Collaborative small group learning in an online environment using Adobe Connect

Ulimage Scholarship In Online Learning Group Seminar

Sarah Hyde, Yann Guisard, Peter Mills, Caroline Love, Karl Behrendt, and Kerri Hicks

Contact: shyde@csu.edu.au

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# The QLT Key Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Provide students with Subject Outlines published 14 days prior to commencement of session.</td>
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<tr>
<td>2</td>
<td>Subject Interact 2 site landing pages available to students 14 days before start of session.</td>
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<td>3</td>
<td>Assessment tasks returned to students within 15 working days.</td>
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<td>4</td>
<td>(Teaching Staff submit) Examination scripts (completed and submitted) to HOS 5 days before required submission to DSA.</td>
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<td>5</td>
<td>(Teaching Staff submit) Marks and grades (submitted) by deadline set by School Assessment Committee.</td>
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<td>6</td>
<td>Teaching staff follow Faculty protocols when changes to delivery modes and assessment schedules are required.</td>
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<td>7</td>
<td>Teaching staff follow Faculty protocols when cancellation of classes is required.</td>
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<td>8</td>
<td>Provide students with quality assured Subject Outlines.</td>
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<td>9</td>
<td>Students experience initial quality assured subject Interact 2 site landing pages and basic outline.</td>
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<tr>
<td>10</td>
<td>Quality assured examination scripts submitted to DSA.</td>
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<tr>
<td>11</td>
<td>Students will experience a subject that provides the opportunity for peer to peer interactions in the online space.</td>
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<tr>
<td>12</td>
<td>Students will experience a subject that provides structured opportunity for staff to student interactions in the online space.</td>
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Aim: Promote learner-learner interaction

* Via:
  * a Problem-Based Learning approach
  * One case over 3 weeks
  * Groups of 6-8
  * Variable protocol for group composition
  * Designed for DE and asynchronous → shifted to DE + internal + asynchronous + synchronous
  * Adobe Connect + Interact DB
Key features of the learning design

* Authentic case + tutor guide
* Implemented in AHT101 twice, AGR202, AGB450 (across 8 courses)
* 334 students altogether
* Student and staff orientation to both PBL and Adobe Connect
* Weekly OLM; SGL resources; Easy access to OLM rooms
* Weekly group summaries posted to subject DB on Interact
* Group based assessment – common goal
* Peer evaluation of participation
* Reflective essay
Key features of PBL

* Case design
* Facilitation
* Wider context

* Implications for evaluation results
The problem-based learning process
Goal: To develop a deep understanding of the case

Tutorial 1 - Generate
Goal: To generate and expand hypotheses and identify learning issues

Tutorial 2 - Clarify
Goal: To apply and integrate science knowledge and differentiate hypotheses

Tutorial 3 - Consolidate
Goal: To why the problem occurred, plan management and evaluate problem and group process

Trigger

Divergent thinking and curiosity

What is problematic here?

Generate ideas and issues

Convergent thinking and analysis

Clarify key issues and questions

Rethink the situation

Begin to develop mechanism

Gather information

Refine mechanism

Discuss goals and options for managing the situation

Identify research questions

How did we do?

All Steps

Identify learning issues for deeper study

Critical reasoning

Identify cues in the situation
Formulate a statement of the case
Generate and organise hypotheses

Critical reasoning

Develop an inquiry plan
Gather data
Review your decision

Critical reasoning

Refine and explain contributing factors to the case
Discuss management goals and options
<table>
<thead>
<tr>
<th>Subject</th>
<th>When</th>
<th>Cohorts</th>
<th>What we did</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>AHT101</td>
<td>Weeks 11-13</td>
<td>DE only N = 85</td>
<td>PBL case on a farmer trying to improve crop yields. Case derived from farmer newsletter case study. Group task was to create a management plan. No specific information in the SO except for the reflective assessment task. Groups allocated based on learning style, degree and age; Orientation provided in an OLM.</td>
<td>Reflective assessment task; 500 words; <strong>10%</strong></td>
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<tr>
<td>AGR202</td>
<td>Weeks 4-6</td>
<td>DE + some internal students enrolled in DE cohort N = 83 (~20 internals)</td>
<td>Immediately prior to res school. Orientation via an OLM. PBL case based on developing a Caring for Country plan. Case taken from local media. Info on hours per week for PBL included upfront in the SO and in the L&amp;T support strategies there was a detailed description Groups were mixed DE/Internal composition (unintentionally) based on geographic location.</td>
<td>Group project presentation assessed at Res School (15% Group mark) Self-evaluation of participation (10%) <strong>25% altogether</strong></td>
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<tr>
<td>AGB450</td>
<td>Weeks 3-5</td>
<td>All cohorts – DE, Internal, Muresk; N = 73 Incl. Masters students</td>
<td>Orientation to PBL and Adobe provided on a recorded presentation associated with a mini-test Group task was to develop a Business Enterprise Report which required financial analysis of a spreadsheet associated with the case study. Case study based on a real case the subject coordinator had consulted on.</td>
<td>Group Business Enterprise Report (20% Group mark) weighted by peer evaluation Individual reflection assignment (10%) <strong>30% Total</strong></td>
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<tr>
<td>AHT101</td>
<td>Weeks 5-7</td>
<td>DE only N = 93</td>
<td>Same case as 201530; detailed info in the subject outline Group composition based on postcode Orientation through recorded presentation and mini-test Students instructed to liaise with groups before starting the case using Groups tool in Interact. Group task to develop a consultant report for the Farmer in the case with</td>
<td>Group Management Plan/Report (15%) weighted by peer evaluation Peer evaluation of participation (5%) Individual reflection (10%) <strong>30% Total</strong></td>
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Scaffolding in Adobe Connect

