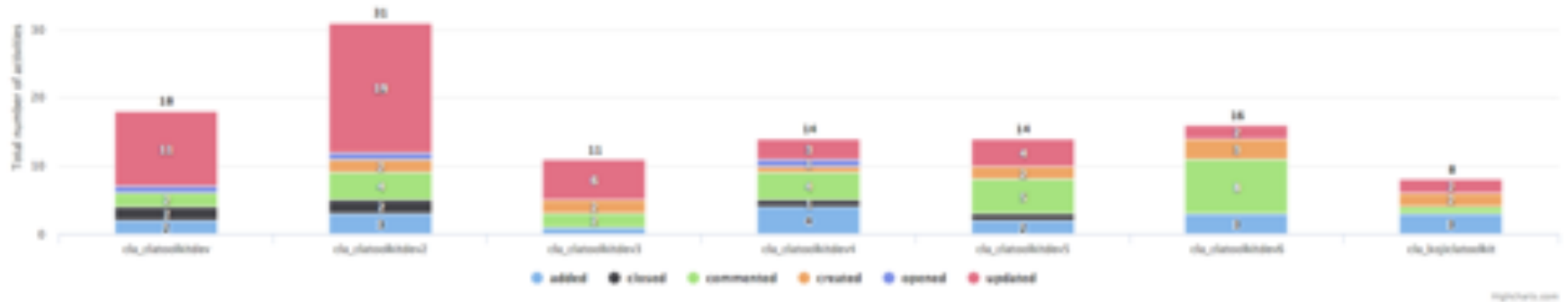
- a “go look at it” approach tends to fail
 - students don’t apply knowledge
 - limited reflection
 - often blindly believe LA instead of questioning it and reinterpreting
 - and it can be **hard to use** without scaffolding

what should I do?

- authentic integration with assessment is necessary
- student facing LA great for formative scenarios
- 3 learning design patterns have been created to facilitate
 - do-analyse-change-reflect
 - active learning squared
 - groupwork

Kitto, K., Lupton, M., Davis, K., Waters, Z. (2016). Incorporating student-facing learning analytics into pedagogical practice. In S. Barker, S. Dawson, A. Pardo, & C. Colvin (Eds.), *Show Me The Learning*. Proceedings ASCILITE 2016 Adelaide, pp. 338-347.

groupwork dashboard





reflective
writing
analytics

- Demo Available:
<http://nlytx.io/2016/metacognition/index.html>
- Infrastructure since developed at UTS:
<https://utscic.edu.au/projects/uts-projects/a3r-authentic-assessment-analytics-reflective-writing/>

Gibson, A., Aitken, A., Sándor, Á., Buckingham Shum, S., Tsingos-Lucas, C., & Knight, S. (2017, March). Reflective writing analytics for actionable feedback. In *Proceedings of the Seventh International Learning Analytics & Knowledge Conference* (pp. 153-162). ACM.

Towards the Discovery of Learner Metacognition From Reflective Writing

[About](#) | [Live Demo](#) | [Tech Info](#)

Exit Now!

- To load new text and re-run the analysis, click the **Edit text** button
- Darker sentence numbers indicate sentences with more evidence of metacognition
- Possible phrase tags are shown on the right. For more detail on these tags, see the **About** tab
- Under the summary table (below right), the first chart indicates relative frequency of metacognitive tags, the second shows the relative frequency of phrase tags
- You can close this section by clicking the cross on the right, and reopen it by clicking the arrow that appears in its place.

Phrase Tags:

an·a·ly·sis g·ra·ph·ic·al·ly an·a·ly·ze g·ra·ph·ic·al·ly

temporal articulate passive definite masculine

perform [download](#) [compare](#)

第 10 章

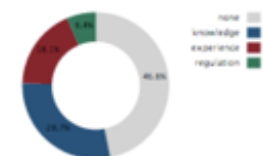
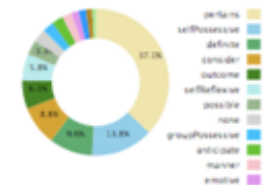
100

This text has a HIGH level of evidence suggesting metacognitive activity

SOURCE: Longing for Visions, Losing Sight? by Troy Rensen - <http://www.jba.org/360emotionalife/blogs/longing-visions-losing-sight>

No.	Sentence	metaTags
0	Hello ?	
1	I am alive .	
2	Recovery is a warped motorway with dips and curves that reflects you to places you've been before , spaces you've hated , and reflects you visiting terrifying memories you never wanted to visit again .	experience
3	Albeit , recovery also provides glimpses to a path of self-reflection in a form never imagined .	
4	Recovery being healthy for a considerable amount of time , it is n't as easy to maintain it may seem .	knowledge
5	for me , it has cost me the passive - ignorance I used to have about my self-awareness and perception of the life that surrounded me .	experience knowledge
6	I have been coming to terms with some hard truths about life and how my role in it has been out .	knowledge
7	As a result , I have had to step back from it .	
8	Before , as hard as it is for me to be patient , you have to hold back on writing or avoid putting too much gibberish out there until I navigated around a few roadblocks .	regulation experience
9	I wanted to offer my personal experience and vulnerabilities to others , hoping you has the strength you need , for as long as I am able .	regulation knowledge
10	you and I have a semi-unspoken arrangement : you read and may like the things I write , or perhaps what I talk about will resonate with you ;	
11	and I come here because I've realized that honesty and transparency are what 's most important in my road to redemption .	experience knowledge
12	I hope if you like what you read you come back soon , and hopefully nurture the need to support individuals elsewhere , in your own way .	
13	We decide to share it all ;	
14	an easier how it's for to know that whatever I do as human will with	





