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Transforming taxonomies into rubrics: Using SOLO in social science and inclusive education

Abstract

Designing assessment rubrics has become an important pedagogical practice for lecturers in the Wits School of Education (WsoE) in the recognition of writing as a valuable tool for teaching and learning across disciplines. This paper describes and reflects on the process of adapting the SOLO taxonomy (Structure of Observed Learning Outcomes) devised by Biggs and Collis (1982) into assessment criteria for two assessment tasks in Social Science Methodology and Inclusive Education (Learning Support 1) courses. Through a collaborative relationship between the course presenter (Rembach[1]) and the WSoE teaching and learning advisor (Dison) over a four-year period, a number of rubrics based on the SOLO taxonomy were created, revised and refined for specific tasks in order to determine how students were responding to the set tasks at different levels of cognition. The paper demonstrates several learning benefits that emerged from the process of adapting the SOLO taxonomy for different task requirements, such as better scaffolding of tasks, enhanced student learning, collaborative professional development and better modelling.

Given the diverse student population in the School of Education, there is a strong need to establish a deeper and more nuanced understanding of how course and assessment tasks influence student learning. As assessment plays a fundamental role in shaping student learning in a course (Biggs, 2011), we need to understand how it can contribute meaningfully to promoting higher order thinking outcomes in education courses.

The paper illustrates the central role of assessment criteria in strengthening the relationship between lecturer and student development in designing assessments for these two courses in the Wits School of Education.

Keywords: *SOLO taxonomy, rubrics, assessment criteria, constructive alignment, academic literacies, critical thinking, scaffolding*

1. Introduction

Students' challenges as writers of academic discourse have been well documented in a South African context (Boughey 2009; McKenna, 2009 & Scott, Yeld & Henry, 2007) as have lecturers' difficulties with creating coordinated and sequenced assignments to accelerate students' growth

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1   Rembach is the course presenter of two undergraduate Social Sciences and two postgraduate Honours courses

(Fry, Kettridge & Marshall, 2009). Discipline specialists often see writing as someone else's domain (the language specialists or the 'Writing Centre') or as a basic competence that should have been developed at school or in previous years of study. Lecturers may not feel sufficiently confident or pedagogically equipped to formulate suitable assessment tasks with accompanying criteria that specify differing levels of writing performance. The initial motivation for the course presenter to develop rubrics for assessment tasks in these courses, was to determine more accurately what students knew and believed about their own learning, how they developed knowledge within the discipline, and how they organised and structured that knowledge in response to an assessment task. She worked collaboratively with the teaching and learning advisor to develop contextualised rubrics based on the SOLO (Structure of Observed Learning Outcomes) taxonomy (Biggs & Collis, 1982) in order to analyse student responses to specific assignment questions. She wanted to measure the extent to which students had achieved the course outcomes as a result of participating in discussions about assessment criteria.

After developing these rubrics for assessment tasks in a number of courses, the course presenter began incorporating them more explicitly into the teaching programme at under-graduate and postgraduate levels. The creation of rubrics served a dual purpose in assisting the presenter to explicitly align the course outcomes, assessment tasks and learning outcomes and to address students' academic literacy requirements more systematically. In response to this embedded approach, students appeared more confident and proficient in class when they engaged with the criteria of complex course concepts and assignments. In this paper, we propose a method for designing rubrics that foregrounds improved learning experiences by explicitly identifying the knowledge and skills needed to produce disciplinary discourse for a particular task. We analyse the design and implementation of two rubrics that we developed for two different cohorts of students: a first year cohort and an Honours cohort in contrasting disciplinary contexts for these purposes.

2. Literature review

Social constructivists argue that, "people are abundant in the resources of their experience which they bring to situations that are intentionally about creating learning in learners" (Brockbank & McGill, 1998: 4). Identifying with this view of learners actively constructing knowledge, our purpose in creating contextualised rubrics was to integrate assessment practices into the social sciences methodology and inclusive education courses that would elicit the kinds of high-level critical engagement expected of successful university students. Different ways of understanding learning are seen to underpin two basic approaches to learning: a 'surface' approach in which the student's intention is to memorise the text, and a 'deep' approach in which the student's intention is to understand the meaning of the text through high levels of cognitive processing (Biggs & Collis, 1982; Entwistle,1987; Marton & Saljo, 1984). Our contention is that assessment criteria in the form of rubrics have not made a significant contribution to literacy development in teaching programmes because of their perceived peripheral, add-on nature. We show that by consciously embedding them into courses, they become a unique opportunity to enhance students' high-level conceptual engagement and academic literacy development.

