

Students' responsiveness to adaptively released assessment feedback. But when do I get my mark?

Final report: 2016

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< <http://assessment.avondale.edu.au/toolboxtat> >

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List of acronyms used

AARE	Australian Association for Research in Education
AQF	Australian Qualifications Framework
ARAF	Adaptively Released Assessment Feedback
CASTL	Centre for Advancement of the Scholarship of Teaching and Learning
HEPP-QN	Higher Education Private Provider Quality Network
ICT	Information and Communication Technologies
LMS	Learning Management System
OLT	Australian Government Office for Learning and Teaching

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Executive summary

Project context

The project was implemented at Avondale College of Higher Education, a small private provider with campuses in Lake Macquarie and Sydney. Providing for approximately 1500 enrolled students, from VET to PhD, the College provides a unique context for a Seed Project. The 120 year old College has a history of engagement with teaching and learning, consistently scoring highly in the Good University Guide for the teaching. Avondale offers courses in Education, Theology, Humanities, Nursing, Business, Science and Creative Arts.

The project was run through the College's Centre for the Advancement of the Scholarship of Teaching and Learning (CASTL). CASTL provides a unique opportunity for conducting this project as it provides all staff development within the College; the Centre provides a focus on the scholarship of learning. CASTL is a natural home for the project, providing staff engagement with workshops and resources emanating from the study.

The research built on previous work (Butler, 1987,1988; Butler & Nisan, 1986) which identified how student learning can be affected by the provision of qualitative and quantitative assessment feedback. The project also extended a previous pilot study, conducted at Avondale in 2014, for the purpose of better understanding the impact of qualitative and quantitative feedback on the quality of student learning and their engagement with assessment tasks (Northcote, Williams, Fitzsimmons, & Kilgour, 2014).

Aim of the project

The project aimed to explore issues that impact on students' use of assessment feedback. This was achieved through the development of adaptively-released assessment feedback (ARAF) strategies during which the type, sequencing, timing, distribution and content of assessment feedback were trialled. The aim was achieved through the following goals:

1. investigating how the variation of presentation of qualitative and quantitative assessment feedback influenced students' future learning intentions;
2. determining if a student's response to receiving adaptively-released assessment feedback (ARAF) resulted in metacognitive learning;
3. determining if there is a relationship between the learner's experience over time at university and their responsiveness to ARAF and determining if a student's seniority at university changes the way they respond to assessment feedback; and
4. identifying the implications of using an ARAF approach.

Of these elements, points 1, 2 and 4 were successfully achieved, while issues arising throughout the project prevented clear outcomes on point 3.

Project approach (in brief)

The project's methodological approach was driven by the overall aim of the study: to develop more effective assessment feedback by evaluating the impact on student behaviour of variations in timing, the release sequence and the expectation of student responses to qualitative and quantitative forms of feedback. To gain insight into students' responsiveness to varied forms of ARAF, the research approach was based on the precepts and operations of the qualitative paradigm. The project was purposefully designed to ensure it could be applied in other higher education institutions, despite their choice of online LMS.

The data were gathered from four groups from Avondale College of Higher Education:

1. Interviews of academic teaching staff from the three units of study.
2. Survey and focus groups with undergraduate first year students.
3. Survey and focus groups with third year undergraduate students.
4. Survey and focus groups with students in a Masters course.

Project outputs/deliverables/resources

- 1) Design of ARAF strategies informed by data from students and lecturers.
- 2) Implementation of ARAF strategies across three courses.
- 3) Collection and analysis of data from students and lecturers responding to ARAF.
- 4) Development of an ARAF strategies Toolkit, the *Transformational Assessment Toolbox* (available at <http://assessment.avondale.edu.au/toolboxat>).
- 5) Development of an ARAF strategies Workshop (available at <http://assessment.avondale.edu.au/toolboxat/workshop.html>).
- 6) Publication of one refereed conference paper, see [Appendix M: Refereed conference abstract \(AARE\)](#), submission of one refereed journal article, see [Appendix N: Abstract from submitted refereed journal article \(Active Learning in Higher Education\)](#) and the future refereed journal article for *Innovations in Education and Teaching International*.

Impact of the project

Avondale is a relatively small institution so the impact of a project such as this one has had a major impact on staffs' appreciation of assessment feedback and how engaging students more fully through a managed feedback process can assist student learning. The College, in part because of this project, has decided to make student assessment the primary push for the staff development in 2016 through staff development programmes and an online toolbox which showcases the ARAF project and its outcomes. The project has created a groundswell of interest at the College and across other institutions including Charles Sturt University and Alphacrucis College, where workshops will be conducted.

Students who were the recipients of the ARAF initiative were open in their discussion about the impact of the initiative on their learning. They were predominantly supportive of its

ability to provide the motivation to do further assessment tasks differently, and also to approach their learning and the receipt of assessment feedback differently. The approaches gave staff the confidence to approach assessment feedback in a more creative and student learning focussed manner. Essential features of ARAF include separating qualitative and quantitative feedback; designing assessment tasks to inform future assessment; encouraging student self-assessment; and providing clear communication about the processes and purpose of ARAF strategies to students.

To date, the materials the team has submitted and presented at both conferences and workshops have been very positively received, and colleagues have been supportive of the ARAF initiative. The project team has met the stated outcomes of the grant but there is still further opportunity to communicate the findings of the initiative and the research findings. As such, two further journal articles reporting on the development of the ARAF strategies and the outcomes of the study are currently being drafted for submission.

Key findings or recommendations

The project provided insights into students' approach to the ARAF initiatives. Stage 1 established the type and timing of feedback are key concerns for students which were both consistent with Bayerlein's findings (2014): a timely post-date increases effectiveness and also feedback given close to the end of the semester produces a double disincentive to active engagement. Another key finding of stage one was its synergy with previous research linking emotive responses to feedback with levels of engagement and quality feedback; this equates to a student response of disappointment with grades deterring students from engaging with qualitative comments. This is consistent with Yang and Carless' (2013) finding that the social-affective dimension of feedback impacts student motivation.

The second and third stages of the study identified a range of considerations in the design of future ARAF strategies. Firstly, diverse cohorts require ARAF strategies not to be standardised or general; they need to be targeted to the needs and resources of individual cohorts, and implemented within the Learning Management System (LMS). Also thoughtful planning and predation of the ICT component of ARAF strategies is vital. Another consideration in promoting the 'feed forward' aspect of assessment is the choice of feedback type because students have difficulty remembering and applying qualitative feedback in future assessments when they are separated by a significant time lapse (Irwin, Hepplestone, Holden, Parkin, & Thorpe, 2013, pp. 53-54).

The study established that it was important to increase students' capacity for self-assessment, and to provide the tools for students to judge their understanding of criteria and standards. This acknowledges that such knowledge is not always tacitly acquired by students and needs development (Boud, Lawson, & Thompson, 2015), and positions the feedback assessment as learning.

Narrative

Introduction

This project built on previous research highlighting the importance of student engagement and participation in tertiary assessment feedback practice. It acknowledged the student as key to closing the 'feedback loop', and promoted metacognitive reflection on individual learning. The project extended previous research parameters by surveying students at undergraduate and postgraduate levels of study to identify qualitative shifts in attitudes to assessment feedback. By offering adaptively-released qualitative and quantitative feedback to students soon after they submitted their assessment tasks for evaluation, this investigation aimed to minimise ego-involving feedback and expand the capacity of metaphase learning through the requirement of a formal student response to adaptively released assessment feedback (ARAF). While the project also aimed to explore the relationship between a learner's seniority at university and their responsiveness to ARAF, sufficient evidence was not gathered throughout the project to support claims regarding this relationship. The project culminated in the development of innovative strategies that both assisted and empowered students in changing attitudes and intentions to modify their future response to assessment feedback.

Aim of the project

This project aimed to develop more effective assessment feedback by evaluating the impact on student behaviour of variations in timing, the release sequence and the expectation of a student response to qualitative and quantitative forms of feedback. This was achieved through the development of adaptively released assessment feedback (ARAF) strategies.

In targeting this outcome, the team investigated whether: a) the variation of presentation of qualitative and quantitative assessment feedback influenced students' future learning intentions; b) a student's response to receiving adaptively-released assessment feedback (ARAF) resulted in metaphase learning; c) there is a relationship between the learner's experience over time at university and their responsiveness to ARAF and determining if a student's seniority at university changes the way they respond to assessment feedback; and d) identifying the implications of using an ARAF approach.

Of these elements, points a, b and d were successfully achieved, while issues arising throughout the project prevented clear outcomes on point c.

Project context

Avondale College of Higher Education have approximately 1500 students enrolled in a range of undergraduate and postgraduate degrees in Arts, Education, Business, Science, Theology and Nursing. The College provided a unique environment for the implementation of the

ARAF initiative. It has a long history of interest in teaching and supports low student to staff ratios so as to provide a positive learning environment for students. The staff involved in this project represent only a portion who have expressed interest in looking at assessment and its impact on learning.

The College offers courses from VET certificates and diplomas through to PhD level, including a range of undergraduate and postgraduate coursework degrees. For this project two undergraduate and one postgraduate course were chosen as they provided the situation where classes would include some of same students in semesters 1 and 2, ensuring continuity of participants throughout the project.

By building on previous research which evidenced how the provision of qualitative and quantitative feedback impact on students' engagement with assessment feedback (Butler, 1987, 1988; Butler & Nisan, 1986), the project examined how developmental and diagnostic assessment feedback can enhance the quality of student learning through the development of innovative models of ARAF to undergraduate and postgraduate students. Avondale provides an environment with small student numbers that is able to readily adopt initiatives and to redress issues which occur. The students in each of the units all attend the same classes allowing a supportive setting for students engaged in change, yet allowing a reactive environment if issues arise where communication is effective. The lecturers involved in the implementation of the ARAF initiatives all had very high teaching satisfaction scores and all rate high in the area of communication. Students invariably have confidence in confronting change in a situation that is supportive and responsive to issues when raised; even supportive words in class help in these situations. An environment that instils confidence is paramount in a setting of challenging change.

Previous research about assessment and feedback

The design, completion and evaluation of student assessment in universities has long been a contentious issue (Boud & Molloy, 2013). Furthermore, the effectiveness of assessment feedback and its retention and use by students requires more investigation (Buckley, 2012). Added to and possibly related to the well-documented difficulties associated providing effective feedback to students about their assessment efforts, assessment-focused items typically score poorly on student evaluation and course evaluation questionnaires (Pickford, 2010; Wren, Sparrow, Northcote, & Sharp, 2008). Further, research suggests students are often confused about the purpose of feedback and how to best use it (Cochrane and Withell 2013; Maggs 2014; Sopina and McNeill 2015).

Despite its thorny nature, assessment "powerfully frames how students learn and what students achieve" (Boud & Associates, 2010, p. 1). In their report about assessment reform in higher education, Boud and his associates devote one of their seven propositions for assessment reform to feedback and its role in improving student learning. This proposition recognises that marks and grades alone do not provide adequate information for students

to improve their learning, yet they gain the highest level of student attention. This project aimed to operationalise this proposition by developing and enacting strategies that enable students to access feedback about their assessment tasks in a sequence that places the quality of their learning before their curiosity about their marks and grades. In this way—the metaphase of learning—we aimed to further enact assessment for learning (Brown, 2004-2005) practices which encompass the stage of the assessment cycle when students receive feedback. The importance of the ongoing nature of feedback has also been identified by The Higher Education Academy in the UK (2012) in their report, *A marked improvement: Transforming assessment in higher education*, which pinpoints the timing of assessment feedback as an area that requires improvement in higher education.

