# OnTask: A tool to support the provision of personalised messages at scale

ESUP Days #31 & Apereo Paris 2021
2 February 2021

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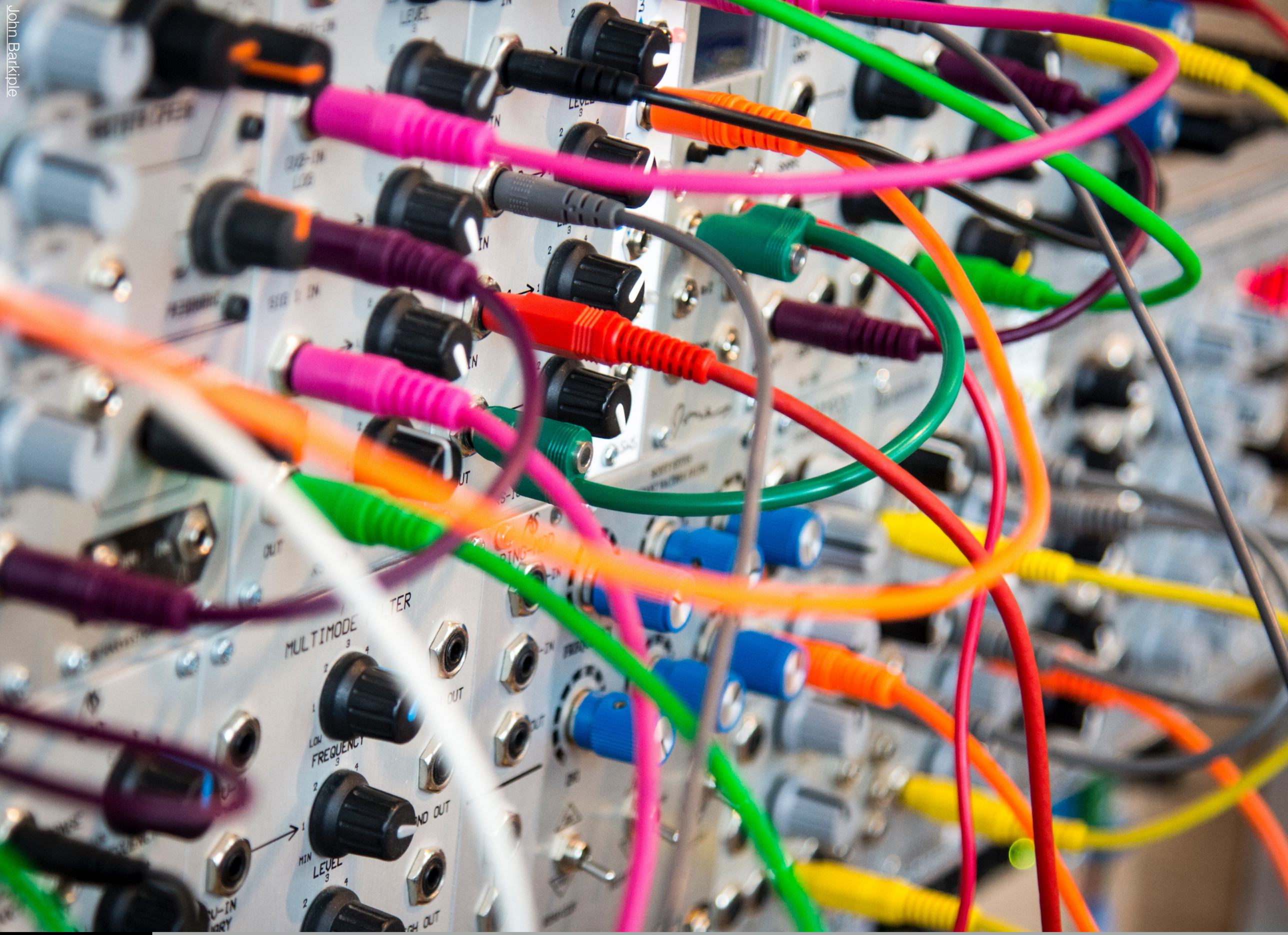
Green Chameleon


John Barkiple
MULTIMODE
FREQUENCY
LEVEL
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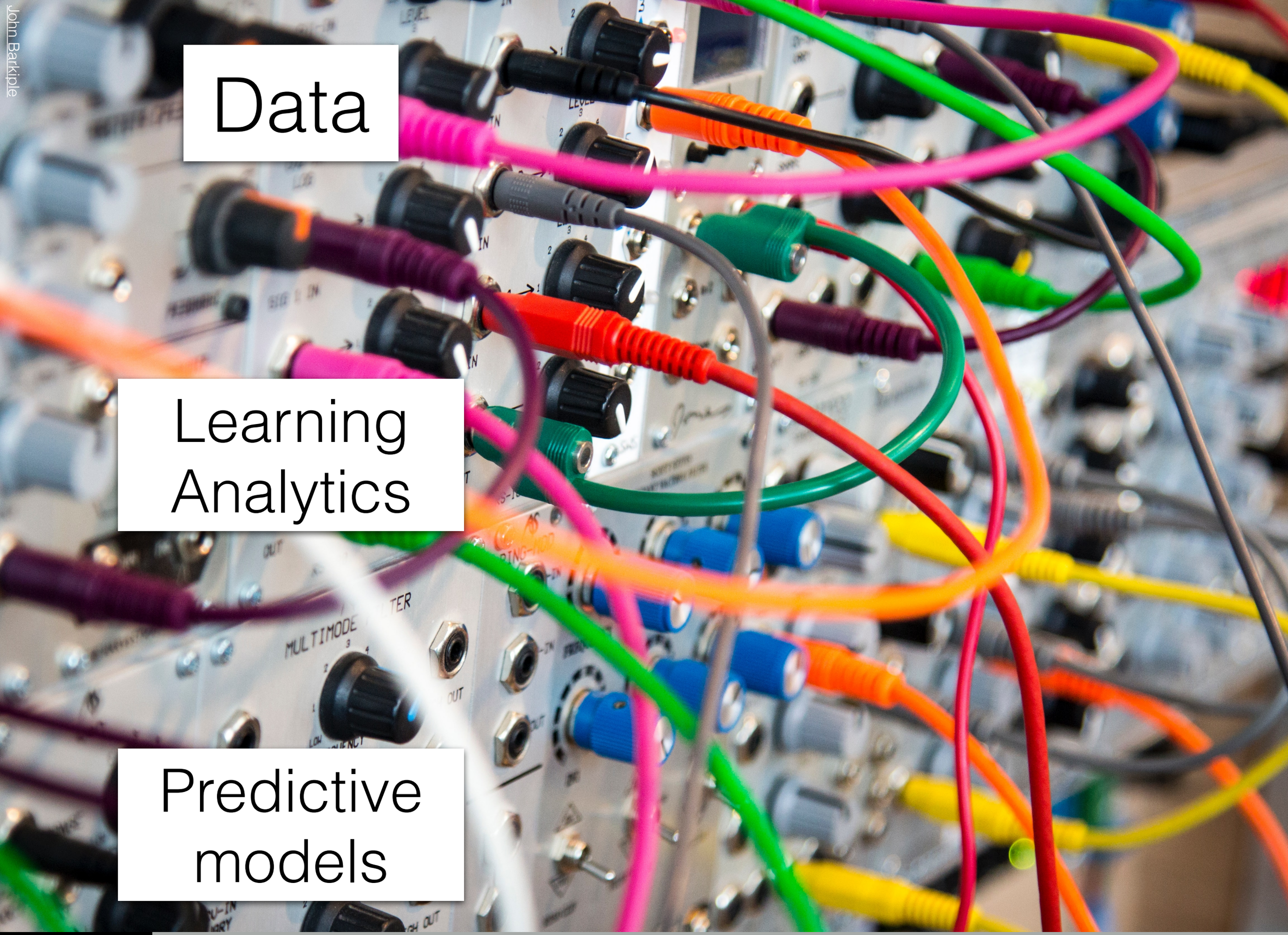
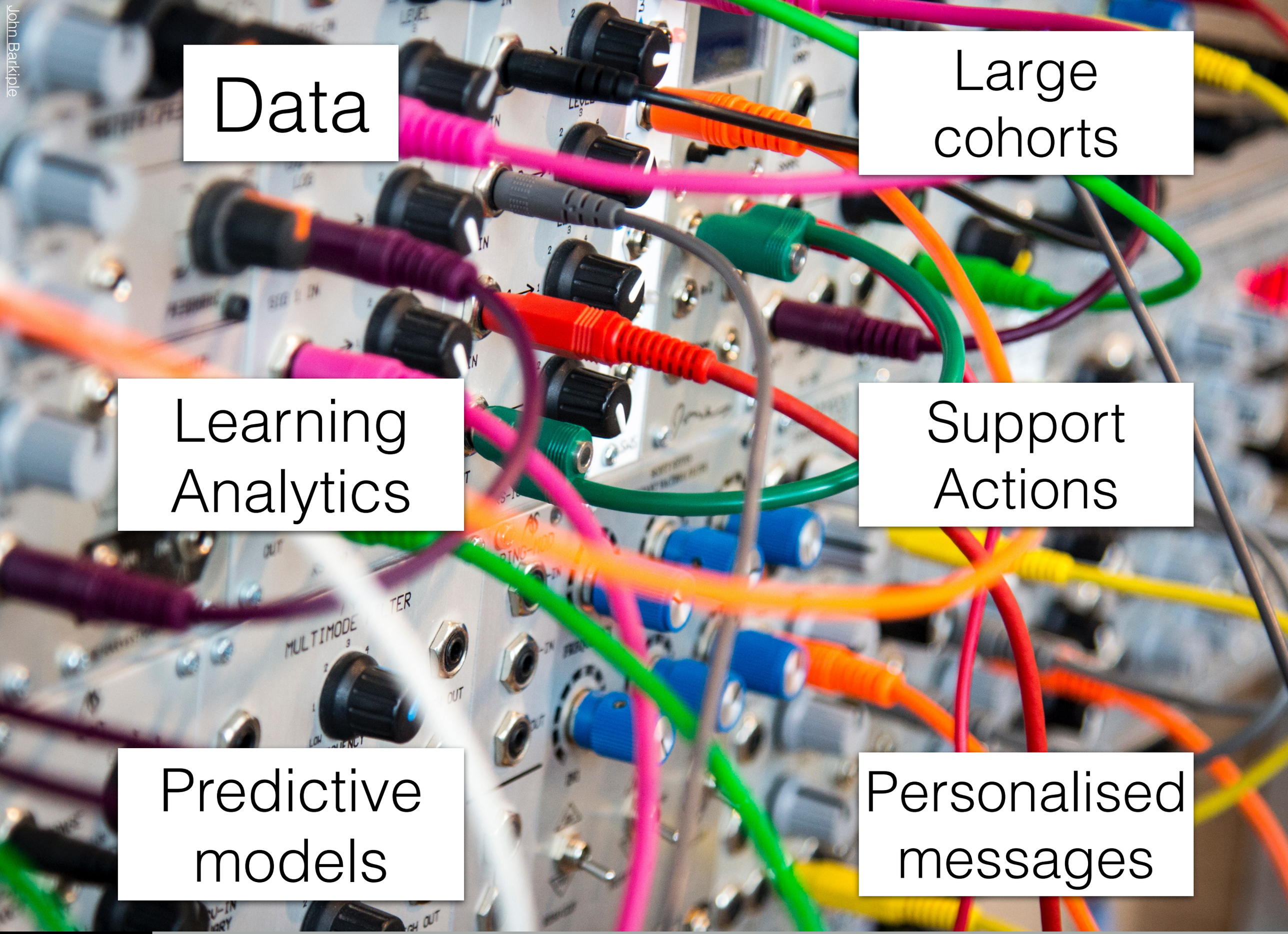
OUT


