

**Title:**                    **ABC learning design and learning analytics: intent meets indicators**

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### **Session Learning Outcomes**

By the end of this session, delegates will be able to:

- understand how learning analytics can link to learning design
- understand the ABC method of learning design
- identify 3 or 4 questions of pedagogic interest for a given learning design
- identify data points & indicators related to the questions of pedagogic interest

### **Session Outline**

The growth of blended learning means that educational institutions now have access to a wide range of 'big data' patterns from online activities. Such data sets have been used traditionally to evaluate courses and compare institutional performances. Schmitz et al., (2017) outline more recent approaches showing how data dashboards displaying real-time progress activity can flag issues to be addressed by the student or the tutor through various personalised interventions.

The next step may be to consider how analytics could be used to help design and deliver individual programmes and modules. Providing data sets is not enough; academics rarely use the data already available to them. We believe such indicator data has to be analysed and presented in a pedagogical context. Toetenel and Rientes (2016) agree, "Combining learning design with learning helps to provide a context for the empirical data and enables researchers to empirically investigate learning design decisions". In other words, systematic learning design provides the pedagogical intent necessary for indicators to be interpreted and used, either post-hoc or 'on the fly'.

The problem is creating explicit designs on to which analytics indicators could be mapped. UCL uses the ABC learning design method, built around a short rapid-development workshop for module and programme teams to storyboard the student journey. The analogue storyboard is then 'marked up' to show assessment and strategic interventions. At this stage indicators could be embedded according to the needs of the academic designers. Data from specific embedded indicators can support post-course review or, perhaps most interestingly, to flag 'critical-path' activities (quizzes, forum posts, downloads etc) for intervention in real

time. In this case 'blending' in online activities becomes an essential part of the student experience.

This workshop will investigate the identification of course elements of pedagogic interest of existing learning designs and how resulting questions could be answered by the identification of corresponding data points and analysis.

We will also discuss how data points and analysis could be used to evidence students' blended learning activities and changes in learning design.

### Session Activities and Approximate Timings

The outline of the workshop is as follows;

Timeline(mins):	Activities:
0-5	Welcome and Introduction
5-10	What learning analytics is and why we think it should be used to assist learning design
10-15	Online poll: Current uses of data
15-30	Overview of ABC method
30 - 45	Group task 1: Identifying 3 or 4 questions of pedagogic interest based on group's ABC learning design.  Example ABC learning designs will be made available for this exercise – ABC graph and completed storyboard.
45-50	Group feedback
50-65	Group task 2: Identification of blended activities / data points to answer questions and the type of analysis that may be undertaken.  These will be based upon the questions identified in Group task 1. Each group will also be provided with a pack of ABC cards, to help identify activities where data could be gathered.
65-70	Group feedback
70-80	Group discussion: How can/should student activity data be used in course evaluations?
80-90	Session summary and closing

## References

Schmitz, M., Limbeek, E. van, Greller, W., Sloep, P. and Drachsler, H. (2017), "Opportunities and Challenges in Using Learning Analytics in Learning Design", *Data Driven Approaches in Digital Education*, presented at the European Conference on Technology Enhanced Learning, Springer, Cham, pp. 209–223.

Toetenel, L., Rienties, B. (2016) Analysing 157 Learning Designs using Learning Analytic approaches as a means to evaluate the impact of pedagogical decision-making. (2016). *British Journal of Educational Technology*. 47 (5) 981-992 DOI: 10.1111/bjet.12423.