Previous studies have investigated how the quality of feedback about assessment tasks impact on the quality of student learning, especially in relation to motivation. In their investigation into the impact of grades on intrinsic motivation, Pulfrey, Darnon and Butera (2013) explain that the "use of grades to motivate constitutes an unresolved theoretical controversy" (p. 39). The social-affective dimensions of student learning also impact on the student learning experience (Yang & Carless, 2013). This focus on the quality of feedback and how it impacts on the various aspects of student experience has built upon previous research, conducted during the 1980s by Butler and Nisan (Butler, 1987, 1988; Butler & Nisan, 1986), which found that the provision of qualitative and quantitative feedback has a direct impact on students' learning. Their research also investigated the possibility of not giving grades at all (Butler & Nisan, 1986). From this research, the effects of the provision of various types of feedback on students' motivation levels were found to be particularly influential. The theme of questioning the value of assessment grades in general has been continued by Kohn (Kohn, 2000, 2011) and, more recently, the impact of assessment feedback has been investigated in higher education (The Higher Education Academy, 2012), especially in relation to how academic staff can enable students to use feedback more effectively. Mechanisms, strategies and the timing by which feedback can be provided have been investigated over the last few years (Australian Learning and Teaching Council, 2009) but it is the nature of the feedback and the progressive provision of feedback that is being investigated in this project. As outlined by Bell, Mladenovic and Price (2013), the important issue is what students do with their assessment feedback once it has been provided.

Other studies provided useful guides on areas that needed careful management in the project design. ICT was flagged by Sopina and McNeill (2015) as playing an integral role in improving consistency for submission and feedback processes. They also found that online submission was effective in reducing anxiety for students who otherwise would have had to travel to submit an assignment. Ongoing student access to feedback through an online depository was also highlighted as important to promote ongoing or future engagement with feedback (Irwin et al. 2013). A range of studies emphasised timeliness of feedback as a key factor in promoting positive engagement with feedback (Irwin et al. 2013; Maggs 2014; Parkin et al. 2012; Rae & Cochrane 2008), although no guidelines were given as to what

constitutes 'timely' feedback. Rae and Cochrane (2008) further found that it is important to give students the opportunity to 'feed forward' into future assessments if possible. Another issue arising from the literature is students' confusion about the purpose of feedback, and therefore the need to fully inform them about the reason for the staged release of feedback (Irwin et al., 2013); otherwise students may see the innovation as an unnecessary waste of time and resources.

A pilot study was undertaken at Avondale in 2014 to determine how the provision of qualitative and quantitative feedback has influenced the quality of student learning and their engagement with the assessment task. This study established that students' behaviour post receipt of assessment changed with the type and timing of feedback. The 2014 pilot study found that students' responses to receiving qualitative feedback were more focused on constructive issues relating to improvement of their learning whereas their responses about receiving quantitative marks and grades tended to be less future-focused and more negative (Northcote et al., 2014). The findings of the pilot study informed the design of this research project.

This research project contributes to a better understanding of how qualitative and quantitative feedback is received by undergraduate and postgraduate students, and the impact this feedback has on their learning and on their perceptions of themselves as learners. Through focusing on the potential "action" that may be catalysed by receiving feedback, the value of which has also been noted by Parkin, Hepplestone, Holden, Irwin and Thorpe (2012), this project explored how best to close the loop of assessment by enabling students to modify their behaviour, more effectively engage with feedback and thus to improve their learning from the assessment experience and its subsequent feedback.

This research took up some of the challenges offered by Boud and Molloy (2013) to reconsider "the way that we think about how learners operate within a course" (p. 710) and to rethink the concept of feedback "from a prime focus on timely and detailed information to one in which the focus is on the appropriateness of timing and the nature of information for fostering self-regulation" (p. 711). The project also responded to Yang and Carless' (2013) call for more research to be conducted into "innovative ways of arranging the structural dimension" of feedback, contributing to the appeal for "reports of institutional attempts to adjust structures to support the enhancement of feedback practice" (p. 294).

The process of delivering feedback was investigated to determine the outcomes of receiving feedback on the quality of student learning, especially focusing on the impact of adaptively releasing feedback and grades according to the nature of the feedback (Parkin et al., 2012). By improving the way in which feedback is structured, provided and received by students, this project aimed to increase student satisfaction about assessment feedback and to improve the useful impact that feedback has on student learning. This project shifted the focus on feedback from teacher-distributed to student-received and produced

recommendations about how to replicate similar practices in other undergraduate and postgraduate learning contexts.

Adaptively released assessment feedback (ARAF)

The Avondale-developed ARAF model, used with undergraduate and postgraduate students, examined how developmental and diagnostic assessment feedback can influence students' intentions to modify their future learning approaches. Previous projects that investigate the efficacy of ARAF strategies have been limited to undergraduate (Irwin et al., 2013; Parkin et al., 2012) and postgraduate students (Northcote et al., 2014; Sanchez & Dunworth, 2015) respectively. The project differs from previous studies in its coverage of three case study contexts. It is also distinguished by its equal emphasis on the cognitive, affective and behavioural domains; the time given for students to reflect on their assessment feedback; and clear intentionality to scaffold the metacognitive process for students throughout the assessment event. As such, the intervention aims to develop students' "self-regulation through inducting students to the multiple purposes of feedback and their active role in generating, processing and using feedback" (Yang & Carless, 2013, p. 293). It also seeks to address students' confusion as to the purpose of feedback (Cochrane & Withell, 2013; Maggs, 2014; Sopina & McNeill, 2015), and facilitate a process in which the feedback loop is re-conceptualised from a closed circuit to an ongoing—if iterative—supported process of learning.

The Avondale project involved investigating student responsiveness to receiving ARAF about their task performance. When assessment feedback is adaptively released, students receive the feedback in portions according to type and purpose. For example, quantitative feedback in the form of numeric marks and rating scales may be provided separately from qualitative feedback which may be provided in the form of annotated comments on students' assessment tasks. The following metaphase (referred to as metaphase learning) is characterised by the students' ownership of their learning during which they articulate their intentions to modify their future learning practices, based on the feedback they receive about their assessment task.

Project approach

The project's methodological approach was driven by the overall aim of the study: to develop more effective assessment feedback by evaluating the impact on student behaviour of variations in timing, the release sequence, and the expectation of a student response to qualitative and quantitative forms of feedback. To gain insight into students' responsiveness to varied forms of ARAF, the research approach was based on the precepts and operations of the qualitative paradigm. Because some of the data were gathered using available functions within the institution's Learning Management System (LMS), both lecturers and students in the study were using similar forms of electronic communication. The methods used in this project were selected to enable students to increase their understanding of how to utilise assessment feedback to improve their learning and the methods also allowed

university lecturers to enhance their understanding of how to provide effective feedback to students through assessment design and delivery. The project's approach was purposefully designed to ensure it could be applied in other higher education institutions, independent of their choice of online LMS.

Prior to the implementation of the study reported here, a pilot study was conducted in 2014 (Northcote et al., 2014), to determine how the provision of qualitative and quantitative feedback influenced the way in which postgraduate students enrolled in a Masters level coursework unit engaged with feedback received about their assessment tasks. Findings from the pilot study indicated that students' learning behaviour, after they received assessment feedback, changed according to the type of feedback provided and when it was provided. That is, students' responses to receiving qualitative feedback tended to be focused on how they would specifically improve their learning in the future. On the other hand, their responses to quantitative feedback were more reflective of their opinions of themselves as learners and more general in nature. The methods used and the findings that emerged from the pilot study served to guide the overall methodology and methods used in the project reported in this report.

The participants for this study were made up of four groups. All groups were drawn from Avondale College of Higher Education:

1. Academic teaching staff (lecturers and tutors) from three units of study in three different courses, including undergraduate and postgraduate degrees;
2. Undergraduate students in their first year of study;
3. Undergraduate students in their third year of study; and
4. Postgraduate students in a Masters course.

During Semester 1 2015, students in three cohorts of students at Avondale College of Higher Education and their lecturers were invited to join the project from:

1. a first year undergraduate unit in a Bachelor of Arts degree;
2. a third year undergraduate unit in a Bachelor of Education degree; and
3. a postgraduate unit in a Master of Teaching degree.

Students in each of these cohorts were consulted in focus groups about their current use of assessment feedback and their responses to the possibility of receiving assessment feedback in adaptively-released methods. During the focus groups, the student-participants were asked questions such as:

- Without using lecturer or unit names, what type of assessment feedback do you receive from your lecturers about your assessment tasks?
- What type of assessment feedback has been most useful to your learning?
- When you receive assessment feedback from your lecturers about your assessment tasks, do you use the feedback to improve your learning?

Lecturing staff who taught each of the three cohorts were asked similar questions, such as:

- What type of assessment feedback do you think is most helpful to give to students about their assessment tasks?
- What type of assessment feedback do you think is most helpful to students' learning?
- When students receive assessment feedback from you about their assessment tasks, how do they use the feedback to improve their learning?

Data gathered from these focus groups were analysed to inform the development of adaptively-released assessment feedback (ARAF) strategies. From this analysis, a set of practical recommendations were developed which guided the construction of three different types of specific ARAF strategies in Phase 2 of the project. The course specific strategies were tailored to suit each of the student cohorts and units.

The ARAF strategies were implemented in Phase 4 of the project, followed by data collection processes which sought student and lecturer feedback about the use of these strategies. These data were analysed in Phase 5 and the results of this analysis, as well as previous analyses, were used to develop an online professional development resource, the *Transformational Assessment Toolbox*, and a professional development workshop, *Transformational Assessment: Rethinking the Feedback Process*, which is currently being delivered in on-campus and online formats. During Phases 5-6, the findings and outputs of the project were documented and disseminated in the toolbox, the workshop and in reports and scholarly articles.

Details of the project phases, across a one year period, are outlined in Table 1.

Table 1. Timeline: Project Stages, Phases and Processes

Stage	Project phase	Dates	Project process
1	Phase 1: Establishing the project	February – March 2015	<ul style="list-style-type: none"> • Defined student populations • Prepared and submitted ethics documents
	Phase 2: Data collection and analysis (1)	April – June 2015	<ul style="list-style-type: none"> • Created focus group questions targeted students' current use of qualitative and quantitative feedback • Facilitated focus groups across three units, facilitated focus group with unit lecturers • Analysed data to inform creation of ARAF strategies

Stage	Project phase	Dates	Project process
2	Phase 3: Design of ARAF strategies	June – August 2015	<ul style="list-style-type: none"> Developed guidelines to inform development of ARAF strategies Developed of ARAF strategies tailored to each of the 3 units Identified appropriate assessments where ARAF could be implemented Completed and submitted AARE conference paper detailing analysis of phase 1 of the project
	Phase 4: Implementation of ARAF strategies Data collection (2)	September – November 2015	<ul style="list-style-type: none"> Informed students of the process of ARAF strategies Implemented ARAF strategies for one assessment task within each of the three units Collected student and lecturer feedback regarding usefulness of ARAF strategies
3	Phase 5: Data analysis (2)	December 2015 – January 2016	<ul style="list-style-type: none"> Presented AARE Conference paper Analysed data from student and lecturer feedback Continued working on journal articles
	Phase 6: Dissemination	February 2016 onwards	<ul style="list-style-type: none"> Developed ARAF strategy toolkit and workshop Submitted <i>Active Learning in Higher Education</i> journal article Dissemination of project findings Further preparation of scholarly article for <i>Innovations in Education and Teaching International</i> journal

Project outputs and findings

To achieve the overall aim, the project was designed to achieve four goals, which were directly aligned to four project outcomes and four deliverables and dissemination methods, as outlined in Table 2. All but one of the goals below, along with their associated outcomes and deliverables, have been achieved. However, the third goal (c), was only partially achieved. This goal was to determine if there was a relationship between the learner's experience over time at university and their responsiveness to ARAF, and to determine if a student's seniority at university changes the way they respond to assessment feedback. Because there were some unforeseen difficulties with gathering data from the postgraduate cohort (for more details, see [Factors that impacted the success and impediments of the project](#)), the project researchers do not believe that they had sufficient evidence from the data gathered throughout the project to claim that the relationship between learners' experience over time at university and their responsiveness to ARAF could be documented within the boundaries of this project. This aspect of the project has been recommended as a future direction for research (for more details, see [Future research directions](#)).