John Barkiple
Data
Learning Analytics
Predictive models


Data
Large cohorts
Learning Analytics
Support Actions
Predictive models
Personalised messages

Paul A. Kirschner, Mirjam Neelen, https://3starlearningexperiences.wordpress.com/2018/06/05/no-feedback-no-learning/



# NO FEEDBACK, NO LEARNING

June 5, 2018

*Paul A. Kirschner & Mirjam Neelen*

Feedback is one of the most, if not the most important tools for supporting learning. Giving effective feedback has also been found to be one of the most powerful educational interventions to improve learning. According to Shank (2017) effective feedback positively affects learning outcomes and motivation to learn, and can help build accurate schema. John Hattie (2011) found that giving feedback has an extremely large effect on learning, with an effect size of 0,79 (2X the average of all other educational effects)…

Search …

- EXPLORE OUR MOST RECENT BLOGS -

No Feedback, No Learning

Chess in Schools: Holy Grail or Snake Oil?

Logical Fallacies: Don't Let Them Fool You

Direct Instruction Gets No Respect (But It Works)

A Little Learning in the Workplace is a Dangerous Thing

- TAGS -

education expertise feedback

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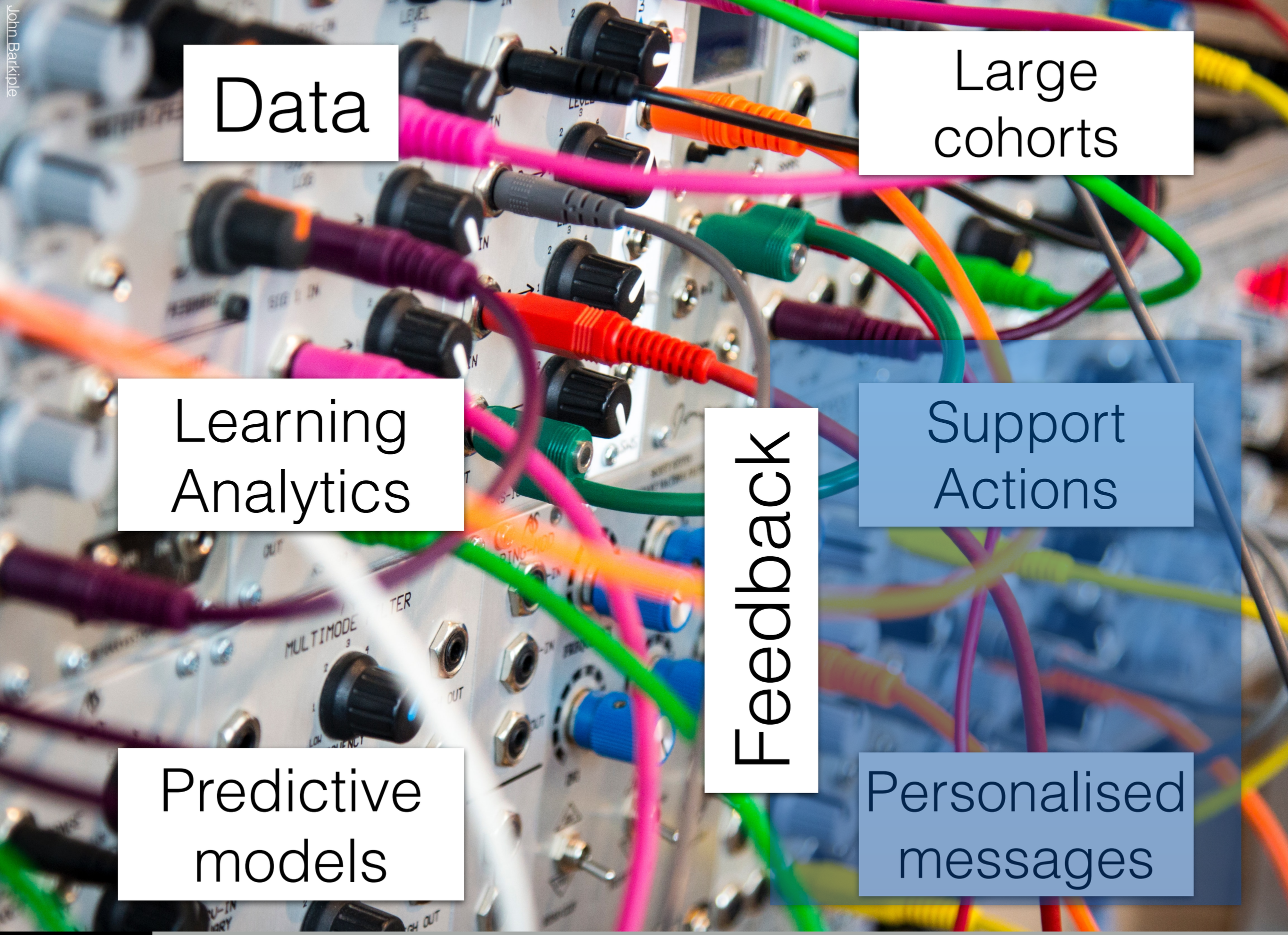
Data
Large cohorts
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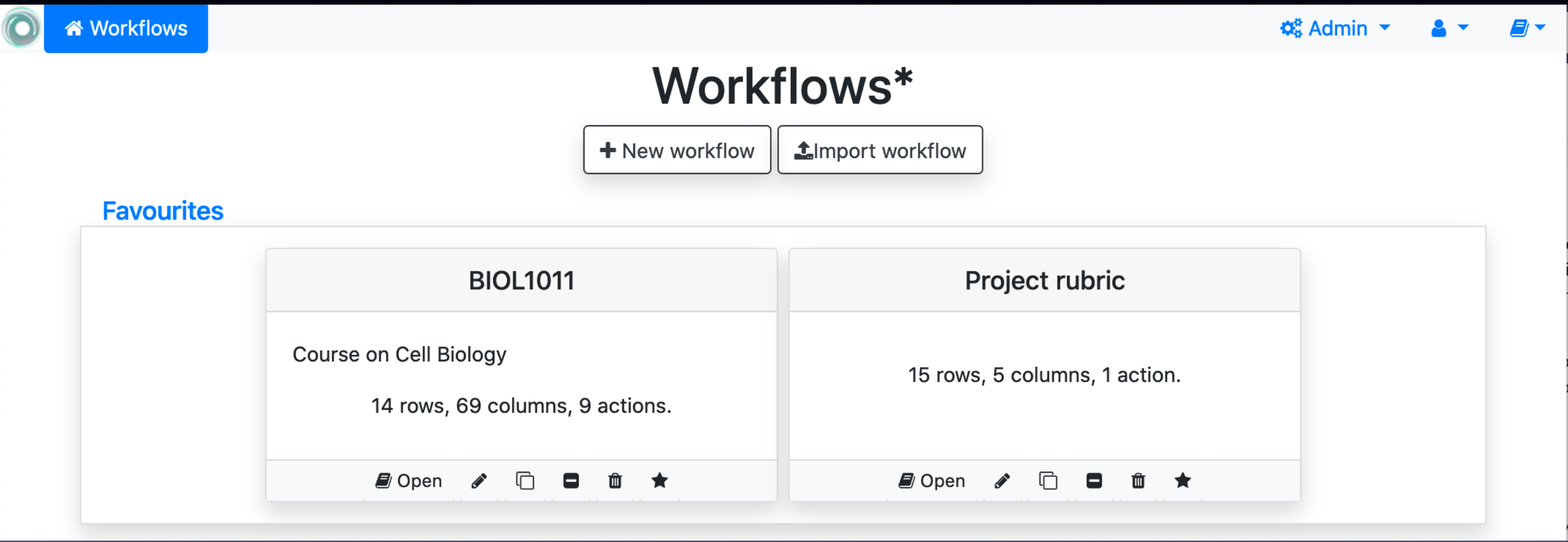
Personalised messages

