design alchemy

transforming contemporary
teaching and learning experiences

based on the work of
roderick sims

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This presentation provides insights into a design strategy for enabling sustainable, learner-centred online learning environments.
who are we???

design alchemists

backwards

Individuals are not programmed machines in which rigid step-by-step procedures lead inevitably to answers (Lauer & Pentack, 2008)
Although the ideas and concepts presented in this slideshow are based on the online learning environment, they apply equally to the development of all training and education initiatives.

In essence design alchemy is about role transformation:

- **Teacher**: an enabler, to ensure students apply knowledge appropriately
- **Student**: an enactor, demonstrating their ability to apply knowledge appropriately within their own context
Where should we start our discussion about online learning? Perhaps the classroom might be the best,

First, we have what is often termed the “traditional” classroom environment, where the teacher takes on the role of facilitator and demonstrator – showing students the way things work.

>> But what if the teacher were removed from the face-to-face classroom?

>> The students would be confused and not know which way to look.
With the online environment, the teacher must (in some way) be integrated into the online design so that students have a clear direction and understanding of the activities and assessments they are expected to undertake to complete the course.

And while the basic online mode is a student separated from his or her peers, it is important to remember the connectivity and networking that is available.
And while in this mode, it is important to remember that the individual student may wish to work with the content within their own context.

Even more importantly, through the power of interaction and communication, the network may create a new and viable knowledge base.
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- **Process**: the over-arching approach we take to design a module, course or program
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### Design Alchemy

#### The Classic

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity Description</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Read, Post &amp; Discuss x 2, Quiz</td>
<td>Textbook Chapters 1 - 7</td>
</tr>
<tr>
<td>4</td>
<td>Read, Post &amp; Discuss x 2, Quiz</td>
<td>Textbook Chapters 22 - 28</td>
</tr>
<tr>
<td>5</td>
<td>Read, Post &amp; Discuss x 2, Exam</td>
<td>Textbook Chapters 29 - 35</td>
</tr>
</tbody>
</table>

**Quiz Question:**
What percentage of the ozone layer is said to be depleted?
As demonstrated in the accompanying templates, a critical aspect of **d4ql** is to focus on what the student can do on completion of the course, rather than the content that underpins that performance.

Therefore the key process underpinning the design (compared to the production) follows the following steps:

1. **applied knowledge**: on completion of the course, what should the student be able to demonstrate as application of the knowledge learned
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This slide demonstrates how the template might be completed.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assessment</th>
<th>Activity</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. justify</td>
<td>compare business types identify stakeholders</td>
<td>textbook</td>
<td></td>
</tr>
<tr>
<td>2. contract and property laws</td>
<td>ask question solve problem</td>
<td>textbook legislation</td>
<td></td>
</tr>
<tr>
<td>3. hr, tax, liability laws</td>
<td>ask question solve problem</td>
<td>textbook legislation</td>
<td></td>
</tr>
<tr>
<td>4. international, federal, state laws</td>
<td>ask question solve problem</td>
<td>textbook legislation</td>
<td></td>
</tr>
<tr>
<td>5. ethics</td>
<td>debate ethics justify legal change</td>
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In the current environment the elements shown in the slide are considered essential for an effective learning experience, with each being an integral element of the learning activities created.

1. **contextual**: that the activity allows the student to contextualise the knowledge within their own environment. For example, a student living in Japan and studying Taxation Law at an American university should be able to focus on Japanese Taxation Law and its application in Japan.
2. **emergent**: that the activity allows students to propose new or contentious material, rather than using discrete, historical resources.
3. **problem-based**: that the activities focus on students making decisions and/or solving problems. The value of this approach is in the comparative analysis of solutions.
4. **social**: that activities allow collaboration between students to develop solutions or decisions.
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The *contextual* approach takes in the personal needs of the learner, their culture, their role in the global marketplace and the importance of an authentic learning experience.
The emergent concept is predicated on the interactions between learners having the potential to create new or alternative solutions to those traditionally accepted as “correct”.

The **problem-based** approach encourages critical thinking, and the verbs shown in the diagram are those which should inform the focus of each and every activity.
The ability to focus on a social approach to learning means that each course participant can take on a range of roles, as shown in the illustration.

Importantly these roles are considered only temporary – determined by the nature of the activity in which participants are engaged.
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An integrated approach implies that you as the designer will consider the following:

1. That the course is **strategically aligned** with the organisation’s mission and goals. For example, an organisation changing delivery strategies to offer courses in a distance mode would require those courses to be accessed via computer networks.
2. That design decisions are **based on evidence** (from reliable sources) rather than anecdotes or beliefs.
3. That the design is **driven by pedagogy**, which implies that the decisions associated with student activities and assessments are consistent with one or more educational approaches.
4. That the learning environment is **enabled by technology** in order to enable access and communication.
These are some of the words considered appropriate for the design alchemist. Identifying the terms helps you keep focused on the underlying strategies being deployed in the design process.