Table 2: Project Aim, Goals, Outcomes and Deliverables

Overall project aim: To explore issues that impact on the way in which students use assessment feedback for their learning purposes		
Goals	Outcomes	Deliverables & Dissemination
a) To investigate how the variation of presentation of qualitative and quantitative assessment feedback influences student learning	Documented evidence of how student learning is influenced by the variation in presentation of qualitative and quantitative assessment feedback.	Contribution to Final Project Report. Documented examples of qualitative and quantitative assessment feedback.
b) To determine if a student's response to ARAF results in metaphase learning	Documented evidence of strategies adopted by students in metaphase learning in response to ARAF.	Contribution to Final Project Report. Journal article on strategies adopted by students in metaphase learning in response to ARAF.
c) To determine if there is a relationship between the learner's experience over time at university and their responsiveness to ARAF and to determine if a student's seniority at university changes the way they respond to assessment feedback	Documentation of the relationship between learners' experience over time at university and their responsiveness to ARAF.	Contribution to Final Project Report. Journal article on students' experience at university and their effective utilisation of assessment feedback.
d) To identify the implications of using an ARAF approach	Trial approach to provision of feedback in a Learning Management System to facilitate student engagement with assessment feedback	Contribution to Final Project Report. Journal article to report on overall project outcomes. Online toolbox of ARAF strategies for use in an LMS. Development and delivery of workshop at Avondale and Charles Sturt University (Avondale's partner) with future rollout to other universities.

Key findings

The key findings of the project can be explained within two categories: 1) the design of ARAF strategies; and 2) the responses of students and staff to the use of ARAF strategies. These findings have been reported in more detail in three scholarly publications which are in various stages of writing, submission and publication. See [Project publications](#) below for more details. The findings are also integrated throughout the online toolkit, the *Transformational Assessment Toolbox*, and the workshop, *Transformational Assessment: Rethinking the Feedback*. See [Resources and outputs](#) below for more details.

The design of ARAF strategies

From the data gathered throughout Stage 1 of the project, practical guidelines were developed to inform the design of adaptively-released assessment feedback (ARAF) strategies. Essential features of ARAF include separating qualitative and quantitative feedback; designing assessment tasks to inform future assessment; encouraging student self-assessment; and providing clear communication about the processes and purpose of ARAF strategies to students.

This project developed and employed adaptively released assessment feedback (ARAF) strategies to disrupt students' learned responses to, and facilitate deep engagement with, feedback. This was achieved by separating qualitative and quantitative feedback; designing assessment tasks to inform future assessment; encouraging student self-assessment; and providing clear communication about the processes and purpose of ARAF strategies to students.

These guidelines were then used by each of the lecturers involved in the study to design customised ARAF strategies for their three respective courses of study (see [Appendix F](#), [Appendix G](#) and [Appendix H](#)).

Pre-semester
<p>Decide on:</p> <ul style="list-style-type: none">• type and amount of feedback to be given (e.g., quantitative scores, qualitative comments, diagrams, verbal feedback, audio feedback, peer feedback, diagrams, annotations, written feedback, overall comment, format of feedback given to individuals and the whole cohort);• location of feedback (e.g., on rubrics, on assessment task, via email, on LMS);• rubric design (e.g., availability, weightings, length, criteria);• timing of feedback (e.g., time taken to return feedback to students after assessment tasks are submitted, when individual feedback is distributed to individual students and to the cohort); and• sequencing of feedback (e.g., verbal feedback followed by written feedback, qualitative feedback before, after or with quantitative feedback). <p>Create:</p> <ul style="list-style-type: none">• instructions for completing assessment task; and• rubric content, structure and provision method.

During the semester (provision of feedback)
<p>Decide on:</p> <ul style="list-style-type: none"> • self-assessment activity - whether students are required to submit a set of responses to reflection questions with their assessment task; • who will provide assessment feedback (e.g., lecturers, other students, other experts); and • how student responses about receiving feedback will be gathered (e.g., an online survey or paper format, analysis via LMS learning analytics). <p>Communicate to students:</p> <ul style="list-style-type: none"> • how rubric will be used by students (e.g., submit with assessment task, as a self-reflection activity); • when and how assessment feedback will be distributed; and • why assessment feedback will be adaptively released. <p>Implement:</p> <ul style="list-style-type: none"> • timing and frequency of how varied types of assessment feedback will be distributed.
During the semester (gathering responses from students about feedback given)
<p>Communicate to students:</p> <ul style="list-style-type: none"> • data gathering and tracking methods of how students' responses to receiving different types of feedback will be collected. <p>Implement:</p> <ul style="list-style-type: none"> • timing and frequency of when students will be requested to respond to different types of feedback (e.g., immediately after or within one week of receiving feedback).
During the semester (metaphase learning: learning that occurs after students receive feedback)
<p>Implement:</p> <ul style="list-style-type: none"> • tracking method to gather information about student actions after receiving feedback; and • data gathering method to gather student responses about receiving feedback. • Analyse: • differences between students' quality of work and grades, based on ARAF strategies used.

The table above will be published in the AARE Conference paper (Morton, Johnson, Williams, & Northcote, 2015, in press).

Responses of students and staff to the use of ARAF strategies

The data gathered throughout Stages 2-3 of the project provided information about how the lecturers and students responded to the use of ARAF strategies. These responses were grouped into four themes: 1) usefulness of ARAF strategies; 2) feedback; 3) anxiety; and 4) timing of ARAF.

Usefulness of ARAF strategies
<ul style="list-style-type: none"> • Current ARAF strategies are having an impact on how students interact with their feedback. Lecturers feel that students using ARAF strategies are more likely to read and consider their qualitative feedback, because of the absence of the quantitative

<p>mark.</p> <ul style="list-style-type: none"> • Students' intentions to alter their behaviour was evident from both student and lecturer responses. • Students appeared to find the qualitative feedback useful in terms of learning about what they have not been doing well in assessment tasks. They indicated that they were planning not to make the same mistakes again. • A number of students who were enrolled in education courses commented on how the ARAF strategies would be useful in their own future as a teacher. This was an interesting connection for them to have made and, while outside of the scope of the project, may be worth pursuing further. Teaching education students to use ARAF strategies in their own teaching may be an avenue to spread ARAF strategies through the schooling system. • There is evidence that the ARAF strategies made students look more closely at their assessment task after submitting it, which many of them indicated they would not have done in the past. • The majority of the students showed evidence of using the current qualitative feedback to improve their learning in the future.
<p>The nature of feedback</p> <ul style="list-style-type: none"> • Using ARAF strategies has made lecturers consider how they frame their feedback, and how they give comments which are helpful and encouraging to the students. • As feedback comments need to be carefully considered, ARAF strategies can mean more marking time is required. This should be considered in the future. • Having their comments and marks released in an adaptively-released manner seemed to force the students to read their comments, something which many admitted they would not have done previously. • On the whole, students found the comments to be useful and fair, indicating that they reflected on their own work after reading the comments. • Many students also commented that they now realise the time and effort that lecturers put into marking and commenting on their work and how valuable the comments can be. • Some students commented that qualitative feedback is much more useful than quantitative, showing that they have an understanding of the project's purpose.
<p>Anxiety</p> <ul style="list-style-type: none"> • Lecturers commented that student anxiety was high between receiving qualitative and quantitative feedback. • Anxiety was high in both low and high achieving students. • For some students, the anxiety they experienced appeared to be helpful as it made them re-read and re-engage with their qualitative feedback. • Lecturers commented on how some level of student anxiety may be helpful to their learning, a case for disruptive assessment. • Many students expressed anxiety about the process of having their comments and marks given separately. For most students this seemed to be time dependent. • Some of the anxiety was helpful, and even after students received their marks they went back and compared the marks to the comments.
<p>Timing of ARAF</p> <ul style="list-style-type: none"> • ARAF strategies may encourage students to engage with qualitative assessment

feedback and, subsequently, formulate plans for their future learning.

- The time delay between receiving qualitative and quantitative feedback may cause anxiety for students which, in turn, appears to have prompted them to re-engage with their qualitative feedback in order to settle the anxiety.
- Lecturers commented on how the timing greatly affected students – for example it may be better to have a shorter time between distributing qualitative feedback and quantitative feedback. However, enough time should be provided to allow students time to read and absorb the feedback without drawing out the process so much that it creates large amounts of anxiety, which can be destructive rather than productive.
- When considering the timing of ARAF strategies, lecturers need to also take into account the additional marking time that may be required.

Recommendations for practice

Based on an analysis of the data gathered throughout all stages of the study, a number of practical recommendations were developed. These were grouped into three categories: 1) timing; 2) the nature of feedback; and 3) gathering responses and accessing feedback.

Timing
<ul style="list-style-type: none">• Giving students a schedule for when to expect their feedback to be distributed and sticking to the schedule would be better in the future; some students became frustrated when their feedback did not arrive when expected.• It seems that better results were observed when using ARAF on the first assessment task of the semester. In future ARAF strategies should be introduced with the first assessment task. It may be useful on subsequent tasks also but getting students used to ARAF strategies early in the semester appears to work better.• Having students respond to their qualitative feedback is an important part of the ARAF process as it encourages engagement. Since there was so much anxiety around students receiving their mark perhaps quantitative feedback could be released once a student has responded to their qualitative feedback. Future research may be conducted to investigate the effectiveness of students receiving their quantitative feedback immediately after, soon after or a week after receiving qualitative feedback.
The nature of feedback
<ul style="list-style-type: none">• There was a large amount of variance in the quality, type and quantity of qualitative feedback given to the students, which is understandable with three different lecturers. However it might be better to set a consistent standard of qualitative feedback, a consistent method (comments throughout, comments on a rubric etc.) and a consistent quantity. This would not only allow the lecturers to set themselves realistic marking times but would also enable students to know what to expect from qualitative feedback.• Using the rubrics as a reference point and having student self-assess appeared to be very effective, especially as some students continued to self-assess on future assessment tasks. Incorporating more of this into assessment tasks could be a useful way to engage students and may increase the effectiveness of ARAF strategies.
Gathering responses and accessing feedback
<ul style="list-style-type: none">• Having students access feedback and give responses online may take more initial

setup but seems to be more practical should ARAF strategies be expanded across more contexts and be used at a college level. Additionally this would allow ARAF strategies to be used in online only subjects.

- One lecturer had students re-assess the mark they believed they would receive after reading their qualitative feedback. Encouraging students to compare lecturer-provided and self-assessment results, may be interesting for future research. This would encourage students to engage with the feedback and the rubric criteria, and think critically about their work and their learning.

Resources and outputs

The following resources and outputs are aligned to the project aim, goals and outcomes, as outlined in Table 2: Project Aim, Goals, Outcomes and Deliverables. They include:

- the online toolkit, the *Transformational Assessment Toolbox*;
- the workshop, *Transformational Assessment: Rethinking the Feedback*, offered in on-campus and online modes; and
- the Final Report (this document).

Online toolkit: Transformational Assessment Toolbox



Available at: <http://assessment.avondale.edu.au/toolboxat>

The *Transformational Assessment Toolbox* has been designed especially for use within the higher education sector. It may be of particular interest to course designers and lecturers who are interested in rethinking traditional processes of providing assessment feedback to their students with the intention of engaging students in reflection about their own learning by transforming some elements of the assessment process. The toolbox includes:

- information about this OLT Seed Project;
- links to the OLT site;
- names of researchers involved in the project;
- definition of ARAF strategies;
- information about three case studies, including: suggestions for actions including guiding questions, recommendations for practice and future research directions; and
- project publications, annotated bibliography of selected readings and readings about ARAF strategies.

For more details, see [Appendix K: Transformational Assessment Toolbox](#).

