Transforming Assessment Feedback Design: Students' Responses to Adaptively-Released Assessment Feedback (ARAF) Strategies

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ABSTRACT

The concept of Adaptively-Released Assessment Feedback (ARAF) is relatively new and, to date, has had limited application in the university sector. This article looks at the applications of ARAF into the assessment of courses in three different contexts across multiple disciplines at both undergraduate and postgraduate course levels. The article outlines the ARAF strategies and their potential for promoting a deeper learning process by enhancing student engagement with feedback. Qualitative data from students are utilized to understand student perceptions of ARAF strategies. Students reported that ARAF increased engagement with assessment feedback and, in some cases, provoked deeper reflection and encouraged them to plan their approach to future assessment tasks. Keywords: quantitative feedback, qualitative feedback, adaptively-released assessment feedback (ARAF) strategies, assessment design

Introduction

Assessment is widely recognized as ~~the~~ primary driver of learning. It functions as the interface between the teacher's expectation of what needs to be learned and activities that demonstrate student achievement

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(Cox, Bradford, and Miller 2016; Heywood 2000). Assessment also provides the means for students to gain insight into how well their learning is progressing against pre-established learning expectations (Bell, Mladenovic, and Price 2013; Boud and Falchikov 2006) and the intended outcomes of a course. Many students prioritize assessment tasks over other significant course elements such as self-directed readings and preparation for tutorials. Consequently, "assessment has an overwhelming influence on what, how and how much students study" (Gibbs and Simpson 2005, 3). Despite students' prioritization of assessment, however, the same enthusiasm for reading the qualitative or formative feedback in the final stages of the assessment event is often not equivalent to their enthusiasm for seeking information about the assessment task at the beginning of the semester. In fact, in the final stages of the assessment event, many students only read their numeric mark or grade and do not progress far beyond that (Butler 1987, 1988; Northcote et al. 2014).

This article reports on the results of a project designed to modify the way in which feedback is distributed to students in order to increase the authenticity of their learning experience. The study tracked the development and implementation of three alternative approaches employed by lecturers to provide assessment feedback to students. This article describes different methods of providing adaptively-released assessment feedback (ARAF) —including both qualitative and quantitative feedback—and how these methods affected students' intentions to modify their future learning practices. The methods developed in this study were implemented in three different courses across varied disciplines, thus forming three cases. The term Adaptively-Released Assessment Feedback (ARAF) was created by the research team to describe the development of strategies for providing feedback to students in a staged approach, rather than the traditional approach of disseminating all aspects of the student feedback at one time.

The findings of the study are significant to the higher education sector as academic staff expend considerable time and effort providing student feedback, and strong student engagement is vital if feedback is to be effective in enhancing students' learning (Sadler 2010). This study provides important evidence that, as a response to the ARAF initiative, students did engage with and reflected more deeply on assessment feedback. Of specific interest is how students in the study expressed their intentions to approach future assessment tasks as a result of their experience with the ARAF initiative.

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Background

Dialogic Role of Assessment Feedback

This project builds on the concepts of feedback loops as both dialogic (Dowden et al. 2013; Elwood and Klenowski 2002; Orsmond et al. 2013) and dialectic (Evans 2013, 97). For assessment cycles or loops to produce effective learning outcomes, students need to engage with and act in response to feedback (Bloxham and West 2007; Boud and Molloy 2013; Sadler 2010). ARAF strategies, developed in this study, aimed to facilitate feedback leading to action for future assessment tasks by augmenting the typical feedback loop. This was achieved by promoting student reflection, engagement with feedback, and constructive action through assessment design. In previous studies, most notably Irwin et al.'s "Sheffield Hallam Approach" (2013, 53–54), qualitative feedback (specifically in the form of comments) was released to students while quantitative feedback (the grade) was withheld for a short period of time, then released after the qualitative feedback was distributed. This approach encouraged students to engage with qualitative comments at a deeper level, thus promoting reflection on, retention of, and future use of this type of feedback (p. 3).

