Exploring the way students use rubrics in the context of criterion referenced assessment

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The aim of our study is to explore students' responses to rubrics. We wanted to discover how students read and use rubrics, and how useful and clear students find rubrics in explaining what is expected in assessment tasks and, later, explaining marks and marker comments. Rubrics are currently regarded as an important part of the assessment and moderation process, meant to provide markers with a means of achieving consistency and students with clarity and transparency in assessment tasks. We used an online survey with questions about whether, when and how students read rubrics; whether they feel able to ask for clarification if they do not understand something; to what extent, on return of an assignment, students focus on how their work is judged against the rubric; whether students ever feel overwhelmed by the amount or form of language used in a rubric and what other kinds of clarification might be helpful to them. In the pilot survey stage of this project, 22 surveys have been undertaken by student participants. Analysis of the pilot study data provided several clear indications that warrant further research. Namely, that: class discussion is vital to comprehension of rubrics; the use of exemplars instead of/in addition to rubrics may aid student comprehension; the complexity of language used in rubrics may confuse students; and rubrics may not accurately reflect the work required for the task and therefore influence students to change their approach to the assessment task.

Keywords: rubrics, learning tools, assessment policy

Introduction

Rubrics are intrinsic to modern Australian assessment and moderation processes that are based on criterion referencing, as described by Sadler (2005, p. 185).

> A university may develop a policy that obliges all university teachers to specify
> the criteria or qualitative properties that the assessor intends to take into account
> in making a judgment about the quality of student responses to each assessment

task… Characteristics that apply explicitly and directly to student responses clearly lie within the scope of the definition of criteria.

Such rubrics are designed to provide markers with a means of achieving consistency and act as a feedback learning tool for students by providing clarity and transparency in assessment tasks (Reddy & Andrade, 2009).

The use of rubrics is strongly supported by institutions and promoted as flexible and helpful, and in some cases mandated, for example,

> Many Schools have mandated the provision of rubrics as part of the assessment documentation and feedback process. We strongly encourage you to present your criteria and standards in the form of a rubric (Charles Sturt University 2015).

In contrast to the institutional embrace of rubrics, there has been criticism in academic literature about the effectiveness of rubrics as a learning tool. These critiques, coupled with anecdotal reporting from our students on their perceptions of rubrics, led us to investigate the design and implementation of rubrics and their effectiveness in higher education. The research is based within the Australian literature on Assessment and Evaluation and particularly notes Taylor and Da Silva's recent research on the effectiveness of feedback where they call for more research and suggest "there is scope to improve the design of marking templates or scoring rubrics to provide more effective feedback to students" (Taylor & Da Silva 2014, p. 805).

Our study aims to explore how students use rubrics; how useful and clear they find rubrics in explaining *ante hoc* what is expected in assessment tasks and, *post hoc*, marks and marker comments; and possible pedagogical solutions to identified difficulties. The first phase of this research, upon which this discussion is based, utilised an online survey that aimed to explore students' responses to rubrics. The results of this survey are analysed and emerging themes identified to generate further research via a focus group study. Our findings indicate that rubrics may not be effective in helping students complete assessment tasks and that there is a need for future research in this area.

Literature

The use of rubrics as a tool arose out of concerns regarding historical forms of higher education marking, known as overall achievement marking which measures by score totals. As explained by Sadler 'the obvious measurement issue raised by [Overall achievement marking] is how the marks are generated in the first place' (2005, p. 182). There are further questions about reliability and replicability, validity, sampling adequacy, marking standards, marking reliability and measurement error in tertiary assessment marking. In recent years, this criticism has led to calls for more transparency (Montgomery, 2000), which in turn led to interest in criteria referenced grades and explicitly described standards. A common institutional response is to introduce policy that specifies clearly any criteria or qualitative properties upon which the students' work will be judged (Sadler 2005).

This type of policy is, in turn, problematised within education research. Areas of concern include a disconnect between rubrics and overarching course objectives, lack of impartiality of rubrics, inconsistency in implementation, and differing individual interpretation of rubrics. The lack of alignment of criteria with subject and course level learning outcomes in criterion

referenced marking has been highlighted by several education scholars (Brooker, Muller & Mylonas, 1998; Montgomery, 2000; Sadler, 2005). A clear problem with them is that the rubrics are frequently developed in a separate process to learning outcomes and therefore do not align or map in any easy to understand way (Sadler, 2005).