Workshop: Transformational Assessment: Rethinking the Feedback



Available at: <http://assessment.avondale.edu.au/toolboxtat/workshop.html>

The workshop, Transformational Assessment: Rethinking the Feedback, is currently being developed in the following three formats:

1. on-campus workshop;
2. online synchronous webinar; and
3. online self-paced tutorial.

The workshop is currently being rolled out (March - May 2016) using online video conferencing software to academic staff at Avondale College of Higher Education, in a public university (Charles Sturt University) and a private higher education institution (Alphacrucis College Sydney). Members of The Higher Education Private Provider Quality Network (HEPP-QN) will also be invited to participate in the online versions of this workshop during 2016.

The following dates have been booked for an on-campus workshop and three online webinars:

- On-campus workshop for Avondale College of Higher Education: Tuesday 29 March 4-5pm
- Online webinar for Avondale College of Higher Education: Tuesday 5 April 4-5pm
- Online webinar for Alphacrucis College Sydney: Tuesday 26 April 4-5pm
- Online webinar for Charles Sturt University Wagga: Tuesday 3 May 4-5pm
- Online self-paced tutorial for members of The Higher Education Private Provider Quality Network (HEPP-QN)

During this workshop, adaptively-released assessment feedback (ARAF) strategies will be defined and examples of these strategies will be shared, including variations in the sequencing and distribution of quantitative feedback (e.g., scores) and qualitative feedback (e.g., annotated comments). The webinar will also provide opportunities for reflection and discussion, with a focus on considering how the findings of the research project may be applied to the participants' own teaching context.

For more details, see [Appendix L: Workshop: Transformational Assessment: Rethinking the Feedback](#).

Project publications

At the close of the project, the project team has presented and produced a refereed conference paper, submitted a refereed article for one scholarly journal and partially completed a refereed article to submit to a second journal, as outlined below.

Publication 1: Refereed conference paper (in press)

Morton, L., Johnson, A., Williams, A., & Northcote, M. (2015, in press). *Research-informed guidelines for the development of adaptively-released assessment feedback (ARAF) strategies in higher education*. Paper presented at the Australian Association for Research in Education (AARE) Conference 2015, University of Notre Dame Australia, Fremantle, Western Australia.

The above paper titled *Research-informed guidelines for the development of adaptively-released assessment feedback (ARAF) strategies in higher education* was presented by two members of the research team, Lindsay Morton and Maria Northcote at the Australian Association for Research in Education (AARE) Conference in December 2015. This paper reported on the earlier stages of the project in which the process of delivering assessment feedback was explored from both students' and lecturers' points of view for the purposes of developing a set of design recommendations to develop ARAF strategies. These recommendations included issues of feedback timing, sequence and type, as well providing students with a rationale for the strategies, an issue cited as important by Parkin et al. (2012). See [Appendix M: Refereed conference abstract \(AARE\)](#). The full paper will soon be available to access at <http://www.aare.edu.au/publications-database.php>

Publication 2: Refereed journal article (submitted)

Northcote, M., Morton, L., Johnson, A., Williams, A., Kilgour, P., & Hattingh, S. (2016 (submitted 29 Feb 2016)). Transforming assessment feedback design: The development of adaptively-released assessment feedback (ARAF) strategies. *Active Learning in Higher Education*.

The above paper will report on the later stages of the project during which innovative assessment strategies were developed to implement in a selection of undergraduate and postgraduate courses; that is, after the staff and students have engaged with ARAF strategies for distributing and receiving assessment feedback.

Publication 3: Refereed journal article (currently being written)

The project team are currently preparing an article, titled *Disruptive assessment feedback practices and their impact on student learning in higher education*, to submit to the *Innovations in Education and Teaching International* journal towards the second half of 2016. This article focuses on the positive but disruptive impact ARAF strategies have on student learning which will aim to build on the work of other researchers such as Boud, Lawson and Thompson's work (2015) on disruptive effects of assessment patterns, as those

who have previously investigated the role of disruptive innovation (Christensen, 2011; Rogers, 2003) and disruptive technology (Archer, Garrison, & Anderson, 1999; Meyer, 2010).

Use and advancement of existing knowledge

This project is part of the Innovation and Development Programme of the OLT, with the focus priority area: Assessment and promotion of student learning. It builds on a suite of research projects targeting assessment theory and praxis in an effort to address student concerns over the nature, purpose and use of assessment.

This project built on previous research that experimented with adaptive release such as such as Parkin et al. (2012) 'A role for technology in enhancing students' engagement with feedback', and Irwin et al. (2013) 'Engaging students with feedback through adaptive release'. These papers report on a project that trialled adaptive release strategy to second-year undergraduate students from a range of disciplines. This project extended that trial by researching three cohorts of students from different stages of their degree ranging from undergraduate to postgraduate. This was designed to advance existing knowledge by comparing students' experience across the course of their tertiary studies.

During the course of the project, a set of practical guidelines for the design of ARAF strategies was also developed. This was based on the team's experience through stage 1 of the project and a range of published research on assessment theory and praxis including Boud and Molloy (2013), Maggs (2014), Rae and Cochrane (2008), and Yang and Carless (2013). These guidelines represent the first complete set of recommendations of how to develop ARAF strategies, and are fully adaptable to a range of tertiary contexts and environments. The recommendations were reported on at the end of stage 2 of the project and disseminated at the 2015 AARE conference.

The project also relied on important work on assessment by Boud, Lawson and Thompson (2015) that acknowledges the assumption that students have capacity for self-assessment and judgment of criteria and tertiary standards. They propose that this type of knowledge is not always tacitly learned by students; this project tested and proved this by including a self-assessment tool with the intention of making tacit processes explicit, and by facilitating self-reflection on expectations compared with the quantitative and quantitative assessment. This is an addition to the literature on assessment *for* learning rather than assessment *of* learning.

Disciplinary and interdisciplinary linkages

This project was multi-disciplinary in nature; that is, a number of disciplines were represented but knowledge was not integrated so much as shared for the purpose of comparison. All of the meetings with project participants were multi-disciplinary, facilitating the exchange of insights into student behaviour, assessment praxis and different forms of lecturer self-reflection. Throughout stage 1 of the project it became apparent that there is a

high level of synergy between the undergraduate and postgraduate Education assessment tasks, while the undergraduate Arts assessments had much less in common with the other cohorts. Nevertheless, the interactive sessions allowed lecturers to benefit from each others' insights and develop different strategies for assessment design. The diversity of cohorts and disciplines produced a wider range of recommendations for future implementation of ARAF strategies in other disciplines and institutions.

Factors that impacted the success and impediments of the project

The pilot study conducted at Avondale College in 2014 was instrumental in the success of the major study. Although small in size, the pilot set expectations and guided the researchers in project design. In stage 1 of the project, students were initially asked in focus groups to reflect on their experience of receiving and using feedback; this was important in the project design, but also had the benefit of preparing a number of students to be involved in the study the following semester which contributed to the project's success. As reported earlier, a key component for success in using ARAF strategies is informing students about the project's aim and the reasons for each step, as they are the key stakeholders. An extensive literature review also ensured that recommendations from previous studies were implemented and potential risks avoided where possible.

While some may consider size as weakness, the project benefitted from the small, manageable size of Avondale and the ability to communicate with participants easily and frequently. Lecturers often also run tutorials for their units, so they are able to get to know their cohorts and tailor feedback to some extent.

Another contributing factor to the success of the project was the excellent support from an ICT who assisted lecturers in setting up the online component of the feedback process. The process needs to be as streamlined as possible to ensure there are no unnecessary delays, and the ICT support was excellent in devising the best LMS tools and preparing the online sites for delivery of assessments as well as feedback.

Impediments to the project included the phenomenon of 'survey fatigue'; at the end of the feedback cycle and final reflections on the project, students reported being 'tired' of responding which may have impacted the depth of responses. Differing expectations between lecturer and tutor also impacted the project; communication was not clear about the timeline and process to be followed throughout the feedback loop, resulting in some discrepancies between students' expectations and the actual feedback process. This in turn impeded the ability to determine whether a student's seniority at university changes the way they respond to assessment feedback; responses tended to focus more on the process of receiving feedback rather than the students' incorporation of the feedback. While the results of the project show an encouraging level of engagement and self-reflection amongst students, the researchers were unable to achieve one of their early goals which was to determine whether or not ARAF strategies impacted students' future learning. As a result,

the aim was modified to investigate whether ARAF strategies impact students' future learning intentions.

Transferability of the project

The project team developed strategies that were repeatable, expandable and transferable and, as such, possible to implement across different educational contexts. These strategies are particularly pertinent to small institutions or larger institutions that may be in the process of investigating the impact its assessment feedback strategies have on student learning—especially the impact on students' future learning intentions.

Avondale's Transformational Assessment Toolbox and Transformational Assessment: Rethinking the Feedback Process Workshop provide activities and resources for private providers and Australian universities to consider how to rethink the assessment feedback giving process in order to facilitate greater impact on student learning.

The Avondale initiative has demonstrated the potential to be implemented in both undergraduate and postgraduate coursework contexts. The limitations of the study mean that it had a small institutional footprint, even in the Avondale context. So there are many questions yet to be answered, including will it be appropriate for a more “technical or algorithmic” content implementation? Avondale does not have a significant scope of courses in this domain but further study in such environment would be appropriate. Likewise, at the other end of the spectrum the heuristic type of content is another possibility, though with the research done at Avondale there is promise that this type of learning could be benefited by an ARAF adoption. Course 1 Media Studies has components that are heuristic in nature and the initiative in this unit provides evidence that ARAF is appropriate for a heuristic type of content

In considering the potential of blended or fully online learning environments, the Avondale model of ARAF offers potential. Although not implemented in a fully online environment, all units in which ARAF was implemented had blended learning modes—all units having active LMS, Moodle, sites with considerable student engagement in the online environment. As such, transitioning an ARAF initiative into a fully online environment would be seen as viable from the results gained in the Avondale study.

Opportunity exists for a broader range of feedback initiatives. As evidenced in the three models of implementation in the Avondale project, there was limited scope available to consider the most effective feedback types for different learning situations. What was evidenced was that there is potential to explore a range of types from the rubric to other forms of feedback. The second phase feedback strategies hold a great deal of potential as well for engaging students in metacognitive learning. Although limited in scope, the Avondale initiative did show potential to be implemented in a range of forms with different types of learning occurring.

What was evidenced is the potential value of ARAF as an initiative in students' first year of study. Students need support in their first year but at the same time there is the potential to set standards of learning and level of outcomes achieved. ARAF has the benefit of introducing students to metacognitive strategies which will support their university studies beyond their first year.

One of the observable benefits of the ARAF initiative in the College was staff engagement. Assessment is a core activity and as such staff have an interest in it both for pedagogical and workload purposes. What was evident was that ARAF has the potential to drive teaching change; staff watched the initiatives undertaken with interest, and there is a focus now on assessment as a driver of learning. The College has implemented a year of focus on assessment and developed an online Assessment Toolbox in which the ARAF toolbox has a primacy. Staff have shown interest in looking at ARAF strategies as a means of renewing their units of learning. This interest has been projected beyond the College with Australian and US institutions looking at ARAF.

As has been identified in the limitations of the study, the scope of the implementation was limited; that withstanding, what was evidenced is the potential of such initiatives as ARAF for both changing student learning and staff culture with promoting a focus on gaining full advantage of student learning through the innovative use of assessment and its feedback. There is potential to take greater advantage of an activity that is fundamental to teaching, assessment feedback, and mining it for greater outcomes.

Links between the project and other projects and fellowships

The findings that were identified during the implementation of this Seed Grant funded project have built upon previous projects.

Project title: Assessing Creativity: Strategies and Tools to Support Teaching and Learning in Architecture and Design.

Date: Completed 2012.

Lead institution: University of Newcastle, NSW.

Project reference number: ALTC Project Reference: PP9-1288.