Feedback Provision and Its Influence on Student Engagement

Previous research in this area emphasizes the importance of the method by which feedback is given (Butler 1987; Irwin et al. 2013). Further, the use of information and communication technology (ICT) has significant potential to influence the mode and timing of assessment feedback. Sopina and McNeill (2015) maintain that using an online system for the submission of assessment tasks and the provision of assessment feedback improves consistency and may relieve anxiety for students who would otherwise need to travel to submit printed copies of their assignments. Parkin et al. (2012) found that students were less likely to engage with assessment feedback if there was a significant time delay between the (online) publishing of grades and provision of feedback (printed copy). Further in favor of feedback being distributed using technological means, students have reported a strong preference for typed feedback, explaining that it felt cohesive and thoughtful, and provided more valuable insight than handwritten feedback (Parkin et al. 2012, 970).

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Irwin et al. (2013) found that the expectation of a response to feedback boosts student engagement with assessment feedback; they also recommend that students should have online access to qualitative data for ease of accessibility (53). Maggs (2014) and Rae and Cochrane (2008) emphasize the importance of timeliness for maximizing positive engagement, with the latter study highlighting the importance and benefit of the feedback being incorporated into future assessments within the same course where possible. Further, Cramp (2011) found that deepening first-year students' engagement with written feedback assists them to connect to their feedback meaningfully, thus fostering self-regulation of their studies as well as improving student retention rates. Overall, these studies offer evidence that increased student engagement with assessment feedback has positive influences.

However, while the process of engaging students with assessment feedback and ensuring their access to such feedback is timely and streamlined, the purpose of engaging with feedback must be clarified to students. For example, another consideration arising from Irwin et al.'s (2013) study is that students need to be fully informed of the reasons underpinning the staged-release of feedback to avert the issue of students seeing the initiative as an inconvenience or an unnecessary waste of time and resources.

Scope of Previous Research

Previous projects investigating the efficacy of ARAF strategies have been limited to either undergraduate (Irwin et al. 2013; Parkin et al. 2012) or postgraduate students (Northcote et al. 2014; Sanchez and Dunworth 2015) respectively. The project described in this article differs from previous studies in its coverage of three case study contexts across both undergraduate and postgraduate contexts. It is also distinguished by:

1. its emphasis on multiple domains, including the cognitive, affective, and behavioral domains;
2. the extended time given for students to reflect on their assessment feedback; and
3. clear intentionality to scaffold the metacognitive process for students throughout the assessment event using adaptively-released feedback mechanisms.

As such, this investigation aimed to develop students' "self-regulation through introducing students to the multiple purposes of feedback and

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their active role in generating, processing and using feedback" (Yang and Carless 2013, 293). Implementation of the ARAF initiative also sought to address students' confusion as to the purpose of feedback (Maggs 2014; Cochrane and Withell 2013; Sopina and McNeill 2015), and to reframe the feedback loop as an ongoing—if iterative—supported process of learning that fosters self-regulation.

Research Methodology

The qualitative methodological approach used in this research was adopted as it "endeavours to catch an holistic perspective as well as capture the depth of understanding of the respondents" (Flick 2004, 229), thus allowing a dual focus on feedback as *teacher-provided* and *student-received*. Furthermore, this research project employed online research processes advocated by Burnett and Roberts (2005) for the purpose of promoting greater transparency between the teachers and students in each of the courses, and fostered co-learning between participants and researchers. The project's approach was purposefully designed to ensure it could be applied in other higher education institutions, regardless of differences in learning management systems (LMSs).

The methodology adopted throughout this project was designed to elicit data from student-participants in three different cohorts about their previous experience with assessment feedback and their reactions to the use of ARAF strategies in the three courses in which the strategies were utilized. The three courses were investigated as three separate cases and, due to the differences across the cases, the analysis of the data gathered from each case was intended to be more exploratory than comparative. While the data gathered about the students' previous assessment experience informed the design of each course's ARAF strategies, the purpose of the study was to investigate how the use of ARAF strategies impacted students' intentions to modify their future learning practices in response to their experience of receiving adaptively-released feedback. To gain insight into the students' responsiveness to varied forms of ARAF, the project drew upon data gathered in three different case studies. The study involved students in two undergraduate courses and one postgraduate course:

Course 1: First-year bachelor of arts;
Course 2: Third-year bachelor of education; and
Course 3: Postgraduate master of teaching.

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Since the purpose of the research was exploratory, data were not gathered for the purposes of conducting comparative case studies but to investigate three different learning contexts and three different assessment task profiles, each chosen for their "particularity and complexity of a single case" (Stake 1995, xi).

