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Using Assessment to Develop Social Responsibility as a Graduate Attribute in Teacher Education

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Abstract: Australian higher education institutions have struggled to develop clear strategies for developing and assessing graduate attributes within their specific disciplinary contexts. Using the example of the graduate attribute of social responsibility, this paper explores the outcomes of using assessment tasks to raise the awareness of development of graduate attributes, while at the same time contextualising their meaning and relevance within pre-service teachers' immediate lived experiences within the study situation. The data collected were pre- and post-surveys as well as written reflections. The findings indicate that if embedded in an explicit way in assessment tasks that require reflection on the development of social responsibility within practicum experience, the pre-service teachers demonstrate an increased awareness of its relevance to their emerging teaching practice.

Key Words: constructive alignment; assessment; affective domain; reflective practice

Introduction

For over two decades now, the development of graduate attributes such as, critical thinking, problem solving, communications skills, and social responsibility, has been a central focus of much research (e.g., Barrie, 2005, 2006, 2007; Bath, Smith, Stein, & Swann, 2004; Candy, Crebert, & O'Leary, 1994; Kemp, & Seagraves,1995). Smith and Bath (2006) contend that "…while there is a plethora of research investigating the development of graduate attributes, there is still some uncertainty about how generic skills should be developed" (Smith & Bath, 2006, p. 261). Although many of the recommendations that have arisen from the research advocate that graduate attributes be integrated into the curriculum, it appears that many Australian higher education institutions are still grappling with establishing clear strategies for the development and assessment of graduate attributes within their specific disciplinary contexts (Reason, Ryder, & Kee, 2013). This suggests that alternative approaches are needed. This study addresses this issue by investigating the influence of making explicit the development of social responsibility in a foundations of teaching unit that was part of a teacher education graduate entry course. Using that context, the aim of this study is to answer the following research questions:

1. How can assessment of social responsibility be embedded into the curriculum?
2. From a unit and course design perspective, what key factors can be attributed to the development of social responsibility?

Although the *Australian Professional Standards for Teaching* (Australian Institute for Teaching and School Leadership [AITSL], 2014) have recently taken precedence in guiding the curricula of many education courses, it is maintained that attention still needs to be given to graduate attributes that encompass the wider skill set that can be applied to any profession (Barrie, 2007; Green, Hammer, & Star, 2009). Moreover, we see the development of social responsibility as key to the some of the stated graduate standards, such as 2.4 "Understand and respect Aboriginal and Torres Strait Islander people to promote reconciliation between indigenous and non-indigenous Australians," 4.1 "Support student participation," and 7.1 "Meet professional ethics and responsibilities."

The Importance of Developing Graduate Attribute Skills

There is strong research-based evidence that professional employability requires graduates to be able to demonstrate their achievement of graduate attribute skills (Treleaven & Voola, 2008; Kember & Leung 2005; Barrie, 2006). There are, however, concerns about graduates' preparedness for work and ability to face the "messiness" of problems in the real world (Jaschik, 2015; Vu, Rigby, & Mather, 2011). These issues are highlighted in calls from professions for graduates to be "work ready" (McNeil, Scicluna, Boyle, Grimm, Gibson, & Jones, 2012; Teacher Education Ministerial Advisory Group [TEMAG], 2014) and possess capabilities important for successful business or professional practice that go beyond disciplinary competence (Treleaven & Voola; Candy et al., 1994; Bath et al., 2004). Attainment of graduate attribute skills is important so that graduates have the ability to adapt to rapid changes in their professional and personal life. The idea that graduate attribute skills are central to the generation of life-long learners is also articulated well in the literature (e.g., Boud & Falchikov, 2006; Candy & Worrall-Carter, 1999; de la Harpe & Radloff, 2008).

Some academics have argued that a higher education should go beyond attaining knowledge of a discipline or becoming competent in a profession to developing more generic capabilities as knowledge taught can become outdated quickly (Kember, 2009). Kember, however, also points out there is limited evidence of the nature of effective "mechanisms" to produce graduate attribute skills and that there is still some uncertainty about how graduate attribute skills can be developed. Closely aligned to these issues is research that suggests that educators need to bring the conversation of developing social responsibility to the forefront of higher education, given the importance of preparing graduates for effective participation in professional, personal and community life (Reason et al., 2013). This means preparing graduates to engage in community life and being able to communicate effectively across demographic, ideological, and political differences. Current events and social issues within broader society illuminate the need to provide intentional learning opportunities that support moral development among students.

Development of Social Responsibility as a Graduate Attribute

In stating the importance of developing social responsibility in graduates, the literature suggests that higher education has "de-emphasised its historical mission of promoting 'civic' engagement and participation..." (Reason et al., 2013, p. 16). Educators are often unable to clearly define their role in educating for social responsibility and students are less likely to be involved in learning opportunities that encourage social responsibility as they move through their undergraduate education (Reason et al.). Colby and Sullivan (2009) referred to social and personal responsibility learning outcomes as "distantly connected" and

a "by-product" of higher education (p. 29). It could be that educators avoid learning opportunities that promote dialogue with students related to politics, religion, economics or race relations (Reason et al.) or fear imposing their own values on students, while others believe that morality is an inherently personal issue or that teaching and learning should be restricted to analytical skills and discipline or subject matter (Hersch & Schneider, 2005). It also appears that educators receive minimal support or preparation to address ethics, values and social responsibility and often shy away from helping students connect the values implications of their subject topics and themes with students' own lives and potential careers (Hersch & Schneider, 2005).