Grants Program: ALTC Research Grant - Priority Projects Program

Relationship to this project: This previous project focused on the varied nature of assessment including developmental, diagnostic and summative assessment. Our Seed Grant project built upon the findings of this previous project (ALTC Project Reference: PP9-1288) which was designed to investigate how to ensure feedback is both appropriate and useful to students, and that students and staff have a shared understanding about criteria and tertiary-level standards. This project found that teachers need to promote student critical self-reflection and self-perception, integrating both in to the cycle of productive

scholarship. These elements were taken up in the project and implemented by disrupting the feedback loop, ensuring students taken time to reflect both within the feedback loop and in the metaphase of learning at the end of the assessment event.

Project title: Facilitating work integrated learning (WIL) through skills-enabled e-portfolios in construction and nursing.

Date: Completed 2012.

Lead institution: University of Newcastle, NSW.

Project reference number: ALTC Project Reference: PP9-1283.

Grants Program: ALTC Research Grant - Priority Projects Program

Relationship to this project: This previous project found that students require support to make metacognitive links between their theoretical and practical learning experiences. It also recommends that self-reflective elements should be built into the assessment cycle. Our Seed Grant project built upon the findings of this previous project (ALTC Project Reference: PP9-1283) by identifying tacit knowledge assumptions—such as students’ understanding of criteria—and providing a framework for students to explicitly make links between their self-assessment and instructor’s feedback.

Project title: Quality assessment: Linking assessment tasks and teaching outcomes in the social sciences.

Date: Completed 2009.

Lead institution: University of Newcastle, NSW.

Project reference number: ALTC Project Reference: PP7-320.

Grants Program: ALTC Research Grant - Priority Projects Program

Relationship to this project: This previous project focused on assessment design by testing a model for its capacity to analyse the quality of assessment tasks. The report stresses that student learning must be the priority of all assessment activities; therefore it aimed to examine and enhance the quality of assessment tasks. Our research area complements this project by investigating best practice in the feedback stage of task design. While the previous project focused on areas such as deep knowledge, higher order thinking and substantive communication in the discipline area, the project extended the assessment event to include different types of learning including self-knowledge and understanding of higher education standards. Together these projects promote a quality design at all stages of the assessment task.

Future research directions

Based on the findings of the project reported in this document, the project team recommend the following three areas of future research.

Larger cohorts of students, lecturers and tutors - In this study, most of the lecturers of relatively small cohorts also filled the role of tutor and assessor. Future research will need to consider possible limitations of the implementation of adaptively-released assessment feedback (ARAF) strategies in units or courses that have larger cohorts and a range of lecturers and tutors delivering the unit. Such research could investigate the use of ICTs (Information and Communication Technologies) in the design and support of ARAF strategies, along with an investigation into how such strategies could be incorporated into rather than adding to the lecturers' and tutors' workloads.

Longitudinal impact - It is important to determine whether ARAF strategies increases student capacity for reflection and action beyond a single unit or course conducted in one semester. While students were asked in this project to indicate their intention of incorporating feedback into future assessment tasks, future longitudinal research could consider the extent to which students recognise their own role and agency in metacognitive learning, and use feedback to inform future practice into the next semester and beyond.

Students' experience or seniority - The study could be implemented in a wider range of contexts to determine whether or not there was a relationship between the learner's experience over time at university and their responsiveness to ARAF. Furthermore, an investigation could be conducted to determine if a student's seniority at university changes the way they respond to assessment feedback. For example, a future project could explore whether or not there is a connection between the way in which undergraduate and postgraduate students respond to ARAF strategies.

Project impact, dissemination and evaluation

Compared to most universities in Australia, Avondale is a relatively small institution so the impact of a project such as this has had a major impact on academic staff in terms of their appreciation of the value of assessment feedback and how the process of engaging students more fully through a managed feedback process can facilitate the quality of effective student learning. The implementation of this project has resulted in a heightened interest in high quality assessment processes as well as an understanding of how to engage students with quality feedback in engaging ways. The College, in part because of this project, has decided to make student assessment the primary focus for its staff development program in 2016 and has supported this focus through staff development programs as well as developing an online assessment toolbox which will assist staff in enhancing assessment design, in addition to showcasing the ARAF project and its outcomes. While the project has created a groundswell of interest at the College, it has also created interest across other

institutions including Charles Sturt University and Alphacrucis College, where workshops will be conducted in the coming months.

In terms of the impact the ARAF initiative had on the student-participants in this project, they were predominantly supportive of its ability to provide the motivation to do further assessment tasks differently, and also to approach their learning and the receipt of assessment feedback differently. The approaches implemented provided students with a positive experience and, importantly, gave staff the confidence to approach assessment feedback in a more creative and student-focused manner.

To date, the materials the team has submitted and presented at both conferences and workshops have been very positively received, and colleagues have been supportive of the ARAF initiative. There is still further opportunity to communicate the findings of the initiative and the research findings. As such, further journal articles reporting on the development of the ARAF strategies and the outcomes of the study are currently being drafted for submission.

Further details of the anticipated impact of the project are outlined below, in Table 3: Anticipated project impact.

Table 3: Anticipated project impact

	Anticipated changes at:			
	Project completion	Six months post-completion	Twelve months post-completion	Twenty-four months post-completion
1. Team members	Trialling ARAF in own teaching. Reviewing effectiveness of initiatives.	Informal mentoring of colleagues within disciplinary context	Contribution to the policies which support an institutional approach	Further trialling of ARAF in varied contexts.
2. Immediate students	Provide insight into students' attitudinal and behavioural changes due to the ARAF initiative	Use of ARAF strategies	Continued engagement in reflective practice during metaphase learning in responding to assessment feedback	
3. Spreading the word	Workshops, Online Toolbox	Workshops, Online Toolbox Journal submission	Workshops, Online Toolbox Journal submissions and conference presentation	

	Anticipated changes at:			
	Project completion	Six months post-completion	Twelve months post-completion	Twenty-four months post-completion
4. Narrow opportunistic adoption	Showcasing ARAF strategies and outcomes amongst peers	Advocacy for use of ARAF strategies		
5. Narrow systemic adoption	Use of institution's LMS to support the use of ARAF initiatives	Contribution to professional development activities and resources to support and extend the use of ARAF initiatives		
6. Broad opportunistic adoption	Support of cross-institutional use of ARAF initiatives through workshops and toolbox	Contribution to external institutions' professional development activities and resources to support and extend the use of ARAF initiatives through workshops and toolbox		
7. Broad systemic adoption	Journal and conference publications			Edited book of case studies of ARAF initiatives

1. *What indicators exist that there is a climate of readiness for change in relation to your intended project?*
Interest in the initiative at Avondale indicates potential for wider application of the project. External higher education institutions, including private and public higher education provides, have registered their interest in the project by enrolling in the online workshop.
2. *In brief and indicatively, what impacts (changes and benefits) do you expect your project to bring about, at the following levels and stages of the Impact Management Planning and Evaluation Ladder (IMPEL)?¹*
Please refer to Table 3: Anticipated project impact.
3. *What were your strategies for engaging with stakeholders throughout the project?*
Throughout this project, the main stakeholders were provided with multiple opportunities to engage with the project by providing their responses at two data collection points: a) to contribute their perceptions via questionnaires and focus groups about feedback in general as well as their willingness to engage in ARAF strategies as teachers and students; and b) to provide their responses via questionnaires and focus groups regarding the use of ARAF strategies, as teachers or students.

¹ The full version of the IMPEL model, developed by Tilly Hinton while on secondment to the Office for Learning and Teaching, is online at <http://www.olt.gov.au/grants-and-projects/impact>. Further information on this model and resources to assist in considering project impact are available on the website.

4. *How will you enable transfer² that is ensuring that your project remains impactful after the funding period?*

The workshop that was developed during this project will be offered in three modes: a) on-campus; b) online webinar; and c) online tutorial. The assessment toolbox will also be made freely available through a non-password protected website. These methods of dissemination will be offered to public and private higher education providers. Some international partners of Avondale have also made inquiries about the availability of this workshop and toolbox. The conference paper and journal articles which were prepared during the project will also serve to share findings of the project across the higher education sector.

5. *What barriers may exist to achieving change in your project?*

One of the main barriers to achieving change as a result of this project is the time required by academic staff to administer ARAF strategies. However, many recommendations for practice have been made available through the toolbox, the workshop and the project's publications.

6. *How will you keep track of the project's impact? What analytics may be useful?*

Google Analytics will be used to track online traffic to the online toolbox and the online website about the project's workshop. Interest in the online workshop will be recorded through enrolment and participation in the workshop, and registrations will also be recorded for on-campus workshop participation. Journal citations will be tracked to monitor access to our conference paper and journal articles.

7. *How will you maintain relevant project materials for others to access after the project is completed?*

The *Transformational Assessment Toolbox* will be maintained by Avondale's central Information Technology Services. As part of the ongoing evaluation of the CASTL at Avondale, the *Transformational Assessment Workshop* will also be consistently reviewed and evaluated at the end of each semester. During this process, the effectiveness, currency and appropriateness of the toolbox and the workshop will be monitored and modified accordingly.

² Transfer in this context means 'the processes undertaken to maintain momentum and impact beyond the funded life of the project and beyond the project team', Hinton, T., Gannaway, D., Berry, B., & Moore, K. (2011). *The D-Cubed Guide: Planning for Effective Dissemination*. Sydney: Australian Teaching and Learning Council.

Certification

For a certification by the Vice-President (Academic & Research), see [Appendix A: Project Certification](#). This certification confirms that the final report is reviewed and approved by the DVC for public release.

Appendix A: Project certification

Certification by Deputy Vice-Chancellor (or equivalent)

I certify that all parts of the final report for this OLT grant provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

Name: Prof Tony Williams, Vice President (Academic & Research)

Date: 1 March 2016

Appendix B: Information Statement

INFORMATION STATEMENT

RESEARCH TITLE: But when do I get my mark? Students' responsiveness to adaptively released assessment feedback

RESEARCHERS' NAMES:

- Principal Investigator: Prof. Anthony Williams, Avondale College of Higher Education
- Co-investigator: Assoc. Prof. Maria Northcote, Avondale College of Higher Education
- Co-investigator: Dr Lindsay Morton, Avondale College of Higher Education
- Co-investigator: Alexandra Johnson, Avondale College of Higher Education

YOUR INVOLVEMENT IN THE PROJECT: You are invited to participate in a research project that aims to develop more effective assessment feedback by evaluating the impact on student behaviour of variations in timing, release sequence and expectation of a student response to feedback.

PURPOSE OF THE PROJECT: Your participation in this project is sought so that college and university lecturers can understand how students engage with their feedback, and evaluate the effectiveness of an adaptively-released assessment feedback (ARAF) strategy.

PARTICIPATION CRITERIA: Participants for this study will be:

- approximately 10-15 postgraduate students from the Master of Teaching (Primary) program
- approximately 10-15 undergraduate from the Bachelor of Arts program
- approximately 10-15 undergraduate from the Bachelor of Theology program

WHAT PARTICIPATION INVOLVES: Participation in focus groups (first semester) to assess current use of feedback, followed by participation in the use of adaptively-released assessment feedback strategies throughout their second semester course and finally a follow up focus group to determine the response to the feedback system. The time involved in these activities is as follows:

- a 30-60 minute focus group
- a self-assessment task
- three short questionnaires (10-15 min)

POSSIBLE RISKS OR INCONVENIENCES: We are required to notify you of possible risks and inconveniences should you agree to take part in the research. No potential risks are foreseen in this study, apart from the inconvenience of contributing data. Specifically students will be asked to attend two focus groups and two to six online questionnaires, across semesters one and two. The focus groups will run between 30-60 minutes and the questionnaires will take 10-20 minutes each.

BENEFITS: This research will provide insight into how students' learning behaviour is influenced by assessment feedback and, further, if changes in the schedule of feedback release and type of feedback released first (comments or marks) will be followed by changes in student behaviour in association with their learning and reflection practices. These processes are known as adaptively-released feedback strategies.

