Online Training

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Reusing this material

EPCC / ARCHER Ecosystem

Credit bearing

No assessment

MSc Programme

PPD Courses

ARCHER Driving Test

PRACE MOOC

ARCHER Courses

Online MPI Course

Face-to-face

Online

Minty and Westhead (EPCC,1997)

MPI On-line: A Teaching Environment for MPI

MPI On-line now provides a specially developed multimedia training environment. The course is presented as a slide show accompanied by a streamed audio sound track.

Tied into this presentation are animations illustrating the concepts described, such as the different communication modes provided by MPI.

Understanding of these concepts is reinforced by simulations for the student to study at intervals during the presentation and by the programming exercises which accompany the main sections of the course.

EPCC Ecosystem
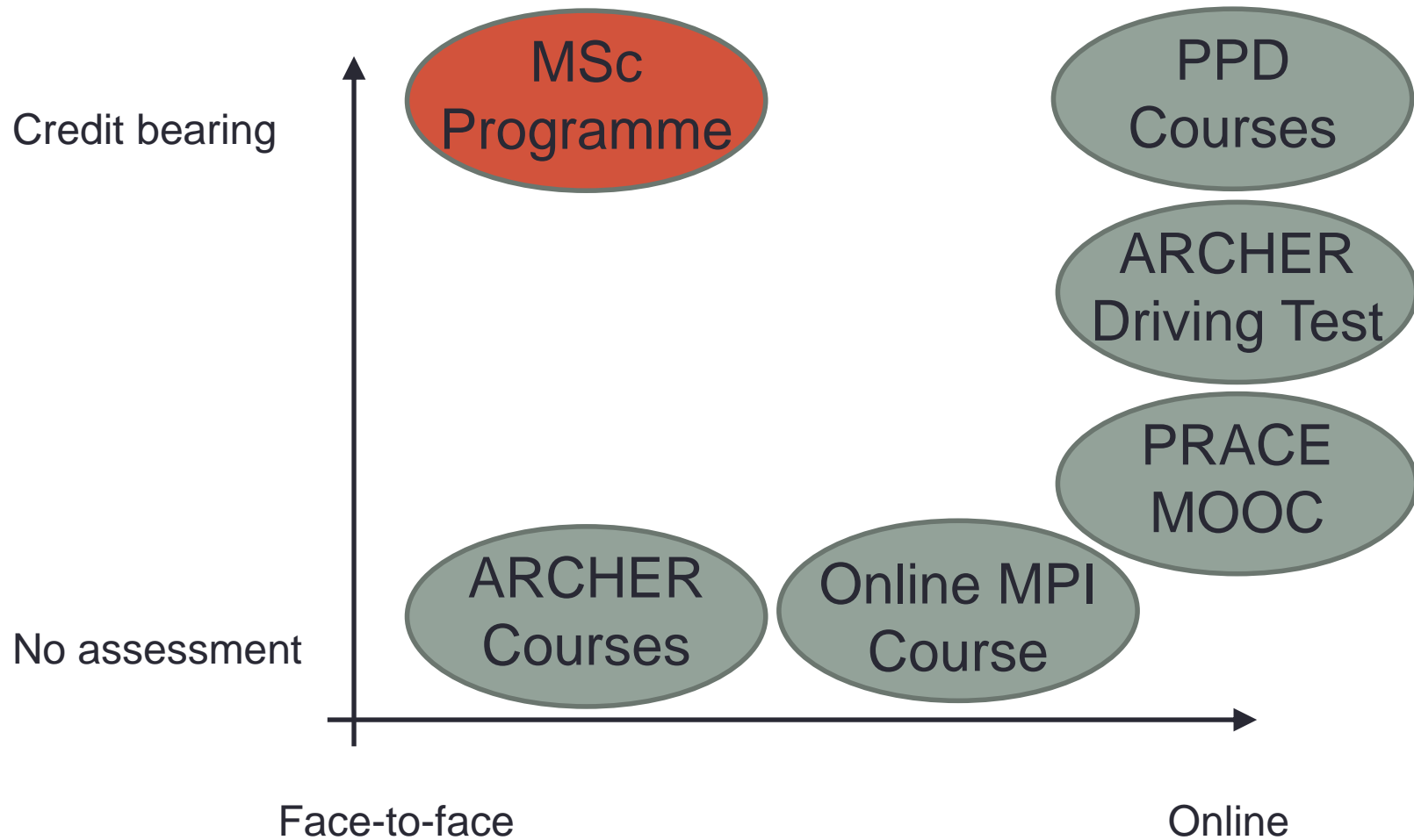
MSc in HPC / HPC with Data Science