Harrington (2011: 48) highlights the important role of assessment in the growth of students' learning and writing in the disciplines "in the service of, rather than simply measurement of,

students' learning… through writing". We have located our study within the wider field of using assessment for the purposes of assessment for learning rather than assessment of learning (Brown, Collins & Duguid, 1989: 50-51). We argue that explicit assessment practices have the potential to give students 'epistemological access' to disciplinary content (Morrow, 2007) and shift them from surface to deeper approaches to learning by making our 'target academic literacies explicit' (McKenna, 2009). Despite the recognition that "one of the most important aspects of supporting student learning is the feedback students receive on their work" (Gosling, 2009: 121), many students only find out how well or badly they have performed when they receive their marks at the end of a semester. Similarly, (Norton, 2009: 132) highlights the findings of the UK National Assessment Survey (2006) that "assessment and feedback were areas that students were least satisfied with". We intended to address these summative conceptions of assessment by consciously integrating formative feedback assessments in the form of rubrics into the courses under discussion.

Our conceptual approach to academic literacy development has been guided by the view that context-specific educational strategies embedded in course content have developed in students the meta-knowledge necessary for enhancing their ability to succeed. The move away from generalist views of academic literacy to integrated approaches have assisted course presenters to improve their teaching practices as they clarify and make explicit the conventions and requisite skills of the discipline. A situated approach does not involve mere teaching *about* learning, but is about students *becoming* effective learners in particular situations. Students become 'cognitive apprentices' as they acquire expertise in a range of 'skills' valued by the community rather than being viewed as successful or inadequate based on their ability or preparation. For the tasks analysed below, assessment criteria were tailor-made for specific tasks and made explicit to students via various forms of oral and written feedback. This highlights the crucial role of subject specialists in facilitating student writing in the context of the academic subjects they are studying. In other words, well-conceptualised assessment practices in the disciplines can enhance the development of effective academic writing.

We have drawn on Biggs' (2011) concept of constructive alignment to illustrate the inter-relatedness of all aspects of course design – the intended learning outcomes, teaching and learning activities and assessment practices. Constructive alignment (Biggs & Tang, 2011: 109) describe constructive alignment (CA) as a system in which "all components support each other, so the learner is enveloped within a supportive learning system". It uses a constructivist approach to learning, as students are required to construct meaning through learning activities. In setting up a system of alignment, the course presenter identifies the desired outcomes in relation to the course themes and topics and designs teaching and learning activities to maximise the possibility of students achieving the specified outcomes. Student performance on the assessment tasks informs the lecturer how well individual students have achieved the learning outcomes. These principles were adopted by the course presenter who recognised the need to create a learning context that supported student learning opportunities to achieve the specified outcomes. The key ingredient of setting up an aligned curriculum was to take cognisance of the consistency between the curriculum context and content of the courses in social sciences and inclusive education, their projected outcomes, pedagogical approaches and assessment tasks. According to Biggs (2011) if there is poor alignment between the various key components of the ecosystem, the students' learning may be disadvantaged and result in surface learning. This phenomenon will be analysed in our discussion of the examples below where we propose a substantial change in the way we assess students in

order to enhance their engagement with the course material, development of writing skills and assessment requirements. We argue that rubrics, which are well aligned to what we want students to learn, enable us to understand the way students are constructing understanding in these contexts and play a role in the on-going development of the curriculum.

3. Methodology: Applying the SOLO taxonomy

For the purposes of our collaborative research study, we have used the SOLO taxonomy as an assessment and pedagogical tool for learning. We show how we adapted the taxonomy for different task requirements at the different grade levels in the two courses. Participant observation, document and text analysis were the primary forms of research in this study. The authors used their understanding of constructivism, constructive alignment and academic literacies to gain insights into the implementation and implications of using these rubrics to classify levels of student performance. The SOLO taxonomies designed for the two courses constitute the data used in this paper.

Taxonomies such as the SOLO taxonomy describing levels of student performance (Bloom, 1956; Biggs & Collis, 1982; Perkins, 1992) have been used extensively for designing 'outcomes-based' courses and materials in higher education as they describe how student performance grows in complexity during the course of mastering tasks. It assumes that understanding develops gradually and becomes more structured and articulated during the course of mastering academic tasks. It also provides a hierarchical structure to guide and move students' thinking from simple patterns to patterns that are more complex. Biggs and Tang (2011: 205, 230, 239-240) emphasise the importance of using a "standards model of assessment" at tertiary level compared to a measurement model as it is criterion-referenced and identifies "performances that tell us what has been learned, and how well… independent of other students".