During phase 1 of the study, students in each course were invited to participate in focus group interviews during which inquiries were made about their previous use of assessment feedback and their responses to potentially receiving assessment feedback using ARAF methods. Of the total number of 77 students invited to participate in the focus group interviews across three cohorts, 18 (23%) volunteered. In this first phase of data collection, students were asked a number of questions including:

Without using lecturer or course names, what type of assessment feedback do you typically 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?

Data gathered from these focus group interviews were collated and qualitatively coded using a constant comparison method of network analysis, described by Thomas (2009, 199), to identify a set of key themes that emerged from the data. These themes were then used to develop a set of guidelines to inform the construction of three sets of course-specific ARAF strategies as part of each course's curriculum design. Subsequently, these guidelines were used by each lecturer to develop a set of practical ARAF strategies in each of the three courses, including self-assessment practices, which guided the delivery of qualitative and quantitative assessment feedback to students. Each customized set of ARAF strategies was implemented for one of the assessment tasks in each of the three courses.

After the ARAF strategies were implemented, phase 2 of the data collection took place in which students were asked to respond with qualitative responses to two online surveys. Responses to these two surveys were gathered immediately after the students received, first, their qualitative assessment feedback and, second, their quantitative assessment feedback. The first survey gathered data about their responses to receiving qualitative assessment feedback (in the form of commentary, advice, and verbal feedback). The second survey elicited students' responses about receiving

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quantitative assessment feedback (in the form of criteria ratings, grades, and numeric marks). In each of these two online surveys, students were asked to describe what they did immediately after receiving the assessment feedback, what they thought and felt after they received the feedback, and how this experience influenced their intentions about how they would approach their learning and engage with assessment feedback in the future.

Findings (Part 1): Development of ARAF Design Guidelines and Strategies

The data collected in phase 1 of the study provide insights into students' previous experience with assessment feedback. The students' reflections provided a baseline of experiences and expectations on which to begin the process of designing practical ARAF strategies. Students reported that the most common types of assessment feedback they had experienced were annotated comments on assessment tasks and information provided within marking rubrics. If marking criteria were used, these were most often nested within the structure of a rubric. A small proportion of students had received verbal feedback either immediately following an oral presentation in an on-campus class or as an audio recording accompanying their written work. Even so, written feedback was reported as being more common than verbal feedback. Not surprisingly, constructive and positive feedback was preferred by students but, overall, students tended to undervalue feedback and found it challenging to relate feedback from one assessment task to another.

The specificity of students' reflections revealed that they were aware of the potential of assessment as a learning tool but articulated a number of barriers to their effective use of the feedback. They placed importance on the timeliness of feedback, whether it was qualitative (e.g., annotated comments and written feedback) or quantitative (e.g., numerical marks, grades, and criteria ratings).

Findings from an analysis of phase 1 data enabled the lecturer in each course, in conjunction with the researchers, to collaboratively develop a set of general ARAF design guidelines appropriate to their course. The guidelines included practical recommendations for:

processes to establish and/or resources to develop before the semester began;
implementation of ARAF strategies during the semester;

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the provision of qualitative assessment feedback to students;
the provision of quantitative assessment feedback to students;
gathering responses from students about receiving various types of feedback; and
tracking information about student actions after feedback was provided and received in the "metaphase" of learning (the phase post–assessment submission and grading).

Next, these general ARAF guidelines were customized by each of the three lecturers and implemented in each of their courses. Typically, each lecturer used a combination of paper-based and electronic means of receiving assessment tasks, and grading and distributing assessment feedback to students. Each of these customized set of ARAF strategies are now described.

Customized ARAF Strategies for Course 1

Customized ARAF strategies were incorporated into a first-year course in Media Studies involving 25 students studying in specializations ranging from Visual Arts to English Literature. The course focused on reading, interpreting, and encoding content presented in varied forms of media. During the semester, students were introduced to a range of ideological approaches to analyzing media, the psychology of advertising, and basic design principles for creating print and digital media; the assessment tasks in this course focused on these three areas. The assessment tasks comprised an essay, a series of blog posts and a group advertising pitch. By the end of this course, students were expected to be able to identify, analyze, and employ key compositional features of a range of media; they were also expected to analyze media texts from a range of critical approaches.