- Classical format residential taught Masters programme
    - fees are charged
    - around 25 – 30 students
    - lectures + lab sessions
- Students use Learn VLE
    - PDFs of lectures
    - all practical material
    - coursework submission
    - recordings of all lectures (soon?!?)
- Collaborate for webinars
    - e.g. backup during Snowmaggedon

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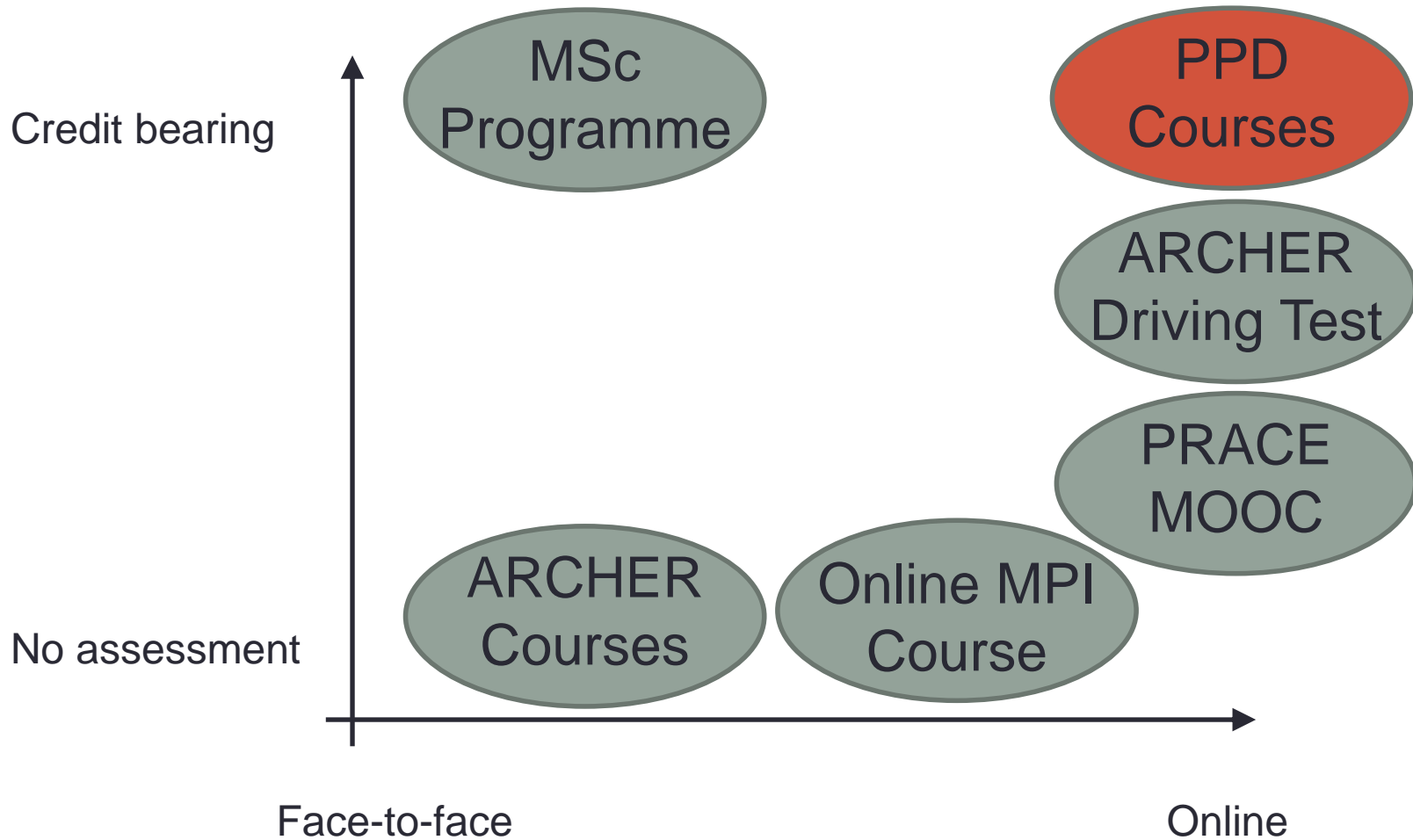
Online

