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In recent years, Australian universities have been requiring academics to include graduate attributes in curriculum documentation. This 'top-down' approach can lead to 'tick-box' mapping exercises where learning goals are matched with attribute categories and assessment processes can remain untouched, inevitably leading students to focus on marks or grades. In these circumstances, assessment rarely provides feedback to students about the progressive development of the very attributes universities claim to instil in their graduates.

This article follows a research-based approach to a law teacher's journey through various attempts to implement a graduate attributes policy in a business law unit of study offered to non-law degree students. The integration of graduate attributes with assessment tasks and assessment criteria coded to attribute categories was facilitated through a process involving software designed for this purpose.

The strategies used and the lessons learned in this research are relevant for academics, academic developers and academic leadership generally.

I. BACKGROUND

A. Terminology and Definitions – Important Issues

For the past decade, Australian universities have been required to include graduate attributes, generic skills, graduate capabilities, competencies and various other terms in the quality assurance plans they submit to the Commonwealth government.¹ These terms are confusing and contested. For example, the word 'generic' implies independence from a field of study; 'skills' is too narrow to embrace attitudes and values; and 'competencies' has been used as a tick list against specific skills.

The term 'graduate attributes' seems now to be the most common and has been defined as 'the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study'.² Australian Technology Network (ATN) universities define graduate attributes as:

... the qualities, skills and understandings a university community agrees its students would desirably develop during their time at the institution and, consequently, shape the contribution they are able to make to their profession and as a citizen.³

However, there are problems with both these definitions. The first, in using the phrase 'regardless of their discipline or field of study' may imply that graduate attributes are best developed through separate units of study. However, this 'bolted-on' approach is not supported by educational research.⁴ The second, in using the phrase 'would desirably develop during their time at the institution' seems to let universities off the hook in regard to any accountability with respect to their involvement in the development of graduate attributes. The view that students will gain attributes by some kind of osmosis is clearly

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Department of Education, Science and Training, *Striving For Quality: Learning, Teaching and Scholarship* (2002) 22.
 Higher Education Council Australia, *Achieving Quality* (1992) 20.

³ John Bowden, Gail Hart, Bruce King, Keith Trigwell and Owen Watts, 'Graduate Attributes and Generic Capabilities', Generic Capabilities of ATN University Graduates (2000) <<u>http://www.clt.uts.edu.au/ATN.grad.cap.project.index.html</u>> at 1 December 2008.

⁴ Simon C Barrie, 'A Research-based Approach to Generic Graduate Attributes Policy' (2004) 23(3) *Higher Education Research and Development* 265.

unacceptable as governments, accrediting bodies, professions and society all bring pressure to bear on a higher education sector⁵ in which:

[m]ore than ever before universities are being relied upon as a vehicle for the advancement of both the national economy and wider society. They do this through the creation of new knowledge and by preparing graduates with appropriate skills and attributes. It makes sense, then, for them to maintain a focus on keeping graduate capabilities in line with the needs of the economy and society.⁶

The term 'graduate capabilities' mentioned in this quote could be used instead of 'graduate attributes' in an educational context. However, with both terms, care must be taken in the sense that capability (to do) tends to imply ability in multiple contexts. In an educational setting, assessment can really only identify 'ability to do' as evident in work presented in any given assessment task. It is an attribute of a student's work rather than a judgment about them. In this important distinction between the student and their work, the term 'attribute' is a little less problematic than 'capability'.

The term 'graduate attributes' used in this article is intended to include a very broad range of personal and professional qualities and skills, together with the ability to understand and apply discipline-based knowledge.

Having considered the subtlety of terminology and definitions, the question then emerges: how do we achieve consensus about these terms in a university community?

B. Achieving Consensus about Graduate Attribute Frameworks

In an ideal world, a university community should agree on what constitutes the attributes of its graduates. However, the reality is that such understandings often remain implicit⁷ and, even when made explicit, individual academics have quite different views of what graduate attributes are and how they can (or cannot) be integrated into the curriculum.⁸ These different understandings can cause deep divisions in a higher educational climate in which quality assurance predominates and assurance of learning is required by accrediting bodies. This climate contrasts with the traditional approach in which university teachers devised their own intended learning outcomes and determined how they would be communicated to their students.⁹

For a university community to achieve consensus, it is helpful to consider the different institutional levels at which graduate attributes can be conceptualised: university, faculty, school, department, program of study (or degree) and specific units (or subjects) within which students will be expected to develop these.

At the University of Sydney, for example, three 'overarching graduate attributes' have been identified, namely scholarship (students' attitude or stance towards knowledge), global citizenship (students' attitude or stance towards the world), and lifelong learning (students' attitude or stance towards themselves).¹⁰ To be workable at lower levels, the following more specific set of attributes have been articulated: (1) research and inquiry; (2) information literacy; (3) personal and intellectual autonomy; (4) ethical, social and

7 Bowden et al, above n 3.

⁵ See, eg, Sue Cranmer, 'Enhancing Graduate Employability: Best Intentions and Mixed Outcomes' (2006) 31(2) Studies in Higher Education 169; Barbara de la Harpe, Alex Radloff and John Wyber, 'Quality and Generic (Professional) Skills' (2000) 6(3) Quality in Higher Education 231; Cassandra Star and Sara Hammer, 'Teaching Generic Skills: Eroding the Higher Purpose of Universities or an Opportunity for Renewal?' (2008) 34(2) Oxford Review of Education 237.