The SOLO taxonomy is a five-tier hierarchical framework of structuring learning outcomes intended to describe the increasing structural complexity in the way students learn in particular disciplinary contexts. According to Biggs and Tang (2011: 87), there are two main changes in the outcomes of student learning: the amount of detail and the quality of learning. This is described as 'quantitative' as the amount of detail in the student's response increases, and 'qualitative' as the ideas become organised and integrated into a 'structural pattern' that addresses the assessment task. Other well-documented theories of learning and understanding in university students (Marton & Saljo 1984; Entwistle, 1997) have found a similar contrast between the organisation of knowledge as "discrete, serial elements to be remembered and reproduced, and the integration and transformation of knowledge into a personally constructed and meaningful entity" (Campbell, Smith & Brooker, 1998: 450).
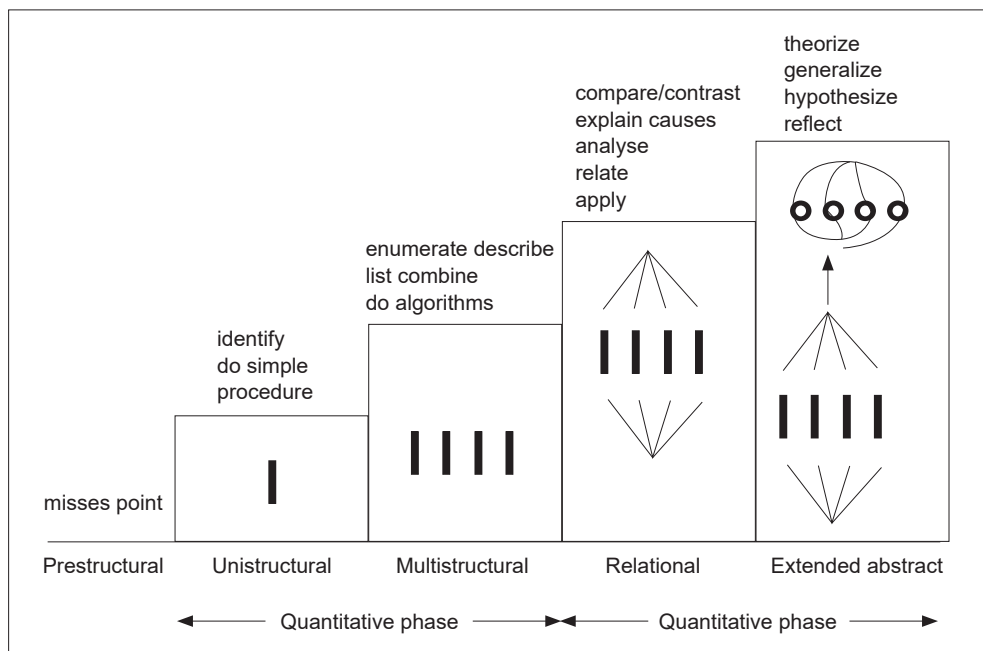
Figure 1: SOLO Taxonomy (Biggs: 2003: 48)

In referring to the diagram, a *pre-structural* response is described as one in which students miss the point of the question entirely. This differs form a *unistructural* response, which focuses on one or two isolated elements, related to the question. Responses at this level for example, give simplistic definitions of conscription as an issue (in response to question b). In the students' responses in both courses, it is difficult to determine how they have addressed the key issues or concepts. A *multistructural* level response is one in which several relevant independent ideas are described sequentially but do not address the question as a whole. Both '*uni-*' and '*multistructural'* levels of understanding view understanding as a quantitative increase in what is understood rather than attempt to tackle the question in hand. There is an add-on, shopping list logic to student texts and they reveal an absence of student voice or critical engagement with texts or ideas.

A shift in the quality of writing occurs when there is a move to a more integrated and relational level of writing. This answer is no longer a listing of ideas and facts but shows a deeper understanding of what is required to answer the question. A level analyses, synthesises and draws comparisons between ideas and theories in a meaningful way; for example, analysing the role of conscription in the film in relation to human rights and social justice. Coherence, writing and critical argument characterise the high order '*extended abstract'* level. Examples at this level would be the questioning of the human cost of the war on the young soldiers depicted in the film. A critical response would challenge the notion of the call to be patriotic and the unfolding human rights issues. Students go beyond the task and are able to work with additional course material to hypothesise and create new knowledge.