The assessment task chosen for implementing ARAF strategies in this course was an essay that required students to conduct an ideological critique of a feature film. In this task, students were expected to select a critical approach (e.g., Marxist, feminist, Christian) and draw on a small range of secondary sources to analyze relevant elements in a film from their chosen perspective. The word limit for the essay was 1,500 words, comprising 35% of the overall grade for this course. This was the first assessment task of the semester. Feedback on essays is typically given through in-text comments made on specific points throughout the essay,

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and a more general overall comment is usually provided at the end of the essay. For this course, feedback was provided to students in the form of a rubric (see appendix A) with criteria ranging from quality of argument to written expression and the ability to incorporate secondary critical sources.

At the beginning of the semester students received details on each assessment task in the course and the rubrics used for the assessment of those tasks. The ARAF strategies for this task included an additional self-assessment rubric, which was identical to that used by the lecturer when marking the essays, and was submitted by the student with his or her essay through the institution's originality checking and plagiarism prevention software (Turnitin) on the LMS (Moodle). When the assessment tasks were graded, the marked-up essay with qualitative feedback (no grades were given to students at this stage) was returned to the students via a link on the LMS. Students then accessed a hyperlink to three questions that required them to respond to this qualitative feedback and to explain how they planned to use this feedback in their future learning. Once these data were gathered from all students, the quantitative assessment feedback was released in the form of the completed rubric, grade, and an overall comment. Students were then asked to respond to the quantitative assessment feedback and, in addition, were asked to explain how they planned to particularly use the qualitative assessment feedback in their future learning.

Customized ARAF Strategies for Course 2

The second course that was investigated during the study included 30 students and was a third year Curriculum Studies—Humanities and Social Sciences II (HASS) course that dealt with historical, geographical, and civic concepts, and skills required for the effective and investigative teaching of HASS in primary classrooms. Throughout this course, students were expected to apply their knowledge through practical tasks using an eclectic but integrated and interdisciplinary approach. This course required three assessment tasks to be completed:

1. a portfolio—electronic resource;
2. a unit plan and field trip; and
3. a series of five cooperative literacy activities.

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The first assessment task in this course was chosen as the task for implementing and monitoring a set of customized ARAF strategies.

For this task, students were expected to create a portfolio of resources for six topics from the Primary History curriculum. Students were required to demonstrate an in-depth knowledge of investigative processes, content, historical concepts, and historical skills in the selection of resources. The task, although not an essay, was limited to 2,500 words and contributed 35% of each student's overall score for the course. The developed marking rubric (see appendix B) outlined seven criteria measured on a five-point scale and included the option of providing general feedback comments; these comments provided students with detailed feedback on their performance against the criteria.

The ARAF strategies for this task included the students completing the rubric as a self-assessment component. In addition, during the week 6 and week 7 tutorials, the students shared their portfolio with their peers. At this time, they received peer feedback on their tasks, discussed questions about their task efforts, and recorded these ideas. Self-assessment questions which prompted students to reflect on their learning, included:

1. If I did this task again, what would I do differently?
2. What can I take from this task to help me improve in the future?
3. How will I use what I learned here for future tasks?
4. What did I do well in this task?
5. What did I do poorly in this task?

In week 8 of the 13-week semester, students received qualitative assessment feedback from their lecturer in the form of annotations throughout the task and some overall comments. In week 9 students received the quantitative assessment feedback for their task in the form of a marking rubric that highlighted the applicable scale together with their achieved grade. After receiving both the qualitative and quantitative feedback, students were invited to share their responses to receiving such feedback in the order it was given, as well as how they planned to use the qualitative feedback for their future learning.

Customized ARAF Strategies for Course 3

The third course that was investigated included 17 students and was a postgraduate course that covered a customized set of ARAF strategies.

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This course covered the specific theory and practice of teaching Indigenous and culturally diverse students. This course is mandatory for all pre-service teachers within a postgraduate teaching degree program. The three assessment items in this course include:

1. a group cultural presentation on a specified ethnic group;
2. a panel discussion with an accompanying report on issues such as Indigenous schooling, acculturation, racism, and citizenship; and
3. a final examination covering the content and concepts of the entire course.

Of the three above tasks, the assessment task chosen for implementing customized ARAF strategies was the report component of the panel discussion in the second assessment task. The students were provided information in their course guide about the course's assessment tasks, including a marking rubric (see appendix C), marking criteria, and the learning outcomes being assessed. The standard form of feedback students typically receive for this assessment task is a marking rubric that had been personalized with specific comments in addition to feedback about levels of achievement in each of the categories listed on the rubric. Additionally, students received a final quantitative grade and mark as part of the rubric. However, for this project, the students were also required to provide a completed marking rubric with their report that contained their own qualitative and quantitative self-evaluations of how they perceived their performance against the criteria in the assessment task.