⁶ Department of Education, Science and Training, Employability Skills for the Future (2002) 25.

⁸ Barrie, above n 4.

⁹ See, eg, Debra Bath, Calvin Smith, Sarah Stein and Richard Swann, 'Beyond Mapping and Embedding Graduate Attributes: Bringing Together Quality Assurance and Action Learning to Create a Validated and Living Curriculum' (2004) 23(3) *Higher Education Research and Development* 313; Jennifer Sumsion and Joy Goodfellow, 'Identifying Generic Skills Through Curriculum Mapping: A Critical Evaluation' (2004) 23(3) *Higher Education Research and Development* 329.

¹⁰ Barrie, above n 4, 269.

professional understanding; and (5) communication.¹¹ To reflect disciplinary differences, faculties have been encouraged to translate these graduate attributes into a set of more specific learning goals and outcomes relevant to the degree programs offered. For example, the Faculty of Economics and Business has the following as a learning outcome for research and inquiry: 'apply economic, political, legal, commercial and business theories and concepts to problems and practice.' The translation of graduate attributes into the language of the discipline reflects an approach in which graduate attributes are seen as embedded rather than distinct from disciplinary knowledge.¹²

However, even with strong top-down directives and support from academic development units, boxes can too easily be ticked without change occurring in assessment and feedback to students.

C. The Context and Methodology of this Study

Developing graduate attributes has become a key focal point in professional disciplines, including law.¹³ Consequently, legal academics are now grappling with the task of embedding graduate attributes in their courses,¹⁴ and learning and teaching and curriculum development in law schools has become the subject of a number of national initiatives.¹⁵

Learning and teaching in law is not limited to law schools teaching law degree students.¹⁶ It also includes teaching law to non-law degree students. This article discusses the inclusion of graduate attributes in Trade Practices and Consumer Law ('CLAW2205'), an elective offered by the Faculty of Economics and Business (the 'Faculty') at the University of Sydney to commerce and economics degree students.

The methodology used in this article is that of case-study methodology¹⁷ but is written up as the 'journey' of one law teacher attempting to implement not only her own teaching and learning values, but also the university's requirements and directives in this area. Her journey began with her concerns regarding the way the university graduate attributes policy was initially implemented within the Faculty. These concerns were articulated both within and beyond the university.¹⁸ In collaboration with a Faculty colleague, a model for influencing teaching and learning culture in universities was developed.¹⁹ The journey might have ended there. However, the law teacher (the first author of this article) then heard about a successful graduate attributes project at the Faculty of Design, Architecture and Building at the University of Technology, Sydney, using an online criteria-based assessment system known as ReView.²⁰ ReView is described in Section A of Part III of

<<u>http://acquire.cqu.edu.au:8080/vital/access/manager/Repository/cqu:1845</u>> at 1 December 2008. 15 See, eg, Richard Johnstone and Sumitra Vignaendra, *Learning Outcomes and Curriculum Development in Law: A*

¹¹ See University of Sydney Institute for Teaching and Learning, *Graduate Attributes Project* <<u>http://www.itl.usyd.edu.au/GraduateAttributes/</u>> at 1 December 2008.

¹² Barrie, above n 4.

¹³ See, eg, Sally Kift, 'Lawyering Skills: Finding Their Place in Legal Education' (1997) 8 Legal Education Review 43; Elisabeth Peden and Joellen Riley, 'Law Graduates' Skills — A Pilot Study into Employers' Perspectives' (2005) 15 Legal Education Review 87.

¹⁴ See: Sharon Christensen and Sally Kift, 'Graduate Attributes and Legal Skills: Integration or Disintegration?' (2000) 11 Legal Education Review 207; Sharon Christensen and Natalie Cuffe, 'Embedding Graduate Attributes in Law — Why, How and Is It Working?' (Paper presented at the 2nd International Lifelong and Learning Conference, Rockhampton, 2002)

Report Commissioned by the Australian Universities Teaching Committee (AUTC) (2003) <<u>http://www.cald.asn.au/docs/AUTC_2003_Johnstone-Vignaendra.pdf</u> > at 1 December 2008; and Australian Learning and Teaching Council (ALTC), Discipline Based Initiative, Learning and Teaching in the Discipline of Law: Achieving and Sustaining Excellence in a Changed and Changing Environment (2006) <<u>http://www.altc.edu.au/carrick/webdav/site/carricksite/users/siteadmin/public/dbi_pilotprojects_law_projectsummar</u> y_2007.pdf> at 1 December 2008.