At Charles Sturt University an attempt to overcome this problem has been developed with the constructive alignment of assessment and course and subject objectives. Each assessment item must contain a rationale linking the assessment criteria to learning outcomes. The assessment for each subject must meet all the learning outcomes for that subject. The criteria and standards must be presented to students in the subject outline prior to the start of semester to encourage subject coordinators to spend time ensuring their assessment aligns constructively with the learning outcomes, rather than being completed 'on the fly'. The need for constructive alignment has been recognised by Charles Sturt University policy for some time (Charles Sturt University, 2000), however, what is new is the widespread use, specifically, of rubrics, as a perceived answer to all the problems; hence the importance of problematising them in this research. While rubrics may mitigate the disconnect problematised in the literature, in practice subject coordinators can 'jiggle' their assessment to fit the learning outcomes and consequently may make concessions to 'fit' criterion referenced marking.

Another criticism of criterion referenced marking is that marking schemes alone do not enhance reliability, rather, as McConlogue (2012) argues, the use of rubrics (along with grade descriptors and assessment criteria) mistakenly promotes a belief within the institutions that their use makes assessment more valid, reliable and fair. In any process involving human interaction there are subjective judgements as McConlogue (2012) explains

> Assessment criteria and grade descriptors are not … unproblematic articulations of standards. They encompass a range of beliefs and assumptions derived from tutors' previous marking experiences, and given the range of these experiences, understandings of criteria and descriptors vary. (p. 114)

This highlights that marking guides and assessment criteria are not neutral documents. Marking rubric interpretation may end up being a palimpsest of each tutor's previous marking experiences and prejudices. The students' missing insight into the markers' marking baggage is critical and worrying for criterion referenced marking guides.

There is also an issue, as Bell, Mladenovic and Price (2013) outline, that understandings may vary not only among markers (something we are trying to overcome with moderation processes), but also, and crucially, between markers and students; students may not understand these in the same way as academics are using the guides to mark. This is exacerbated as understanding of standards within assessment uses both 'explicit and tacit knowledge' (Bell et al., 2013, 771), but criteria and rubrics only deal with explicit knowledge. The tacit knowledge or implicit rules of the game are at play within all assessment contexts in higher education. There are misunderstandings generated when students do not understand that assessment judgements always include tacit knowledge (Orrell, 2006), to which they may or may not have access and of which they may have no comprehension. These misunderstandings are exemplified by McConlogue (2012).

For example the definition of an apparently clear term like 'argument' may vary depending on disciplinary, sub-disciplinary (or even individual tutor's) understandings of what constitutes argument (p. 120).

Any gap in shared understanding, either between marker and student, or between two markers, impacts validity and impedes the consistent interpretation of assessment items (Reddy & Andrade, 2009, p. 443).

The remedy, as Tapp (2013) finds, of trying to make rubrics and assessment items increasingly explicit is also problematic and can be counterproductive:

Assignment briefs that include detailed criteria and lists of indicators of success can result in more specialised language and detailed documents which can become ultimately less intelligible (p. 324).

Therefore, while it is important to have clear and explicit rubrics and assessment instructions, striving for complete clarity by adding more information can make it more confusing.

There is a certain consensus that a lack of shared understanding of items in the assessment materials, such as rubrics, can negate the usefulness of the items (McConlogue, 2012). The understanding of the assessment criteria and documents are critical and Payne and Browne (2011) indicate that confidence and performance increase with an enhanced understanding. In pursuit of this, Handley and Williams (2009) suggest formative dialogue is useful to define the assessment criteria. It is suggested that these discussions can take place in extra workshops (Bell et al., 2013), or as compulsory class time or possibly to form part of compulsory online activities. Hendry and Anderson (2012) also suggest students find discussing in compulsory class time helps make the assessment materials and marking guides understandable. Selwyn's (2009) work on the educational use of Facebook by undergraduates shows that a key topic for discussion was assessment rubrics. Reddy and Andrade (2009) propose "An alternative strategy is a collaborative approach in which rubrics were … co-created with … students before they began an assignment" (p. 437).

In addition to the contention that rubrics enhance understanding of grades, Sadler (2005) argues that rubrics with criteria and standards can also help students make more sense of their own learning. A final interesting line of inquiry, therefore, is: is this really the case, and, if so, do students see this happening?

Methodology

The over-arching research question is: Are rubrics a useful tool to help students complete assessment? In order to find an answer to this question, the following questions are addressed in this study: Are rubrics intelligible to students, or do they make a task more intelligible? Do rubrics make feedback and grades more intelligible? Does a rubric give a student a sense of control over their own learning and thus enable them to become more self- monitoring? Do rubrics induct students into a process of making academic judgements? Are rubrics read by students, and at what point in the process?

