Switching to online learning – the Good, the Bad and the Ugly

CHEM113: 250 students, wide range of backgrounds, at least half have 1-2 Level 3 Chem AS (external)

CHEM114: 80 students, all have at least 3 Level 3 Chem AS (external) or equivalent, range from 3 As, to 3 Es or Scholarship (OS)

Issues: Coping with change to 3º study and need for self management, sense of isolation/lack of community, overwhelmed, not engaging with opportunities for help till too late
What have we learned from teaching under COVID-19?

From the literature

- Increase in viewing of ‘worked example’ videos
- A large proportion of students do not interact online – “easy to skip a meeting because I can do it later”
- Asynchronous learning is preferred from synchronous ‘In house’ videos preferred to ‘internet’ options.
- Weaker students tend to ‘opt’ for on-line learning but are less likely to succeed.
- Pull of on-line distractions
- Major barriers in on-line learning: lack of social interaction and community
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- The Good – let’s keep this in our programmes in the future

- The Bad – with a bit of tweaking we might be able to salvage something useful

- The Ugly – let’s not go there again
GENERATING TITRATION CURVES

https://www.youtube.com/watch?v=SQEmKzx7Ghs
Exercises that help students – particularly scholarship students – review/recall/map their knowledge of a subject area

Write down as many correct, distinct and relevant facts as you can about:

1. CH₃CH₂CH₂Br  CH₃CH=CH₂  CH₃CH₂CH₂OH
2. 107.87 g AgNO₃(aq) reacts with 36.46 g HCl(aq)
3. CH₃CH₂CH  CH₃CCH₃  CH₃CH₂C—OH
4. CF₄, SF₄, XeF₄
5. 0.1 mol L⁻¹ solutions of HCl, NaCl, CH₃COOH
6. CH₃CH₂C Cl  CH₃CH₂CNH₂  CH₃CH₂COH
7. CH₃CH₂CCH₃  CH₃CH₂CHCH₃  CH₃CH₂CH₂CH₂OH
• Developed for Level 2 and Level 3 students at Te Kura by Delene Holm

• Adapted for CHEM113 (mostly equivalent to NCEA Level 3) and CHEM191 (mostly equivalent to NCEA Level 2)

• Students have 7-8 questions to answer to help scaffold a logical explanation for a range of structure and bonding.

• Can be crafted to suit each school/teachers/approach to a topic

• Students should progress to practising exam style questions that they answer, initially using the scaffold and then working independently.