Incorporating the Development of Social Responsibility in Curricula

Attention to concerns raised in the literature highlight the need to implement a systematic approach to embedding and evaluating graduate attributes in curricula. Bath et al. (2004) pose the questions: "Is it enough to 'validate' the curriculum and the opportunities therein for graduate attribute development? And how will we know that alignment exists?" (p. 314). Although most unit outlines identify opportunities for developing graduate attributes skills, without explicit assessment of these attributes how can we be sure they are not only realised but also have meaning and relevance to the students? Clearly, a need for achieving constructive alignment (Biggs, 2003) of assessment tasks, learning opportunities, and learning outcomes with respect to graduate attributes skills, as is done for other unit specific learning outcomes, is necessary. Designing innovative assessment tasks that require students to develop graduate attribute skills is a critical step in the constructive alignment process (Treleaven & Voola, 2008). As Bath and colleagues (2004) highlighted, the evaluation of whether or not graduate attribute skills were developed by the end of a course is a problem for both course design and the larger issue of quality assurance and accountability. They go on to say:

> *The value of measuring development of graduate attributes in students, apart from providing evidence of desired outcomes for quality assurance purposes, is also in creating a wider awareness of such skills and attributes for students and teaching staff, and encouraging wider participation in the development of these aspects of higher education. (p. 317)*

Moreover, graduate attributes are context and discipline-specific and need to be taught within relevant and meaningful contexts (Barnett, 2004; Barrie, 2005; Bath et al., 2004; Clanchy & Ballard 1995; Kemp & Seagraves, 1995). Implications for pedagogy are that educators need to find ways to position social responsibility in the lived experience of our students and to assist them to ascertain its relevance in their daily lives and potential careers. How this would translate at the course level, following the line of thinking of Dall'Alba and Barnacle (2007), would be that "ways of being" need to be embedded within the learning and assessment activities.

There is confusion about how graduate attributes should be taught, assessed, and evaluated. Also, how their "…adoption should ultimately shape teaching practices in higher education" (Green et al., 2009, p. 18) is a contentious issue. There is evidence that suggests forms of learning that demand active student involvement and are self-directed, reflective, and relevant to students seem to be better at promoting the development of graduate attribute skills (Kember, 2009; Luca & Oliver, 2002; Ryan & Ryan 2013). Of particular note is the value of reflective learning as a means of improving students' lifelong learning and

professional practice (de la Harpe & Radloff, 2008). When students are provided with opportunities to examine and reflect upon their beliefs, philosophies and practices they are more likely to see themselves as active change agents and lifelong learners within their professions (Mezirow, 2006). A critical issue is that reflection is a "complex, rigorous, intellectual and emotional enterprise that takes time to do well" (Rodgers, 2002 cited in Ryan & Ryan, 2013, p. 245). However, "a focus on self, own views, learning style and one's place in society provides a rich ground for reflection in the first instance" (Ryan & Ryan, p. 251). Additionally, Ryan and Ryan go on to say that it is important that the prior knowledge of the student in relation to reflective learning and practice, along with the academic conventions, be considered in any pedagogic interventions made in the learning environment.

Incorporating the Ontological in Assessment Tasks

Attention to the ontological has been prefaced as important in order for skills and knowledge to have a transformative effect on the learner (Dall'Alba & Barnacle, 2007; Barnett, 2004). With this emphasis, it would not be sufficient for students to just know about social responsibility or to have an intellectual grasp of how to be socially responsible, rather "knowledge is understood and created, embodied, enacted" (Dall'Alba & Barnacle, p. 683). If accepted, it follows that social responsibility would need to be developed and assessed explicitly, which may require an expansion of the curriculum to include graduate attributes legitimately balanced with the delivery and assessment of disciplinary knowledge (Candy et al., 1994).

Dettmer (2006) suggests assessment of social responsibility can be achieved through self-reporting. This can be achieved by integrating the student voice into assessment practices in order to actualise and evidence fully ontological, epistemological, and practical dimensions of understanding (Batchelor, 2006). Student voice covers a range of activities that encourage reflection, discussion, dialogue and action of matters that primarily concern students. This opportunity for voice is in harmony with an agenda in the higher education environment of social inclusion and empowerment for all. Student voice is about students and teachers working and learning together in partnership. Its processes and procedures are emergent and are shaped by the dialogic values that underpin its aspirations and dispositions (Bain, 2010).

Bain (2010) reconceptualises the use of student voice in assessment as "ways of becoming" (p. 24). This stance promotes the idea that assessment opens up possibilities for the future rather than being an assessment of a moment in time. It promotes the development of assessment practices that value and validate the experiences students bring and situate those experiences at the centre of the learning process. This highlights the importance of allowing students an opportunity to express ideas from their own perspectives. It notes the importance too of providing the voice space through a range of learning and assessment approaches centred on collaborative and reflexive marking and feedback.

