

# Curriculum Design Pattern

Global Learning by Design

Name of Pattern

**Using Cloud Technologies to Build Engaging Multi-Media Resources for Multi-Program Courses**

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Author/s

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Abstract

The problem is this project addressed was the emerging need to deliver online School based common courses that are high quality and highly inter-active. Previously the course was run online but the only suitable text was not engaging, had a high readability index, poorly described difficult concepts and had no student support or relevant interactivities.

Rationale

The project provided the opportunity:

- to allow a large (N = 300) first year cohort (five different programs) to be connected globally (on-campus or off-campus in clinic settings etc)
- for an online presentation with an emphasis on the practical use of modern technology, this online course facilitates learning by multi-program, multi-discipline students from all locations

- to develop Google sites and an e-book that allows for the innovative use of modern technologies that can be adopted by others well into the future.
- to develop a step by step guide in creating this material will allow other RMIT staff to develop future resources.

## Learners

Common courses for large undergraduate cohort from: multi-programs, multi-disciplinary, multi-locations/campus, and across four semesters (summer, semester 1; semester 2; spring).

## Related patterns

Flipping the Trades, Online Professional Scientist.

## Category

Flexible delivery, multiple opportunities for student interaction and learning, flexible assessment, responsive feedback.

## Outcome/impact

This pattern allows staff to create diverse learning opportunities and to utilize creative, innovative student centred learning experiences.

Students can access and complete the course utilizing their preferred learning technology e.g. LMS, Google sites or eBook, in their own time, from their preferred learning space (on or off-campus), can choose from various assessment modes and can submit all work online (assignments, projects, tests, etc).

The teaching environment allow flexible delivery, flexible learning and ensures student specific, timely feedback on all aspects of the learning process.

## Alignment

This pattern has been created to enhance the existing (traditional) learning resources. While students continue to have the original choice of reading the prescribed text and completing traditional assessments, this pattern has created innovative options in student accessing materials, in their mode of presentation, in the range and types of assessments and in their level of engagement (work alone versus in groups, with industry, etc).

## Challenges

The key to developing cloud technologies to build engaging multi-media resources for multi-program courses is close interdependent team work: requirement for staff with academic expertise, with expertise in educational development and

development/production of education technologies. The primary challenge was continuing the pattern/project in the absence of one of these key staffing elements.

## Instructions/process

### Overall philosophy

Provide a course that has:

1. Inclusive teaching practices
2. Maximum flexibility in terms of course delivery and all aspects of assessment
3. Maximize student choice in terms of:
  - a. How they learn
  - b. How they demonstrate their knowledge
  - c. How they achieve feedback on their progress to achieve their learning goals.

### Step 1.

Ideally choose courses that has one or more of the following characteristics: multiple offerings across semester, across campuses, across disciplinary groups and across programs.

### Step 2.

Utilize the course learning objective to drive course content, course delivery, course experience and the associated assessment for this course.

### Step 3.

Create weekly topics and generate learning objectives for each topic. Note, these should be driven by the amount of manageable content for a 12 credit point course.

### Step 4.

Given the notion of cloud technologies, the following domains need to be conceptualized in terms of innovative presentation and assessment styles.

- 4.1. Create written content—no more than 300 words per learning objective, use conversational style, use minimal references and link to online reference material.
- 4.2. Use illustrative material—these should include but not be restricted to podcasts, audio explanations (especially difficult concepts), videos, practical demonstrations and exercises, simple quizzes, images and graphs/tables.

- 4.3. Pose questions that expand on content, challenge the inquiring mind, use interactives, place/emphasize on the application to the theory/content.
- 4.4. Ensure flexibility of delivery (or medium)—traditional lecture material, google docs, e.book, LMS, Echo 360 etc.
- 4.5. Ensure flexibility in terms of progress—should ensure that students engage in the material early in the teaching period, but then allow students to work through the material at their own pace.
- 4.6. Ensure basic/foundational (compulsory) material is at the beginning and then allows choice and flexibility in later (selective) material.
- 4.7. Flexibility in terms of assessment types—from traditional (writing responses to learning objective and completing exams) to a choice of innovative (but equivalent) approaches—Consider some of these assessment ideas and examples.

#### **Step 5.**

Build in immediate and detailed feedback—this should include generic (lecturer level) feedback highlighting what was expected of the students in terms of expected achievements in each topic and then this should be followed by student-specific (tutor level) feedback—should be a student specific comment, expanding on the students' responses/observations/queries and then followed by some valued added material—set further challenges that invites the student to travel further down their exploratory path.

#### **Designing the site - see the template exemplar The Google Site Template/Exemplar**

1. Use our template and instructions Designing a Google Site for Learning or the RMIT link for Getting started with sites, <http://learn.googleapps.com/sites> create your first site using the template we have created here for you, The Google Site Template/Exemplar. Once you become familiar you may design your own. Follow the instructions here, Google Site development - Quick Steps.
2. Start by laying out your key headings. To make this easier in our version we simply used the Week number; this provided the students with a weekly guide to their readings and assessments.