In its general form, it is possible for the taxonomy to provide a limited, one-dimensional view of how students formulate their arguments or responses to assignment questions. Norton

(2009: 135) points out that constructive alignment principles can be taken up in a formulaic way in which learning outcomes are 'slavishly' matched with assessment tasks. While there is a risk in using the taxonomy mechanistically, we support Hattie and Brown's (2004: 28) contention that the key strength of the SOLO taxonomy is the way it reflects the complexity of human learning. "Unlike the assumptions on which the Bloom taxonomy has been predicated, there is no separation between content and context, and there is recognition of the role of both the student and the teacher in student learning." (Hattie & Brown, 2004: 48). In our experiences with adapting and implementing the taxonomy into rubrics described below, we have sought creative ways of mapping course outcomes and tasks onto the taxonomy and adapting it for our curricular purposes. Furthermore, we have used several feedback principles to ensure that students see how they are progressing along the assessment criteria. A key principle is to encourage students to reflect on their learning in relation to the feedback (Moon, 2004) and to promote peer dialogue for students to engage actively with the assessment criteria. Harrington (2011: 52) emphasises students' central role in the feedback process by creating opportunities for them to receive information about their learning. She suggests that students need to connect meaningfully with "the substance of what they are studying in the disciplines" in order to participate in a disciplinary field of practice.

The course presenter worked with the teaching and learning advisor to adapt and apply the SOLO taxonomy at multiple levels. It enabled her to structure learning outcomes she wanted the students to master or learn when completing a task or writing an essay. It allowed her to assess student progress in relation to particular assessment tasks and provide students with a structured, developmental tool with which to assess their own learning progress. The students, as future teachers, were expected to reflect on their own development, thus enhancing their meta-reflective thinking.

The next section describes and provides examples of various SOLOs used in the social sciences and Honours inclusion courses.

4. Descriptions of the contextualised SOLO taxonomies

The SOLO taxonomy adapted into a rubric for the social sciences methodology course

The first example provided is an assessment activity that was selected for a first year undergraduate social sciences methodology course. The topic was World War 1[2] that is generally taught to grade 8 classes[3] and the learning outcome for this particular topic was to expose student teachers to the use of film as an effective means of teaching historical events. The students were provided with contrasting readings that critiqued film in history and which showed positive pedagogical findings for using this medium in lessons.

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2   World War 1 from 1914-1918 was fought extensively in Europe, with huge loss of civilian and soldier lives. Military deaths were estimated around 10 million with another 20 million wounded (www.pbs. org.casdeath_pop)

3   The CAPS social sciences grades 7-9 curriculum (DoE, 2011) states that 15 hours notional time should be allocated to World War 1 and suggests that one of the aspects that needs to be addressed is trench warfare on the Western Front (CAPS, DoE, 2011: 39).

The film chosen for the task

The film, *All Quiet on the Western Front* (1930 black & white version) about the First World War as told from a German perspective, was shown to the students. This film is based on the novel by Erich Maria Remarque, which describes conditions in the trenches on the Western Front. The film highlights the effects of the war on an individual soldier and illustrates its horrors with a specific focus on trench warfare. The underlying message of the film promotes anti-war sentiment rather than an unquestioning patriotism that many of these young soldiers aspired to when they volunteered or were conscripted into the army at the onset of World War 1. Wineburg (2001) argues that using films in history classrooms play a role in how students learn and think about historical events, contributing to what he terms "collective memory". He claims that teachers should not ignore film as a pedagogical tool but use them as a source "to advance students' historical understanding" (Wineburg, 2001: 250).

The essay

The task required students to respond to the following questions after viewing the film and a class discussion regarding the events depicted in the film.

A.   What view of war and World War 1 in particular, does the film convey?

B.   What issues in general do you think teaching war raises?

C.   Is this a useful source through which to raise these issues? Give reasons for your answer.

Questions/tasks	LEVEL 1: UNI-STRUCTURAL Below 50% (below 12.5)	LEVEL 2: MULTI-STRUCTURAL 50-65% (12.5-15.5)	LEVEL 3: RELATIONAL 65-74% (16-18.5)	LEVEL 4: EXTENDED ABSTRACT 75%+(19+)
What view of war, and WW1 in particular, does the film convey?	– Few ideas/thin description of how war is depicted in the film. – Some irrelevant material. – Answer lacks evidence. – Poor structure.	– Ideas provided of how war is depicted in the film. – Some use of evidence and examples but insufficient detail. – Some irrelevant material/repetition. – Not always logical.	– Comprehensive account of how war is depicted in the film. – Appropriate and detailed uses of evidence and examples. – Develops a logical argument.	– Clear insight and understanding of how war is depicted in the film. – Excellent use of examples and evidence. – Material relevant and substantial. – Argument logical and convincing.
What issues in general do you think teaching war raises?	– A few ideas listed about teaching war. – Ideas not explained clearly. – Some sweeping generalizations. – Irrelevant material. – Poor structure.	– Some relevant issues raised about teaching war. – Insufficient detail/evidence to support ideas. – Not always logical.	– Clear and detailed account of issues about teaching war. – Appropriate illustration of ideas with relevant evidence/examples. – Coherent structure.	– Same as Level 3 with sophisticated insights into the issues teaching war raises. – Ideas well integrated and critical.
Is it a useful source through which to raise these issues? Give reasons for your answer.	– A few ideas listed but little analysis of critical discussion. – Answer lacks evidence. – Ideas jumbled and incoherent structure.	– Some evidence of analysis and critical discussion. – Reasons a bit thin and not clearly integrated.	– Selects relevant evidence to analyse and engage critically with the source. – Good use of examples and reasons to illustrate ideas. – Logical argument.	– Same as Level 3. – Substantial and convincing amount of analysis and critical discussion. – Has sophisticated grasp of how source raises complex issues.