Online Masters Course (PPD)
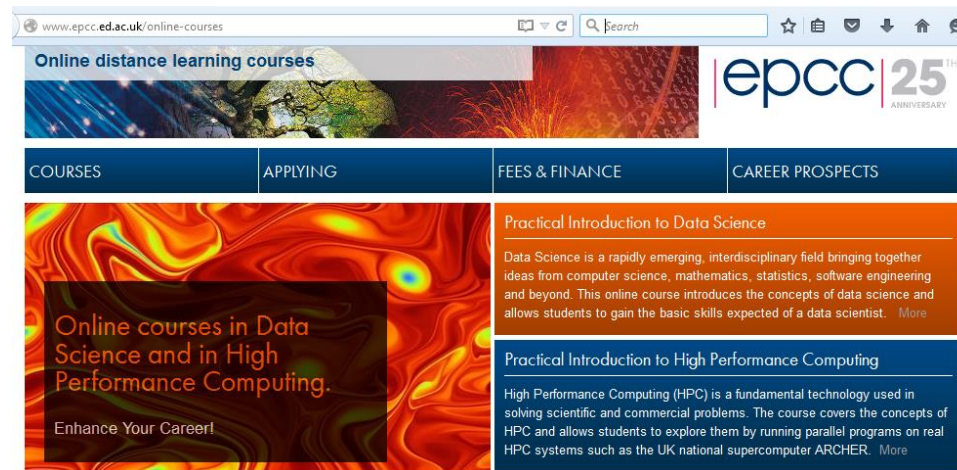
- Postgraduate Professional Development (c.f. CPD)
  - under Data Science Technology and Innovation MSc programme
  - Practical Introduction to HPC; Practical Introduction to Data Science
- Entirely online via Learn with recorded lectures
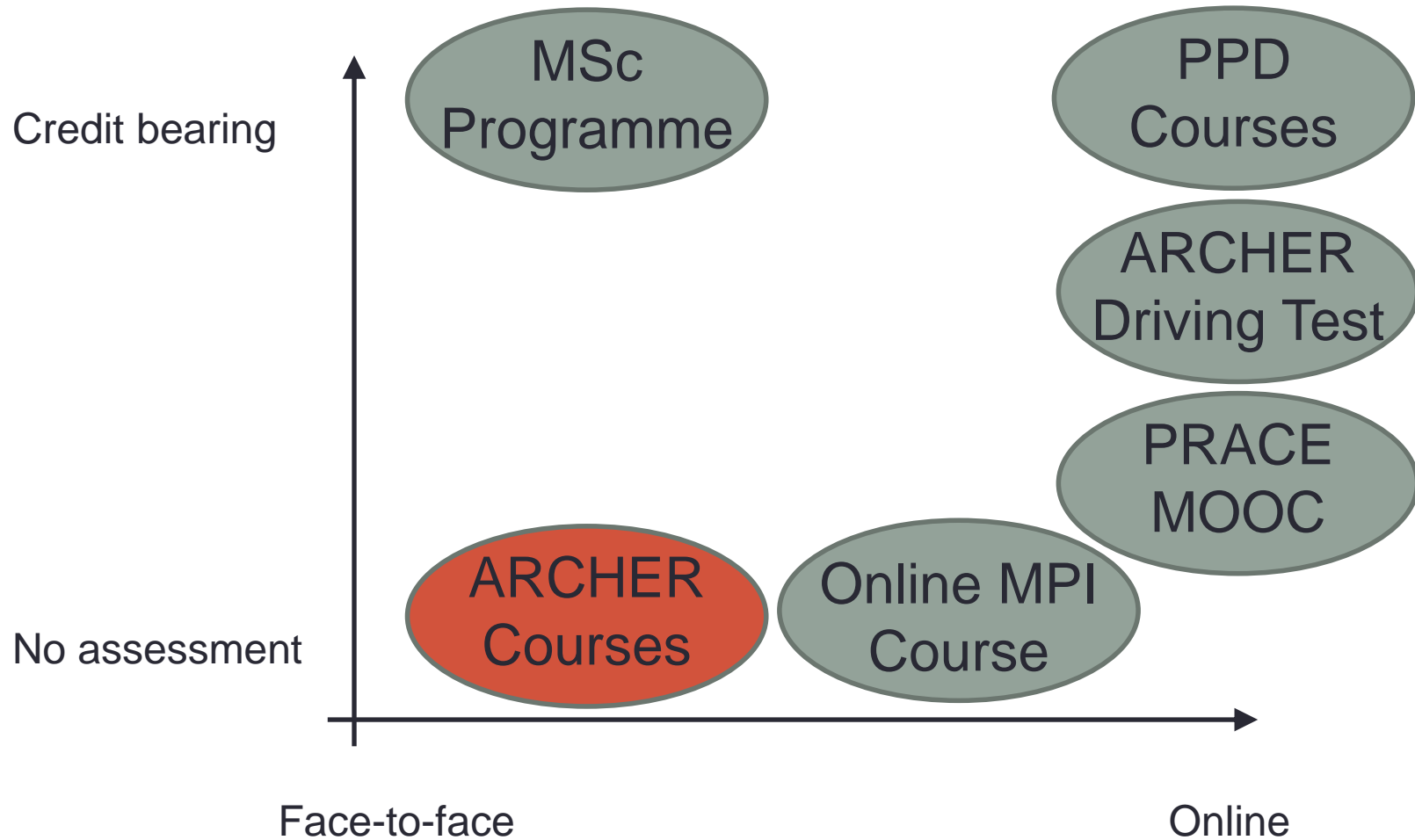 - fees charged; around 50 students across both courses
  - each course is 20 credits (out of 120 taught credits)
  - no exams – 100% coursework