Brainstorm

This is the space for you to brainstorm the cues from the case trigger.

What were the main points mentioned? What 'cues' did you observe from the visual presentation of the trigger?

What terms do you need to clarify? For example, do you know what the Aboriginal Land Council does? As your discussion progresses use the space provided in the Actions pod to keep track of the topics you need to investigate and assign group members to each one. It is ok for more than one person to research on issue. At the end of the discussion period (Friday 7th August) you can allocate these issues between yourselves as a group and report back on them at your next meeting (around 12th August) where you will need to prioritise the hypotheses based on your research.

key questions:
- Does the land that's been set aside encourage on private property or is it adjacent to private property?
- What are the concerns of the local land owners?
- What is the vision for the local idig group for the land?
- Is the land being used for crops or animals, is the river providing what is needed now? Have the indig people seen a marked decline? Do they have any advice for farmers that aren't listening to theirs here?
- Has prompted the funding for this specific area.

key issues:
- Different cultural values and understanding of land and ownership
- Lack of recognition of aboriginal culture and resistance of non-indigenous Australians to recognize history and its impacts.
- What concerns do local land owners have about possible future water use restrictions to improve the health of the river?

We need to create a 'Centre for country plan' - what does this involve? Obviously needs to be sustainable, yet achievable.

Keep track of any issues that come up which require further investigation. By 7th August you should have allocated people to each issue and be ready to report back on them at the beginning of Session 2 (12th August).

Bonnie: research the 'bringing back country program' and how it's been implemented in Australia so far.

Shawn: if everybody is fine with this I will research the health of the Murray river and its current desire levels for agriculture and what can be done to improve water usage policy and infrastructure to preserve the river for future use. So this will satisfy the sustainability approach which I would like to take responsibility for, river usage and sustainability. I will see if we can find anything on the concerns of farmers about the future of the river too.

Stacie: I will research what exactly a 'caring for the country plan' is, or is this what you are already doing? Bonnie, I'll research it anyway because I think I'll be able to understand this project a little better.

You beat me to it Stacie. I'll see if I can find information on land practices of Wiradjuri people. Perhaps this will give us some idea of what might happen in the area provided.

In the meantime, here's a link to 'bringing back country' on Youtube so people can watch this easily and get an idea of what it is.

https://www.youtube.com/watch?v=fbAAJMP Italy feature=youtu.be

Bernard: I will be happy to research some background on the cultural significance of the Murray river to aboriginals. I would also like to research some of the major...
Aim:
1. Promote learner-learner interaction via a Problem-Based Learning approach for DE cohorts
2. Cost benefit analysis of the pedagogy

Mixed method methodology
* Survey (development/validation/utilisation)
* Student reflections and posts
* Student and staff interviews
Literature

89 items (including demographics)

AHT101
AGR202

+/− Items

Rasch: Survey is not validated
Student interviews/reflections
Staff interviews

PCA: Item reduction
6 Factors – 35 items

Rasch validation

Preliminary Qualitative Analysis

Rasch Analysis
Demographic correlations
Developed from literature

- Originally 89 items – now 64 items, 6 factors:
  - Outcomes of cognitive engagement (or task based outcomes) (10 items)
  - Success factors (positive mediators for engagement) (7 items)
  - Participation; metacognitive behaviours (5 items)
  - Collaborative learning outcomes (7 items)
  - Social outcomes and benefits (3 items)
  - Collaboration (3 items)
Survey results

- Cognitive engagement outcomes
- Success factors
- Participation
- Collaborative learning outcomes
- Social outcomes
- Collaboration

Factors:
- Combined cohorts (N = 108)
- AHT101 (n = 49)
- AGR202 (n = 25)
- AGB450 (n = 34)
Percentage agreement

Chart showing the percentage agreement across various factors:
- Outcomes of cognitive engagement
- Success factors
- Participation
- Collaborative learning outcomes
- Social outcomes
- Collaboration