# Instructors manage workflows



# A workflow contains a table

Workflows | Actions | Table | More | Admin

BIOL1011

## Table

+ Row | + Column | Views | Dashboard | Column statistics | CSV Download

Show 10 entries  Search:

| | SID | email | Surname | GivenName | MiddleInitial | Gender | UOS Code | P |
|---|---|---|---|---|---|---|---|---|
| | 300773633 | euhz6532@bogus.com | Jen | Jie | M | male | ELON3509 | |
| | 315500979 | zqdk2609@bogus.com | Iredale | Flynn | M | male | ELON3509 | |
| | 317547296 | ckrn7263@bogus.com | Prenzel | Blake | I | male | ELON3509 | |
| | 319549896 | ttqp9766@bogus.com | Chien | Jin | Y | male | ELON3509 | |
| | 320250819 | tjxk6150@bogus.com | Tuan | Donglu | D | female | ELON3509 | |
| | 326285587 | isim6886@bogus.com | Pan | Li Na | Y | female | ELON3509 | |
| | 330794979 | olie8242@bogus.com | Chang | Lian | M | female | ELON3509 | |
| | 352120481 | ucdx8510@bogus.com | Shao | Tain | L | male | ELON3509 | |
| | 360594548 | euho9752@bogus.com | Vida | Bailey | C | male | ELON3509 | |
| | 363393232 | tdrv2640@bogus.com | Hague | Joel | K | male | ELON3509 | |

Showing 1 to 10 of 14 entries  Previous 1 2 Next

String | Number | Boolean | Datetime

You may drag and drop a column header to change its position in the table

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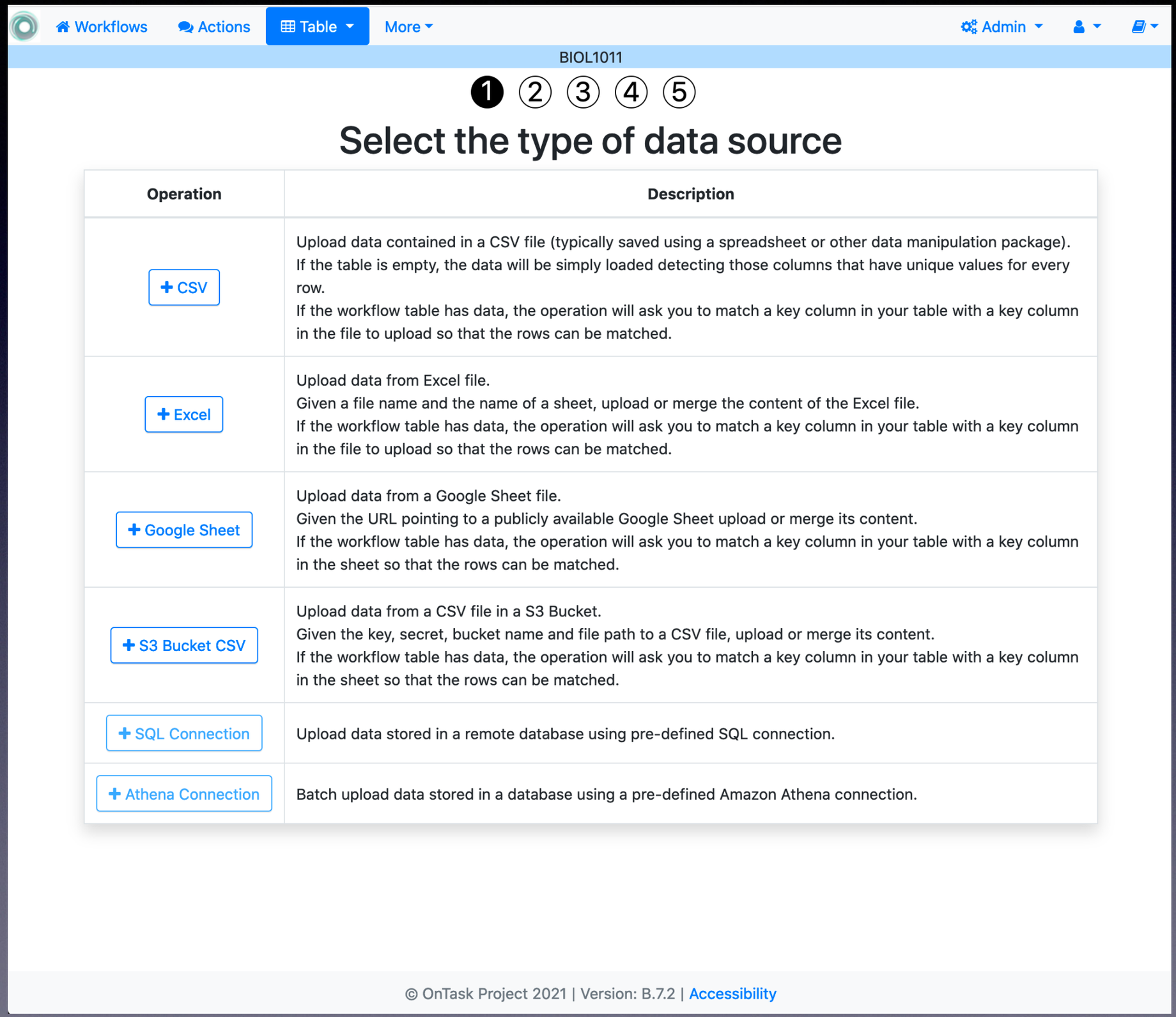
# Manual data upload/merge



# Automatic data upload/merge

Django REST framework

Table Json Merge

## Table Json Merge

OPTIONS GET

Basic methods to perform JSON merge.

get: Retrieves the data frame attached to the workflow and returns it labeled as "data_frame"

post: Request to merge a given data frame with the one attached to the workflow.

```
GET /table/[redacted]/merge/
```

```
HTTP 200 OK
Allow: GET, PUT, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

{
    "how": "",
    "left_on": "",
    "right_on": "",
    "src_df": {
        "SID": {
            "0": [redacted]
            "1":
            "2":
            "3":
            "4":
            "5":
            "6":
            "7":
            "8":
            "9":
            "10"
            "11"
            "12"
            "13"
        },
        "email": {
```

