Tool Kit
For
Graduate Attribute Program Mapping Reports

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Source: Student GA Campaign for 2014
Overview:

Programmatic thinking is key in developing successful student learning journeys.

This quick curriculum tool kit has been produced to assist program leaders and other academics who are working with their existing program curriculum design for any number of reasons. Curriculum planning and design is an increasingly complex process which must attend to numerous stakeholders - often a diverse group of subject area experts; new and evolving technologies; changing student demographics, capacity and expectations; as well as larger socio-political exigencies. The purpose of this short package is to suggest easy and direct tools and lenses to view current curriculum practice. Obviously this tool kit would just be one of the many strategies employed by your program team.

The USC Graduate Attribute Quality Curriculum Model (GAQC) (Figure One) is useful when evaluating existing program design and illustrates the four stages that programs can consider in their student centred curriculum planning. All existing programs now have STAGE ONE ‘natural mapping’ available and will have access to a GA Program Mapping Report. This document will explain the utility and processes associated with reviewing that report (STAGE TWO).

Figure one: USC GA Quality Curriculum Model
What to do in Stage Two:

Overall, the mapping data for most current programs can be defined as ‘natural mapping’ which represents a cumulative picture of courses that have translated current course practice into graduate attribute terms for the program. Some course translations are stronger than others. The natural map illustrates what the curriculum looks like at a macro level across the whole degree. There are many other ways to look at curriculum such as:

- Vertical analysis – across the years focussing on single skill or quality development:
  
  *Ex. What does creative and critical thinking look like in courses from year 1 to year 3?*

- Horizontal analysis – across a single year looking at assessment distribution, types, weighting:
  
  *Ex. When are assessments due for a student your program in Sem 1?*

There are four main tools that are included in the GA Program Reports that have been designed and prepared by the Graduate Attribute and Standards Project:

- A GA program map
- GA Incidence column graph
- A GA pie chart
- Assessment analysis suite

“Graduate attributes are recognised globally as a critical outcome of modern tertiary education. “(de la Harpe and David 2012)
Using the GA Program Map

The program maps give a very quick and easy view into program assessment design. Each current program at USC will have a program map which illustrates the courses that are required in the program. It is important to note that electives are not included in program maps as they are not guaranteed experiences/learning in a student’s learning journey. This map illustrates graduate attribute coverage and distribution across a program. There are a few very quick assessments that can be made from these maps including:

- What type of assessment is privileged – as this maps GA explicitly linked to assessment
- Distribution and development of attributes
- Indicator of depth of translation (CLO change)
- Quick new assessment procedures check – course with 2-3 summative tasks

Figure Two: Sample program map

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Course Description</th>
<th>Mapping</th>
<th>CLO</th>
<th>GA</th>
<th>CLO</th>
<th>GA</th>
<th>CLO</th>
<th>GA</th>
<th>CLO</th>
<th>GA</th>
<th>CLO</th>
<th>GA</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Proposed questions to use with this program map:

- Do all courses in a program teach and assess the same attribute? This dense or over coverage usually demonstrates a design weakness and could indicate an opportunity for strategic reassignment of teaching and learning outcomes to address those attributes that need greater/more representation.
- Does a single course assess too many GAs? This is a serious consideration that directly impacts student learning success and sustainability. This issue also has equity issues between courses. All courses should generally have similar learning requirements/outcomes across years of study. This is particularly important for First Year courses. However, many higher level and cap stone courses may have heavier learning outcome loads/expectations, as their assessment suite requires more complex and multi-faceted evidences of learning.
- Check the sequencing and advancement of the GAs – as they move from Introductory, Developing to Graduate. Is there evidence that the curriculum has been designed to develop and advance the attributes? – vertical design considerations

Using the GA incidence column graph

The GA incidence chart is a quick and easy way to look at how the assessment of graduate attributes generally occurs in a program. Instances where every course assesses the same attribute become obvious in this graph and may lead to a reconsideration and evaluation if this coverage is appropriate.

*Figure Three: Samples of GA Incidence column graph*

Proposed questions to use with this incidence graph:

- Should the program adjust the emphasis of qualities?
- Do certain qualities have to be assessed in every course?
Using the GA pie chart

The GA pie chart gives a different look at the distribution and overall coverage of GAs in a program. The percentages that are shown here represent the percentage of all course mappings in a program to a graduate attribute. In the example below, 24% of ALL the generic skills occurring in course outlines across the program are Problem Solving. This statistic gives a generalised privileging/emphasis of this attribute. This is interesting data when viewed together with the incidence bar chart which indicates that 88% of all courses assess Problem Solving. The pie chart is only used to give an overall picture and is not indicative of good or bad design. However, it is useful for programs to look at this representation and to ask if it generally looks like the emphasis they would like to see. I.e. Are communication and problem solving the predominant skills that this program and their graduates require? Or on the flip side – is the skill of collaboration a marginal skill in this program and will have limited practicality for student’s future learning/employment path?