Enactment of Embedding Social Responsibility in the Curriculum: Research Context

A pivotal aim of the foundations of teaching unit was to develop skills of reflection. The reflective practitioner not only focuses on student learning and teaching practices, but on all of the dimensions of self that are relevant to the teaching process – dimensions that have been highlighted above as relevant to the development of social responsibility. The reflective practitioner does not only teach content, but is also aware of how much of their self is paramount to the success of the teaching moment (Palmer, 1998). Mastery of content without

awareness of how much they themselves are a vehicle for this content, neglects the fundamental premise of good teaching. In the words of Palmer, "…good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher" (p. 10).

In order to attend to the underlying principles of the approach advocated here, the principles of constructive alignment (Biggs, 2003) were applied to design a foundations of teaching unit. Attention was given to embedding the unit specific outcomes as well as outcomes related to social responsibility explicitly in the unit. This was achieved through a series of lectures on the theoretical and practical underpinnings of the reflective practitioner (Schön, 1983, Dewey, 1933, 1938; Brookfield, 1995; Palmer, 1998); exercises that provided scaffolding for the development of an understanding of the inquiry process (Beattie, 2007); and activities that promoted journal-writing (Bain, Miller, Ballantyne, & Packer, 2002; Holly, 1998). Teaching activities were also provided to support the successful completion of the reflection assessment tasks. Also embedded in the assessment tasks was the opportunity for the pre-service teachers to reflect on their understanding of social responsibility in relation to the learning experiences offered in the unit and observations of and experiences encountered during practicum placement. Other interrelated themes covered in the unit were teacher identity and teacher professionalism. A list of the content topics covered in the unit is in Appendix A.

The Research Approach

The aim of the study is to investigate the influence of embedding explicitly social responsibility into a teacher education course and to present a way forward where assessment tasks can be used to develop social responsibility. The hypothesis is that if students have greater awareness of the notion of social responsibility and are given the opportunity to articulate this in the context of their own experience, they will have a greater chance of developing it as a graduate attribute. As outlined above, the context of the study is a first-semester unit in a graduate entry teacher education program. Assessment tasks that give students a voice and involve reflective practice were used as a means of testing the hypothesis. Referring to Barrie's (2007) framework of "Academic conceptions of how students develop generic graduate attributes", the approach taken is "participatory" – it is focused on the learner who has the power to influence the development of their graduate attributes skills.

The study adopts an interpretivist/constructivist paradigm (Mackenzie & Knipe, 2006) and employs an instrumental case study approach (Stake, 1995). Utilising an instrumental case study facilitated the examination of the participants' understanding of social responsibility in order to look for commonalities or differences in ideas expressed. Such an approach not only gave voice to the participants' views of the situation studied but also recognised that their background and experiences impact on the research (Mackenzie & Knipe). Creswell (2009) suggests an understanding of the situation comes from making meaning through an interpretation of the data that is generated from the participants' lived experiences and often draws on qualitative and quantitative data.

Participants

This case study involved a cohort of pre-service teachers in their first year of a two-year graduate-entry program at a regional university which prepares them to potentially become registered teachers in Australia. The cohort comprises of students with a range of first degrees. The specific unit under investigation is a foundations of teaching unit taken by all students regardless of specialisation. All the pre-service teachers enrolled in the foundations of teaching unit were invited to participate in the study. Participation was voluntary and students were not disadvantaged by choosing not to be included in the study because all the students in the unit covered the same content and had the opportunity to engage in all the learning activities. It was also compulsory for all students to complete all the assessment tasks. Eighty of the 110 students enrolled in the unit gave ethics approval for their work to be included in the research study.

Data Collection Instruments

Assessment of the foundations of teaching unit included two major assignments. The first was aimed at increasing students' awareness of reflective writing and giving feedback in readiness for practicum placement and completion of the second assignment. In the first assignment students were required to write a two-page reflection on the topic of:

"What events in your previous school experience stand out as:

i) helpful to learning, rewarding, enhancing your self-image and positive, and/or
ii) hurtful, unjust and impeding learning?"

The second assignment was two-tiered: a 2000-word narrative that focused on the pre-service teachers' beginning philosophy of teaching and a 500-word reflection on the development of a graduate attribute. Both components of the second assignment provided the opportunity for the pre-service teachers to discuss the development of aspects of their teacher identity in light of the content covered in the unit and experiences on practicum. The assignment had the following aims:

- To assist students to begin to articulate their growing philosophy of teaching;
- To reflect on how this had changed over the course of the semester;
- To acquire the skill of reflection and narrative writing while including various experiences that informed their teacher identity and philosophy of teaching; and
- To apply at least one theory that they had learned about in the unit.

For this assignment, constructive alignment was achieved in the following way. Students were required to adopt a narrative style that had been modelled and practised in tutorials to write about their philosophy of teaching. Throughout the unit they were introduced to the concept of a philosophy of teaching and examples of this from various theorists. They were to draw from at least one of these in the assignment. Students were to mention at least three experiences that had influenced their own philosophy of teaching. These could be sourced from tutorials, lectures, literature, conversations with their colleagues, their experience in schools, outside influences, and previous experiences.