Figure 2: SOLO taxonomy social sciences methodology 2012

Explanation of the task

The students were expected to analyse whether the film *All Quiet on the Western Front* is authentic in its representation of WW1. The task required students to draw on a variety of primary and secondary sources relating to the film. This comparison of sources is a more 'cognitively demanding' (Cummins, 2000) task than students recalling facts as it required students to describe, analyse and synthesise the various sources on hand and reflect critically

on the view of war conveyed by the film. Furthermore, it required students to develop their own ideas and arguments based on the evidence presented to them during class sessions. It encouraged students to think about teaching history using a constructivist approach as they actively engaged with the material. The task was devised to encounter the conventional perspective of war, which speaks to patriotism and heroism by presenting an alternative view of war that questioned this traditional interpretation. This approach would enable students to reflect critically on the devastation and futility of war rather than on its glorification.

Before doing this task, students had examined primary and secondary sources relating to various accounts of soldiers who had fought in the trenches. They had also been provided with examples of war poetry as sources to enable them to discuss the conditions in the trenches and, more importantly, critique the idea of patriotism, a notion that is central to the film *All Quiet on the Western Front*. The course presenter wanted to promote and enhance students' critical learning abilities through higher order cognitive tasks such as this critical analysis (Biggs, 2011). Furthermore, the task under discussion was more demanding than previous tasks as two critically opposing readings were juxtaposed. The first text provided a critique of using films in a history classroom, arguing that they are romanticised and not always authentic. The second reading suggested that if used correctly with careful planning and scaffolding by the teacher, films could develop students' conceptual understanding of the event. The readings developed the students' understanding of the claims made by the authors regarding the value, if any, of using film as a medium to teach about war. They further provided opportunities for critical engagement of how lessons could be planned using film. This task and the accompanying assessment criteria would elicit the extent to which students had made substantial, qualitative changes to their learning (Biggs, 2003). The changes in students' learning shifted to engaging with more cognitively demanding tasks requiring higher order thinking.

In preparation for the task, students were provided with opportunities to address reading and writing tasks based on historical enquiry skills. They were expected to distinguish between facts and opinion in authentic historical events as compared to events in scripted films. This process allowed them to reflect on the different arguments made by various authors by suspending their own beliefs and ideas. The written task (essay) expected students to identify the different perspectives on war in the film and in the readings denoted above as well as the soldiers' from their experiences in the trenches. Through this scaffolding process of viewing the film and critically investigating sources, students would see connections between the different readings in order to construct meanings from the text (Campbell *et al.,* 1998). The assessment task gauged whether students were able to engage with the following: *what (*the content of) the different perspectives of war they analysed through the variety of sources they were given; the *how:* students compared and critically discussed the sources and integrated other perspectives with their own ideas.

How the rubric was constructed and implemented

The core principles of the SOLO taxonomy were adapted and contextualised in order to develop a rubric tailor-made for this task. First, the scaffolding of questions (see figure 2) allowed the course presenter to separate out the different aspects of the question and 'to weight' them accordingly. In this case, the questions were given equal weighting for students to evaluate the film methodically, theoretically and with an ability to reflect on their use in practice (Biggs & Tang, 2011). The task itself was designed to prepare students for the higher

order; rigorous demands of the application task and it required their engagement in their capacity as students and as future teachers.

Second, the levels depicted in the SOLO taxonomy were adjusted by the course presenter and the teaching and learning advisor with the view that *prestructural* engagement (missing the point), was not a possible response to this task, given the extensive scaffolding. Careful attention was given at each level to relate specifically to the task requirements (see figure 2 for the criterion requirements at each level)[4]. In response to the question asking what view of war the film conveys, a *unistructural* response would merely mention the negative portrayal of war without providing evidence from the film. A *multistructural* response would describe some of the negative effects in more detail using categories while a *relational* and *extended abstract* answer would explain why the film does not romanticise war and would begin categorising the physical and emotional effects of war. Such an answer would avoid sweeping generalisations about the horrors of war by referring directly to the film[5]. A *multistructural* response to the second part of the question (asking students to identify issues the teaching of war raises) would clarify and elaborate more than a *unistructural* response would on some of the concerns about handling controversy and bias in the classroom. It would also counter stereotypical and romanticised views of war. A nuanced and sophisticated *relational* or *extended* abstract response would grapple with the role teachers can play in challenging learners' assumptions and helping them develop their own critical positions. It would also reflect critically on the validity and authenticity of the sources. The third part of the question, which required students to evaluate the usefulness of the source, would demonstrate students' capacity to provide a well-reasoned and critical answer about the role of film in this context. In their actual responses, some students operating at the relational level, raised issues about how teachers use films, e.g. whether they consider how learners relate to one-sided film representations without being exposed to other perspectives on the western front and trench warfare.