Figure Four: Sample of a GA pie chart

Proposed questions to use with this pie chart:

- Overall does this coverage meet the profile of what your students should be able to know, do and be?
Using the Assessment Analysis Tools

“The raison d’être of a higher education is that it provides a foundation on which a lifetime of learning in work and other social settings can be built” (Boud and Falchikov 2006)

As David Boud and Nancy Falchikov argue there is “substantial evidence that assessment, rather than teaching, has the major influence on student’s learning”. Moreover it “directs attention to what is important, acts as an incentive for study, and has a powerful effect on student’s approaches to their work” (Boud and Falchikov 2007). Therefore viewing assessment through horizontal (what happens across a year) and vertical (what happens across three to four years) analysis tools is important for programs.

It is important to look at the cumulative journey of the student in a program. There are two main tools offered here which are helpful in program and course design:

- Frequency of assessment type across a program
- Value of assessment types across a program

Firstly, the pie chart viewing the percentage frequency of assessment types in a program is useful when considering a student centred lens of support and development of skills, qualities and competencies. Students need more than one chance to develop/evidence a skill and alternatively, may not see the point in engaging with the same assessment type over and over again. Therefore, careful consideration should be given to how a program uses/distributes different assessment types across the program.

Secondly, analysing where all of the marks of a program come from is equally illuminating.

It may also be useful to think about the skills and selection criteria that employers look for when hiring our graduates (Graduate Outlook 2012 – Employers perspectives) and if these align or compliment the products that students would be evidencing in their assessment experience in your program.

Figure Five: Employer perspectives 2012

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal and communication skills (written and oral)</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Passion/Knowledge of industry/Drive/Commitment/Attitude</td>
<td>2</td>
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</tr>
<tr>
<td>Critical reasoning and analytical skills/Problem solving/Lateral thinking/Technical skills</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Calibre of academic results</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Cultural alignment / Values fit</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>5</td>
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<tr>
<td>Work experience</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Emotional Intelligence (incl. self-awareness, strength of character, confidence, motivation)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Teamwork skills</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Activities (incl. intra and extra curricular)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>9</td>
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<tr>
<td>Leadership skills</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
Using the Quantity of Assessment Type Pie Chart

Are students doing what they need to do?

Figure Six: Quantity of Assessment Pie Chart

Potential Questions for interpreting the Assessment pie tool:

- Is the type of assessment used most frequently the most effective, important and authentic form of evidence for your discipline?
- Are there key competencies, skills and qualities that seem to be under assessed?
- Are there several assessments that are only used once in a student-learning journey? WHY? Should they be eliminated or augmented?
- Does the assessment profile make sense? If a program has 60% of all assessments and weighting in exams and essays – does this fit the type of graduate the program is trying to develop?
- Is the assessment that is privileged – ie greatest value in marks also the most valued for future graduates skills and qualities? – is the assessment regime future focussed?
Using the Value of Assessment type column graph

Ideally programs should evaluate what types of assessment are important for students and the discipline and then map out how those skills, qualities and competencies are developed and appropriately assessed. Assessment items and skills that are important and fit for purpose should be where the bulk of the marks for the program lie.

The column graph below demonstrates where all of the grades for a program are found. Not surprisingly this graph corresponds to the pie graph but that is not always the case. There are some instances where students are asked to do something frequently but it holds little value to the overall mark in the program. The evaluative question to be asked here is whether this emphasis of 67% of all marks in a program found in two assessment task types is appropriate.

Figure seven: Sample of percent of total value of assessment type in Program

Potential Questions for Interpreting the Assessment Value column graph:

- Are the marks in this program reflective of what the student should be able to know, do and be when they graduate?
- Is this assessment mark profile overly dependent on a narrow grouping of assessment practices
- Is this assessment profile future focussed?
Closing Ideas: Constructive alignment

“Focus on what the student does and how that relates to learning (and teaching)” (Biggs and Tang, 2007)

This short package specifically focussed on the select instruments available in the USC GA Program mapping reports. Nonetheless, it is important to recognise that the practices and curriculum analysis tools offered here are just part of the wider curriculum processes that include the consideration of granular course design issues (course learning outcomes that align with program learning outcomes), that are then articulated into learning activities and assessment tasks which are anchored to standards established by the Australian Qualification Framework (AQF). This describes the repeated refrain in tertiary learning and teaching circles – constructive alignment:

- What do we say students will know, do and be? At the program level and then at the course level
- What types of teaching/learning activities support this?
- What types of evaluation instruments do we develop to assess this learning? And how do we judge if these instruments are valid, authentic, fit for purpose?

This process of evaluating curriculum through the constructive alignment lens is important. But ultimately it must be framed within a larger context of currency and relevance in the 21st Century (Gosper and Ifenthaler 2014).

In the end:

- Is the program designed to be future focussed?
- Does the program consider the new and evolving dimensions of the employment landscape?
- How does the program leverage and incorporate the pervasive influence of technologies?
- How has the program demonstrated a planned and designed assessment journey in line with the assessment procedures (effective July 2014)
- And lastly, how does it engage with the changing student demographics, expectations and needs found in this regional university?