The second component of the assignment was a 500-word reflection on how completing the first component of the assignment had contributed to the pre-service teachers' development of one of the graduate attributes—*communication skills, problem solving skills,* or *social responsibility.* The unit outline provided a table of the attributes, along with general descriptors for each of the attributes that had been prepared by the university. This gave the pre-service teachers initial definitions of the graduate attributes on which they could elaborate or build a deeper understanding through reflecting on their experiences. Of the two-tiered

assignment, only the 500-word written reflections contributed to the data analysed in this paper.

Additional data were sourced from pre- and post-assessment surveys aimed at providing the pre-service teachers with the opportunity to self-report on their understanding of the graduate attributes. These surveys required students to identify their areas of strength and areas of improvement in each of the graduate attributes of *communication skills, problem solving skills* and *social responsibility*. The survey only included opportunities to respond in written form and no quantitative data were collected. The purpose of the pre- and post-assessment surveys was to identify if there were changes in the way in which the pre-service teachers expressed ideas about each of the graduate attributes. The same survey was administered twice; at the beginning of the unit before any teaching and learning activities had been undertaken, and 13 weeks later at the end of the unit after all teaching, learning activities and assessment were completed.

All the 80 participants completed the 500-word written reflections and the pre-assessment survey. Of the 80 participants, only 22 participants completed the post-assessment survey. The low return rate for the post-assessment survey was due to requesting the pre-service teachers complete the survey after the close of the academic semester. For the purposes of this paper, only the data relating to *Areas of Strength: Social Responsibility* from the 22 participants who completed both the pre- and post-assessment surveys were analysed. Of the 22 participants, seven made social responsibility the focus of their 500-word written reflections. The written reflections based on the other two graduate attributes were not analysed for this paper.

Data Analysis Strategies

The qualitative data analysis strategy used in this study was designed to address the interpretivist/constructivist paradigm (Mackenzie & Knipe, 2006) in which the study is grounded. Taken into consideration was Dettmer's (2006) contention that, "Affective learning is more difficult to assess [than the cognitive domain], but can be assessed through interviews, student self-report, dropout and absentee rates, survey, and observation" (p. 78). In this study, the data collection instruments—pre- and post-assessment surveys and written reflections—were chosen because they provided the opportunity for the pre-service teachers to self-report of their understanding of social responsibility. As the written reflections were assessed to determine the students' results for the foundations of teaching unit, analysis of the data was not conducted until after all the students' results for the unit were collated and submitted to student administration.

Determining how to evaluate the level of understanding of social responsibility exhibited by the students in their writing posed a challenge for this study. The value-laden and personal nature of the data required a data analysis strategy that facilitated identification of aspects of social responsibility acknowledged in the discussion above as important. Of particular relevance to this study is the Krathwohl, Bloom, and Masia (1964) educational taxonomy in the Affective Domain. This domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The taxonomy is ordered according to the principle of internalisation. A person's affect toward an idea or value starts with an awareness of the idea or value through to an internalisation of the idea or value, which consistently guides or controls behaviour (Woolfolk & Margetts, 2007). As such, it provides categories that vary in complexity that can be used to distinguish the differences and commonalities in students' understanding of personal and social responsibility. An example of using the Affective Domain as a qualitative data analysis framework is offered by Fitzallen and Brown (2016), who used the taxonomy

successfully to interrogate the benefits of graduate and post-graduate students' participation in an educational outreach program. They gathered their data from interviews.

Another advantage of using the Affective Domain taxonomy is that it also facilitates quantitative data analysis through the assignment of numerical values to each of the categories. This makes it possible to compare statistically the responses from the pre- and post-assessment surveys and compare the post-assessment survey data with the data gathered from the written reflections. The statistical analysis provides the evidence needed to be able to determine if the pre-service teachers' understanding of social responsibility had undertaken a transformation as a result of participating in the foundations of teaching unit, completing the assignment tasks, and reflecting on their learning experiences in the unit.

Results

Pre- and Post-Assessment Surveys

The pre- and post-assessment surveys required the pre-service teachers to generate short statements about their areas of strength in relation to social responsibility. This provided the opportunity for the pre-service teachers to articulate their perception of social responsibility at two points of time. The responses in the surveys were assigned one of six categories of the Affective Domain taxonomy according to the degree to which they represented the information about social responsibility. The framework for analysis of responses is shown in Table 1. The descriptors for the categories 1-5 were adapted from the work of Krathwohl and his colleagues (1964). *Level 0: No Evidence* was added to the taxonomy to indicate where responses provided only irrelevant data or not enough information to determine if the participant had an understanding of social responsibility. Included in Table 1 are indicative examples of the way in which the pre-service teachers reflected on their understanding of social responsibility for each of the categories. These examples were extracted from the pre and post-assessment surveys. The results for the pre and post-assessment surveys are presented in Table 2.