With the agreement of the lecturer, the tutor marking the students' reports provided completed rubrics for all students. These rubrics contained both qualitative and quantitative feedback on each student's performance for the report in the form of feedback comments and an overall numeric mark. The two types of feedback were then sent to the students at different consecutive points of time. Students were required to record responses to both the qualitative and quantitative feedback they received after their assessment task was marked. Students were asked about the feedback process as well as their perceptions of evaluating their own performance, receiving qualitative and quantitative feedback separately, and the difference between the feedback from the tutor and their own evaluation of their assessment.

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Findings (Part 2): Students' Responses to Implementation of ARAF Strategies

The findings above (part 1) have outlined how analyses from the data gathered during the first phase of the study informed the design, development and implementation of ARAF strategies in three different courses of study in one higher education institution. In the second phase of the study, further data were gathered using online surveys to document students' reactions to receiving a mixture of qualitative and quantitative feedback as the ARAF strategies were implemented. The main focus of this post-ARAF data collection phase of the study was to identify specific examples of how the students were intending to modify their future learning based on the assessment feedback they received during implementation of the ARAF strategies.

After students' responses to two online surveys were analyzed, participants' responses were categorized into four themes, indicating that they held views about (1) the usefulness of ARAF strategies; (2) the nature of feedback in general; (3) anxiety about receiving feedback in the form of ARAF strategies; and (4) timing of ARAF strategies.

The usefulness of the ARAF initiatives evoked a broad array of comments from the students, ranging from appreciation through to disdain. The students' comments provided insights into their perceived usefulness of the initiative. Some students reacted very positively and used the qualitative feedback comments, without the distraction of their grade, to re-examine aspects of their assessment task. It was interesting to note their reflective comments about their assessment tasks as they reacted to the qualitative feedback, as is captured in the following quotes:

> I'll scrutinize my work much better before handing it in to see that it improves from the mistakes I made in this essay. (first year, Media Studies)

> I plan to use the qualitative feedback more because it's there to help us get better grades and understand assessment. (third year, Primary Curriculum Studies)

These comments indicate that the students have read their assessment feedback and are starting to assimilate the feedback information into

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their understanding of preparing assignments, even acknowledging very specific aspects of the task. Students did see value in the feedback and acknowledged that they would utilize what they had learned when working on future assignments: this is one of the underpinning principles of using ARAF strategies. The following comment by a student captures this sentiment and is typical of several responses:

> I will use the comments to write better essays in the future. (first year, Media Studies)

These students appreciated that the feedback they received on their current essay had value for them when writing essays in the future. However, some students could not see beyond the specific course in which they were currently enrolled:

> Although the feedback was valuable to determine what was done adequately or poorly, I felt there isn't a lot of value in applying this to other assessments because of the specificity of this particular essay. (first year, Media Studies)

Overall, however, many of the students perceived the usefulness of the specific assessment feedback they received through the implementation of the ARAF strategies:

> I could understand the marker's thoughts through the feedback. (third year, Education)

> I appreciate knowing what I did right and wrong. (third year, Education)

> I continued on with the next task I had planned to work on but with the feedback comments at the forefront of my mind. (postgraduate Master of Teaching)

While the ARAF strategies used in this initiative certainly presented novel experiences for both staff and students, an important component of the study was to understand how the students reacted to the nature of the feedback provided to them during the implementation of the ARAF strategies. Data gathered from the students reflected their ideas about the

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nature of the feedback they were provided. They acknowledged the time taken by their lecturers to prepare qualitative feedback:

> I felt that the lecturer took the time to evaluate my assessment and give me helpful and critical feedback. (third year, Education)

When noting how they felt when they received their qualitative feedback, the students' responses covered a wide spectrum from "I just got on with life" and "I really couldn't bother to read it" through to comments in which their reactions showed that they valued the feedback they received:

> Went back and read portions of the essay which received a poor grade. Looking at what needs to be done differently. (first year, Media Studies)

> I was keen to check over my assessment and mentally make improvements. (third year, Education)

These quotations provide an insight into the positive effect that resulted from the provided feedback. The students did not just look at the mark and move on but actually responded by going back and looking at the assignment to better understand why they received the feedback and the grade they had.

