Building an engaging group project-based learning environment using Jigsaw tasks... ..and WATTLE.
1. Why I’m doing it
2. What I’m doing
3. How I’m doing it
4. What students think
5. What I’m struggling with
1. Why I’m doing it - Learning is a system
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- learning is more than knowledge transmission
- only learners are in charge of their own learning
- my job is to create a feedback-rich learning environment
2. What I’m doing

- Jigsaw Tasks: 45%
- Portfolio: 30%
- Group Project: 25%
Jigsaw Classroom

- **Jigsaw Tasks**: 45%
- **Facilitation**: 15%
- **Peer Review**: 2 x 2.5%
- **Research Paper**: 25%
- **Portfolio**: 30%
- **Group Project**: 25%

chris.browne@anu.edu.au
Self-tests
Research Paper
Group Project
Individual Portfolio
Extended Abstract
Creating
Formulate
Generate
Hypothesise
Reflect
Theorise
Relational
Analyze
Apply
Argue
Compare/contrast
Criticise
Explain causes
Relate
Justify
Multistructural
Combine
Describe
Enumerate
Perform serial skills
List
Prestructural
Unistructural
Identify
Name
Follow simple procedure
Fail
Incompetent
Misses point

3. How I’m doing it
Jigsaw Classroom

Topic Workshop

Week Before Topic

Week of Topic

Week After Topic
Draft Research Paper

Week Before Topic

Week of Topic

Week After Topic
Jigsaw Classroom

Week Before Topic

Week of Topic

Week After Topic

Tutorial
Week Before Topic

Week of Topic

Week After Topic

Research Paper
Individual Research Paper Tasks

Structured Abstract Assignment

Draft Submission + Peer Review Workshop Module

Final Submission Assignment
4. What students think

[Graph showing CECS Average from 2010 to 2013]
4. What students think

![Graph comparing student opinions over years]

- **ENGN2225**
- **CECS Average**
4. What students think
Student responses - peer learning

It’s a learned skill – watching people, seeing if they’re getting things, asking good questions, integrating people’s answers – even self-confidence. I wish it was done in more courses, because it’s a valuable skill set.
Student responses - peer learning

Learning from peers is at times the most useful experience [in the course].

By being the [expert], I was able to grasp each weekly meeting and contribute to group discussion.
5. What I’m struggling with

- groups in Moodle
- manual allocation of the PR task
- students work at all hours, and don’t always submit things on time
Jigsaw Classroom explained in video:
http://youtu.be/ZAjjC8YwCbc

More information about the courses are available on the Public Access course pages:

ENGN2225 Systems Engineering Design
http://eng.anu.edu.au/courses/ENGN2225

ENGN2226 Systems Engineering Analysis
http://eng.anu.edu.au/courses/ENGN2226