Affective Domain	Descriptor	Indicative responses in surveys (Student ID Code)
0. No Evidence	Irrelevant information or no understanding of social responsibility conveyed.	Respect self and others. Politeness. (Student D)
1. Receiving	Being aware of or attending to issues and notions of social responsibility.	Being aware of people's feelings. Being aware of my own responsibilities to the school community and being aware of their responsibilities as well. (Student C)
2. Responding	Exhibiting behaviours of social responsibility.	I can identify the impact my actions have on people. I can recognise diversity and cater for specific needs. (Student K)
3. Valuing	Showing some commitment or definite involvement in socially responsible actions or ideas.	Take responsibility for own actions. Like to work with others and share responsibility. Always conscious of social consequences of my actions. (Student Q)

4. Organisation	Integrating values of social responsibility into own value set.	Think about and take responsibility for own actions. Try to think from a range of perspectives. Adapt to different social environments. Try to act ethically. Encourage democracy. (Student N)
5. Characterisation by Value	Acting consistently with values of social responsibility.	I am committed to inclusion as a basis for producing a more accepting and equitable society for the future. Committed to social role valorisation to prevent learned helplessness in students with disabilities and to work towards a society that does not label people as "special" or assume people are different and therefore social expectations do not apply. (Student V)

Table 1: Indicative responses to the Social Responsibility: Awareness of Strengths survey.

Student code	Pre-assessment survey responses		Post-assessment survey responses	
	Affective Domain category	Response code	Affective Domain category	Response code
A	Responding	2	Valuing	3
B	Receiving	1	Responding	1
C	Receiving	1	Organisation	4
D	No evidence	0	No evidence	0
E	Organisation	4	Characterisation	5
F	Receiving	1	Valuing	3
G	Receiving	1	Receiving	1
H	No evidence	0	Receiving	1
I	No evidence	0	Receiving	1
J	Responding	2	Valuing	3
K	Responding	2	Responding	2
L	No evidence	0	Receiving	1
M	Valuing	3	Valuing	3
N	Receiving	1	Responding	2
O	Receiving	1	Organisation	4
P	Receiving	1	Responding	2
Q	Valuing	3	Characterisation	5
R	Organisation	4	Characterisation	5
S	Receiving	1	Receiving	1
T	Receiving	1	Responding	2
U	Receiving	1	Valuing	3
V	Organising	4	Characterisation	5

Table 2: Coding of responses to the Social Responsibility: Awareness of Strengths survey.

Statistical analysis of the pre- and post-assessment data (Table 2) was conducted to determine if there had been any change in the pre-service teachers' understanding of social responsibility. A Wilcoxon signed-rank test was used as the data were closer to being ordinal rather than measurement data. This test assumes non-normality and compares medians of data sets. The null hypothesis tested for the population was that the results for the pre-assessment survey would be the same as for the post-assessment survey. The W-value was used to evaluate the hypothesis because the sample size was less than 20. Five of the individuals were discarded from the calculations because the difference in their pre- and post-assessment results were zero. For the test the W-value is 0. The critical value of W for N = 17 at $p \leq 0.05$ is 34. Therefore, the result is significant at $p \leq 0.05$ and the null hypothesis is rejected. This indicates that there was significant change between the pre-service teachers'

comments about social responsibility recorded on the two surveys. As a supplementary analysis, a one-tail paired t-test was applied to the data to determine if there was "improvement" not just a "difference" between the results. For the t-test the value of t is 5.895644 and the value of p is < 0.00001, therefore, the result is significant at $p \leq 0.05$. This test yielded essentially the same conclusion as the Wilcoxon signed-rank test, which suggests the pre-service teachers' understanding of social responsibility had improved. As both tests agree on this conclusion, it can be asserted with more confidence.

Written Reflections

The written reflections from the seven pre-service teachers provided extremely rich data that demonstrated the pre-service teachers' development of social responsibility and the way in which the reflective process contributed to their development as teachers. This data helped us gain further insight into the notion of social responsibility from the students' perspective. The first round of coding was conducted using the Affective Domain taxonomy, applying the same procedure for assigning a numerical code that was adopted for analysing the pre- and post-assessment surveys. In all seven cases that made social responsibility the focus of their written reflections, there was a direct correlation between the results of the post-assessment surveys and the written reflections.

A second data analysis iteration of the written reflections was conducted using content analysis (Miles & Huberman, 1994). This process involved a line by line analysis of the data to find open codes, which were then refined into themes. The two emerging themes were: *Influences of development*, and *Awareness of social responsibility.* Examples of responses from the written reflections will be used to illustrate the pre-service teachers' understanding of social responsibility evidenced at the end of the foundations of teaching unit.

Influences of Development

Fundamental to the development of social responsibility was the learning and assessment experiences provided during the foundations of teaching unit. Five of the pre-service teachers commented that engaging with the readings on the theoretical perspectives explored during the unit assisted in developing an understanding of social responsibility. Two of these pre-service teachers identified that they had made the connections between the theory and observations made during their professional experience practicum. In four of the written reflections examples from the pre-service teachers' practicum experiences were used to illustrate the type of inequities and challenges teachers must address in order to be socially responsible. The following illustrates how one student saw this development in terms of how he would address students with high needs as well as his strong commitment to do this:

> *Developing a healthy balance between professionalism and compassion will be a challenge but essential for me in my growth and development as a teacher. I have made a commitment to research current social, cultural and emotional issues that fill our schools such as ADHD, Autism and difficulties at home. That way I will be better equipped to help future students have a more fulfilling and beneficial school experience.*

As intended, the written reflections provided the opportunity for the pre-service teachers to be reflective on how the assignment helped them develop their understanding of social responsibility. The following example displays the facets of this understanding deemed important—relevance to teaching practice, the impact on social change, and the access to principles that underlies these notions:

> *This assignment has contributed to my development of the UTAS graduate attribute referred to as Social Responsibility, encompassing the acknowledgement of the social and ethical implications of teaching practice, appreciating the impact of social change and being committed to access and equity principles and demonstrating responsibility to community and society.*

Others were more contemplative of the writing process itself. As one student highlights how it can give perspective and incite action:

> *I have found that reflection in the form of narrative writing functions to provide some perspective and encourage action.*

Whilst, another went further to state the value in terms of future applications as modelled in others. Her proposed actions were influenced by observing and working with teachers in the classroom and then contemplating on the implications of her actions when she took on the teacher role.