# Explore table column values

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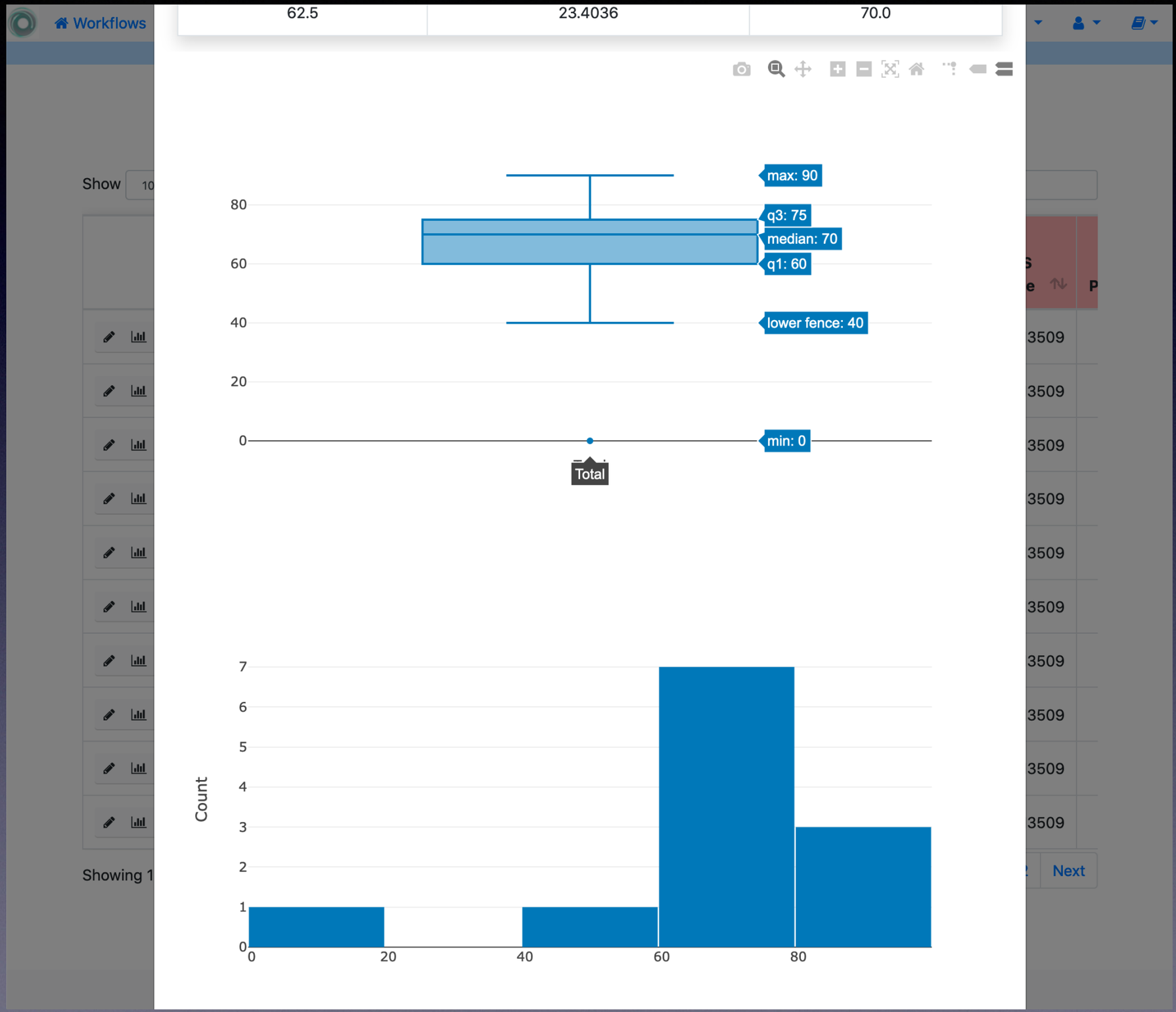
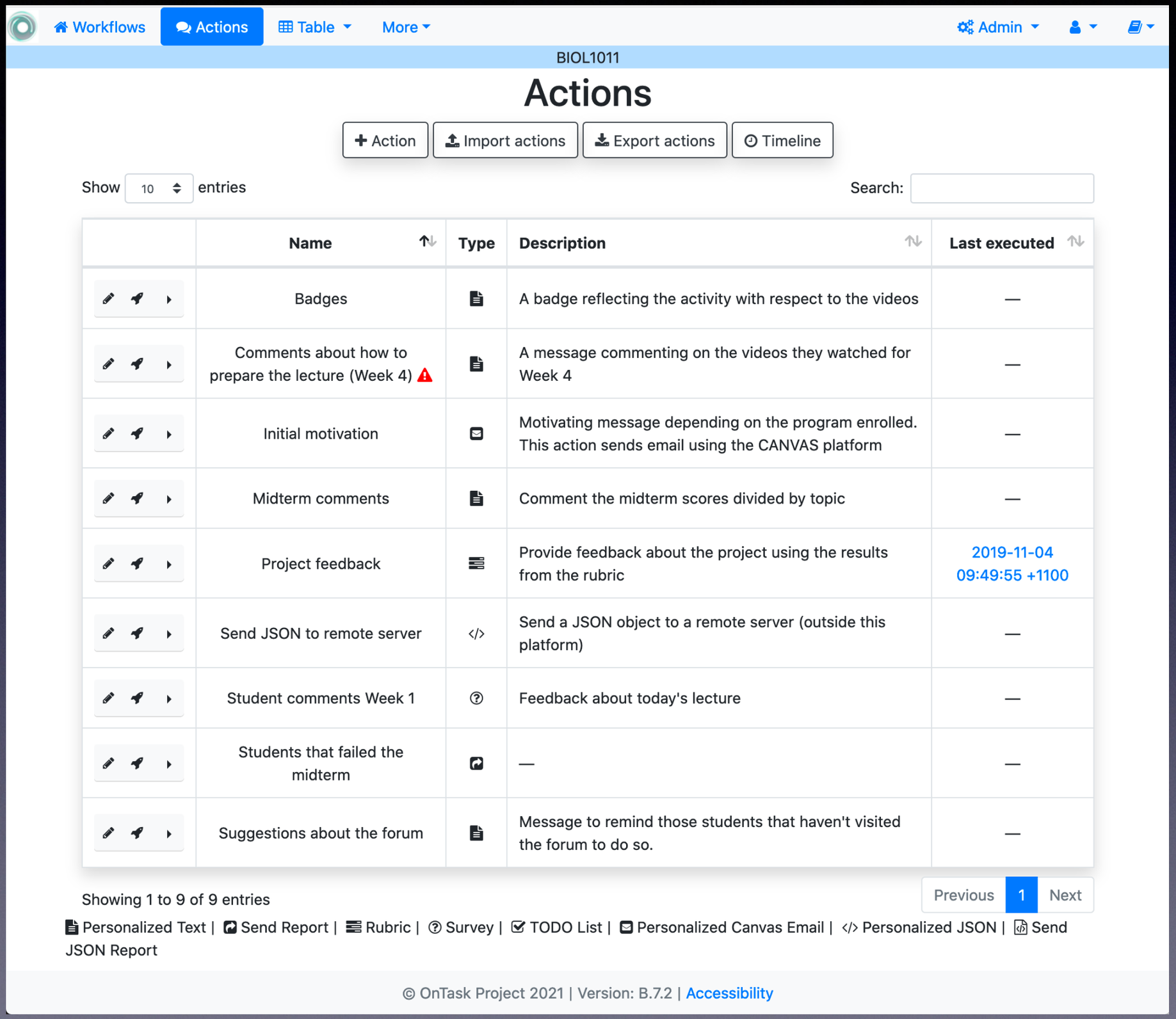