For this initial exploratory study we employed an online survey, the rationale being the ease of conducting an online survey, the ability to garner a wide range of initial data on the subject to see if further research is warranted, and the ability of surveys to provide data on the link

between attitudes and behaviour (Groves, Fowler, Couper, Lepkowski, Singer & Tourangeau, 2009; May, 2001). The survey asked: Whether, when and how students read rubrics (e.g. carefully, skim over them, not at all); whether they feel able to ask for clarification if they do not understand something - either a criterion or a standard and how to achieve it; whether, on return of an assignment, students focus on how their work is judged against the rubric, marker comments, both equally or simply the grade awarded. We also asked whether students ever feel overwhelmed by the amount or form of language used in a rubric and what other kinds of clarification might be helpful to them. The students were recruited from first and second year undergraduate classes in Justice Studies and Literature at Charles Sturt University. The survey had 31 questions on rubrics and the online link was given to the students in class time, although it was to be completed out of class time. Twenty two surveys were completed.

Limitations

The study did not trawl a wide variety of disciplines, but was limited to first year students in Justice Studies and third year Literature students at Charles Sturt University. The survey was conducted on a small number of students and not all students completed all questions in the questionnaire. This cohort was not necessarily a representative sample, because it was voluntary. These limitations indicate that the main value of this report is as an indication of the need for further research.

Results and Discussion

Demographics
The link to the survey was provided to students during class time. Of the total number of enrolled students in the two subjects (one first year Justice Studies subject and one third year Literature subject) (total n=109) there were 22 students who fully completed the online survey. Respondents were asked to indicate specific demographics: 88% responded female (n=19) 12% male (n=3). No student indicated that they had a disability nor were state care leavers. Two students reported they were of Aboriginal or Torres Strait Islander origin. The survey also asked the students to report their grades from the unit they were reflecting on, 42% gained an HD for that subject, 5% a D, 31% a C and 21% a P, indicating a preponderance of fairly high achievers. High achievers may be more engaged in their academic life and enrolled subjects and therefore, more likely to complete these sorts of surveys. This means the survey may not capture the experiences of students who are less engaged and who do not generally achieve high marks. It could be surmised that these are the students for whom rubrics are both more crucial and more problematic. If this is the case, their absence from survey respondents might be seen to reinforce the indications that rubrics can be more problematic than helpful.

Reading the rubrics
Charles Sturt University students are told that they are required to read the subject outline, and, perhaps because of this requirement, 100% of respondents reported having read the Subject Outline for the subject they were writing about. This meant that all students would have been exposed to the rubrics, yet even with this relatively high-achieving group who are engaged with the course documentation only 78% (n=18) said they had read the rubrics for the subject, which still leaves 22% (n=4) of respondents having not read the rubrics in the units on which they were commenting.

Further analysing the reading of the rubrics there was a question related to how they read the rubrics which asked 'Out of class time, did you read the rubrics (standards and criteria for assessment) in this unit?' Table 1 illustrates the responses of the eight who read the rubrics out of class time.

Table 1: How Rubrics are Read

	% / No. of responses
Carefully, taking note of them	37.50 (n=3)
Briefly, as an overview	50.00 (n=4)
Knew they were there but did not read them	12.50 (n=1)
Didn't know they were there	00.00 (n=0)

The respondents who declared they did not read the rubrics were redirected to an additional question asking why they did not read the rubrics (available answers were that they could not find them, ran out of time or looked at them and they were too complicated). No students responded that they did not read the rubrics because they ran out of time and the rest of the responses were split evenly between the other two options. This indicates that students were either not able to locate the rubrics or that they believed the rubrics were too complicated.

A key question in the survey was: Did you discuss the rubric in class time in the unit? Of 15 responses 11 said they had discussed it in class time when they were present and four said they had not.

Of those 11 students who stated they read rubrics in class time, a finding that emerged from analysis of the data was that rubrics were not actively helping these students for a variety of reasons. Students were confused as to what a rubric was, and rubrics were confusing and unclear. The analysis also indicated that some students only selectively engaged with rubrics.

A follow up question asked, 'Thinking about the rubrics you read in this unit, do you agree with these statements'. The responses are illustrated in Table 2.