¹⁶ As clearly indicated by the existence of a large and active Law for Non-Law Students (LNLS) Interest Group in the Australasian Law Teachers' Association (ALTA). See the ALTA website <<u>http://www.alta.edu.au//index.html</u>> at 1 December 2008.

¹⁷ Norman K Denzin and Yvonna S Lincoln (eds), Strategies of Qualitative Inquiry (2nd ed, 2003).

¹⁸ See Arlene Harvey and Patty Kamvounias, 'Bridging the Implementation Gap: A Teacher-as-Learner Approach to Teaching and Learning Policy' (2008) 27(1) *Higher Education Research and Development* 31.

¹⁹ Ibid.

²⁰ Developed at the University of Technology, Sydney. Information available through Re:View: Online Criteria-based Assessment <<u>http://reviewsecure.com/</u>> at 1 December 2008.

this article. The law teacher and the designer of ReView (the second author of this article) met and the law teacher's graduate attributes journey continued with a new collaboration.

The process of implementing ReView in one business law subject is described in Section B of Part III.²¹ Discussions between the authors in the context of using ReView, led to the constructive alignment²² of assessment tasks with explicit assessment criteria coded to attribute categories. Student feedback, both quantitative and qualitative, was available in the form of responses to the standard Unit of Study Evaluation (USE) forms.²³ This was analysed to determine student views on the implementation of graduate-attribute-coded criteria feedback through ReView and to identify directions for future research.

The formative journey of one law teacher's attempts to respond to graduate attribute policy initiatives in practical ways is described in the next section.

II. A GRADUATE ATTRIBUTE JOURNEY BEGINS

A. First Attempt to Implement Graduate Attributes Policy

Although general statements about graduate attributes appear on university websites and in documents such as Faculty handbooks and promotional materials, it is in specific unit or subject outlines that the relevant graduate attributes and learning goals are articulated and communicated to students and others. In early 2003, the Faculty identified 25 learning goals that related to the university's five categories of graduate attributes and mandated the use of a unit outline template that, inter alia, required teachers to select up to six of these learning goals and link these to the assessments in their units.²⁴ This approach was problematic for units such as CLAW2205 because the Faculty list did not include all the first author's goals for her unit. Another problem was that although the learning goals were linked to assessment tasks, they were not linked to the assessment criteria.²⁵ The first author's uneasiness about the lack of alignment²⁶ between the learning goals, graduate attributes and assessment criteria and dissatisfaction with the implementation of the graduate attributes policy were raised with the Faculty and have been fully discussed in a previously published article.²⁷

B. The Current Faculty Approach to Graduate Attributes Policy

In October 2003, the Office of Learning and Teaching in Economics and Business (OLTEB) was established to provide learning and teaching support for both students and academics in the Faculty.²⁸ Having demonstrated a commitment to quality learning and teaching, and a willingness to act as a conduit between OLTEB and disciplinary colleagues, the first author was appointed the first Learning and Teaching Associate for the

²¹ Following this and other pilot studies, ReView is being used as the basis for an Australian Learning and Teaching Council (formerly Carrick Institute for Teaching and Learning) Priority Project entitled Facilitating Staff and Student Engagement With Graduate Attribute Development, Assessment and Standards in Business Faculties Australian Learning and Teaching Council,

<<u>http://www.altc.edu.au/carrick/webdav/site/carricksite/users/siteadmin/public/grants_priority_uts_graduate_summary_2007.pdf</u>> at 1 December 2008.

²² For a discussion of a 'constructive alignment' approach to teaching practice, see generally John Biggs, *Teaching for Quality Learning at University* (2nd ed, 2003).

²³ See the University of Sydney Institute for Teaching and Learning, *About the Unit of Study Evaluation System (USE)* <<u>http://www.itl.usvd.edu.au/use/</u>> at 1 December 2008.

²⁴ For further details, see Harvey and Kamvounias, above n 18, 35-37.

²⁵ For a discussion of the link between assessment criteria and learning in law, see: Kelley Burton and Natalie Cuffe, 'The Design and Implementation of Criterion-Referenced Assessment in a First Year Undergraduate Core Law Unit'(2005) 15 Legal Education Review 159; Richard Johnstone, Jenny Patterson and Kim Rubenstein, 'Improving Criteria and Feedback in Student Assessment in Law' (1996) 7 Legal Education Review 267; Nicolette Rogers, 'Improving the Quality of Learning in Law Schools by Improving Student Assessment' (1993) 4 Legal Education Review 113.

²⁶ Biggs, above n 22.

²⁷ Harvey and Kamvounias, above n 18.

²⁸ See University of Sydney, Office of Learning and Teaching in Economics and Business <<u>http://www.econ.usyd.edu.au/caleb></u> at 1 December 2008.

Discipline of Business Law.²⁹ The second author was invited by the Faculty's Associate Dean (Learning and Teaching) to give a presentation to the Faculty's Learning and Teaching associates to introduce ReView to academics in economics and business-related disciplines. The first author saw the potential for a new 'deep' approach to implementing graduate attributes policy using ReView.³⁰ She therefore enthusiastically agreed to participate in the semester one, 2007, pilot of ReView in the Faculty along with teachers from the disciplines of Government and Political Economy.³¹ In the extended 2008 ReView project, other disciplines within the Faculty and other business faculties at other universities were included.³² The business law unit that was to use ReView in 2007 and 2008 was CLAW2205, a senior elective with enrolments of about 60 students in each semester.