# … and actions




Personalised email

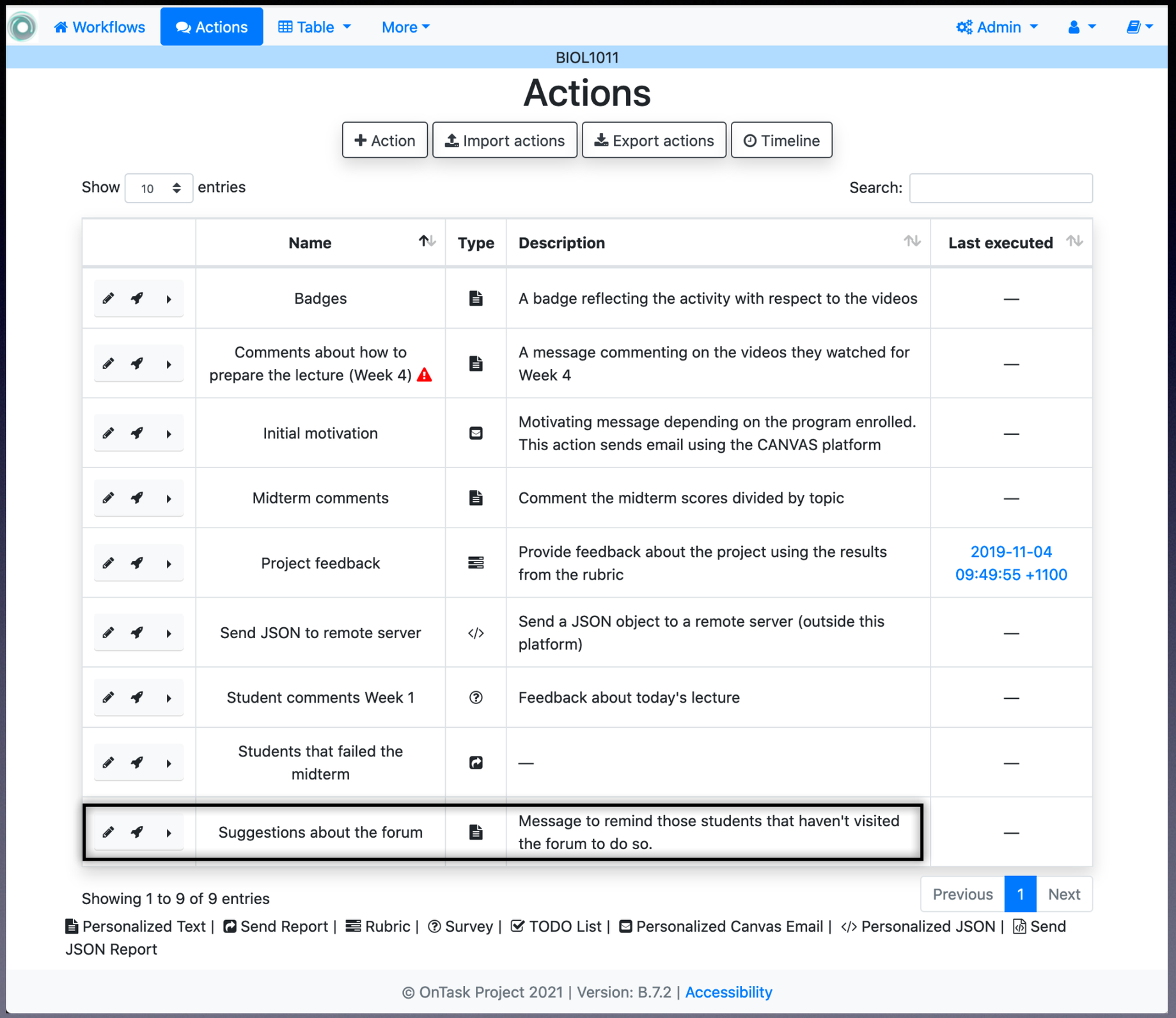
Personalised page

Rubric feedback

Send report

Survey (Input)

# … and actions




Personalised email

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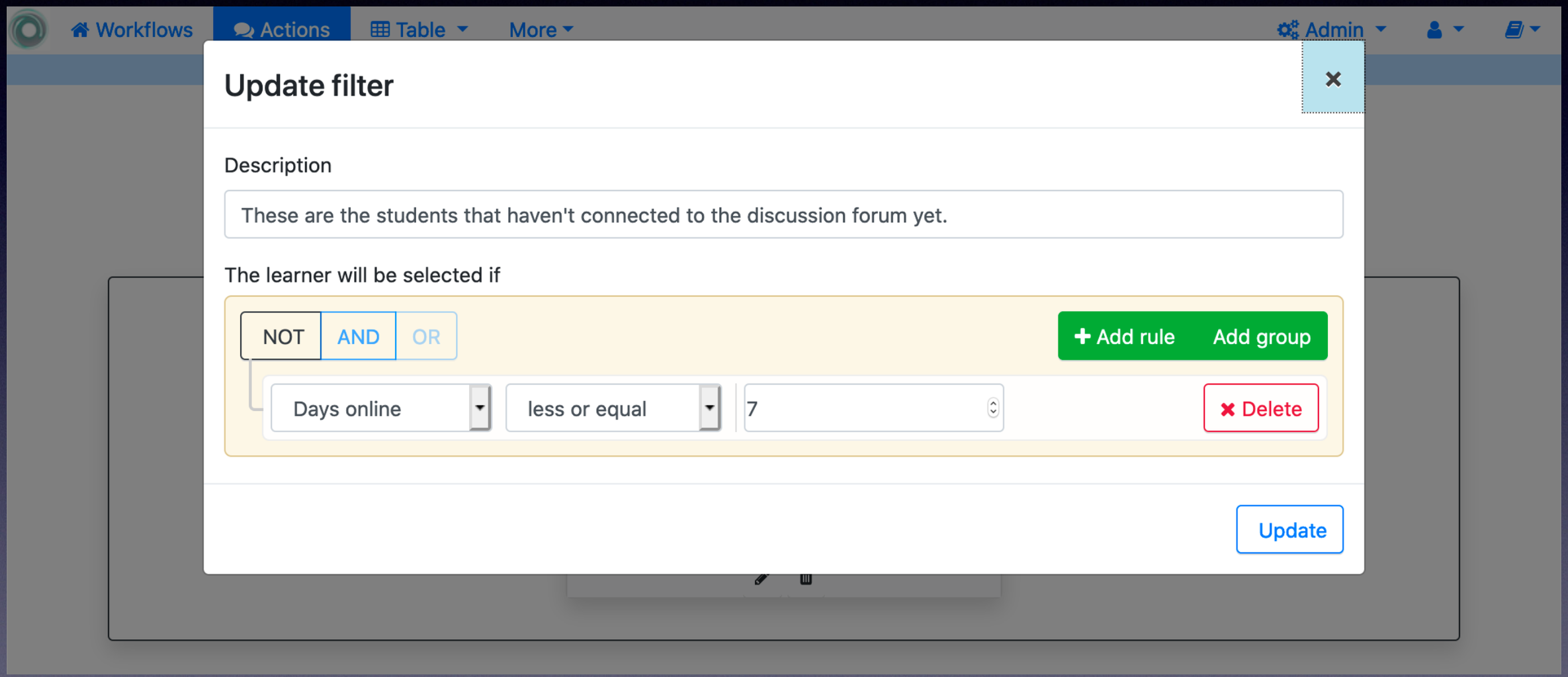
# Email to a subset of students (filter)



# Email to a subset of students (filter)

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## Suggestions about the forum

Preview | Save | Close

Text | Select Learners (2 learners of 14) | Text Conditions (0)

Insert Column Value | Insert Attribute

Dear {{ GivenName }}

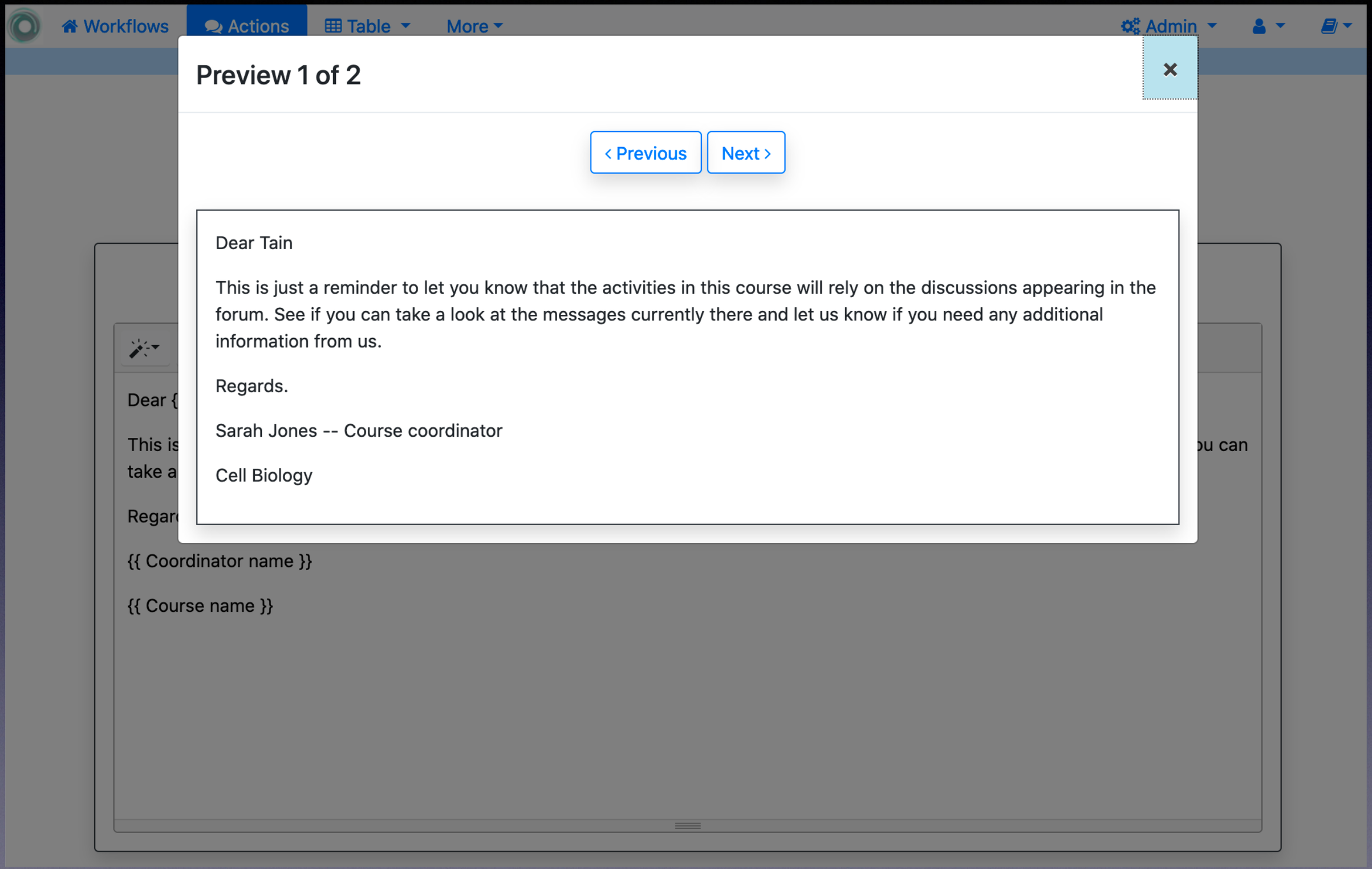
This is just a reminder to let you know that the activities in this course will rely on the discussions appearing in the forum. See if you can take a look at the messages currently there and let us know if you need any additional information from us.