3. Provide clear and succinct instructions on the homepage on how students should be using the site.
4. Provide a weekly or topic overview, once again key dot points are helpful. Ensure students know the objectives for the week so they know exactly what they need to take away each week.
5. Provide a short video introduction to each week. About 5 minutes maximum is a good guideline. Introduce yourself, the topic, what they need to know, and any hints they need to be successful in their weekly learning; let them know what will be assessed.
6. Place links through to each topic for the week on the front page, create a table of contents.
7. In our example we have used Google presentations to cover the topic content. This gives students an uncluttered view of the content that is easily clicked through in bite size pieces of knowledge. The presentation format is helpful for them when reviewing for any tests that may be scheduled.
8. Finish with a weekly hint on what they should do next.
9. Placing a link back to their Blackboard is also helpful so they can simply click through for information.
10. Use the building of the site to review assessments; here are some ideas that could be adapted.

## Conditions

Critical success indicators/factors that influence use/ implementation of the solution (e.g. needed roles, type of resources), resources needed to solve the problem.

## Resources

[Designing a Google Site for Learning](#)

[Google Site development - Quick Steps](#)

[The Google Site Template/Exemplar](#)

[Assessment ideas](#)

## Reflection

There are two levels of evaluation/effectiveness:

1. Effectiveness of the project in terms of staff feedback, student feedback (primarily CES data), and student performance (level of engagement, improvement in grades, etc)
2. RMIT staff uptake in utilizing this pattern – the move toward flexible delivery and inclusive should make this pattern a practical, user-friendly resource.

**Comments & Case Studies** Moving from the text to an online resource was favourably acknowledged by the students in CES feedback e.g.

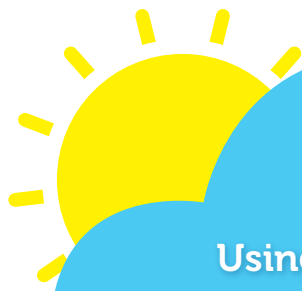
- ‘New online notes, well presented and laid out
- Online content makes it easier and more interesting to read than from the text with slabs of writing
- The online content that is provided is very helpful and interesting to read’ (CES comments, semester 2, 2014).

## Acknowledgements

Dr. Mervyn Jackson, Psychology, School of Health Sciences  
Pauline Porcaro, Inclusive teaching and assessment practices project, College of SEH Neil Goudge, GLbD, College of SEH.

## References

- E-LEN Network - Design patterns for e-learning (<http://www2.tisip.no/E-LEN/tutorial/02.html>)
- Laurillard, D (2012) Teaching as a Design Science: Building Pedagogical Patterns for Learning and Technology. Routledge, NY.
- Queensland University of Technology: Developing Reflective Approaches to Writing (<https://wiki.qut.edu.au/display/draw/Home>)
- University of Queensland – eLearning Implementation Patterns Trial (<http://www.uq.edu.au/cipl/imp-patterns>)



## Using cloud technologies to build engaging multimedia resources for multiprogram

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### PHILOSOPHY

Provide a course that has:

- 1 Inclusive teaching practices
- 2 Maximum flexibility in course delivery and assessment
- 3 Maximize student choice in terms of:
  - a. How they learn
  - b. How they demonstrate their knowledge
  - c. How they achieve feedback on their progress to achieve their learning goals

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### PROCESS

- 1 Choose courses that have multiple offerings (semester, campuses, disciplinary groups and programs)
- 2 Utilize the course learning objective to drive content, delivery, experience and assessment
- 3 Create weekly topics and generate learning objectives for each topic
- 4 Domains need to be conceptualized in innovative presentation and assessment styles
  - 4.1. Create written content
  - 4.2. Use illustrative material
  - 4.3. Expand on content, challenge the inquiring mind.
  - 4.4. Ensure flexibility of delivery [or medium]
  - 4.5. Ensure flexibility in terms of progress
  - 4.6. Ensure basic/foundational [compulsory] material is at the beginning and then allow choice and flexibility in later [selective] material
  - 4.7. Flexibility in terms of assessment types
- 5 Build in immediate and detailed feedback

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### DESIGN

Designing the site - see The Google Site Template/Exemplar

- 1 Design your site
- 2 Lay out key headings
- 3 Provide clear and succinct instructions on the Homepage on how students should be using the site
- 4 Provide a weekly or topic overview
- 5 Provide a short video introduction to each week
- 6 Place links through to each topic for the week on the front page, create a table of contents
- 7 Give students an uncluttered view of the content that is easily clicked through in bite size pieces of knowledge
- 8 Finish with a weekly hint on what they should do next
- 9 Placing a link back to their Blackboard is also helpful so they can simply click through for information
- 10 Use the building of the site to review assessments