> *Through reflecting on the well-developed attributes of these impressive and experienced teachers I could understand the utility of these attributes to apply as I taught.*

The pre-service teachers also showed indications that they had become highly motivated to enact socially responsible actions into their teaching practice to address power imbalances and think forward to improved futures for their students and their own professional development. One participant noted:

> *During the process of the assignment, I developed a strong commitment to steering clear of oppression and embracing existentialism, and I think this is a good recipe for being socially responsible, and a great teacher.*

Awareness of Social Responsibility

The majority of the student reflections were based on the role and responsibility of teachers and schools and potential impact in terms of student future engagement as citizens as well as the influence teachers can have on the students as they become young adults. The pre-service teachers discussed the role of the teachers as being "agents of change". It was evident in many responses that they had established a sense that teachers were role models and conduits for instilling socially responsible behaviours in students. One exemplar in the written reflections was:

> *The potential to change the attitude of society through the education system has opened my eyes to the possibilities that even one socially committed teacher can have within a society. Perceiving "power" and the ability to seriously influence students. If all teachers were to model social responsibility to their students and those teachers are seen to be authentic, then the impacts on social justice in the world would create a more egalitarian society.*

Another pre-service teacher appeared to be motivated to engage actively in reflective practice as way of enacting socially responsible behaviours. The focus was on promoting equity and providing opportunities for those traditionally disadvantaged. The following quotation places the responsibility firmly on the teacher and is acceptance that the role will shape the classroom dynamics.

> *It will be my job as a teacher to build bridges between peers and minority groups, through fostering the mixing of sub-groups in the classroom and always treating individuals as equals. I will need to actively pursue inclusion in my teaching practices and constantly reflect and reconsider my actions to ensure exclusion does not occur.*

Comparison of Results from Two of the Data Collection Instruments

The data generated by the seven students who made social responsibility the focus of their written reflections were compared with the results of their post-assessment survey. The null hypothesis in that instance was that there would be no change in results because the data were collected within two weeks of each other at the end of the semester. In all seven cases there was a direct correlation between their results of the two data collection instruments. That is, no change was evidenced. This suggests that the pre- and post-assessment surveys and the written reflections were reliable data collection instruments for determining the pre-service teachers of understanding of social responsibility and the Affective Domain taxonomy has merit as a data analysis framework.

Discussion and Conclusion

From an assessment perspective both data collection instruments proved to be beneficial. Although both reliable, one instrument could not be favoured over the other in future studies but both offer alternative assessment approaches to elicit students' understanding. It could be argued that there is a problem with self-reporting in that students may over-state or exaggerate understanding because of wanting to please or writing what they perceive to be expected, in order to succeed (Northrup, 1997). In this study, however, the use of two different assessment instruments reduced the impact of this issue. The first, the pre- and post-assessment surveys asked the pre-service teachers to report directly about their understanding of social responsibility by detailing strengths and areas of improvement in relation to graduate attributes skills. The second, self-reporting in the written reflections gathered the same sort of information about social responsibility skills but from a different perspective. The reliability of the assessment items supports Dettmer's (2006) view that assessment of social responsibility can be achieved through self-reporting.

This case study has demonstrated that students of education can become meta-cognitive of their development of a graduate attribute if we structure our curriculum so that there is opportunity to reflect on this, link it to relevant literature and teaching content, and embed it within assessment tasks. In taking social responsibility as a case in point, we can see from the pre-and post-survey that there was considerable development of this attribute and from the reflection on assessment, that various dimensions of this graduate attribute were explored in a rich and meaningful way. These include preferred ways of being and becoming, some of which was modelled by others, and some of which comes from a clearer idea of how important social responsibility is in both policy and practice. It should be noted that the links made here between becoming more socially responsible and addressing the diverse learning needs of students with disabilities such as ADHD, links directly back to the Australian Teacher Professional Standards for Teachers, specifically, 1.5 "Demonstrate knowledge and understanding of strategies for differentiating teaching to meet the specific learning needs of students across the full range of abilities" (AITSL, 2014). Although not starting out with the intention of drawing parallels, a case could be made for starting out with a general graduate

attribute, such as social responsibility, and then seeing how students make links with the professional standards.

Other ways of being (Dall'Alba & Barnacle, 2007) and ways of becoming (Bain, 2010) that were articulated in the written reflections relate to being agents of change. This would seem to be a pre-requisite for the development of social responsibility because it would require a move from an individualist paradigm to more of an interconnected one, which we also witness in some of these students' statements. A greater awareness of the impact of their actions not only on their students but also on their emerging pedagogical practices, and the world at large, addresses the need within the profession to be graduating teachers who see teaching as a vocation that has positive influence.