Regards.

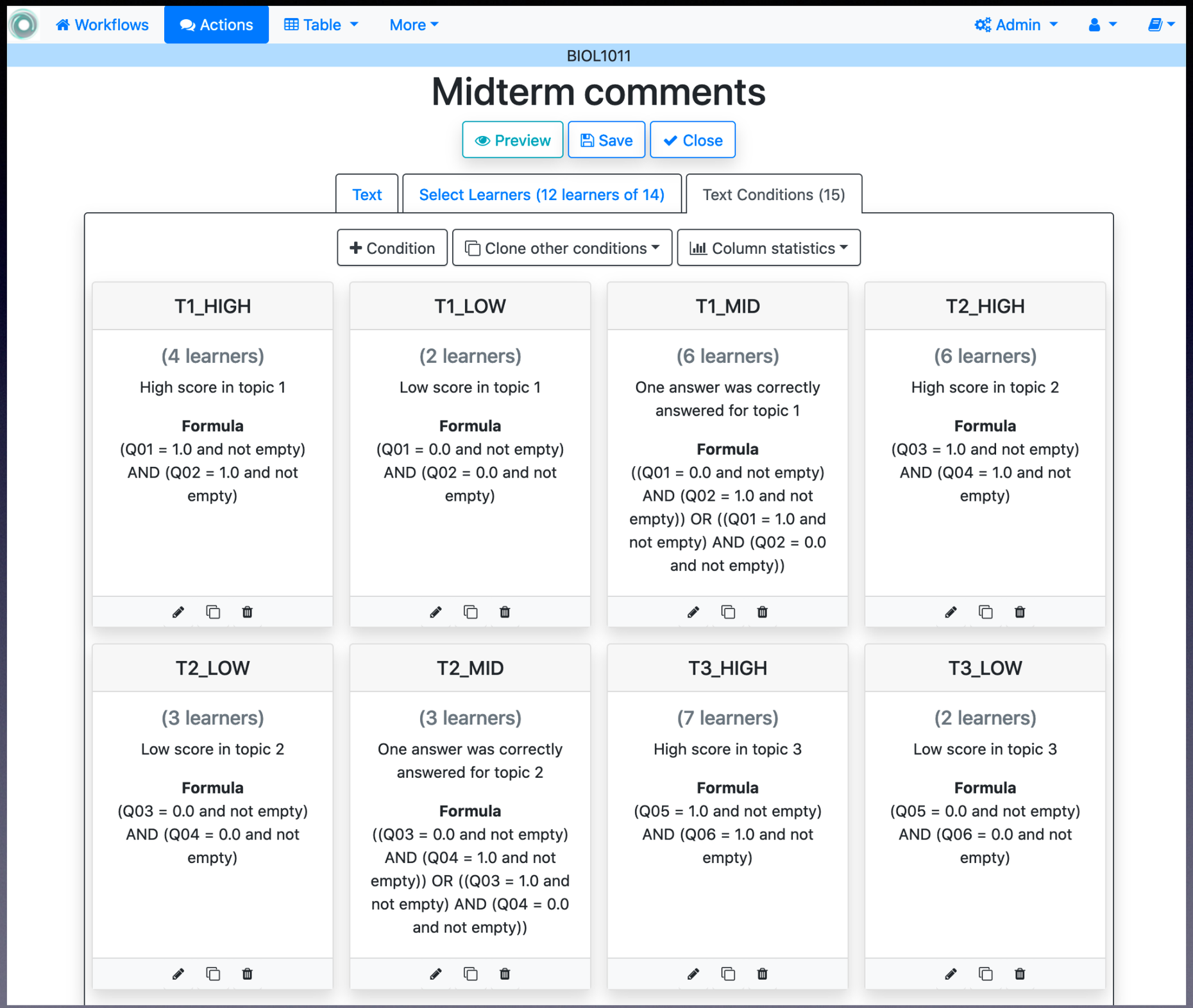
{{ Coordinator name }}

{{ Course name }}

# Email to a subset of students (filter)



# Email for multiple sub-cohorts



# Email for multiple sub-cohorts

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BIOL1011

## Midterm comments

Preview | Save | Close

Text | Select Learners (12 learners of 14) | Text Conditions (15)

Insert Column Value | Use condition in highlighted text | Insert Attribute

Dear {{ GivenName }}

Here are the comments about your answers to the midterm exam (ordered by topic).

### Chemistry and Molecules of Life

{% if T1_LOW %}You need to review the concepts in this topic. It is important that you identify those molecules that are important in a living organism, and differentiate them from other molecules. Also, make sure you review the basic steps of the chemical reactions we discussed in class.{% endif %}

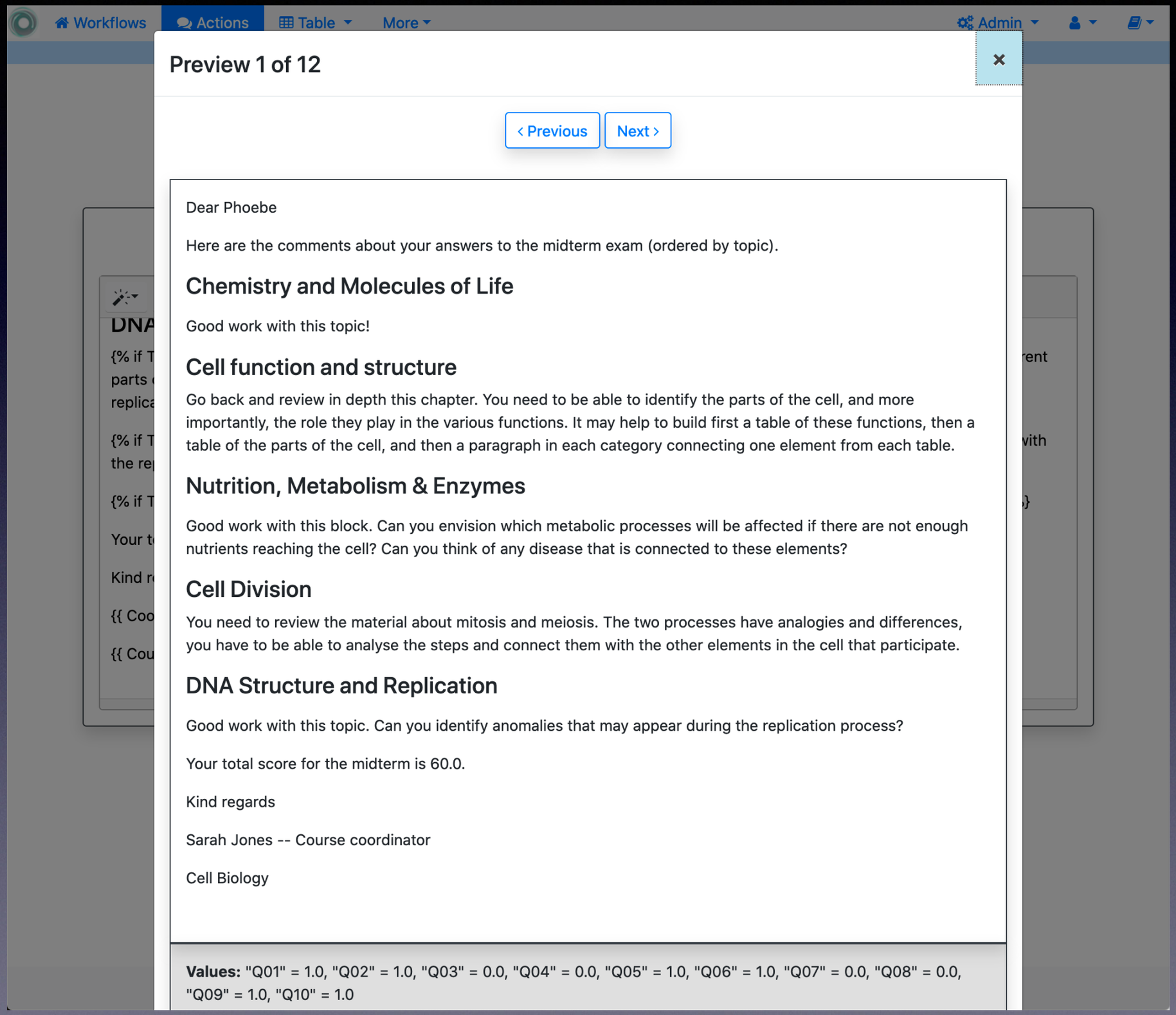
{% if T1_MID %}You need to review this topic again. Make sure you easily identify which molecules are present, for example, inside a cell and differentiate them from other.{% endif %}