C. Conversations, Reflections and Implementation

About three months before the start of semester one, 2007, and the use of ReView by the first author, the authors engaged in conversations and reflections about constructive alignment and the importance of writing explicit assessment criteria for business law units.

During a series of meetings arranged through the OLTEB, the second author introduced the first author to four basic concepts that underpinned the design of the ReView system and its process of implementation. The first concept relates to the importance of assessment criteria. The anecdotal evidence from university teachers is that students pay little attention to learning goals simply listed in unit of study outlines. However, when learning goals and assessment criteria are linked, the assessment criteria have a crucial role in any attempt to embed graduate attributes within the curriculum. In the view of the second author, assessment criteria become an important 'fulcrum of engagement'³³ for both teachers and students. Teachers should therefore be encouraged to develop clear and explicit wording for assessment criteria and students should be encouraged to self-assess against these criteria.³⁴ The second concept relates to the reality that university academics often spend a great deal of time considering the teaching aspects of their work. It is therefore essential that in the development and refinement of explicit criteria linked to relevant attribute categories, teachers' aims and views be valued and their experiences respected. The third concept relates to the fact that all assessment activities contribute to the development of attributes, even exams. Therefore all types of assessments can be marked using criteria and all assessment criteria can be identified or designated as contributing to the development of a range of attributes. Lastly, whilst it is generally agreed that 'assessment is the most powerful influence on student learning in formal courses',³⁵ this idea can be seriously misinterpreted.³⁶ It should not necessarily lead to more tests and exams that focus students' attention on marks or grades. Instead, it should encourage university teachers to value the development of attributes enough to reference them in assessment criteria. In doing this it is more likely students will see attributes as an important aspect of their learning and may have the effect of reducing their focus on marks and grades.

²⁹ See University of Sydney, Faculty of Economics, *L&T Associates: Learning and Teaching Associates Network* <<u>http://www.econ.usyd.edu.au/learningassoc/</u>> at 1 December 2008.

³⁰ Harvey and Kamvounias, above n 18, 38-40.

³¹ For a discussion of the outcomes of the pilot study, see: Darrall Thompson, Lesley Treleaven, Patty Kamvounias, Betsi Beem and Elizabeth Hill, 'Integrating Graduate Attributes with Assessment Criteria in Business Education Using an Online Assessment System' (2008) 5(1) Journal of University Teaching and Learning Practice 34.

³² ALTC Priority Project, Facilitating Staff and Student Engagement, above n 21.

³³ For a discussion of the importance of developing explicit assessment criteria using ReView in previous studies see: Darrall Thompson, 'Integrating Graduate Attributes with Student Self Assessment', Robert Zehner and Carl Reidsema (eds), *Proceedings of ConnectED International Conference on Design Education, University of New South Wales, Sydney* (2007) 1.

³⁴ This is easily enabled in ReView.

³⁵ David Boud, Ruth Cohen and Jane Sampson (eds), Peer Learning in Higher Education (2001).

³⁶ John C McLachlan, 'The Relationship Between Assessment and Learning' (2006) 40(8) Medical Education 716-717

The lively conversations around these concepts elicited many examples from the classroom. Given broad agreement between the authors about these ideas, it was decided that ReView would be used in CLAW2205 using a 'bottom-up' approach to graduate attribute development, beginning with the assessment criteria for all assessment tasks.

As a starting point, the following questions were asked of the first author in the context of the intended learning outcomes of CLAW2205 and the broad graduate attribute categories that had been documented by the university:

What skills do you want students to develop, what knowledge do you want them to construct and what qualities do you want them to acquire as a result of their engagement with this particular assessment task you have designed?

Not surprisingly, writing assessment criteria that explicitly describe both the intended range and the level of students' performance proved to be a complex task. It was therefore helpful for the second author to provide examples of language used in describing aspects of students' work, such as clarity, thoroughness, accuracy, depth, appropriateness, professionalism and ethical approaches. The suggestion that parts of the task, and the knowledge and concepts, could be referenced in criteria settled concerns that subject matter or content would be lost if graduate attribute development became the focus of assessment.

In order to clarify the relationship between aspects of this 'learning design', the first author developed a chart for CLAW2205 that aligned intended learning outcomes with graduate attributes, teaching and learning activities, assessment tasks and assessment criteria.³⁷ The articulation and refinement of assessment criteria was soon found to be an ongoing process. This can be seen by the subtle yet important differences in the statement of criteria in the initial chart and in the chart appearing in the 2008 unit outline set out below (Table A). For example, there is an indication in the 2008 chart that some criteria are for self-assessment purposes only, but acknowledged as an important part of assessment and enabled by the ReView online system.