Table 2: Reading and Understanding Rubrics

	Yes %	Sometimes %	No %
I always read rubrics	71.43	14.29	14.29
I usually understand what is required from reading rubrics	42.86	42.86	14.29
I think rubrics are the right length	71.43	28.57	0.00
I understand the language used in rubrics	71.43	28.57	0.00
I ask for clarification if I don't understand something in a rubric	78.57	21.43	0.00

What is crucial here is that the results demonstrate a chasm between reading rubrics and understanding them. While 71% of respondents said they always read the rubrics, only 43% said they usually understood what is required from reading rubrics. The purpose of rubrics is to be used as a learning tool for completing assessments; these results suggest that rubrics are meeting this aim in fewer than 50% of cases. Examining this finding in conjunction with the

finding that some of those who did not read the rubrics did not do so because they believed the rubrics were too complicated and confusing, strongly suggests many students do not benefit from the provision of rubrics *per se*.

This chasm between reading rubrics and understanding them may be an example of the problems raised by Bell et al (2013), McConlogue (2012) and Orrell (2006) between explicit and tacit knowledge. Perhaps too much is expected of students and their comprehension of not just criteria and standards, but what a rubric is and how to use it effectively. The lack of comprehension of rubrics may also be a result of changes made to rubrics to include more detail, intended to aid students but in reality further confusing them and complicating the rubrics, as found in Tapp's (2013) research. Whether or not this gulf results from assumptions of tacit knowledge, or unsuccessful efforts to explicate criteria and assessment what is clear is that rubrics may not be a useful learning tool for completing assessment. This also presents an opportunity for further research to examine the implications of these results in conjunction with existing education research.

Relating to those students who read the rubrics out of class time (n=8), the timing of their reading is shown in the Table 3.

Table 3: Timing of Reading Rubrics

	% / No. of responses
On starting the unit?	62.50 (n=5)
Before beginning any assessment item?	75.00 (n=6)
During research/writing to keep focus on what was expected?	50.00 (n=4)
Before submitting to check your work meets the rubric?	50.00 (n=4)
After results to check your grade against it?	25.00 (n=2)

That the rubrics were read at the period that the (presumably corresponding) assessment was being prepared is an indication that the rubrics were in some cases being used for their intended purpose, but, given the limited response to this question, perhaps only by the most committed of students.

The study further indicated that too many students found the rubric too complicated, reinforced by such comments as: "It would be nice to have them streamlined to some extent. I find some are clear and concise, some are very vague" (Respondent 20). Further, it is indicative that in answer to the question, 'Do you usually prefer to talk to you tutor about what is required for assessment?', 100% of respondents answered 'Yes'. This seems to suggest that students need both written and oral explanations of rubrics. This corroborates findings in the literature (Bell et al., 2013; Handley & Williams, 2009; Hendry & Anderson, 2012; Selwyn, 2009) that assessment criteria and standards should be discussed during class to contextualise rubrics and that this may increase their efficacy as a learning tool for completing assessment. This raises questions about how best to discuss and clarify rubrics in subjects that are taught 100% online and/or by distance mode.

This can be partly answered by looking at the question designed to understand what students would like further developed, 'What would be the most helpful to improve your assessment experience?' Students, allowed to tick as many answers as appropriate, responded as detailed in Table 4.

Table 4: Improving Assessment

	%
More class time discussing rubrics and assessment	41.18
Clearer rubric language	75.06
Talking to other students	23.53
Seeing examples of assessment at different grades	82.35
More information about academic expectations	41.18

While this reinforces the earlier point that rubrics may be more effective when class time is specifically set aside to talk through the rubric, it also strongly suggests that language used in rubrics is a significant factor impeding our respondents' effective use of rubrics. Further, the significant majority of respondents (82.35%) who believed that seeing exemplars at different grade levels would improve their assessment experience implies that confusing and complicated rubrics can be clarified and enhanced by the use of exemplars, and that they might even be considered as an alternative way of clarifying to students what is expected of them. This is supported by Hendry and Anderson's (2012) demonstration that rubrics are more effective when used in conjunction with exemplars.

Selective engagement with Rubrics

In order to gauge whether the students who said they read the rubrics were reading them for instrumental reasons the question was posed: Do you usually read the rubric and work out from it how much work the assessment requires? The responses were overwhelmingly positive (n=8) Yes: 78.57% and No: 21.43%.

Several students responded qualitatively to this question. One recurring point was the way they applied their personal goals to the standards presented in the rubrics. For example, a student states.