Legend:
- Combined cohort
- AHT101
- AGR202
- AGB450
Interview results

* N = 17 students (11M, 4 internal)
* **Technology** easy to use but needed preparation and reliability. Can sometimes be too many communication channels. Microphones essential; Workplace relevance ++
* **Supported by** OLM, feedback on Weekly summaries, Facilitator presence
* Most had previous experience **working in groups** or teams and commented positively on the group learning experience – were surprised by how well it worked. Workplace relevance ++
* **Overall:** Challenging due to time commitments, but overall worthwhile and realistic
* Synchronous discussions at least once per week – 33% in AHT101 v1, 43% AHT101 v2, 60% AGR202 and 62% AGB450
* >60% all respondents across cohorts agreed that working on the PBL case helped to Develop new knowledge, Examine own viewpoints and method of approaching problems
* Interviewees reported spending extra time on the subject because of the task
* For some DE students it was the only time they had engaged with other students
* Contact with staff and students filled a void left by not having residential schools

* Like the structured nature of the task

* Obligations to the group to perform
Staff reflections – Peter (AHT101)

Reflections

* Worthwhile & important
* Residential school: fill the gap
* Improve engagement
* Improved understanding of content
* Comfortable: knowledge, timing, more efficient
* Self- and peer-assessment
* Still that portion of students who don’t engage

Improvements

* Larger groups
* Group construction: more criteria
* Rigorous orientation: quiz
* Earlier expectations
* Pre-semester residential school
  * Academic skills
  * SGL orientation
  * Study expectations
  * Subject expectations
* Reduced workload
* Process fitted nicely with my subject which covers strategic discussions with no ‘right answer’ & requiring interaction
* Chosen topic worked well – exploring complex issues around Indigenous issues & funding
* Exhausting to deliver due to a short time frame, large number of groups & also teaching internally
* Self-assessment process difficult and added to time pressures
* Not realistic to run again - more suitable for a much smaller cohort only (without substantial skilled teaching support)
What worked?

* Weekly OLM
* Defined roles, including a leader
* Weekly group summaries
* Sync meetings with microphones and headsets
* Division over three weeks was a good strategy
* Advance notice of group work periods
* Peer pressure – having others rely on you
* Depth of subject exploration
* Research oriented
* Social learning aspects highly valued

- DEVELOPING GROUP WORK SKILLS
  - DEVELOPED NEW KNOWLEDGE & EXAMINED OWN VIEWPOINTS
  - CONNECTING WITH AND LEARNING FROM OTHERS
Fine Tuning

* Adobe Connect layouts – less busy
* Orientation – more rigorous student preparation
* **Expectations and instructions**
* Assessment outcomes and expectations; clearly define
* Clear guidelines on where to post what
* Assessment of participation
* Time management
* Communication; multiple platforms
Achievements

* **Project outputs:**
  * PBL resources such as cases, tutor guides, student orientation slides, staff orientation slides, assessment rubrics located on a project Interact Site, student survey, ethics application, grant application
  * Staff development in DE small group learning processes, facilitation and assessment
  * Student development of IT and communication skills
  * The cases and the platform provided a framework for learner-learner engagement
**Pedagogical implications**

- When to introduce?
- Across courses vs within courses
- Case based vs PBL
- Assessment weighting
- Knowledge of the wider context when cases are running
- Staff workloads
- Timing and competing demands – explicit direction, scaffolding and clear expectations crucial to success BUT potential communication overload
* Equivalence of experience v fit with the Online Learning Model

* Recognition of initial staff workload for teaching DE using group work

* Technological capacity for DE students with poor internet reliability
Adobe Connect is a suitable platform for group work; needs support – not just IT related support.

DE students appreciated the opportunity to meet synchronously with peers and having regular task based feedback from staff.

Group work by DE is valuable and achievable 😊

Reduce number of assessment tasks and be mindful of due dates in other subjects.

Don’t underestimate the time requirements – adequately schedule!

Have the support of your course team.

Consider team teaching.
Ensuring success factors in the long term

- Prioritise in courses without a res school component
- Staff workloads need to be adjusted/recognised in using this framework
- Regular OLM meetings
- Use of mics and headphones by all students
- Support of senior management and course teams
- Staff training and development
Further research

* Analyse data using the CoI framework
* Analyse assessment performance against group participation levels
* Learning analytics and correspondence with student performance and engagement
* Second Rasch analysis with AGB450 and AHT101 v2 – group differences, GPA differences; timing; internal v DE
Discussion

* What constitutes benefit?
* Continuity of Adobe Connect??
* Engagement at what cost?
* Staff benefits?
* Student benefits – retention vs resilience?
Using adobe connect was brilliant – there was an audit trail and tracking of progress; it a good communication platform (Rhianna, AHT101, Viticulture)

I was initially hesitant because I like to be in control….. I was pleasantly surprised by the outcome. It’s a good process and reflects the reality (Jim, AGR202, BABM)

I liked being able to connect with others in the course and hearing other points of view and the different knowledge they bring to the case… I liked being the co-facilitator which I never would have done before – it felt safer online (Judy, AHT101, Horticulture)