Third, a crucial aspect of applying this taxonomy was to involve the students in the assessment criteria from the start. They were given the taxonomy alongside the task and the course presenter guided them through the criteria for each question using exemplars. This provided an opportunity for the students to realise the important role of assessment in the growth of their thinking through writing processes. It addresses Carless' plea (2015: 2) for assessment criteria that "clarify expectations and bring much needed transparency to assessment processes".

Reflecting on the implementation of the rubric

On reflection, despite increased awareness and engagement by students with the task criteria, a number of gaps in the implementation of the task were noted. The assessment task could have included more formative forms of feedback. This would have allowed students to reflect more actively on their strengths and weaknesses, especially as these students were transitioning from school to university. A major educational challenge in large first year courses is to create more time and space in the curriculum for students to discuss their reading and

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4   It must be noted that the focus of this paper is not on an analysis of student responses to the essay questions but more on the relationship between the rubric assessment criteria and the levels of the SOLO taxonomy.

5   The course presenter provided varied exemplars of relational and extended abstract responses while guiding students through the rubrics.

writing practices[6]. There was also an issue of students not recognising the value of using film in a history classroom. Many first year students have limited exposure to classroom contexts besides their own experiences of being learners at school. The application aspect of the task may therefore have been better suited to fourth year students who would have been better equipped to gauge the value of using a film as methodology, having perhaps observed this on teaching practice or in methodology lectures in third and fourth year. Similarly, the findings of a research project on assessment in the School of Education (Shalem, Dison & Reed, 2013) critiques the predominance of first year tasks which require students to apply their knowledge to teaching contexts before they have grasped the core course concepts.

Notwithstanding the above, data from students' responses to the assessment tasks, to be analysed in a subsequent paper, have shown several positive effects of engaging with students in class around the assessment tasks.

The SOLO taxonomy adapted into a rubric for an Honours course

Having shown how a rubric was contextualised for an undergraduate course, we now show how one was developed collaboratively for an essay for the Honours students in a course entitled Learning Support 1 EDUC 4016. The course explores the contested meanings and definitions of an inclusive education system. It examines various perspectives globally and nationally that drive a radical shift in the way inclusive schooling is defined. Students cover a vast body of literature underpinned by issues of human rights, social justice, equity, and inclusion for everyone rather than some. The course presenter wanted to gauge whether the students had grappled with the current literature on conceptualisations of inclusive education from a number of researchers who hold contested views in the field. The task was twofold; the first part of the essay required a critical engagement with the literature and the second involved discussing the contestations that arise from various perspectives on how inclusion is defined. This task made qualitatively different demands of the postgraduate students compared to the first year task which was more 'applied' and less 'academic' in orientation.

5. Description of the solo task in the inclusive education course

The task

The students were required to write an essay based on the quotation below:

> *Our Constitution (Act 108 of 1996) founded our democratic state and common citizenship on the values of human dignity, the achievement of equality and the advancement of human rights and freedoms (Section 1a). These values summon all of us to take up the responsibility and challenge of building a humane and caring society, not for the few, but for all South Africans. In establishing an education and training system for the 21st century, we carry a special responsibility to implement these values and to ensure that all learners, with and without disabilities, pursue their learning potential to the fullest.*

Education White Paper 6 Special Needs Education: Building an inclusive education and training system DoE (2001: 11).

Critically discuss this excerpt in relation to the following:

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6   Some students make use of the Wits School of Education writing centre to assist them with structuring and planning their essays.

a) Drawing on three of the more recent conceptualisations of inclusive education that you have studied on the course, show how authors Ainscow, Dyson, Goldrick and West (2012); Armstrong, Armstrong and Spandagou (2011); Graham and Slee (2008) and Walton (2011) do acknowledge the values listed above. In your response discuss the various conceptions of inclusive education and critically engage with the many debates around the concept of inclusive education. (60)

b) As a South African educator how important is it for schools to implement inclusive education practices? Discuss the contribution that existing literature and policies have made to our understanding of inclusive schools. (40)

