First year and Active learning: Inquiry, Engagement and Student success

Gerry Rayner

Objective(s)	Obstacle(s)
Engagement	Diversity - Lack or Lots of prior learning Krause (2005) (1994 vs 2004) *"Despite evidence of peer engagement, trend data suggest that proportionately fewer students are engaging with peers on a regular basis in the first year"*

Objective(s)	Obstacle(s)
Engagement	Diversity - Lack or Lots of prior learning

Ideas and Inspiration
(Caution - Need to interpret 'engagement' in multiple contexts
(+ve Vs obligation vs conflict)
- Communities of learners – remove the comfort zone (HIP)
- Meaningful lab / workshop / tutorial interactions
- Social interactions → learning interactions

Objective(s)	Obstacle(s)
Taking responsibility for learning	VCE – the ATAR ☹ Unwillingness to prepare Surface Vs deep learning

Ideas and Inspiration

- Allow choice, talk less, model learning behaviours (ask questions, be curious, reflect on what you do)
- Ask for feedback, reflect

Objective(s)	Obstacle(s)
Build esteem in TAs / demos / tutors	Casualisation / Corporatisation FiTaFo – 'Fly in, teach and Fly out (or 'back to the lab')

Ideas and Inspiration

- Faculty / university learning workshops, discipline-related teaching conferences → PD
- Pre-activity meetings, brainstorm obstacles to learning;
- Engage TAs in IOL planning, seek feedback re success / failure;
 → Generate communities of practice

Objective(s)	Obstacle(s)
Active learning, inquiry, asking questions, formulating hypotheses, scientific method	Traditional cookbook pracs (exacerbated by massification)

Ideas and Inspiration

Generate a 'mix' of learning opportunities:
- IOL (make it distinctive, >2 weeks, and interdiscipliniary) (HIP)
- some cookbook – validation / verification has value
- team projects
- posters, oral and written presentations

Objective(s)	Obstacle(s)
IOL	Assessment → How to assess teamwork, time management and task delegation, ability to ask meaningful questions, problem solving and critical thinking

Ideas and Inspiration
- Write – connections, communication, reflection (HIP)
- Pre / post surveys
- Peer assessment, self assessment
- Journals, logs

Objective(s)	Obstacle(s)
Develop knowledge and understanding, make connections (synapses)	Reliance on textbook readings – time consuming…impact / efficacy?

Ideas and Inspiration
- Combine readings with simulation, visualisation, drawing
- Study and tutorial groups
- PAL - quad peer assisted learning

What next with IOL?

- Does IOL enhance students' scientific literacy. (e.g. [Freeman et al.](#) 2014)
- Does IOL enhance students' higher order skills - How to measure this?
- Is genuine interdisciplinary teaching possible?
- Successful integration, scaffolding and iteration of IOL across year levels

Ref: George Kuh (2008) *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter*. AAC&U, Washington, D.C.