If the adaptively-released feedback strategies areas successful, some of the strategies may be implemented at an institution-wide level to better support students to engage with their assessment feedback and improve their learning outcomes.

The student-participants will have the benefit of participating in an actual research project. They will also have the opportunity to comment on assessment processes used in their units of study and be engage in opportunities to consider the place of assessment in their own learning processes. The staff-participants will benefit by engaging in processes that have the potential to improve their understanding of assessment and the assessment design in the units they teach.

CONFIDENTIALITY AND DISCLOSURE INFORMATION: Data collected from you during the research will remain within the confidence of the researcher/s. Reports will not identify individual lecturers. Data will be kept secure within a locked filing cabinet of the Principal Investigator and the Co-Investigator at Avondale College of Higher Education and stored for five years after completion of the study.

DISSEMINATION OF RESULTS: The findings of this study will be presented to staff and students at each of the universities involved in the study. Findings from the study will also be published in scholarly journals and presented at educational conferences. All participants' names will be removed from any data that is published.

FREEDOM OF CONSENT: Your participation in this study is voluntary and there is no payment to lecturers for their participation. Please note that you are free to choose not to take part in this research and you may withdraw at any time without providing a reason. Withdrawing will not disadvantage you.

Any questions about the above information can be obtained by contacting: Prof. Anthony Williams at Avondale College of Higher Education, PO Box19, Cooranbong, NSW, 2265. Phone: 02 4980 2121 or email tony.williams@avondale.edu.au

This research project has been approved by the Avondale College Human Research Ethics Committee (HREC). Avondale College of Higher Education requires that all participants are informed that if they have any complaint concerning the manner in which a research project is conducted it may be given to the researcher, or if an independent person is preferred, to the College's HREC Secretary, Avondale College of Higher Education, PO Box19, Cooranbong, NSW, 2265 or phone (02) 4980 2121 or fax (02) 4980 2117 or email: research.ethics@avondale.edu.au

Appendix C: Consent form

PARTICIPANT CONSENT FORM

RESEARCH TITLE: But when do I get my mark? Students' responsiveness to adaptively released assessment feedback

RESEARCHERS:

Prof. Anthony Williams, Assoc. Prof. Maria Northcote, Dr Lindsay Morton, Alexandra Johnson

I, _____ agree to participate in the above research project and give my consent freely.

I have read and understood the information provided in the Information Statement to Research Participants.

I understand that the project will be conducted as described in the Information Statement to Research Participants, a copy of which has been given to me to keep.

I understand I can withdraw from the project at any time and do not have to give any reason for withdrawing.

The procedures required for the project and the time involved have been explained to me. I understand that my access to assessment items in Moodle will be documented. I have had the opportunity to ask questions and have had them answered to my satisfaction.

I consent to contribute to within the course [unit code changed for each unit]:

- A self-assessment task
- Two short questionnaires (5-10 minutes)
- One focus group (30-60 minutes)

Print Name: _____

Signature: _____ Date: _____

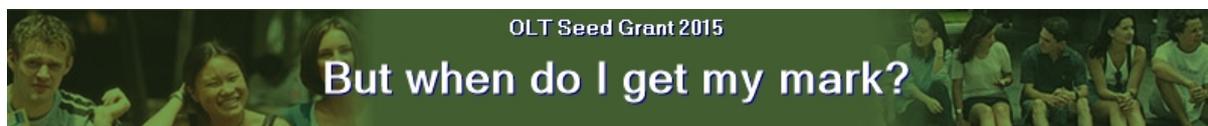
Appendix D: Student focus group question schedule (Semester 1, 2015)

1. Are you in your first, second, third, fourth, fifth or sixth year of study?
2. What types of feedback have you received in the past for your assessments?
3. What are the most useful types of feedback you have received?
4. How do you use the feedback you receive from lecturers?
5. How effective do you think the current feedback system at Avondale is?
6. Would you be willing to trail alternative feedback processes?

Appendix E: Lecturer focus group question schedule (Semester 1, 2015)

1. What kind of feedback do you think is most helpful to students?
2. What kinds of feedback do you supply to your students?
3. When students receive assessment feedback from you, do they use the feedback to improve their learning and if you think they do, how do they use it?
4. What kind of feedback is most helpful for future learning?
5. What do you believe students do when they get their feedback?
6. How might we test and adaptive release assessment feedback system?

Appendix F: Guidelines for design of ARAF strategies in first year undergraduate unit



DESIGN OF ADAPTIVELY-RELEASED ASSESSMENT FEEDBACK STRATEGIES (ARAF)

Level: First year unit

Assessment Task: Assessment Task 1: Research (Ideological) Essay

Strategies to set up before the semester	
Assessment task instructions	Provide instructions to students about the unit's assessment tasks, including marking rubric, marking criteria, learning outcomes being assessed.
Rubric content	When designing rubrics for assessment feedback, provide some indication of the ratings of various criteria.
Rubric availability	Create the rubric being used for assessment feedback before the semester begins and share it with the students at the beginning of the semester.
Rubric weightings	Consider how the weighting of each assessment criteria can be built into the rubric. Decision: individual weightings were not allocated to each criterion.
Length of rubric	Most rubrics are 1-2 pages in length. They vary in content and structure but usually include marking criteria, ratings and descriptors of ratings. Some rubrics include a quantitative grade or score for each criteria and/or for the task overall.
Type of feedback	In the Unit Outline or Student Information PDFs on Moodle, provide students with information about the type of assessment feedback they will receive about their assessment tasks (e.g., mark out of 50, ratings on 5 criteria on a rubric, qualitative comments throughout assessment task, verbal feedback, peer feedback). If possible, provide <i>reasons why</i> various assessment feedback will be provided. This information was provided to students in a rubric format (see above). Reasons for varied types of feedback will be provided to students in on-campus classes.
Timing	In the Unit Outline or Student Information PDFs on Moodle, provide students with information about when they will receive assessment feedback. This information will be provided on Moodle and during on-campus classes.

Strategies to implement during the semester	
Week 5-6 (7-18 Sept): Research Assistant get consent forms	Research Assistant to check with lecturer - how many copies she needs of these documents. (x30 copies) Before Week 7, Research Assistant to provide lecturer with printed copies of consent forms and information statements for the project – Research Assistant

Strategies to implement during the semester	
and info statements to Lecturer	will tailor these to suit unit. Week 7 starts on Mon 5 October, so it would be good to get the consent forms and information statements to Lecturer during the week of Mon 21 Sept - Fri 25 Sept.
Week 7 (or before): Explain feedback for Asst 1	Lecturer explains to students how they will receive feedback for Assessment Task 1. Provide reasons <i>why</i> various types assessment feedback will be provided. Research Assistant invites students to join the project. Research Assistant distributes consent forms and information statements and keeps these for record keeping. This happens during on-campus class with paper based copies. Research Assistant to come to Lecturer's class at 1pm on Wed 23 Sept. Lecturer will pick up Research Assistant up on the way to class, approx.. 12.45pm-1pm
Week 7 (or before): Explain feedback for Asst 1	Lecturer to set up Turnitin link on Moodle for students to click on to submit Assessment Task 1.
Week 8: Students submit Asst 1	Due date for Assessment Task 1: Research (Ideological) Essay. Students submit assignment via Turnitin link on Moodle.
Week 8: Rubric self-reflection activity	Lecturer provides a copy of the rubric to the students in paper version during on-campus class. Students write their names on the rubric and complete it as a self-assessment task. Lecturer collects the rubrics and provides a copy of them to Research Assistant. Research Assistant extracts information from the rubrics (i.e., only use rubrics of students who have completed the consent forms). Research Assistant returns these rubrics to Lecturer.
Week 11 (approx.): Students receive qualitative feedback	Qualitative feedback is: annotated comments in the body of the essay and a summative comment at the end of the essay. Lecturer provides students with qualitative feedback by: creating an Assignment submission link in Moodle, which allows file uploading. This link will be used by Lecturer to upload Word doc including qualitative feedback. Ask for help with creating this Moodle Assignment link. Link could be called "Click here to access your qualitative feedback about Assessment Task 1". downloading each student's assignment as a Word doc via the Turnitin link, then annotating the Word doc and adding a summative comment at the end of the essay [completing a Rubric at this time in another Word doc including grade and ratings on criteria - this will be given to students in Step 8 below.] uploading an annotated Word doc with summative comment to Moodle Assignment link and inform students of its availability.
Week 11-12 (approx.): Students respond to	Lecturer to create an "online text" Assignment link in Moodle for the students to provide their responses to receiving qualitative feedback (see Step 6 above), with the following three questions. Ask for help with creating this Moodle Assignment link. Link could be called "Click here to respond to your qualitative feedback

Strategies to implement during the semester	
qualitative feedback	<p>about Assessment Task 1".</p> <p>Students respond to qualitative feedback, by answering 3 questions (see below) about how receiving qualitative feedback:</p> <ol style="list-style-type: none"> 1. Describe what you did after you read through the qualitative feedback (annotated comments in the essay, and summative comment at the end of the essay) provided to you about Assessment Task 1. 2. Describe your immediate reaction to the qualitative feedback you received about Assessment Task 1 – your thoughts, feelings, emotional and cognitive reactions. 3. Describe how you plan to use this qualitative feedback in your future learning.
Week 12-13 (approx.): Students receive quantitative feedback	<p>Quantitative feedback is: overall grade, ratings on each rubric criteria (row). Lecturer provides students with quantitative feedback by: creating an Assignment submission link in Moodle, which allows file uploading. This link will be used by Lecturer to upload Word doc including quantitative feedback in a rubric. Ask for help with creating this Moodle Assignment link. Link could be called "Click here to access your quantitative feedback about Assessment Task 1". Note that this link will need to be tied to the previous link in Step 7. Students should not be able to access info under this link until they have responded to the link in Step 7.</p> <p>locating the Rubric (created in Step 6 above, during the marking process) in another Word doc including grade and ratings on criteria</p> <p>uploading a completed rubric in a Word doc (with grade and ratings of rubric criteria) to Moodle Assignment link and inform students of its availability.</p>
Week 12-13 (approx.): Students respond to qualitative feedback	<p>Quantitative feedback: grade and the ratings in rubric criteria.</p> <p>Lecturer to create an "online text" Assignment link in Moodle for the students to provide their responses to receiving quantitative feedback (see Step 8 above), with the following six questions. Ask for help with creating this Moodle Assignment link. Link could be called "Click here to respond to your quantitative feedback about Assessment Task 1".</p> <ol style="list-style-type: none"> 1. Describe what you did after you read through the quantitative feedback (mark, completed rubric) provided to you about Assessment Task 2. 2. Describe your immediate reaction to the quantitative feedback you received about Assessment Task 2 – your thoughts, feelings, emotional and cognitive reactions. 3. Describe how you plan to use this quantitative feedback in your future learning. 4. What did I do well in this task? 5. What did I do poorly in this task? 6. Were there any surprises or discrepancies between the self-assessed rubric and the rubric completed by the lecturer?
SUMMARY OF THE ABOVE	
Timing	<p>Students will receive the qualitative feedback (comments) first, after receiving the three questions (see Step 7 above), followed by quantitative feedback (marks) (see Step 9 above). After receiving the qualitative feedback, students will be asked to submit feedback, in response to three survey questions (see Step 8 above). After receiving the quantitative feedback, students will be asked to</p>

Strategies to implement during the semester	
	submit feedback, in response to six survey questions (see Step 9 above).
Frequency	How often will students be provided with feedback about their assessment tasks during the unit? Students receive feedback about three assessment tasks during the unit (Blog posts; Essay; Presentation) but the adaptively-released assessment feedback will only be used in Assessment Task 1: Research (Ideological) Essay which is due in Week 8 (Monday after mid-semester break).
Source of feedback	Students be provided with qualitative and quantitative feedback about their assessment tasks by their Lecturer.