Having identified and refined the assessment criteria for all CLAW2205 assessments and linked these to intended learning outcomes and graduate attributes, the first author then proceeded to implement ReView. The next section describes ReView and the implementation process.

³⁷ The initial chart is available on the Faculty's website as an example of 'best practice'. University of Sydney, Office of Learning and Teaching <<u>http://teaching.econ.usyd.edu.au/UoS/library/CLAW2205Chart.doc</u>> at 1 December 2008.

CLAW2205 Intended Learning Outcomes	University of Sydney Graduate Attributes	CLAW2205 Student Learning Activities	CLAW2205 Assessment Tasks & Assessment Criteria				
Upon successful completion of this unit of study, students should be able to:			Participation and engagement 15%	Group research paper 15%	Oral presentation 15%	Quiz 15%	Individual Assignment 30%
 I. Identify and analyse legal issues with respect to restrictive trade practices and consumer protection law arising from given fact situations and real-world contexts. Resolve problems by applying the problems by applying the problems by and developing coherent arguments to support 	Research and Inquiry (R&I):Read tex materialsGraduates of the Faculty of Business will be able to create new understandingMake ow and sum and sum and sum and sum and sum and sum and sum and sum before le able to create new understandingAttend le through the process inquiry.Attend le tutorials.	t and other n notes maries ctures and te in ons.	* Clear identification of legal issues in the tutorial discussion questions and thoughtful analysis and application of the relevant law.	* Quality of analysis and focus in response to the research topic. * Quality of synthesis of legal materials and information relevant to the research topic. * Consistent support of written statements with appropriate legal authorities.	*Thoroughness of research and preparation as evident in the presentation.	* Accurate identification and application of relevant law to test questions.	* Clear identification of legal issue(s) in the news item. * Thoughtful analysis and application of the relevant law to the news item. * Consistent support of written statements with appropriate legal authorities.

Table A – Chart showing constructive alignment of the subject with explicit criteria for each task coded to attribute categories (headings also apply to the second none of the chart)

 3. Demonstrate 3. Demonstrate Information Isea research skills by locating and by locating and by locating and craduates of the craduates of the Faculty of Faculty of Facunty of Business will be al and other sources of Business will be al busines and to use information effectively in a ran evaluate and use legal materials and information. 	ole	Access materials provided online and in library for this unit. Undertake own research. Evaluate the usefulness of information found. Draft/edit/finalise written work for		* Ability to source a range of legal materials relevant to the research topic. * Consistent use of appropriate method of legal citation and referencing.		* Efficient sourcing of information from own structured notes collated from lectures, tutorials and readings (self-assessment only).	* Ability to source current news item that deals with the law on restrictive trade practices studied in this unit. * Consistent use of appropriate method of legal citation and referencing.
5. Communicate about the law, orally and in writing, to a professional standard.	CommunicationDescentionCommunicationParticipate in tut(C):Graduates of theFaculty ofParticipate in tutFaculty ofdiscussions.Economics andDiscussion forumBusiness willPlan and rehearserecognise and valuepresentation.nool for negotiatingDraft/edit/finaliseand creating newindividualunderstanding,assignment.interacting withcontribute to thetheir own learning.finalising of the greener.	rial nrial s.	* Clear and concise oral articulation of ideas and responses during tutorial discussions, using appropriate legal language. * Effective interaction with peers and tutor in relation to alternative ideas and legal arguments during tutorial discussions.	* Clear and concise articulation of ideas about the research topic in writing, using appropriate legal language. * Careful organisation of ideas so that argument develops logically through the paper. * Correctness of grammar, spelling, etc.	* Clear and coherent oral articulation of ideas about the news item using appropriate legal language. * Quality of engagement with peers. * Appropriate use of written and/or visual aids.		* Clear and concise articulation of ideas about the news item in writing, using appropriate legal language. * Careful organisation of ideas so that argument develops logically through the paper. * Correctness of grammar, spelling, etc.

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6. Plan and achieve goals and meet new challenges and deadlines.	Personal and Intellectual Autonomy (P&IA): Graduates of the Faculty of Economics and Business will be able to work independently and sustainably in a way that is informed by openness, curiosity and a desire to meet new challenges.	Prepare for lectures and tutorials. Prepare for test and oral presentation. Submit all assessments by due date.	* Consistency of participation in tutorial discussions over the course of the semester. * Thoughtfulness of approach to self- assessment in all CLAW2205 assessments.	* Management of own workload to meet submission deadline (self -assessment only).	* Appropriate use of the time allowed for the oral presentation.	* Efficient use of time to answer test questions under exam conditions (self-assessment only).	* Management of own workload to meet submission deadline (self- assessment only).
 Work with people from diverse backgrounds with inclusiveness, openmindedness and integrity, and manage the dynamics of working within a team. Appreciate the ethical and professional dimensions of their conduct within and beyond the classroom. 	Ethical, Social and Professional Understanding (ES&PU): Graduates of the Faculty of Economics and Business will hold personal values and beliefs consistent with their role as responsible members of local, national, international and professional	Attend lectures and tutorials. Participate in tutorial discussions. Work cooperatively with group members in and out of class. Complete/review Faculty of E&B online academic honesty module.	* Respectful interaction with peers and tutor during tutorial discussion. * Professional approach to tutorial attendance.	* Respectful and professional interaction with group members during group activities (peer assessment). * Quality and extent of contribution to group activities (peer assessment). * Adherence to principles of academic honesty (self-assessment).	* Professional approach to oral presentation arrangements (including submitting news item on time with appropriate referencing and adhering to presentation schedule).	* Adherence to principles of academic honesty (self-assessment only).	* Adherence to principles of academic honesty (self-assessment only).