> It has been since pointed out to me that when reading a rubric you start at a pass and read through to a HD - as I aim for a HD I was only reading that information. This was never pointed out to me as a new student. (Respondent 8)

This comment suggests that some students that selectively read rubrics to meet personal goals and do not engage with the full rubric. Given that many rubrics are constructed with cumulative standards information, (i.e. a credit must meet all requirements of a pass plus…), this may mean that students with high aspirations may not read all the requirements to attain that grade. This student's comment further demonstrates the necessity for class discussion and contextualisation of rubrics rather than use of rubrics alone. The following comment reinforces this point.

> I read the High Distinction column within the rubric to help focus my plan for my assessments. I don't refer to the other columns during my time completing the assessments, because I feel the High Distinction column offers the most insight to what is expected from me. (Respondent 1)

These comments raise questions about how rubrics are constructed, particularly the way standards within rubrics are generated. This is reinforced by the following comment from a

student who recognised that by selectively reading a rubric s/he may miss out on important information that is only presented in the rubric, but responded by abandoning rubrics altogether.

> I used rubrics when I was in high school but now do not as they have become too confusing and do not give me the information I need. I used to always get a rubric and read the level expectations this way I wasn't clouded by the minimum I was expected to do now I must read all levels before finding out what is expected for a HD level. E.g. Most rubrics say "all aspects of a distinction level must be met and" distinction says "all aspects of credit mark must be met and" and so on. I now read what is expected in the outcomes and rationale and make my own judgement of what I need to do. Although this does sometimes effect my mark because the rubric suggests to add in things that the outline does not mention, it is however easier to gain understanding of what is expected. (Respondent 17)

These responses suggest that further research should be conducted on selective engagement.

As a follow-up to the question, 'Do you usually read the rubric and work out from it how much work the assessment requires?', respondents were asked, 'Have you ever done less work as reading the rubric meant the assessment didn't require as much as you thought?' Although only 25% agreed that they had done less work, it raises questions about the issue of tacit knowledge; in fairness to such students, should rubrics include assumed knowledge?

Conclusions

Rubrics are being mandated through governmental, national policy, which assumes institutions are implementing them, academics are using them and students are using them in a similar way. This preliminary, exploratory research indicates that these assumptions may be fallacious. Institutions may be putting the policy cart before the evidence based horse when embedding rubrics in feedback policies.

In answering Taylor and Da Silva's (2012) call for more research, this exploratory pilot study raises more questions than answers, indicating that more research needs to be conducted on rubrics in the contexts of both policy and implementation. Education Literature (Bell et al., 2012; Reddy & Andrade, 2009; Sadler, 2005) indicates that rubrics may be useful in assisting students to effectively complete assessment tasks to an appropriate standard. However, this literature assumes that these rubrics are being used properly. This study raised questions about whether rubrics are a useful learning tool for students to effectively complete assessment tasks. The findings of this study indicate that many students do not find them useful and that the efficacy of rubrics may be limited as institutions, academics and students do not have mutual understandings of what a rubric is, or how to use one. The complexity of language may confuse students and some students do not even read rubrics because they are too complicated.

This research also suggests ways in which students may be assisted in understanding rubrics. Importantly, in line with parts of the literature (Hendry & Anderson, 2012), rubrics are not effective on their own and it is suggested that contextualising rubrics in class discussion could make a vital contribution to rubric efficacy. In addition, students indicated that the use of exemplars, in conjunction with rubrics provide a better learning tool than a rubric alone, mirroring the findings of Hendry and Anderson (2012).

This pilot study reinforces Taylor and Da Silva's (2012) call for more research, particularly into students' understanding of what a rubric is and ways in which rubrics can be contextualised effectively to students. First, comparative research into the use of rubrics alone versus rubrics with class discussion and exemplars may provide some clarity on student comprehension of rubrics and their efficacy as a learning tool for completing assessment items. To conduct this research, exemplars could be embedded into subjects, drawn upon in class discussion and the efficacy of this approach could be measured through survey responses and focus group discussion.

Second, the confusion demonstrated by students about their interaction with rubrics implies that institutions and academics assume too much student comprehension of rubrics. Further research could also usefully step back from questions asked in this study, such as 'did you read the rubrics for this subject' and 'when did you read the rubric?' and instead ask questions like 'what is a rubric?', 'what are marking criteria?' and 'what are standards?'. Focus group research could be used to explore these questions as well as those of students' perceptions and experiences of rubrics within class discussion, as an assessment learning tool, and in conjunction with exemplars.

The findings of such research as well as of this exploratory pilot study, should be used to inform institutional policy on rubrics and provide better learning experiences for students by developing *effective* learning tools for student assessment completion.

Acknowledgements

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