Strategies for providing qualitative feedback	
Type of feedback	Students will be provided the following type of qualitative feedback from their lecturer about Assessment Task 1: an overall comment about the task annotations throughout the task using tracked changes
Location of qualitative feedback	Qualitative assessment comments will be placed: throughout the assessment item (essay) at the end of the assessment item (essay)
Provision of general comments to the group	Qualitative feedback will be provided verbally to the whole cohort enrolled in the unit about their performance in the assessment task. This information will be provided to the cohort during on-campus classes.

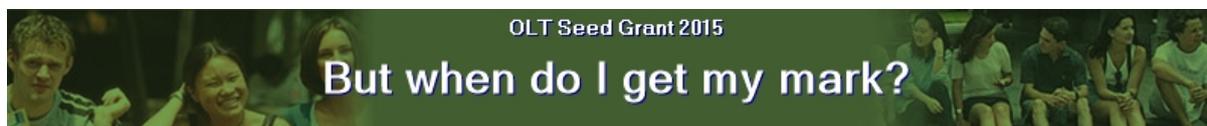
Strategies for providing quantitative feedback	
Type of feedback	The type of quantitative feedback that will be provided will be: Ratings on each rubric criteria (e.g., Fail, Pass, Credit, Distinction, High Distinction) An overall grade (e.g., Fail, Pass, Credit, Distinction, High Distinction)
Location of quantitative feedback	Consider where the comments should be placed, such as: on the rubric - ratings on the rubric - overall grade
Provision of rankings to the group	Display rankings of quantitative results (e.g., 12% of students received a Pass, 35% of students received a Credit, etc.) to the whole cohort enrolled in the unit about their performance in the assessment task. This information will be provided to the cohort during on-campus classes.

SUMMARY of strategies for providing qualitative and quantitative feedback	
Frequency, method of feedback provision	For the purposes of this project, adaptively-released feedback will be provided to students during Assessment Task 1, using the following method: Students submit assessment task Students complete rubric as a self-assessment activity Students are provided with qualitative feedback from their lecturer. Students respond to the qualitative feedback via a survey After qualitative feedback is provided, students are provided with their

	quantitative feedback Students respond to the quantitative feedback via a survey
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Metaphase learning strategies: Tracking student actions after receiving feedback	
Tracking	Use of Moodle analytics (by the project team, with permission from Unit Coordinator) to track what students do after receiving different types of assessment feedback.

Appendix G: Guidelines for design of ARAF strategies in third year undergraduate unit



DESIGN OF ADAPTIVELY-RELEASED ASSESSMENT FEEDBACK STRATEGIES (ARAF)

Level: Third year unit

Assessment Task: Assessment 1: Portfolio – Electronic Resource

Strategies to set up before the semester	
Assessment task instructions	Provide instructions to students about the unit's assessment tasks, including marking rubric, marking criteria, learning outcomes being assessed.
Rubric content	When designing rubrics for assessment feedback, provide some indication of the ratings of various criteria.
Rubric availability	Create the rubric being used for assessment feedback before the semester begins and share it with the students at the beginning of the semester.
Rubric weightings	Consider how the weighting of each assessment criteria can be built into the rubric. Each of the criteria is of an equal rating.
Length of rubric	Create a rubric approx. one page in length including marking criteria, ratings and descriptors of ratings. Some rubrics include a quantitative grade or score for each criteria and/or for the task overall. This rubric has an overall grade out of 35 and using a five point scale for seven criteria.
Type of feedback	In the Unit Outline or Student Information PDFs on Moodle, provide students with information about the type of assessment feedback they will receive about their assessment tasks (e.g., mark out of 35, ratings on 5 criteria on a rubric, qualitative comments throughout assessment task). If possible, provide reasons why various assessment feedback will be provided. Information was added to the Assessment submission link in Moodle. Students will be provided with: General comment will be provided in the Turnitin rubric after two weeks of submission (in Week 7 of the semester) Annotated comments throughout the assessment task Rubric criteria ratings after three weeks of the submission (in Week 8 of the semester) Overall score out of 35 after three weeks of the submission (in Week 8 of the semester) A purpose was also provided to students about why their feedback will be collected in this week.
Timing	In the Unit Outline or Student Information PDFs on Moodle, provide students

	with information about when they will receive assessment feedback (in Weeks 6-7).
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Strategies to consider during the semester	
Use of rubric by students	Instruct students to complete the rubric as a self-reflection task. Some lecturers ask the students to submit a completed rubric with their assessment task. Students will be instructed to complete the rubrics as a self-assessment task as part of their assessment task.
Self-assessment questions	Provide students with a few questions to reflect upon about how they would assess (self-assess) their assessment task, the answers to which can be submitted with their assessment tasks. Questions could include: If I did this task again what would I do differently? What can I take from this task to help me improve in the future? How will I use what I learned here for future tasks? What did I do well in this task? What did I do poorly in this task? In the on-campus Week 6 or 7 tutorial – a discussion will be held where each of the students discuss the questions above and record their ideas.
Collection	In week 8 (6-9 October) Research Assistant to liaise with Lecturer to collect students' self-reflection rubrics and handwritten students comments from the activity above that was facilitated in Lecturer's on-campus tutorials.
Timing	Provide qualitative feedback and quantitative feedback at different times via functions in Moodle, assisted by the project team.
Frequency	Students will be provided with feedback about their assessment tasks 5 times throughout the unit but the adaptively-released feedback strategies will be used for Assessment 1.
Source of feedback	The students be also be provided with feedback about their assessment tasks by their peers. This will happen during on-campus tutorials in Week 6 or 7.

Strategies for providing qualitative feedback	
Type of feedback	Decide on the type of qualitative feedback that will be provided, such as: annotations throughout the task general comments
Location of qualitative feedback	Consider where the comments should be placed, such as: On the assessment item IN the rubric

Strategies for providing quantitative feedback	
Type of feedback	Decide on the type of quantitative feedback that will be provided, such as: An overall mark (e.g., 30/35) Specific rating on each rubric criteria
Location of quantitative feedback	Consider where the comments should be placed, such as: On the rubric

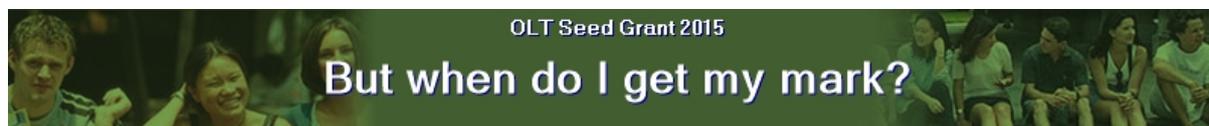
SUMMARY of strategies for providing qualitative and quantitative feedback

Frequency, method of feedback provision	<p>For the purposes of this project, adaptively-released feedback will be provided to students during Assessment Task 1, using the following method:</p> <p>Students submit assessment task with completed rubric as a self-assessment activity with answers to questions (a) to (e) above.</p> <p>Students are provided with qualitative feedback from their lecturer.</p> <p>Soon after receiving qualitative feedback, students respond to the qualitative feedback via a survey.</p> <p>Soon after receiving qualitative feedback, students will be provided with their quantitative feedback (e.g., mark).</p> <p>Students respond to the quantitative feedback via a survey.</p>
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Metaphase learning strategies: Tracking student actions after receiving feedback

Tracking	<p>Use of Moodle analytics to track what students do after receiving different types of assessment feedback.</p>
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Appendix H: Guidelines for design of ARAF strategies in postgraduate unit



DESIGN OF ADAPTIVELY-RELEASED ASSESSMENT FEEDBACK STRATEGIES (ARAF)

Level: Postgraduate unit

Assessment Task: Assessment Task 2: Panel Discussion & Essay

Strategies to set up before the semester	
Assessment task instructions	Provide instructions to students about the unit's assessment tasks, including marking rubric, marking criteria, learning outcomes being assessed.
Type of feedback	Decide on the type of qualitative and quantitative feedback to be provided, such as: an overall comment about the task verbal feedback (in tutorials – group, mark, rubric ratings general feedback)
Location of feedback	Consider where the quantitative and qualitative feedback will be located, such as: via email on the rubric
Rubric availability	Create the rubric being used for assessment feedback before the semester begins and share it with the students at the beginning of the semester.
Length and location of rubric	Decide on the length of the rubric and where it will be located (e.g., on Moodle, in the Student Information, in Turnitin's Grademark, etc.). Most rubrics are 1-2 pages in length. They vary in content and structure but usually include marking criteria, ratings and descriptors of ratings. Some rubrics include a quantitative grade or score for each criteria and/or for the task overall. 1500 words task for undergraduates and 2500 for masters students. Rubric is one page in length includes qualitative comment at the end, criteria ratings including individual marks for each criteria and a final mark.
Timing	Provide students with information about when they will receive assessment feedback. Students will be informed about the staged feedback process being used for Assessment Task 2.

SUMMARY of strategies for providing qualitative and quantitative feedback

Type of feedback	Verbally provide students with information about the type of qualitative and quantitative feedback they will receive about their assessment tasks. If possible, provide reasons why various assessment feedback will be provided. Unit lecturer will provide this information during Week 1 or 2.
Frequency, method of feedback provision	<p>For the purposes of this project, adaptively-released feedback will be provided to students during Assessment Task 2, using the following method:</p> <p>Students submit assessment task – due in Wed 14 October in Week 9</p> <p>Students are provided with qualitative feedback from their lecturer or tutor in the form of a general comment via email (without the quantitative mark) during Week 12 (approx.). This email will be forwarded to each individual student (via email or Moodle message) by Research Assistant and Project Leader along with a statement of consent and information about the project, and the three questions asking for students’ responses to receiving their qualitative feedback. Research Assistant to contact Tutor Masters during one Wed before the assignment is due. Tutor will be asked to provide Research Assistant with a Word document with each student’s name and general comment.</p> <p>Within the following week, students respond to the qualitative feedback via a survey and estimate their mark which may be different from the mark they originally submitted in Step 1 above. See Step 2 above.</p> <p>One week after qualitative feedback is provided, students are provided with their quantitative feedback (e.g., mark). The quantitative feedback is considered to be the rubric criteria ratings and the students’ overall mark. Tutor will provide Research Assistant and Project Leader with the rubrics in Word document format. Research Assistant will email each students their rubric + three questions asking for their responses to receiving quantitative feedback.</p> <p>Students respond to the quantitative feedback via a survey. See Step 4.</p>

Appendix I: Survey questions for students (Semester 2, 2015)

Items students respond to after they are provided with qualitative criteria

1. Describe what you did after you read through the qualitative feedback (comments) provided to you about your assessment task.
2. Describe your immediate reaction to the qualitative feedback you received about your assessment task – your thoughts, feelings, emotional and cognitive reactions.
3. Describe how you plan to use this qualitative feedback in your future learning.

Items students respond to after they are provided with quantitative criteria

1. Describe what you did after you read through the quantitative feedback (mark, completed rubric) provided to you about your assessment task.
2. Describe your immediate reaction to the quantitative feedback you received about your assessment task – your thoughts, feelings, emotional and cognitive reactions.
3. Describe how you plan to use this quantitative feedback in your future learning.

Appendix J: Lecturer focus group question schedule (Semester 2, 2015)

1. Explain your perception of how students reacted to receiving assessment feedback in this way.
2. Explain your perception of how effective adaptively-released assessment feedback strategies were in your unit this semester.
3. As a result of receiving adaptively-released assessment feedback, how do you students' learning was influenced?
4. Was there anything particularly helpful you think students found about receiving adaptively-released assessment feedback?
5. Was there anything particularly unhelpful you think students found about receiving adaptively-released assessment feedback?
6. How would you modify the adaptively-released assessment feedback strategies in the future?
7. What advice do you have for other lecturers about the future use of the strategies used to provide students with adaptively-released assessment feedback?
8. On a scale from 1 (not effective at all) through to 10 (very effective), how would you rate the adaptively-released assessment feedback strategies you used this semester?
 - a – For student learning
 - b – For student engagement
 - c – For lecturer insight into student behaviour
9. Would you like to see adaptively-released assessment feedback strategies used in other courses you teach?
10. Do you believe there is a culture of non-engagement with feedback?
11. Did you notice any correlation between grades and speed of student response to feedback?