Some of the students expressed comments about the anxiety they felt while waiting for their results. While some students felt "relieved," "pleasantly surprised," "happy," and "normal" after receiving their qualitative feedback, because they "already had an idea of the mark from the comments," quite a few other student comments reflected their anxious feelings associated with waiting for their quantitative results:

> I felt anxious to know my mark/grade. (first year, Media Studies)
> I always feel relieved when I see a mark because the anxiety of not knowing what I got is too much. (third year, Education)

After receiving their qualitative comments, one student even expressed feeling "exposed" and another student felt "angry":

> I felt exposed as I realised that the marker really read my essay in great depth to provide these specific comments. (postgraduate)
> A little angry, but it [the comments] may be correct. (postgraduate)

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Many of the students also commented on the timing of the release of assessment feedback, as part of the overall ARAF approach. In fact, the timing of the distribution of feedback appeared to contribute to the feelings of anxiety and nervousness that some students experienced, making such recommendations to the researchers as:

> Please don't subject people to this in future. If you do insist on repeating this process in future assessments please provide the quantitative feedback a day or two later at most. (first year, Media Studies)

While some students were quite "happy" to receive their feedback in a staggered manner, other students expressed their preference for receiving both qualitative and quantitative feedback together:

> To be honest the feedback was quite positive but my grade didn't reflect that. I like to receive both at the same time" ... "I would prefer to have comments and marks at the same time. (third year, Education)

Although there was a mixture of responses about whether students preferred feedback being received in an adaptively-released manner or all at once, quite a few students mentioned that the staggered delivery of their feedback caused them to compare the two types of feedback:

> I was happy with what I had and felt that it matched with the comments earlier. (third year, Education)

Other students compared the feedback they received from this assessment task to previous assessment tasks, or even to their own estimations of their work:

> I compared and contrasted them to the feedback I received on a similar assignment last semester. I also analyzed my assignment in terms of the criteria sheet. (first year, Media Studies)

> Then I read through it again and ran through my essay in my mind. (postgraduate)

These findings from phase 2 of the study indicate the importance of increasing students' capacity for self-assessment and of providing students with methods to judge their own understanding of specific assessment

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criteria and standards. Overall, the students who participated in the study were supportive of the way in which the use of ARAF strategies motivated them to approach the preparation of their assessment tasks differently and to deal differently with receiving their assessment feedback. Although they did experience some anxiety about receiving quantitative feedback separately from qualitative feedback about their assessment tasks, this anxiety was perceived both negatively and positively.

Discussion and Recommendations for Practice

While this project extends previous research in this area, there are also some limitations to be addressed. The ARAF strategies for this project were implemented in relatively small cohorts where the lecturer, in two cases, was also the assessor; future research will need to consider the implications of using ARAF strategies in large cohorts with multiple lecturers and tutors delivering the course. For the purposes of streamlining and efficiencies, ICT design and support—while important in this project—will be crucial to the success of implementation in courses with large numbers of students. Increased workload for lecturers and tutors is another issue; while the amount of feedback may not change necessarily, implementing the ARAF strategies does introduce an additional time commitment to the feedback loop. Another limitation is that the data were gathered over the course of one semester, which limited the tracking of learning outcomes into future semesters. While the self-assessment questions posed to students did elicit data from them about their plans to incorporate feedback into future assessment tasks, the data gathered does not reflect whether or not this is effective, or the extent to which students used their feedback to inform their future practice. This could be addressed in future longitudinal projects by reporting on cohorts undertaking like-tasks over a number of semesters to track whether students exhibit an increased capacity for reflection and action.

This initiative illustrates a wide range of student attitudes and approaches to their studies. This includes students who want to achieve high results and are willing to receive whatever input they can get and use it to improve their grades. Another category of student is revealed in this study: students who just want to receive their quantitative score for the assessment so that they know they have achieved a pass level for the assessment task and can move on to the next task.

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There were also minor categories of students. The postgraduate students were more likely to indicate that they had been completing tertiary assessment tasks for long enough to know how they could improve their performance but they needed to balance the effort required to do so with family, work and other commitments. Another subgroup was not impressed with having the quantitative score withheld and did not appear to care about receiving written or qualitative feedback comments.