EPCC Ecosystem

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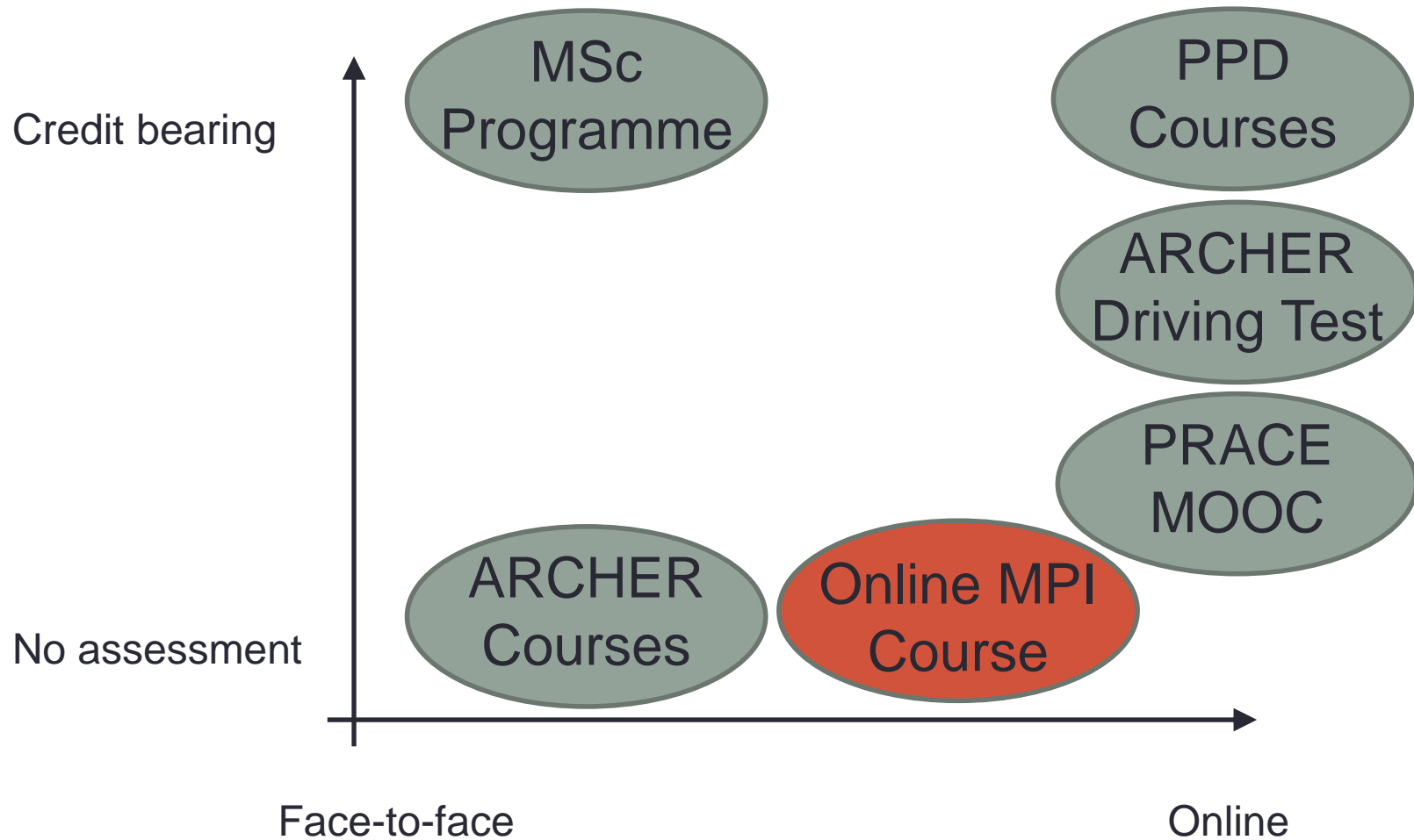No assessment