Appendix K: Transformational Assessment Toolbox



Available at: <http://assessment.avondale.edu.au/toolboxat>

The toolbox contains the following components:

- Description of the Toolbox contents and purpose.
- Project details: title, funding, timeframe, researchers
- Three case studies:



- Guidance for action, including:
 - Guiding questions
 - Recommendations for practice
 - Future research directions
- Publications, readings and references, including:
 - Project publications
 - Annotated bibliography of key readings
 - Readings about ARAF strategies

Appendix L: Workshop: Transformational Assessment: Rethinking the Feedback



Title of workshop/webinar: Transformational assessment: Rethinking the feedback process

Description of workshop/webinar: This free one-hour webinar is based on the findings from an OLT funded Seed project (2014-2016), *But when do I get my mark? Students' responsiveness to adaptively released assessment feedback*. During this webinar, we will define and share examples of transformative, adaptively-released feedback strategies, including variations in the sequencing and distribution of quantitative feedback (e.g., scores) and qualitative feedback (e.g., annotated comments). By sharing the practical recommendations and the Transformative Assessment Toolbox from our recent research, the webinar will also provide opportunities for reflection and discussion, with a focus on considering how the findings of the research project may be applied to your own teaching context.

Dates:

- On-campus workshop at Avondale: Tues 29 March, 4-5pm
- Online webinar using Zoom for Avondale staff: Tues 5 April, 4-5pm
- Online webinar using Zoom for Alphacrucis staff: Tues 26 April, 4-5pm
- Online webinar using Zoom for CSU staff: Tues 3 May, 4-5pm
- Online self-paced tutorial (Moodle): To be available from May onwards

Facilitators: Prof. Anthony Williams, Assoc. Prof. Maria Northcote and Dr Lindsay Morton of Avondale College of Higher Education

Learning outcomes of the workshop/webinar

By the end of this workshop, we anticipate that you will be able to:

- identify adaptively-released assessment feedback (ARAF) strategies
- analyse some examples of adaptively-released assessment feedback (ARAF) strategies
- based on an analysis of how students achieve the learning outcomes in your own units or courses, reflect on how some of the principles and practices of ARAF strategies could be applied to your teaching context

Appendix M: Abstract from refereed conference paper (AARE) (2015, in press)

When the publication of this refereed conference paper is finalised, it will be available here: <http://www.aare.edu.au/publications-database.php>

RESEARCH-INFORMED GUIDELINES FOR THE DEVELOPMENT OF ADAPTIVELY-RELEASED ASSESSMENT FEEDBACK (ARAF) STRATEGIES IN HIGHER EDUCATION

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Main SIG: Assessment and measurement

Abstract

Feedback to students regarding their performance in assessment has the potential to have a significant impact on student learning. This feedback can be quantitative, referring to numeric grades and scores, or qualitative, referring to evaluative commentary provided to students by their lecturers, or both quantitative and qualitative. While assessment feedback is intended to provide students with insight into how their learning has progressed and can be improved, as measured against learning outcomes, exploratory research into the impact of assessment feedback has found that students often pay more heed to numeric grades than qualitative comments, despite the fact that qualitative feedback has more potential to have a greater impact on their learning.

This paper reports on the initial phase of a research project, funded by the Office for Learning and Teaching (OLT), which aimed to determine the impact of feedback strategies on students' learning. Academic staff and university students' perspectives were sought about the manner in which assessment feedback was provided and received within higher education courses. This information was gained by asking lecturers about the intended impact of assessment feedback on student learning and by asking students about the actual impact such feedback had on their learning.

Consequently, this study considered differentiated types of assessment feedback and the way in which they were distributed. The extent to which each type of feedback directly impacted the quality of students' post-assessment learning was investigated. The students' ability to reflect on past learning to enhance future learning was also considered. The potential of Adaptively-Released Assessment Feedback (ARAF) strategies embedded into assessment procedures was considered for the purpose of engaging both lecturers and students in assessment for and as—rather than assessment of—learning.

The assessment design recommendations for the development of ARAF strategies reported in this paper may be particularly relevant to those involved in the design of higher education assessment tasks and academic staff who aim to foster students' reflective practice through interaction with varied types of assessment feedback.

Appendix N: Abstract from submitted refereed journal article (*Active Learning in Higher Education*) - Submitted 1 March 2016

Transforming assessment feedback design: The development of adaptively-released assessment feedback (ARAF) strategies

Maria Northcote, Lindsay Morton, Alexandra Johnson, Anthony Williams, Peter Kilgour and Sherry Hattingh
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Abstract

Assessment design is increasingly an important area for development in higher education. A shift from teacher-focus to student-focus is evident across a range of practices in tertiary education, and assessment is a key area where this redirection can affect significant positive change. This paper reports on Stage 2 of a research project in which innovative assessment strategies were developed to implement across a selection of undergraduate and postgraduate courses. The recommendations from an earlier pilot project informed the design of these adaptively-released assessment feedback (ARAF) tools, resulting in three course-specific sets of strategies to re-focus assessment on student learning. This project draws on research regarding how to work towards best practice in higher education assessment and foster co-learning between respondents and researchers. The project's approach has been purposefully designed to ensure it could be applied in a range of higher education institutions, regardless of differences in Learning Management Systems.

Keywords: feedback; quantitative feedback; qualitative feedback; higher education; adaptively-released assessment feedback (ARAF) strategies

Appendix O: References

- Archer, W., Garrison, D. R., & Anderson, T. (1999). Adopting disruptive technologies in traditional universities: Continuing education as an incubator for innovation. *Canadian Journal of University Continuing Education, 25*(1), 13-44.
- Australian Learning and Teaching Council. (2009). What's happening in assessment? Sydney: Australian Learning and Teaching Council (2008).
- Bayerlein, L. (2014). Students' feedback preferences: how do students react to timely and automatically generated assessment feedback? *Assessment & Evaluation in Higher Education, 39*(8), 916-931.
- Bell, A., Mladenovic, R., & Price, M. (2013). Students' perceptions of the usefulness of marking guides, grade descriptors and annotated exemplars. *Assessment & Evaluation in Higher Education, 38*(7), 769-788.
- Boud, D., & Associates. (2010). Assessment 2020: Seven propositions for assessment reform in higher education. Sydney: Australian Learning and Teaching Council (ALTC).
- Boud, D., Lawson, R., & Thompson, D. G. (2015). The calibration of student judgement through self-assessment: Disruptive effects of assessment patterns. *Higher Education Research & Development, 34*(1), 45-59.
- Boud, D., & Molloy, E. (2013). Rethinking models of feedback for learning: The challenge of design. *Assessment & Evaluation in Higher Education, 38*(6), 698-712.
- Brown, S. (2004-2005). Assessment for Learning. *Learning and Teaching in Higher Education, 1*, 81-89.
- Buckley, P. (2012). Can the effectiveness of different forms of feedback be measured? Retention and student preference for written and verbal feedback in level 4 bioscience students. *Journal of Biological Education, 46*(4), 242-246.
- Butler, R. (1987). Task-involving and ego-involving properties of evaluation: Effects of different feedback conditions on motivational perceptions, interest, and performance. *Journal of Educational Psychology, 79*(4), 474-482.
- Butler, R. (1988). Enhancing and undermining intrinsic motivation: The effects of task-involving and ego-involving evaluation on interest and performance. *British Journal of Educational Psychology, 58*(1), 1-14.
- Butler, R., & Nisan, M. (1986). Effects of no feedback, task-related comments, and grades on intrinsic motivation and performance. *Journal of Educational Psychology, 78*(3), 201-216.
- Christensen, C. M. (2011). *The innovator's dilemma: The revolutionary book that will change the way you do business* New York: HarperBusiness.
- Cochrane, T., & Withell, A. (2013). Do 21st Century students dream of electric sheep? A mobile social media framework for creative pedagogies. In H. Carter, M. Gosper, & J. Hedberg (Eds.), *Electric Dreams. Proceedings ascilite 2013 Sydney* (pp. 151-161). Macquarie University: Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).
- Irwin, B., Hepplestone, S., Holden, G., Parkin, H. J., & Thorpe, L. (2013). Engaging students with feedback through adaptive release. *Innovations in Education and Teaching International, 50*(1), 51-61. doi: 10.1080/14703297.2012.748333
- Kohn, A. (2000). *The case against standardized testing: Raising the scores, ruining the schools*. Portsmouth, NH: Heinemann.
- Kohn, A. (2011). The case against grades. *Educational Leadership, 69*(3), 28-33.
- Maggs, L. A. (2014). A case study of staff and student satisfaction with assessment feedback at a small specialised higher education institution. *Journal of Further and Higher Education, 38*(1), 1-18. doi: 10.1080/0309877X.2012.699512
- Meyer, K. A. (2010). The role of disruptive technology in the future of higher education. *EDUCAUSE Quarterly (EQ), 33*(1).

- Morton, L., Johnson, A., Williams, A., & Northcote, M. (2015, in press). Research-informed guidelines for the development of adaptively-released assessment feedback (ARAF) strategies in higher education. In M. Baguley (Ed.), *Australian Association for Research in Education (AARE) Conference 2015*. University of Notre Dame Australia, Fremantle, Western Australia: Australian Association for Research in Education (AARE).
- Northcote, M., Williams, A., Fitzsimmons, P., & Kilgour, P. (2014). Does the type of assessment feedback I give make a difference?: The impact of qualitative and quantitative assessment feedback. In L. G. Chova, A. L. Martínez, & I. C. Torres (Eds.), *Proceedings of the 7th International Conference of Education, Research and Innovation (ICERI)* (pp. 4531-4540). Seville, Spain: International Academy of Technology, Education and Development (IATED).
- Parkin, H. J., Hepplestone, S., Holden, G., Irwin, B., & Thorpe, L. (2012). A role for technology in enhancing students' engagement with feedback. *Assessment & Evaluation in Higher Education*, 37(8), 963-973.
- Pickford, R. (2010). First-year assessment: Aligning perceptions and practice with purpose. from [http://www.heacademy.ac.uk/assets/documents/ntfs/projects/Leeds Met Final Report 2008.pdf](http://www.heacademy.ac.uk/assets/documents/ntfs/projects/Leeds_Met_Final_Report_2008.pdf)
- Pulfrey, C., Darnon, C., & Butera, F. (2013). Autonomy and task performance: Explaining the impact of grades on intrinsic motivation. *Journal of Educational Psychology*, 105(1), 39-57.
- Rae, A. M., & Cochrane, D. K. (2008). Listening to students: How to make written assessment feedback useful. *Active Learning in Higher Education*, 9(3), 217-230. doi: 10.1177/1469787408095847
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
- Sanchez, H. S., & Dunworth, K. (2015). Issues and agency: postgraduate student and tutor experiences with written feedback. *Assessment & Evaluation in Higher Education*, 40(3), 456-470. doi: 10.1080/02602938.2014.921885
- Sopina, E., & McNeill, R. (2015). Investigating the relationship between quality, format and delivery of feedback for written assignments in higher education. *Assessment & Evaluation in Higher Education*, 40(5), 666-680. doi: 10.1080/02602938.2014.945072
- The Higher Education Academy. (2012). A marked improvement: Transforming assessment in higher education. In S. Orr (Ed.). York, UK: The Higher Education Academy.
- Wren, J., Sparrow, H., Northcote, M., & Sharp, S. (2008). Higher education students' perceptions of effective assessment. *The International Journal of Learning*, 15(12), 11-24.
- Yang, M., & Carless, D. (2013). The feedback triangle and the enhancement of dialogic feedback processes. *Teaching in Higher Education*, 18(3), 285-297.