III. A GRADUATE ATTRIBUTES JOURNEY CONTINUES: IMPLEMENTING THE REVIEW ONLINE ASSESSMENT FEEDBACK SYSTEM

A. A Brief Description of ReView

ReView is essentially a web-based automated marking sheet for the criteria-based assessment of student work. University or Faculty-level graduate attribute categories³⁸ are entered on ReView and teachers then enter their assessment criteria, taking care to match each criterion for each assessment task with the relevant attribute. Colour and symbol coding for each graduate attribute category (as shown in Figure 1) makes this alignment process clear to students and users.

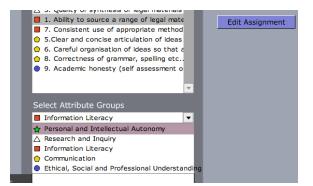


Figure 1 — Screenshot of the criteria coding section where the dropdown menu allows the selection of attribute groups to code all criteria with a colour code and symbol.

Teachers then use the vertical bars on the 'data-sliders' shown to the right in Figure 2 to assess each criterion relating to each assessment task (indicated by the vertical black lines in Figure 2). After teachers' marks are saved, the students' self-assessments appear against all criteria (indicated by the light blue triangles in Figure 2).

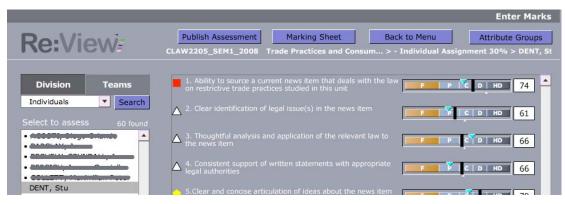


Figure 2 — Academics' marking screen: Students are selected on the list to the left and then the colour-coded criteria are referred to whilst sliding the vertical bars to generate percentage marks for criteria. Once marks are saved the students' selfassessments appear on the top edge of each data slider.

When teachers finish marking and decide to publish their assessments, students see a much simpler screen (Figure 3) that does not show the actual marks, but rather broad grey sliders

³⁸ University of Sydney Institute for Teaching and Learning, above n 11.

to indicate their performance against the criteria in terms of grades only.³⁹ Students also see their own self-assessment indicated by the light blue triangles at the top of each data slider as here in Figure 3.

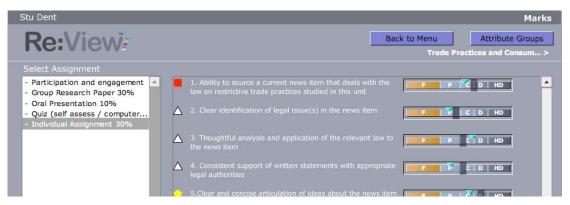


Figure 3 — Student feedback and self-assessment screen: Students can select each of their assignments on the list to the left and then the colour-coded criteria are referred to whilst sliding the triangles on the data sliders to self-assess. The grey bars on the sliders indicate the tutor's grading compared to their own.

When criteria for all assessment tasks are entered on ReView, a pie chart and bar chart are generated showing the attributes developed and assessed in the particular unit of study. Figure 4 indicates this for CLAW2205.

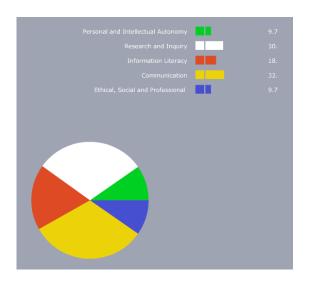


Figure 4 — View of criteria weighting for the complete Unit of Study against attribute categories: Personal and Intellectual Autonomy (green), Research and Inquiry (white), Information Literacy (red), Communication (yellow) and Ethical, Social and Professional Understanding (blue).