Face-to-face

Online

|epcc|

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ARCHER Courses

- Around 25 face-to-face courses per year
  - attendance ~20 students
  - material online and archived
  - free to academics
  - no assessment except certificate of attendance!

- How to deliver to a wider audience?
  - but maintain hands-on support for practical exercises?

EPCC Ecosystem

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ARCHER Courses

Online MPI Course

Face-to-face

Online

Format used by US XSEDE project

- Presenter + slides and video
  - around 25 dedicated sites
  - HD video + high quality audio
  - groups attend at each site
  - locals provide basic IT support
  - presenter does technical support

- ARCHER trial over Collaborate (c.f. Virtual Tutorials)
  - MPI over four Wednesday afternoons
  - ~50 attendees at start, ~25 at the end
  - a few groups at sites but mainly individuals
  - perhaps need to revisit practical support

EPCC Ecosystem

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No assessment

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Online MPI Course

Face-to-face

Online

|epcc|

ARCHER driving test

- Around 360 users passed test so far, 270 given accounts
  - lecture recordings part of learning materials

Users

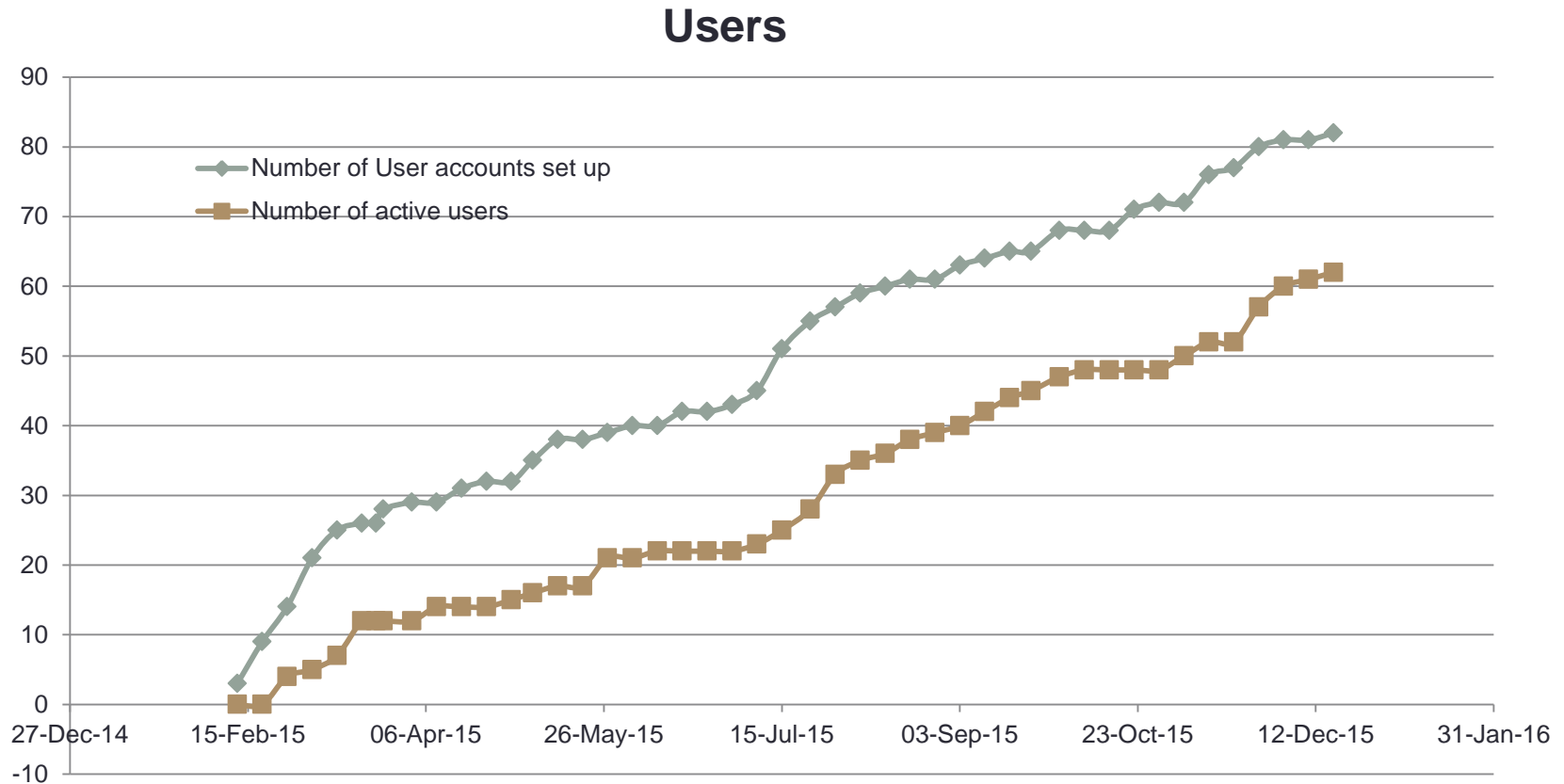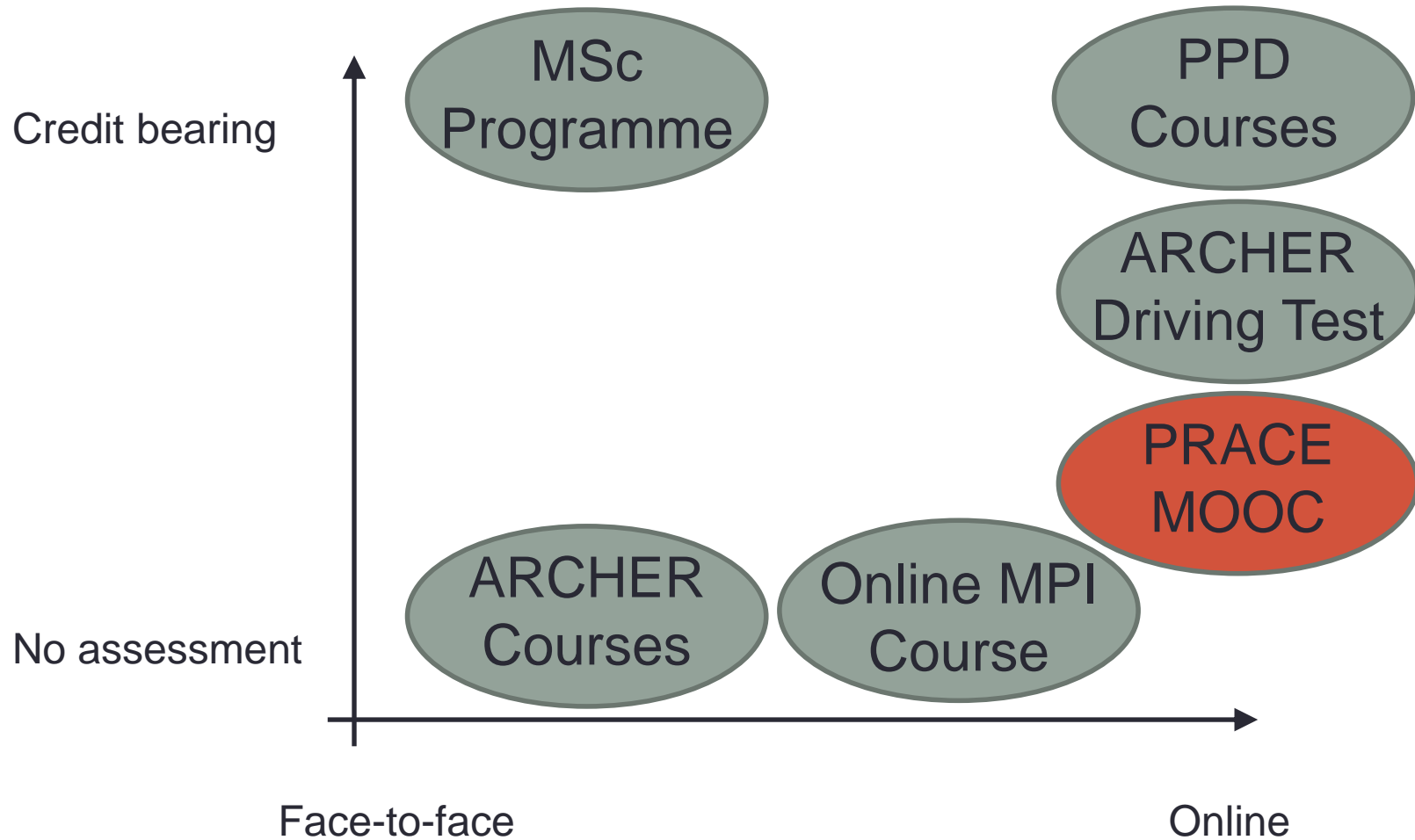# EPCC Ecosystem