Although it is considered good pedagogy to constructively align the curriculum (Biggs, 2003; Treleaven & Voola, 2008) so that the desired graduate attributes skills or graduate teaching standards are attained, the effectiveness of measures to achieve this in assessment tasks remains largely unexplored. This case study argues that by inviting students to reflect on the development of the graduate attribute of social responsibility and others within the actual assessment task itself, highlighted not only the importance of the graduate attributes but also gave the students an additional opportunity to become meta-cognitive of their development and importance. In both the reflective writing task and the pre- and post-survey student voice was given a space (Bain, 2010) and the message was sent that the voice of the student matters in terms of interpreting their meaning of the graduate attribute and its relevance to them and their development as a teacher. This study demonstrates that the use of student voice as a resource has the potential to be included in future iterations of courses for exploring notions of graduate attributes and professional standards that come from the lived experience of the students themselves. Such a model would hopefully encourage assessment tasks that move beyond the normal summative role of testing knowledge or understanding, and empty notions of graduate attributes.

References

Australian Institute for Teaching and School Leadership. (2014). *Australian professional standards for teachers*. Retrieved from http://www.aitsl.edu.au/australian-professional-standards-for-teachers/standards/list

Bain, J. D. (2010). Integrating student voice: Assessment for empowerment. *Practitioner Research in Higher Education, 4*(1), 14-29.

Bain, J.D., Mills, C., Ballantyne, R., & Packer, J. (2002). Developing reflection on practice through journal writing: Impacts of variations in the focus and level of feedback. *Teachers and Teaching: Theory and Practice, 8*(2), 171–196. http://dx.doi.org/10.1080/13540600220127368

Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development, 23*(3), 247-260. http://dx.doi.org/10.1080/0729436042000235382

Barrie, S. (2005). Rethinking graduate attributes. *HERDSA News, 27*(1), 1- 5.

Barrie, S. (2006). Understanding what we mean by generic attributes of graduates. *Higher Education, 51*(2), 215-241. http://dx.doi.org/10.1007/s10734-004-6384-7

Barrie, S. (2007). A conceptual framework for the teaching and learning of generic graduate attributes. *Studies in Higher Education, 32*(4), 439-458. http://dx.doi.org/10.1080/03075070701476100

Batchelor, D. (2006) Vulnerable voices: An examination of the concept of vulnerability in relation to student voice. *Educational Philosophy and Theory, 38*(6), 787–800. http://dx.doi.org/10.1111/j.1469-5812.2006.00231.x

Bath, D., Smith, C., Stein, S., & Swann, R. (2004). Beyond mapping and embedding graduate attributes: Bringing together quality assurance and action learning to create a validated and living picture. *Higher Education Research & Development, 23*(3), 313-328. http://dx.doi.org/10.1080/0729436042000235427

Beattie, M. (2007). *The art of learning to teach*. New Jersey: Pearson Education.

Biggs, J. (2003). *Teaching for quality learning at university* (2nd ed.). Buckingham: Society for Research into Higher Education and Open University Press.

Boud, D., & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment and Evaluation in Higher Education, 31*(4), 399-413. http://dx.doi.org/10.1080/02602930600679050

Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Franciso: Jossey-Bass.

Candy, P., Crebert, G., & O'Leary, J. (1994). *Developing lifelong learners through undergraduate education - Commissioned report, No. 28*. Canberra, Australia: National Board of Employment, Education and Training. Retrieved from http://hdl.voced.edu.au/10707/94444

Candy, P., & Worrall-Carter, L. (1999). Educating health science students for lifelong learning. In J. Higgs & H. Edwards (Eds.), *Educating beginning practitioners: Challenges for health professional education* (pp. 159–165). Oxford: Butterworth-Heinemann.

Clanchy, J., & Ballard, B. (1995). Generic skills in the context of higher education. *Higher Education Research & Development, 14*(2), 155-166. http://dx.doi.org/10.1080/0729436950140202

Colby, A., & Sullivan, W. M. (2009). Strengthening the foundation of students' excellence, integrity and social contribution. *Liberal Education, 95*, 22-30.

Creswell, J. W. (2009). *Research design: Quantitative, qualitative and mixed method approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Dall'Alba, G., & Barnacle, R. (2007). An ontological turn for higher education. *Studies in Higher Education, 32*(6), 679-691. http://dx.doi.org/10.1080/03075070701685130

de la Harpe, B., & Radloff, A. (2008). Developing graduate attributes for lifelong learning: How far have we got? In D. Orr, P. A. Danaher, G. Danaher, & R. E. Harreveld (Eds.), *Lifelong learning: Reflecting on successes and framing futures.* Proceedings of the 5th International Lifelong Learning Conference, June 16-19 (pp. 136– 141). Rockhampton: Central Queensland University Press. Retrieved from http://hdl.cqu.edu.au/10018/13354

Dettmer, P. (2006). New Blooms in established fields: Four domains of learning and doing. *Roeper Review, 28*(2), 70-78. http://dx.doi.org/10.1080/02783190609554341

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process.* Chicago MA: Henry Regnery.

Dewey, J. (1938). *Experience and education.* New York, NY: Collier Books.