B. Discussion of Implementation Issues

The word 'implementation' implies a simple and mechanistic application of predetermined goals. This may be true in some contexts, but in the case of educational environments the inertia against change can be enormous, and in this pilot project the students demonstrated a fairly conservative reaction. For example, the authors agreed that students' self-

³⁹ On the 'data-sliders' shown to the right in Figures 2 and 3, F indicates a fail grade (0-49 marks); P indicates a pass grade (50-64 marks); C indicates a credit grade (65-74 marks); D indicates a distinction grade (75- 84 marks) and HD indicates a high distinction grade (85-100 marks).

assessment against criteria was important for their learning as reflective practitioners.⁴⁰ Whilst the authors were keen to use ReView to promote self-assessment to the students for their own educational benefit (as shown in Figures 2 and 3), it was clear from student feedback that not all students were convinced of the value of self-assessment. Although data on the number of students who self-assessed via ReView is yet to be analysed, a small number of students had negative responses as follows:

ReView was a waste of time;

Over emphasis of ReView and self assessment;

I wasn't aware that participation in ReView would affect our participation mark. Would have been good to have been informed of this.⁴¹

Another example of student conservatism arose with respect to the way feedback was given by ReView. The idea that percentage marks would not be displayed was challenging for all concerned. However, the authors agreed that a shift towards viewing criteria-based feedback without a percentage mark could be beneficial to students understanding in CLAW2205. The fact that CLAW2205 students were only facing these changes in one of their subjects made it difficult to convince them about benefits to their learning. The following student responses were typical:

The ReView system was useful but I still prefer marks against a set of criteria;

I prefer a 'numerical mark' on Blackboard for my assessment instead of a 'letter';

ReView was a bit misleading and deceptive.

The technical issues in implementation were also problematic. As this was a pilot scheme, no link with central university systems had been established. Students and staff therefore had to have different login usernames and passwords for this system. When students initially enrolled in or withdrew from CLAW2205, there was no automatic update of the class list on the assessment screen. When marks were required to be exported to the incumbent Blackboard system Gradebook, ideally a macro excel spreadsheet was needed to handle the upload. These issues, together with all the other usual issues that accompany the use of technology, meant that the first author often asked herself why she agreed to participate in this pilot. These technical issues were also of concern to students, some of whom commented as follows:

I found the feedback for assessments adequate but found the ReView system too complicated and fiddly to be effective;

ReView needs to be tweaked a bit;

Blackboard was a useful tool. I would like to have seen the 'view grades' sections used and updated throughout the course in addition to ReView.

⁴⁰ On the importance of self-reflection as a learning tool see, eg, David Boud, Enhancing Learning Through Self-Assessment (1995); David Boud, 'Sustainable Assessment: Rethinking Assessment for the Learning Society' (2000) 22(2) Studies in Continuing Education 151; and David J Nicol and Debra Macfarlane-Dick, 'Formative Assessment and Self-Regulated Learning: a Model and Seven Principles of Good Feedback Practice' (2006) 31(2) Studies in Higher Education 199. On self-reflection and legal education, see, eg, Kathy Mack, Gerry Mullins, Jan Sidford and David Bamford, 'Developing Student Self-Reflection Skills Through Interviewing and Negotiation Exercises in Legal Education' (2002) 13 Legal Education Review 221; and Judith McNamara, Rachel Field and Natalie A Cuffe, 'Designing Reflective Assessment for Effective Learning of Legal Research Skills in First Year' (Paper presented at the First Year in Higher Education Conference, Hobart, Tasmania, July 2008).

⁴¹ Students were informed of this in the unit outline. See Table A and the assessment criteria for 'Participation and Engagement' that includes 'thoughtfulness of approach to self-assessment in all CLAW2205 assessments.'

IV. RESEARCH OUTCOMES

ReView has now been used in two semesters for CLAW2205 (2007 and 2008). Students have not been surveyed specifically on their responses to ReView but the standard end of semester Unit of Study Evaluation (USE) surveys have elicited some useful data. Student feedback was available in both quantitative and qualitative form each time ReView was used and compared to that provided in the year preceding the introduction of ReView (2006). The number of students enrolled in CLAW2205 in each of the three years was about 60 and it should be noted that the USE scores in CLAW2205 were already historically high for many of the questions asked.

Table B indicates the percentage of students in 2006, 2007 and 2008 that agreed or strongly agreed with USE questions relevant to assessment processes.

Table B – Chart showing the percentages of students to agree or strongly agree with standard Unit of Study Evaluation questions. (Scores in the 80-90% range are considered to be high ratings).

Faculty of Economics and Business Unit of Study Evaluation (USE) CLAW2205 Trade Practices and Consumer Law		2006 Pre- ReView	2007 ReView Pilot	2008 ReView as part of ALTC project
Q1. The learning outcomes and expected standards of this unit of study were clear to me.	strongly/agree:	97.5%	90.9%	90.6%
Q3. This unit of study helped me develop valuable graduate attributes (eg, research inquiry skills, communication skills, personal intellectual autonomy, ethical, social and professional understandings, information literacy, etc).	strongly/agree:	84.6%	81.8%	88.9%
Q8. Feedback on assessment assisted my learning in this unit of study.	strongly/agree:	56.4%	73.8%	80%
Q10. Online learning (eg, with Blackboard) supported my learning in this unit of study.	strongly/agree:	70.3%	79%	90.9%
Q12. Overall I was satisfied with the quality of this unit of study.	strongly/agree:	97.4%	92.9%	94.4%

It should be noted that the data was provided by three different groups of students, so care needs to be exercised when making comparison between these scores. CLAW2205 was also not exactly the same each year with regard to the configuration of assessment tasks and the instructions given to students about them. However, it is worth noting that the three questions (3, 8 and 10) relating specifically to attributes, feedback on assessment and online learning all show some improvement from 2006 to 2008.