{% if T1_HIGH %}Good work with this topic!{% endif %}

### Cell function and structure

{% if T2_LOW %}Go back and review in depth this chapter. You need to be able to identify the parts of the cell, and more importantly, the role they play in the various functions. It may help to build first a table of these functions, then a table of the parts of the cell, and

# Email for multiple sub-cohorts



# Examples

Large, first-year undergraduate course

Use Propensity Score Matching to divide data

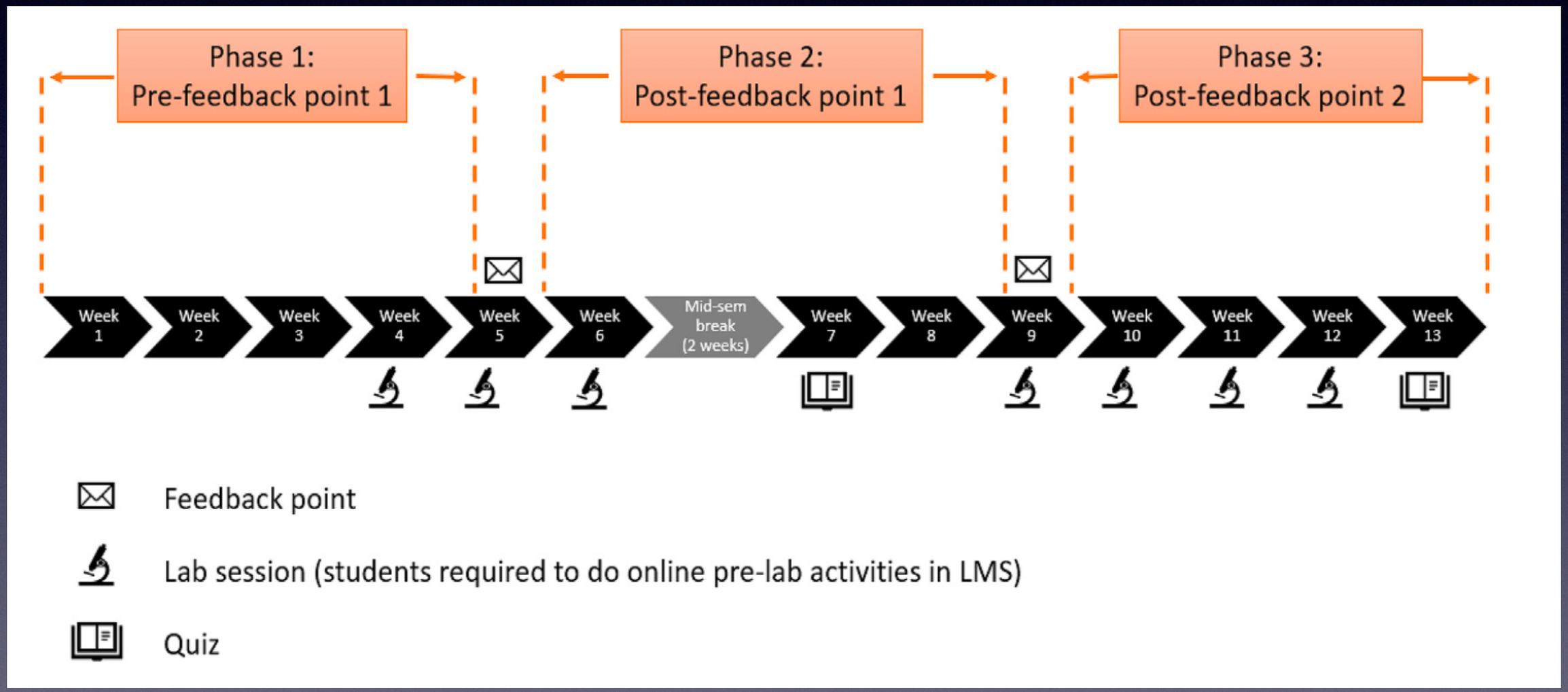
$n_{2015}$=266: no feedback given (control)

$n_{2016}$=277: no feedback given (control)

$n_{2017}$=241: personalised feedback given (treatment)

Lim, L., Gentili, S., Pardo, A., Kovanović, V., Whitelock-Wainwright, A., Dawson, S., & Gašević , D. (In Press). What changes, and for whom? A study of the impact of learning analytics-based process feedback in a large course. *Learning and Instruction*. doi:10.1016/j.learninstruc.2019.04.003

# Impact of LA-based feedback on students' self-regulated learning and academic achievement

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# What is the impact of LA-based, process feedback on students' (a) self-regulated learning and (b) academic performance in a course?