Fitzallen, N., & Brown, N. (2016). Outcomes for engineering students delivering a STEM outreach and education program. *European Journal of Engineering Education.* [Submitted for publication]

Green, W., Hammer, S., & Star, C. (2009). Facing up to the challenge: Why is it so hard to develop graduate attributes? *Higher Education Research & Development, 28*(1), 17–29. http://dx.doi.org/10.1080/07294360802444339

Hersch, R., & Schneider, C. (2005). Fostering personal and social responsibility on college and university campuses. *Liberal Education, 91*(3/4), 6-13.

Holly, M. (1998). Reflective writing and the spirit of inquiry. *Cambridge Journal of Education, 19*(1), 71-80. http://dx.doi.org/10.1080/0305764890190109

Jaschik, S. (January 20, 2015). Well-prepared in their own eyes. *Inside Higher Ed.* Retrieved from https://www.insidehighered.com/news/2015/01/20/study-finds-big-gaps-between-student-and-employer-perceptions

Kember, D. (2009). Promoting student-centred forms of learning across an entire university. *Higher Education, 58*(1),1-13. http://dx.doi.org/10.1007/s10734-008-9177-6

Kember, D., & Leung, D. (2005). The influence of active learning experiences on the development of graduate capabilities. *Studies in Higher Education, 30*(2), 155–170. http://dx.doi.org/10.1080/03075070500043127

Kemp, I., & Seagraves, L. (1995). Transferable skills: Can higher education deliver? *Studies in Higher Education, 20*(3), 315-328. http://dx.doi.org/10.1080/03075079512331381585

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives. Handbook II: Affective domain.* New York, NY: David McKay.

Luca, J. & Oliver, R. (2002). Developing an instructional design strategy to support generic skills development. In *Winds of Change in the Sea of Learning: Charting the Course of Digital Education.* Proceedings of the 19th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education. Auckland, New Zealand, December 8-11. Retrieved from http://ro.ecu.edu.au/ecuworks/6207/

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in Educational Research, 16*(2), 193-205. Retrieved from http://www.iier.org.au/iier16/mackenzie.html

McNeil, H. P., Scicluna, H. A., Boyle, P., Grimm, M. C., Gibson, K. A., & Jones, P. D. (2012). Successful development of generic capabilities in an undergraduate medical education program, *Higher Education Research & Development, 31*(4), 525-539. http://dx.doi.org/10.1080/07294360.2011.559194

Mezirow, J. (2006). An overview of transformative learning. In P. Sutherland & J. Crowther (eds), *Lifelong learning* (pp. 24-38). London, UK: Routledge.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Northrup, D. A. (1997). The problem of the self-report in survey research. *Institute for Social Research, 12*(1), Article 1.

Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life.* San Francisco, CA: John Wiley & Sons.

Reason, R. D., Ryder, A. J., & Kee, C. (2013). Higher education's role in educating for personal and social responsibility: A review of existing literature. *New Directions in Higher Education, 2013*(164), 13-22. http://dx.doi.org/10.1002/he.20072

Ryan, M. E., & Ryan, M. C. (2013). Theorising a model for teaching and assessing reflective learning in higher education. *Higher Education Research & Development, 32*(2), 244-257. http://dx.doi.org/10.1080/07294360.2012.661704

Schön, D. (1983). *The reflective practitioner.* New York, NY: Basic Books.

Smith, C., & Bath, D. (2006). The role of the learning community in the development of discipline knowledge and generic graduate outcomes. *Higher Education, 51*(2), 259-286. http://dx.doi.org/10.1007/s10734-004-6389-2

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.

Teacher Education Ministerial Advisory Group. (2014). *Action now: Classroom ready teachers.* Retrieved from https://docs.education.gov.au/system/files/doc/other/action_now_classroom_ready_teachers_accessible.pdf

Treleaven, T., & Voola, R. (2008). Integrating the development of graduate attributes through constructive alignment. *Journal of Marketing Education*, 30(2), 160-173. http://dx.doi.org/10.1177/0273475308319352

Vu, T., Rigby, B., & Mather, B. (2011). *Embedding the development of grading of generic skills across the business curriculum: Final report*. Surry Hills, Australia: Australian Learning & Teaching Council.

Woolfolk, A., & Margetts, K. (2007). *Educational psychology*. Frenchs Forest, Australia: Pearson Education Australia.

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Appendix A: Elements of the foundations of teaching unit

Intended learning outcomes for the unit:

- Develop an understanding of personal and social responsibility;
- Make links between acting ethically and with integrity;
- Work collaboratively with colleagues to develop and implement a personal philosophy of teaching;
- Develop skills in reflection that assist in the development of an enhanced awareness of social responsibility;
- Gain an awareness of the Code of Ethics for Tasmanian Teachers, and your role in ensuring that this code is adhered to at all times.

Modules within the unit included:

- Becoming a reflective practitioner,
- Foundations of educational philosophy,
- Adult learning theories,
- Teacher professionalism,
- Teacher integrity,
- Teacher presence,
- Teacher resilience,
- Teacher ethics, and
- Ethics of inclusive practice.

Learning activities included lectures, various readings, tutorial discussion, case studies, and observations of the school context. The unit was also linked to a Professional Experience unit that involved observing a class in a school context, one day a week for six weeks. Students then completed a two-week practicum during the delivery of the unit, which included four days supervised teaching experience.