Summary	
Timestamp	May 10, 2017, 7:51:38 AM
Words	1769
Avg Word Length	4.24 chars
Sentences	68
Avg Sentence Length	26.01 words

[show details](#)

♥ [Scroll down for more](#)

The Graduate Employability Dashboard (GED)

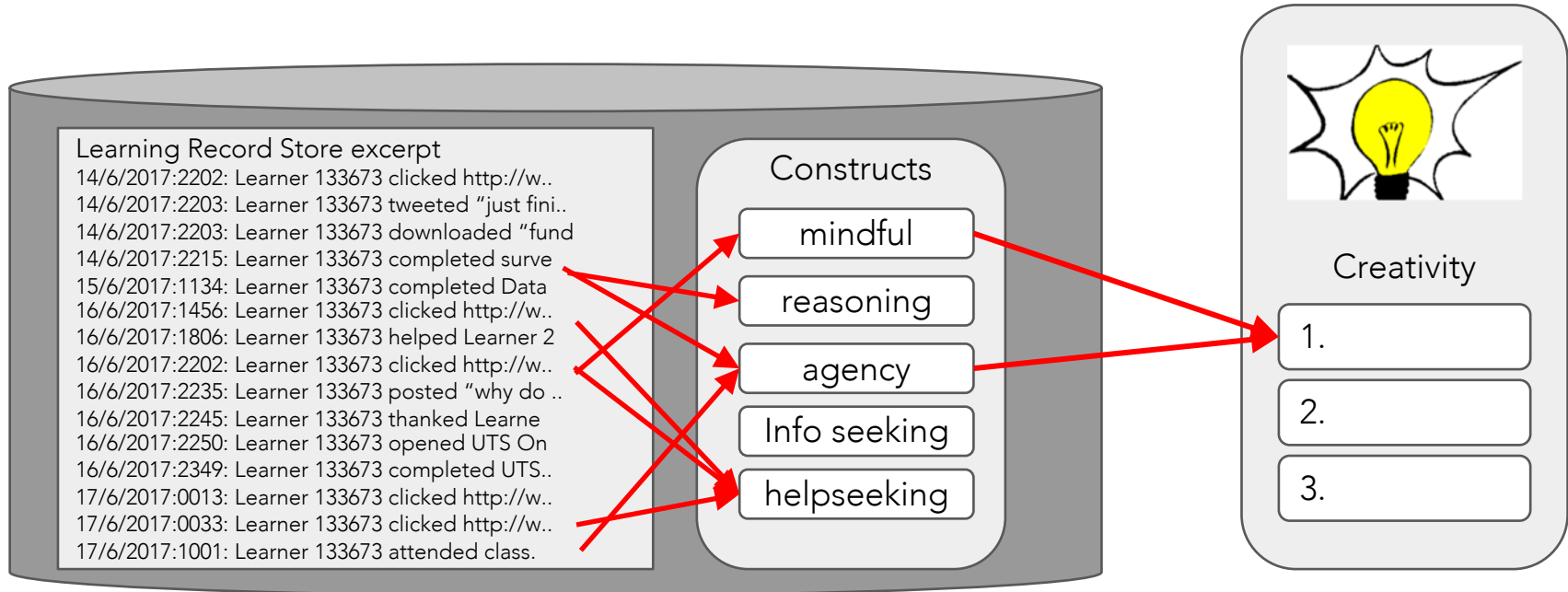
New work funded by Graduate Careers Australia, Graduate Research Program (2017-18)

 Creativity	 Communication	 Collaboration	 Critical thinking	...more...
1. <input type="text"/>	1. <input type="text"/>	1. <input type="text"/>	1. <input type="text"/>	
2. <input type="text"/>	2. <input type="text"/>	2. <input type="text"/>	2. <input type="text"/>	
3. <input type="text"/>	3. <input type="text"/>	3. <input type="text"/>	3. <input type="text"/>	

Students curate increasingly compelling evidence about identified professional competencies

They display them in the GED, which links to fine grained records from both formal and informal learning that are stored in a Personal Learning Record Store (PLRS)

Required Enabling Technology: Personal Learning Record Stores (PLRSs)



so what have we learned?

1. *student facing LA is worthwhile and already a reality*
2. *data interoperability and access are key*
3. *thoughtful learning design and integration with assessment structure is essential*

thankyou!