It could be said that there is nothing surprising about some of the results of this study and that the different attitudes identified in this study are reasonably predictable. What is worthy of note, however, is the large number of students who, in being required to read and comment on the qualitative feedback given out initially, acknowledged the usefulness of that feedback and expressed their appreciation for the work of the lecturer, marker, or tutor who provided the feedback. Without the feedback being adaptively-released, these students may not have benefited from it. Brookhart (2017) believes that students who produce good work may often miss out on constructive comments on their assessments. It is these higher-achieving or hard-working students who appear to benefit the most from ARAF methods because they are the ones who put to good use the qualitative feedback given in the first round of released feedback.

Apart from just collecting data regarding students' perceptions of the ARAF technique of assessment, this study also identified logistical guidelines for implementing ARAF strategies. For example, when ARAF techniques are adopted across a diverse set of cohorts, as described in this article, ARAF strategies cannot be standardized or generalized and need to be adapted to the type and level of course being undertaken. A second aspect that was identified in the study is that the staged release of the assessment feedback actually gives students the opportunity to engage in a form of formative evaluation that, when taken advantage of, is an aid to their skills and future learning.

As illustrated during the course of this study, students need to have timely and easy access to qualitative feedback provided about their assessment tasks. The student responses reported in this article are consistent with previous research that shows students find it difficult to apply feedback in future assessments—or 'feed forward' (Duncan 2007)—which suggests that feedback would be more effective if it is not only cohesive and thoughtful (Parkin et al. 2012, 970) but also readily accessible for future assessments.

To increase the dialogic and self-reflective elements of the feedback loop, the lecturers in this study also required students to complete a self-assessment rubric. The rubric used for this self-assessment task was identical to the final

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rubric that lecturers would use to assess the students' work. The purpose of requiring students to complete a rubric for self-assessment purposes was to increase students' capacity for self-assessment and to provide the tools for students to apply in judging their understanding of assessment criteria and standards. This step acknowledges that such knowledge is not always tacitly acquired (Boud, Lawson, and Thompson 2015), and positions the feedback not only as assessment *for* or *of* learning, but assessment *as* learning. Rather than expecting or hoping students would independently engage in self-assessment, this process somewhat formalizes self-assessment by integrating it systematically into the assessment process. The incorporation of a self-assessment tool in the process of adaptively-releasing assessment feedback is designed to increase the impact of the interval between receiving qualitative and quantitative feedback. Furthermore, as well as giving lecturers insight into individual students' capacity for understanding criteria, this process provides a point of reference against which individual students' progress can be tracked. This use of self-assessment also represents a shift toward ipsative assessment, a model that emphasizes incremental personal achievement over external criteria-referenced evaluation (Hughes 2014).

Participants in this project and previous studies also indicated widespread undervaluing of assessment as a learning tool; designing the feedback loop by embedding self-reflection into the assessment process addresses these underlying assumptions and beliefs. As highlighted in Irwin et al.'s (2013) study, students must be fully informed and have both an understanding of the initiative and the reason for the staged release of feedback, and this requires a clear line of communication between the lecturer and the students.

Conclusion

The outcomes of this project highlight the complexity of the assessment feedback process with implications for the form of assessment feedback, engaging students in the process of receiving feedback and guiding them in the informed application of such feedback to their future learning. This project explored more fully the concepts developed by Irwin et al. (2013) and Parkin et al. (2012) and extends their work on adaptively-released feedback. Furthermore, this project demonstrated how self-assessment processes can be integrated into the processes associated with the provision and receiving of assessment feedback.

This project added new dimensions to the studies by Irwin et al. (2013) and Parkin et al. (2012) through broadening the focus of their study. First, the ARAF initiatives were applied in three different disciplines:

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Media Studies, Education, and Culture. Not only were a range of disciplines engaged in the study but also both undergraduate and postgraduate courses were included. This diversity in discipline and course level enriched the findings of the study beyond the context in which these strategies had previously been investigated. This study provides us with insight into the currently underutilized potential of the assessment feedback that is currently provided to university students. It has shown that there is potential to further enhance the effectiveness of student learning by integrating assessment feedback and reflection processes through the application of ARAF strategies. After ARAF strategies were implemented, deeper reflection by many of the students was demonstrated in the way they re-engaged with their assignments for the purpose of gaining a better understanding of how they could improve their future assignments and their future learning. However, a note of caution should be considered: it was apparent that some students were limited in their capacity to relate their learning from one assessment item to their learning intentions in future courses. This finding indicates that students may require guidance in how to view learning beyond their current assessment task.

