

CEEDA case studies

1. Case study focus and structure

The CEEDA websiteⁱ showcases examples of best practice in online engineering collaborative learning and examines the wider response to emergency teaching at the host universities. Case studies are taken from universities highlighted as world leaders in the 2018 MIT reportⁱⁱ on the global state of the art in engineering education. If other highly-rated practices from elsewhere in the world are identified consistently by thought-leaders in the field, these examples will also be included as case studies.

Each case study is divided into two distinct elements:

Part A. Best practice Activity: a review and profile of an activity that exemplifies best institutional practice in online collaborative learning;

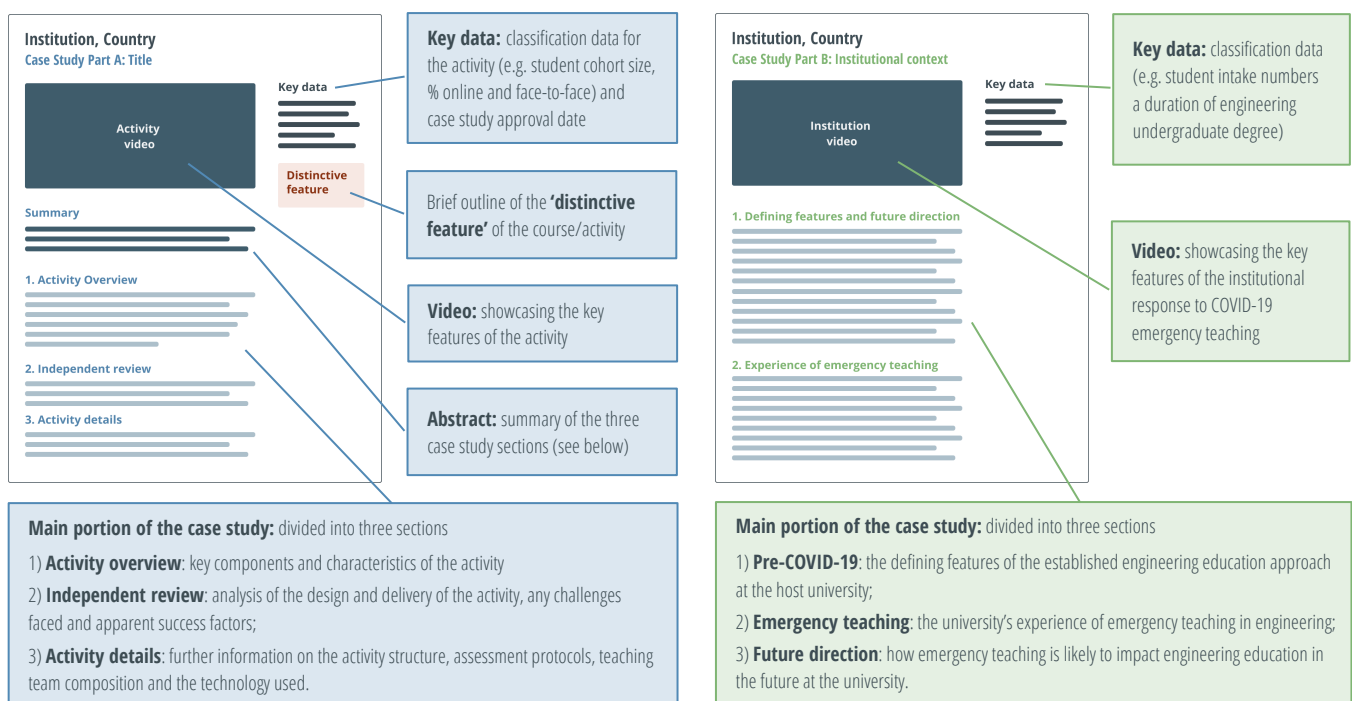
Part B. Institutional context: reflections on the institutional response to emergency teaching and how COVID-19 is likely to influence the future approach in engineering education.

Part A and Part B of each case study follow a common structure, as illustrated below. For each part, a written review and short video will be created and (following sign-off from the host university) made available on the CEEDA website.

Case studies are built from semi-structured interviews with key stakeholders to both the activity/course under examination and the engineering education programmes as a whole. Interviewees include faculty, university/school leaders, teaching assistants, students, and external collaborators. Case studies are developed and documented independently by the project lead.

Part A: best practice activity

Part B: institutional context





2. Case study development process

Outlined below are the key steps in the case study development process. The major data-gathering tool is one-to-one semi-structured interviews with multiple stakeholders to the activity and engineering education programmes, as outlined in Step 4.

Step 1 Identify case study focus and distinctive features

The project lead, Ruth Graham, will work with the university to identify a suitable activity that both exemplifies institutional best practice in online collaborative engineering learning and offers insight into how challenges facing academics teaching in this mode might be tackled.

Step 2 Identify key university contact point for the case study

One or two individuals at the university will be identified as a key contact point for the case study, who will take the lead in providing information and identifying interviewees.

Step 3 Provide background information on the case study activity/system

The university contact point/s to provide any readily-available material that would help to compile key case study components on the activity under review, including:

- schedule/structure of the activity (e.g. course plan or brief given to students);
- the student cohort size and broad profile (e.g. their year groups and disciplines);
- the assessment protocols adopted and any course/activity deliverables;
- technology/equipment used to support the remote/online learning;
- nature/size of the teaching team that designed and delivered the activity.

The contact point is also asked to provide data on the incoming engineering student cohort size and number of engineering faculty at the university. Any available information on the institutional response to emergency teaching and/or video footage that would be suitable for inclusion in the case study videos would be also be gratefully received.

Step 4 One-to-one interviews, held with project lead

Ruth Graham to hold one-to-one interviews with the university contact point and leader/s of the particular activity/course under review; outcomes will be used to identify the major themes for the case study as well as priority individuals for interview.

Informal interviews will then be held with 5–10 additional individuals, including university/school leaders, student participants to the activity and other key stakeholders (such as external collaborators or TAs). Questions will be supplied to interviewees in advance, as desired.

Outcomes will be used to document the case study and identify the 'story board' for the videos. A sub-set of these interviewees will also be invited to contribute recorded feedback for the case study videos. This feedback will either be captured at the close of the interview or during a separate session, based on the interviewee's preference.

Step 5 Review of draft case study and case study launch

The draft case study and videos will be supplied to the university contact point for review and to identify any inaccuracies or omissions to be rectified prior to release.

ⁱ CEEDA: www.ceeda.org

ⁱⁱ Graham, R. (2018). The global state of the art in engineering education. *MIT Report, Massachusetts, USA*.