Questions/tasks	LEVEL 1: UNI-STRUCTURAL Below 50%	LEVEL 2: MULTI-STRUCTURAL 50-65%	LEVEL 3: RELATIONAL 65-74%	LEVEL 4: EXTENDED ABSTRACT 75%
Show how the authors acklowledge the values listed above. In your response discuss the various conceptions of inclusive education and critically engage with the many debates around the concept of inclusive education.	– Some relevant points from the 3 authors about how they acknowledge the values listed above. – Limited discussion of their conceptions on inclusive education and no evidence of critical engagement with the key debates in the field. – Poor structure provided and unclear expression. Patchy referencing.	– Detailed and mostly relevant points from the 3 authors about how they acknowledge the values. – Conceptions of inclusive education are outlined but not integrated. – The beginnings of an argument around the concept of inclusive education but no clear claims or reasoning. – Ideas organised into clear structure and adequtely expressed. Referencing adequate.	– Thorough account of how the 3 authors acknowledge inclusive education values. – An integrated discussion of their conceptions of inclusive education. – The key debates in the files are presented but argument not sufficiently critical as a whole. – Coherent structure and logical flow. Language used effectively to signal key ideas/claims and to link ideas. Referencing good.	– Same as Level 3. – Critical engagement and reflection presents a strong position (clear voice). – Sophisticated use of language with clear thread argument.
As a South African educator how important is it for schools to implement inclusive education practices? Discuss the contribution that existing literature and policies have made to our understanding of inclusive schools.	– A few useful ideas about why it is important for SA schools to implement inclusive education practices but very thin discussion of the contribution of the literature and policies. – Some isolated points made but poorly backed up from souces. Writing jumbled at times.	– Interesting ideas listed about the importance of inclusive education in SA scools. – Reference made to relevant literature and policies that have contributed but not clearly integrated or linked to an understanding on inclusive schools. – Writing has logical structure but connections not explicit.	– Provides comprehensive set of reasons for justifying inclusive education in SA schools. – Thorough and thoughtful discussion of the impace of existing literature and policies on an understaning of inclusive schools. – The writing has coherent structure.	– Same as Level 3. – Also reveals an understanding of the complexity of the issues in inclusive education. – Presents a strong line of reasoning throughout. – Conclusion is convincing and forceful.

Figure 3: SOLO taxonomy inclusive education (Learning Support 1) 2013

The rubric (figure 3) reflects the task requirements and principles students were required to engage with based on the selected literature. The central task was for students to synthesise the principles of various debates regarding inclusive education. These principles needed to be discussed in relation to the values underpinning the excerpt from the Constitution of South Africa. Once students had compared the various conceptualisations and positions of the authors, they were required to examine these from a critical perspective.

This approach addressed many of the concerns about students not meeting the cognitive requirements needed at a postgraduate level. There is an assumption that students can write academically at an Honours level whereas in many instances, they find it a major challenge to synthesise selected literature and develop an argument. Postgraduate students come from diverse educational backgrounds and bring a wide range of experiences and practices to the seminars. The decision to adapt the SOLO taxonomy would enhance our understanding of these writing challenges. This is similar to the previous task. The intention was for students to use the selected criteria from the rubric (figure 3) to develop their written essays based upon

the hierarchical levels of the SOLO taxonomy. The course presenter could use the rubric to mediate the task requirements and provide explicit feedback to students after the task.

Implementation of the task

In preparation for the task, students were required to present seminar papers from selected readings, which provided the necessary content knowledge. The course presenter identified key threshold concepts (Meyer & Land, 2006) as distinct from more peripheral ones that were essential for completing the task. These are vital ideas or processes for understanding disciplinary knowledge that provide a "gateway" or "portal" to illuminate subsequent under-standing (Fry *et al.*, 2009: 14). The students had on-going exposure to the critical debates within the inclusive education discourse from multiple sources: the literature, discussions of seminar papers and feedback from the course presenter and their peers. This enabled them to synthesise the debates and to move to the relational level by taking cognisance of others' perspectives.

At an early point in the course, students were taken through the rubric, which unpacked the task for them and enabled them to measure their performance via the assessment criteria. The elaborated criteria foregrounded what the students were required to do in order to complete the task. Furthermore, the rubric provided students with an opportunity to access the academic discourse and to structure the essay appropriately. The task involved higher order thinking, as students were required to analyse the broad principles included in our constitution such as democratic state and common citizenship; the values of human dignity, the achievement of equality and the advancement of human rights and freedoms and the creation of a humane society. Students needed to understand the connection between the constitution of SA and the move towards an inclusive education and training system. This insight would help them analyse the use of language from the constitution when responding to the statement, "We carry a special responsibility to implement these values and to ensure that all learners, with and without disabilities, pursue their learning potential to the fullest" (White Paper 6, 2011: 11). They needed to engage critically with the use of the term "we" and ask questions about the terminology.