You may wish to add or create your own vocabulary – this diagram was created using Wordle (http://www.wordle.net).
While we can discuss course design from a generic perspective, it is important to remember that there are a range of parameters that will impact on the design flexibility and structures:

1. **delivery mode(s)**: a course that is designed for distance delivery only would take on a different appearance to a course that was designed for on-campus and online delivery (a blended approach)
2. **discourse**: the way subject-matter experts talk about their area of expertise (the discourse) can impact on the way courses are conceptualised
3. **technology**: current technology allows social networking, virtual worlds and mobile computing. If these are determined as necessary for your course then the design will be quite different from a course based on one of the traditional learning management systems (e.g. Blackboard)
4. **program level**: courses can range from a one-hour training session to an undergraduate or postgraduate multi-year program; the level of the course has a significant impact on design, even though the principles of alchemy do not change.
5. **domain**: depending on whether your course is (for example) about chemistry, the arts, engineering or management will determine the design approach, as the teaching of each of these subjects has a long educational tradition.
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A course of study can never be considered complete as the evaluation process will identify areas for improvement – and thus it becomes a continuous process of enhancement for the lifetime of the course.

At the same time it is important to consider the sustainability of the course, ensuring that updates and enhancements are kept to a minimum.
The build-enhance-maintain process is recommended as a key success-factor, with initial focus on pedagogical integrity rather than expensive, and often unnecessary, technological elements.
One form of sustainability comes from externalising the course resources.

Rather than referring to specific resource information (e.g. web sites, textbook chapter) within the syllabus, the designer’s task is to ask the student to explore and locate the required information. For example:

**Unsustainable**  
Read Smith & Jones (2\textsuperscript{nd} edition) pages 75-108.

**Sustainable**  
Use the course textbook or an equivalent resource and review the section(s) on “leadership skills”

In this way resources can be changed as required, without the need for editing of the syllabus.
Using the continuous improvement approach with sustainable practice will achieve these three benefits.
Within any design process there will be a range of stakeholders.

It is important to ensure their needs and interests have been polled during the design process.

Communicating with stakeholders, and encouraging their input to the design process, can eliminate problems that can occur when assumptions are made by the design team.

For example, the design may assume that all students can read and write English, and proceed with development based on that assumption. If, however, the administration had planned for the course to be delivered in non-English-speaking countries then there is a clear disconnect. While this would suggest a communication issue between administration and design, it highlights the problems that could occur.
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Apply learning theory to online design

Week 1: Understanding Learning Theories

The first task for you is to explore the range of learning theories which have been proposed for online learning, and choose at least two you wish to explore further.

Once you have these theories identified, use your research skills to identify at least two articles which provide specific research findings about these theories.

Finally, you will need to document your initial analyses using the site for Assignment 1.

Resources
- Theory of Practice
- Selected Readings

Assessment
- Learning Theory Analysis

Week 2: Link Theory to Design

In an earlier course (DED102) or through your professional experience you would have encountered a range of approaches to the design of online learning environments, incorporating media, interaction and collaborative work.

The main focus for this week is to align your understanding of design principles with the learning theories identified, using both your own research skills and participating in discussion with your peers.

Resources
- Selected Readings and Resources

Activity
- Constructs Learning Theory and Online Design

Week 3: Designing Learning Environments

The aim for this part of the unit is to debate the different approaches that have been proposed to link design theory with design, and, as a result of these debates, update the collaborative report begun in the first week.

Activities
- Debate Theories of Design
- Learning Theory Analysis

Week 4: Reflective design approach

The final process for the first section of this unit is to complete your design analysis and submit your first assessment.
design alchemy
fraud and corruption compliance training

an exercise in transformation
course title

Introduction to Fraud and Corruption

Creating a Safer Workplace

3. Keeping us free from fraud and corruption
knowledge application

- 50 PowerPoint slides
- 10 questions, 80% pass
- use legislation and policy to recognise and respond to fraud or corruption
learning outcomes / assessment

1. discriminate fraud and corruption
   – given a behaviour the student will be able to correctly identify whether or not it is an example of fraud or corruption
2. locate and interpret legislation and policy
   – given a fraudulent or corrupt behaviour, use the correct legislation and/or policy to make an appropriate response
3. independently recognise and respond to fraud and corruption
   – given a workplace scenario, choose an appropriate response
4. initiate a fraud and/or corruption complaint within policy
5. produce an action plan to minimise fraud and corruption within your workplace
layout

- Keeping us free from fraud and corruption
  - Managers
  - Professional
  - Academic
    - Discriminate
    - Locate and interpret
    - Independently
    - Recognise
    - Initiate a
    - Complain
    - Produce
    - Action Plan
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