Another major outcome of the project is the realization that, despite the benefits of ARAF, "one size does not fit all" when planning the strategies within a course's curriculum design. Variables that need to be taken into consideration include the type of assessment, the time the assessment is given in the semester, the timeliness of the initial feedback, the academic level of the students, and their ability and desire to use feedback for improvement.

When planning for this project, thoughtful consideration was given to the quantity and quality of the feedback provided to the students about their assessment tasks, as well as the timing and sequence of the provision of this feedback. As this project continues, it is hypothesized by the research team that by designing individualized feedback loops for each course, students will be gradually conditioned to use the qualitative feedback they receive to enhance their learning. During the next phase of this project the responses from students *and* staff about their use of ARAF strategies will be investigated.

Finally, one of the major lessons learned from this study about assessment design is the need to develop awareness, in both staff and students, of the powerful role of assessment feedback as part of learning. Students do not appear to possess an innate capacity to engage in such levels of reflection about their assessment feedback; for full effect, this needs to be systematically developed and fostered across courses. Likewise, staff will need professional development support to develop appropriate skills to design and employ ARAF strategies.

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Appendix A

Marking Rubric for Course 1

IDEOLOGICAL Research Essay

Name	Mark
Quality of Argument	
Analytic	Descriptive
Argument developed	Weak, no argument
Logically developed and structured	Lacks logic, rambles
Integration across sources, resolution of contradictions	No integration across sources, contradictions not recognized
Use and Understanding of Critical Positions	
In-depth research into critical positions	Little or no research in critical position apparent
High level of understanding and application of critical position	Does not understand or use critical position well
Quality of Evidence	
Well supported by evidence and examples	Inadequately supported by evidence and examples
Accurate presentation of evidence and examples	Inaccurate presentation of evidence and examples
Written Expression and Presentation	
Fluent and succinct	Clumsily written, verbose
Correct punctuation	Incorrect punctuation
Grammatical sentences	Ungrammatical sentences
Correct spelling	Incorrect spelling
Attractive, well set out, essay question and title evident	Untidy and visually difficult to follow; no question or title
Synopsis included	No synopsis
Appropriate length	Over-under length
Sources/Referencing	
Adequate number of references	Inadequate number of references
Adequate acknowledgment of sources	Inadequate acknowledgment of sources
Correct and consistent in-text referencing style (MLA)	Incorrect and/or inconsistent in-text referencing style
Works cited list correctly presented	Errors and inconsistencies in works cited list
Comments:	

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Appendix B

Marking Rubric for Course 2

Marking Rubric: Assessment 1: Resource File					
Criteria	Level of Attainment				
Six topics	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Rationales	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Five resources per topic	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Quality of resources provided (higher order thinking, differentiation, use of ICT and multiple intelligences)	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Organization and layout	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Grammar, punctuation, and spelling	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Core values, Christian worldview, and Aboriginal perspectives	Not evident	Insufficient evidence	Adequate coverage and application	Proficiently covered and executed	Comprehensively and creatively executed
Marks deducted for lateness	(10% per day)				
Total	/35				
Comments:					

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Appendix C

Marking Rubric for Course 3

Multicultural Education and Indigenous Studies							
Report marking							
Name:							
Criteria	Outstanding	Thorough	Proficient	Adequate	Elementary	Not Evident	Mark
	18–20	15–17	9–14	4–8	1–3	0	
Knowledge Competent interpretation and answering the question Conveys strong impression of competence in understanding Overall presentation and communication of ideas in a logical and coherent manner							
	5	4	3	2	1	0	
Knowledge Integration and interpretation of information, including evidence of analysis and synthesis and evaluation of topic Multiple authors integrated into text with a high level of reflective thought linked to text Conclusion: Points/reflections drawn together in a convincing summary of topic							

(*Continued*)

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Format All elements present and follows assignment guide Structure and progression Well structured and progresses in a logical sequence. Spelling and grammar: Use of correct grammar, punctuation and spelling	10	7–9	5–6	3–4	1–2	0
Referencing Bibliography/reference list following APA format Appropriate use of sources, direct quotes, citations and paraphrasing integrated smoothly into text Information well referenced using in-text referencing	5	4	3	2	1	0
Referencing Referencing of five or more information sources Variety of references could include; books, electronic sources and periodicals						
				/55		

Comments: _____

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