Reflecting on the implementation of the rubric

The use of the rubric enabled on-going dialogue with students in relation to the higher order cognitive demands of the essay. This was because it was given to students before they commenced the task and on completion of the task, when there was an opportunity to provide qualitative feedback. In particular, the course presenter used the rubric to assess the extent to which students had addressed both parts of the question and had understood the contested meanings in the selected literature.

The course presenter observed that students, who were not able to compare and contrast the various debates in the readings or identify the main arguments, responded with a *multi-structural* or "shopping list" answer. These students were able to list contestations from the literature with limited synthesis of the arguments. This was in contrast to the students who were able to integrate literature and policies to develop arguments about inclusive education. Some students had trouble when they were required to examine their own educational contexts in relation to principles and policies of inclusion. Others produced *extended abstract* responses in their explanations and justifications of inclusive practices in their schools. These students provided a more nuanced understanding of the definitions of inclusive education and

could analyse and critique the current arrangements in their schools. Furthermore, they could access some of the exclusionary pressures placed on individual learners and deconstruct the ambiguity in some of the principles in the constitution. A few students critiqued the language used in the constitution around the issue of "special responsibility".

6. Conclusion

1. Promoting higher order thinking

Preliminary findings from analysing early drafts of student writing[7] suggest that the design and implementation of the assessment tool played a role in promoting higher order thinking and critical engagement in the disciplines of social science and inclusive education. The course presenter observed, after introducing assessment rubrics as a learning tool, that increasing numbers of students were becoming proficient at addressing all aspects of the task at hand and were gaining the confidence to make stronger claims and arguments. Prior to this intervention, she had assumed that students would automatically apply higher order thinking and write with academic rigour in response to assessment tasks at university. It was evident that many students in the social sciences methodology course relied solely on discussions and explanations given in class to 'get by' rather than persevere with independent and critical reading. The students were more comfortable with a didactic method of instruction (presumably) familiar to them from previous learning experiences. The presenter recognised that for courses like the postgraduate course in inclusive education, which required a high level of critical engagement with a wide range of literature, students' enquiry-based skills needed to be developed systematically. The purpose of the contextualised rubrics was to facilitate the ways students approached the topics or assessment tasks and enhance their understanding of core concepts and theories. Using the rubric in both courses showed the potential of students from diverse schooling backgrounds to participate in complex disciplinary discourses.

2. Integrating formative feedback

Using rubrics as a formative assessment tool in tutorials demonstrated their potential to familiarise students with the demands of writing for assessment tasks in different contexts. The rubrics served as a framework for facilitating feedback to students as they enabled students to reflect on their own reading and writing strategies. Students participated in structured conversations about where they had improved in their writing and where there were still gaps. The quality of instruction, constructivist in design, allowed for participation of all (course presenter and students) and provided an authentic tool for task-specific feedback. In class discussions, it was evident that students had become familiar with the content and form of the rubrics and could recognise where their responses were located on the continuum for each criterion. They developed the meta-language necessary, derived from the rubrics, for articulating their strengths and weaknesses in relation to the 'observable' task outcomes. Ashwin *et al.* (2015) draw on Lillis (2003: 30) to point out that "rather than giving feedback as closed commentary on students' finished texts, more discursive engagement with students texts in development would be a more inclusive approach".

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7   This will be explored in a subsequent paper drawing on empirical data to illustrate students' engagement with the rubrics.

3. Assessing to improve teaching and learning

A number of unexpected learning outcomes and benefits emerged from developing the rubrics despite the perception from colleagues that the process was overly labour intensive. The rubrics highlighted the relationship between the levels of the SOLO taxonomy and the discipline specific assessment criteria and provided the course presenter with a working framework with which to analyse students' writing and thinking. Moreover, in the process of designing the rubrics with the teaching and learning advisor, the course presenter could determine the extent to which the assessment task had succeeded in eliciting the specified course outcomes. The SOLO framework became a tool for distinguishing the more appropriate and effective assessment responses and alerted the designers to instances where instruction tasks might need to be revised. The rubrics facilitated reflective engagement with course topics as it provided students with a measure of how they were doing and which areas required improvement. As the context for this intervention took place within the School of Education, these methods for integrating assessment criteria have the potential to be adapted by education students as future teachers of different subject areas. We suggest that if we want pre-service education students to design and use rubrics effectively for their teaching purposes, then we need to raise awareness of how to develop and implement them more explicitly in methodology courses. Our conclusion is that we require a two-pronged strategy for contextualising the SOLO taxonomy. One which equips lecturers to adapt the taxonomy to refine their assessment tasks and make their assessment criteria more transparent for students and one which brings students closer to a deeper understanding of the context and content of their learning by participating in a detailed analysis of assessment rubrics.

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