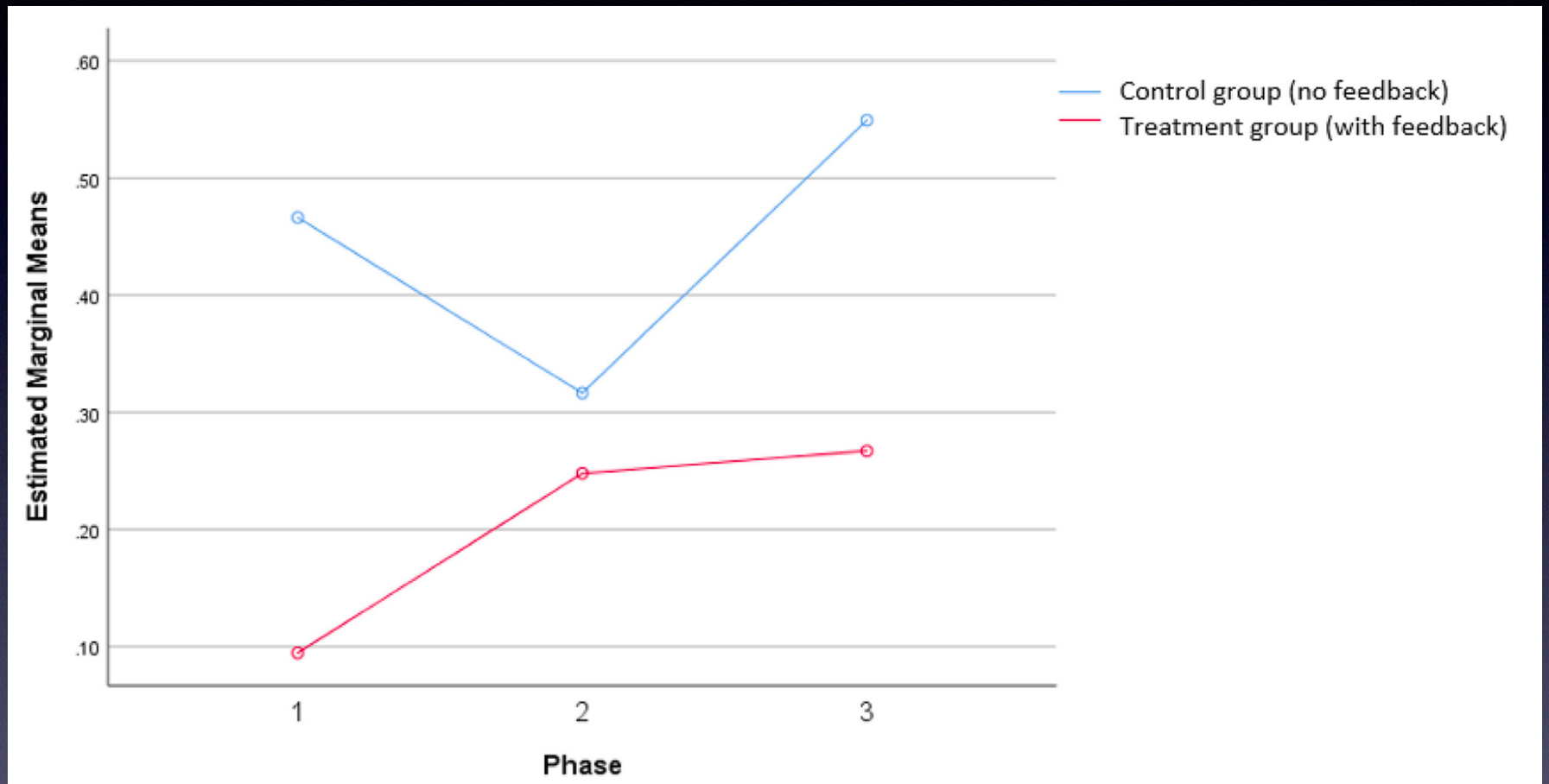
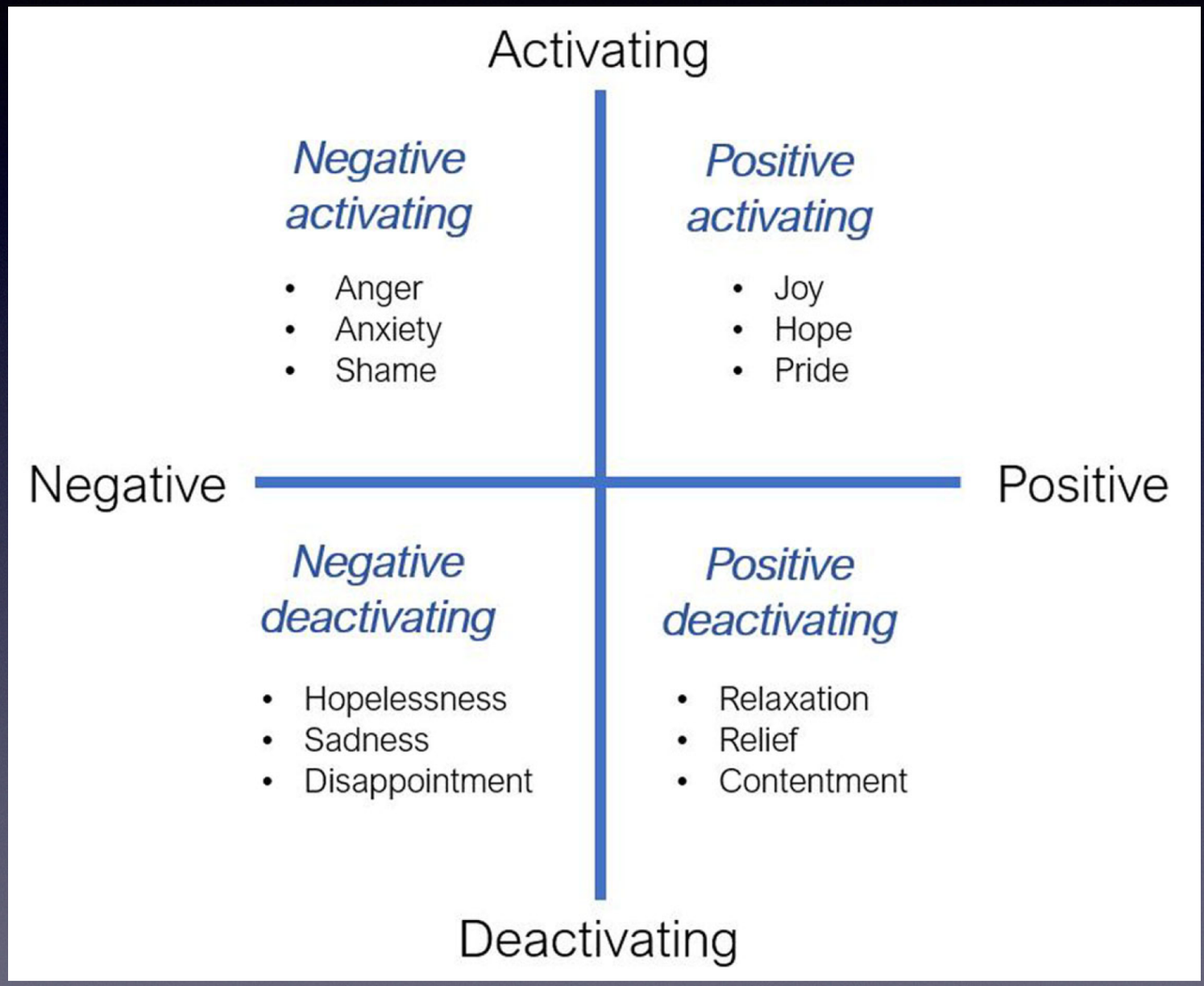



**Fig. 5.** Estimated marginal means for completion rate of *Connect* e-book activities over 3 phases.

Difference in final course mark was strongly significant, with the treatment group achieving higher marks than the group without feedback

Lim, L., Gentili, S., Pardo, A., Kovanović, V., Whitelock-Wainwright, A., Dawson, S., & Gašević , D. (In Press). What changes, and for whom? A study of the impact of learning analytics-based process feedback in a large course. *Learning and Instruction*. doi:10.1016/j.learninstruc.2019.04.003

# Analysis of focus groups from four courses to understand students' sensemaking of personalised, la-based feedback.




Lim, L.-A., Dawson, S., Gašević , D., Joksimović, S., Pardo, A., Fudge, A., & Gentili, S. (2020). Students' perceptions of, and emotional responses to, personalised LA-based feedback: An exploratory study of four courses. Assessment & Evaluation in Higher Education. doi:10.1080/02602938.2020.1782831

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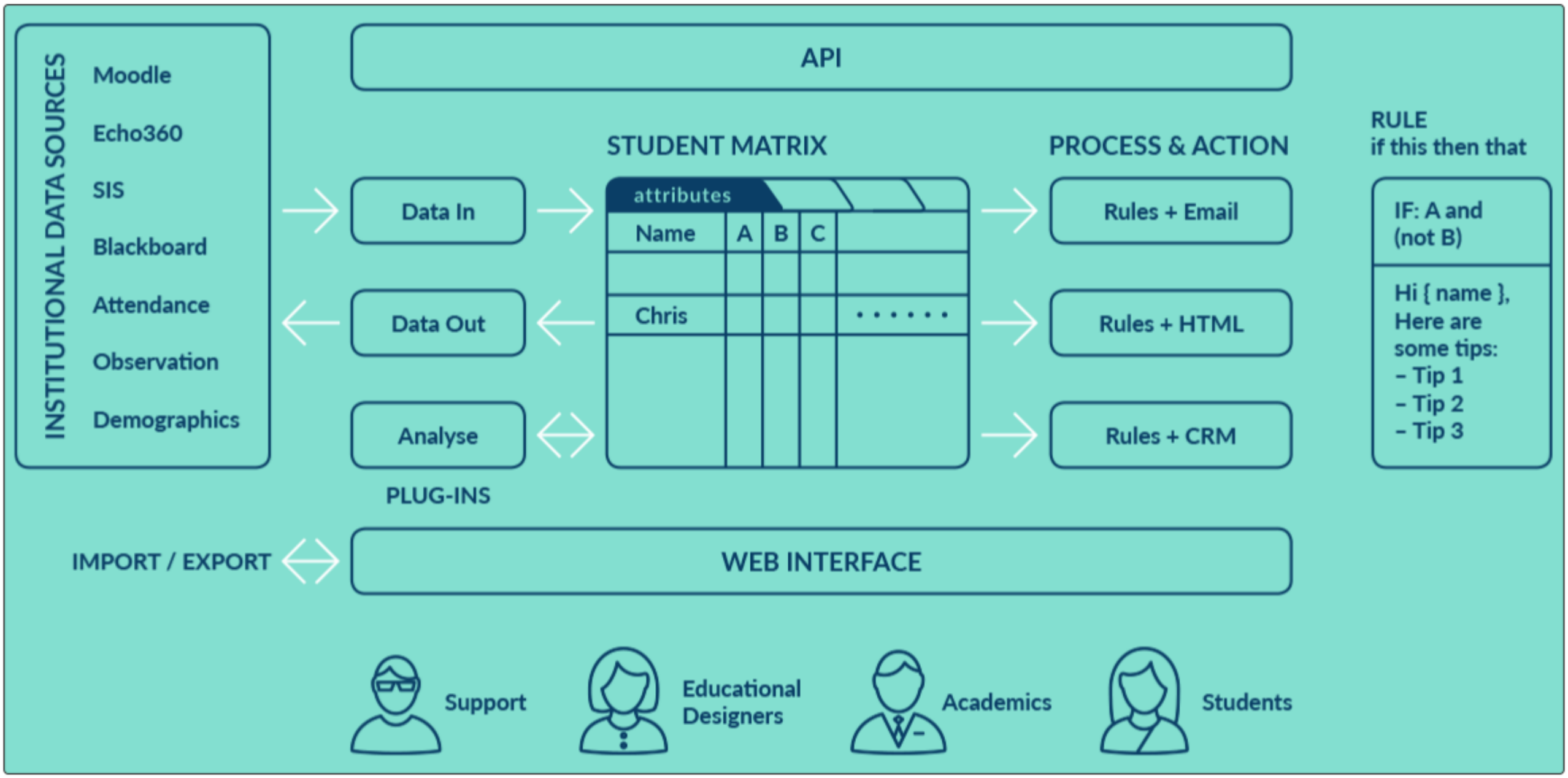

- Addressing retention and student satisfaction
- Communication personalised based on collected data
- Scalable provision of coaching support
- Deployed and used in institutions across the world both in face to face and online courses

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