The USE survey questions do not refer expressly to ReView, so student written comments about ReView on the survey forms were entirely unsolicited.⁴² As CLAW2205 was the only unit of study in which the students would have used ReView, it is interesting that they mentioned it at all. In the 2007 feedback, there were 10 comments regarding the use of ReView; in 2008 there were 21 comments, indicating perhaps that students were more aware of ReView in its second iteration. In 2007, the comments were almost evenly divided between positive (4) and negative (6), whereas in 2008, the comments were overwhelmingly positive (15).

When asked to comment on whether learning outcomes and standards were clear to them (Q1), student responses that referred to ReView were as follows:

Extremely so. The learning outcomes were emphasised thoroughly before all assessments and the ReView system emphasised them also;

The use of ReView clearly demonstrated learning outcomes/graduate attributes and these were reinforced by [lecturer];

ReView told me, even though @ first I didn't want to use it.

It is interesting to note that all comments on this point were positive and it would appear that the assessment criteria were identified by students as being descriptive of the learning outcomes.

Also all positive were student comments about whether CLAW2205 helped them develop graduate attributes (Q3): 'Student ReView was a good example'; 'ReView made me more aware'; and 'This was effectively shown through the "ReView" online program.'

Student views on whether feedback on assessments assisted their learning (Q8) were mixed. In addition to the negative comments about the availability of grades only and the problems with the software referred to in Part B of Section III, the following were typical of the positive responses:

Yes ReView helped me improve on weaker areas.

ReView was great!! (smiley face).

Good computer feedback system.

ReView and good detailed comments on assessments.

ReView had a nice rating system that covered multiple factors.

As discussed above, there were some technical problems with the interaction of Blackboard and ReView. Nonetheless, when asked whether online learning supported learning in CLAW2205 (Q10), a number of students specifically referred to ReView in the following terms indicating that they see engagement in self-assessment and assessment for each graduate attribute as part of their learning: 'Really liked online ReView'; 'Use of ReView was good'; 'ReView was very helpful.'

V. CONCLUSIONS FROM THE JOURNEY SO FAR

As a result of the process that both authors experienced in this case study or 'journey', there are a number of important reflections to take us forward in further research.

Students had mixed reactions as to whether feedback on assessment using ReView assisted their learning. Their concerns about the availability of grades only on ReView have prompted further refinement and implementation. For example, in future semesters, marks will be published a few days after the publication of criteria-based feedback on ReView.

The basic idea underlying ReView, namely that assessment criteria are the key to embedding graduate attributes within the curriculum, is clearly an important 'fulcrum of

⁴² It is interesting to compare similar data from other units of study involved in the 2007 pilot study. See Thompson et al, above n 31.

engagement' for both teachers and students. Assessment criteria therefore need to be relevant, explicit and effectively communicated. It is also clear that the development of criteria should be viewed as an ongoing work in progress, as this has been a significant part of the journey for the first author. A database of criteria for different types of assessments would be a useful resource for teachers when formulating criteria specific to an individual assessment task.

University teachers also need time and opportunities for meaningful discussions to allow them to become clear about the concepts involved in a shift from content delivery to the development of students' attributes. In a high-pressure university environment where research is given precedence, academic development and other support for teachers is vital in facilitating the integration of graduate attributes into curricula. Whilst this paper refers to a 'bottom-up' approach based at assessment task level, it is clear that this would be futile without whole-institution multi-level leadership regarding graduate attribute integration.

Implementing new technology to assist learning and teaching takes time, and both students and teachers need support and clear explanations of why the technology will be useful. ReView assisted with the embedding of graduate attributes in CLAW2205 but could similar results have been achieved without it? Certainly, the first author's journey could have ended with the development of the chart that aligned intended learning outcomes with graduate attributes, teaching and learning activities, assessment tasks and assessment criteria (Table A). But then, how would students know about their progressive development of graduate attributes and how would teachers be able to evidence and assure their students' learning? ReView enables this easily and directly. ReView certainly acted as a catalyst to conversations, reflections and implementation stages in this study. It also facilitated student engagement with the curriculum through online self-assessment and delivery of feedback on student assessment.

In regard to further study, two areas emerge. The first relates to benchmarking, standards and mutual understanding of grade descriptors.⁴³ ReView could potentially be used to engage lecturing staff, tutors and students with these issues, and particularly the standards required at different levels or years of study. The second concerns student self-assessment and how students can be encouraged, or perhaps even rewarded, for their engagement with this feature as an important attribute for lifelong learning and reflective practice.⁴⁴

⁴³ See, eg, Berry O'Donovan, Margaret Price and Chris Rust, 'Developing Student Understanding of Assessment Standards: A Nested Hierarchy of Approaches' (2008) 13(2) *Teaching in Higher Education* 205.

⁴⁴ CLAW2205 students' experiences with self-assessment using ReView will be discussed and analysed in a future article.