A two-axis diagram. The vertical axis runs from "No assessment" (bottom) to "Credit bearing" (top). The horizontal axis runs from "Face-to-face" (left) to "Online" (right).

- MSc Programme
- PPD Courses
- ARCHER Driving Test
- PRACE MOOC
- ARCHER Courses
- Online MPI Course

futurelearn.com/courses/supercomputing/

- Free introductory course
  - videos, articles, quizzes, discussion boards etc.
  - certificate upon completion of multiple choice test (+fee!)
  - largely conceptual
  - tutors contribute to discussions
  - "ask an expert" sessions

- Three runs: Feb 17, Aug 17, Jan 18
  - approx joiners: 3000, 3000, 1500
  - approx completion: 300, 300, 150

- Next run in September this year

Chess video 2
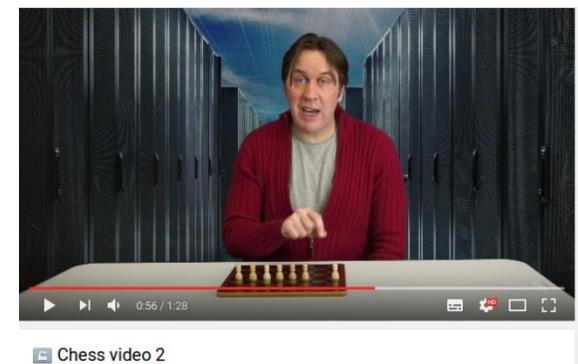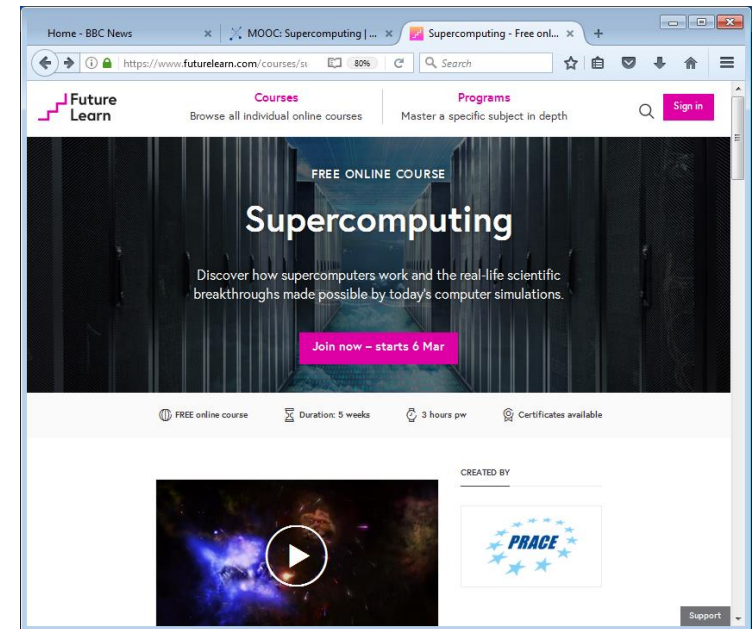
Conclusions

- Technology has matured incredibly in the past 5 years

- Online training is a spectrum

- What doesn't seem to work
  - joint face-to-face and webcast is problematic
  - taking questions over audio

- What does work
  - community support on larger MOOCs
  - chat-based questions
  - instant-feedback online quizzes