TEACHING A SUSTAINABILITY ACOUNTING COURSE IN AN AUSTRALIAN UNIVERSITY: INSIGHTS FOR SUSTAINABILITY ACCOUNTING EDUCATION

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Abstract
The United Nations has named 2005-2014 as the decade of education for sustainable development, thereby highlighting that 'education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues' (Agenda 21, UN, 1992, p. 363). In light of the above, this paper provides insights into two sustainability courses taught at an Australian university in 2009. The paper differs from prior studies in sustainability accounting education which focus on business programs (see for example, Nowak *et al.*, 2008) or on the incorporation of sustainability into accounting degrees (see for example, Haigh and Hazelton, forthcoming). A personal account of my experiences in lecturing an undergraduate and graduate course provides insights into the design of sustainability accounting courses. The paper also highlights the critical need for accounting students to be aware of one of the most difficult challenges that needs to be addressed by governments, the business community and other institutions, and individuals; sustainable development. If accountants are to play a role in addressing sustainability, it is essential that the educational process provides the necessary skills to students which would equip them to handle an area that goes beyond the basic fundamentals of mainstream accounting.

Introduction
This paper provides insights into two sustainability courses taught at an Australian university in 2009. The university has been offering a sustainability accounting course as an advanced third year course as well as a graduate course undertaken by coursework Masters and Honours students since 2007. These courses were only compulsory for those students that majored in corporate sustainability. However, accounting students without a corporate sustainability major constituted almost ninety percent of the class, indicating that this was a popular elective among accounting students at both undergraduate and postgraduate levels.

Last year, I decided to change the course syllabus and assessment in order to enhance the learning process. The course was run for thirteen weeks and students in both courses had the same course content as well as assessment. However, as will be discussed later, the expectations from graduate students were greater than for undergraduate students.

The focus of the course was on corporate accountability, accounting and reporting in the context of sustainability. It extends an understanding of accounting beyond that of shareholder value maximisation and places an emphasis on the concerns and information needs of a range of stakeholders. The emphasis was on the social and environmental context of corporations, the relevance of stakeholders in regard to social and environmental issues, and corporate social responsibility accountability, accounting and reporting within a mandatory and voluntary framework

Teaching Philosophy
Marton and Saljo's (1976) seminal paper provides the foundations of the teaching philosophy. The authors contrast surface-level and deep-level learning, suggesting that deep-level learning is useful because the

knowledge gained extends beyond merely satisfying the requirements of the course work. Emphasis in both courses was on deep level learning and this was clearly pointed out to students, in the first lecture. I clearly highlighted to all students that for them to perform well in this course, they had to engage in the learning process and this would be facilitated through the course content and assessment requirements. Thus, students had to gain knowledge that went beyond simply acquiring a piece of paper with their grade and required the development of a range of critical and analytical skills to both theoretical and practical aspects of sustainability.

The work of Biggs and Tang (2007) was also instrumental in structuring the course in order to facilitate deep-level learning. The authors contend that the traditional two hour lecture plus one hour tutorial is not always an ideal platform for facilitating deep-level learning. They suggest that lectures should be interactive and should provide an environment for students to learn. Biggs and Tang (2007) also mention that given the rise in information technology usage, information is more easily available now and therefore, lecturers are under pressure to illustrate the importance of a lecture to students. This could include an interactive face to face class as well as the focus on discussing matters that are not provided in textbooks. For instance, academics involved in teaching could reflect on their research and be aware of contemporary developments which textbooks and journal articles may not be able to provide because of time lags in publication. Baldwin (2005) supports the link between research and teaching, highlighting that research led teaching provides the opportunity for enhancing the learning process.

The lectures for both courses were run as a three hour seminar, rather than the lecture and tutorial format. The undergraduate class had 60 students (almost double the student intake from the previous year) while the graduate class had 7 students. Thus, the potential for extensive discussion in class was greater for the graduates than the undergraduates. In spite of this, the structure of the lecture enabled discussions to take place. The formal lecture was between one and a half to two hours and quite often this was interactive while the rest of the time was spent on class discussions. To facilitate discussion in earlier weeks, discussion questions were used, while in later weeks, focus was primarily on discussing the assessment components.

The university had a compulsory requirement for lectures to be recorded. However, recorded lectures are no substitute for interactive lectures and as such; an exemption was granted not to have the lectures recorded. It was explained to students that a lecture recording could not replace the dynamics of a face to face interactive class and were encouraged to discuss with the lecturer if they were unable to attend a particular lecture.

In line with Baldwin (2005), the nexus between research, learning and teaching was enriched in this course through the teaching of a subject matter which was the lecturer's major research interest. I was able to talk about contemporary research in sustainability accounting and illustrate its practical relevance as well. Feedback from students confirmed that they valued the discussion of contemporary research issues in sustainability, something that may have been difficult to gain from a mere textbook or reading.

Biggs and Tang (2007) suggest that for learning to be effective, both declarative and functioning knowledge should be acquired by students. Declarative knowledge constitutes the basic foundations of the subject matter, sometimes referred to as the core body of knowledge. On the other hand, functioning knowledge involves the ability to apply the declarative knowledge to the real world. McKenzie *et al.* (2002) refer to functioning knowledge as authentic learning, indicating

that teaching approaches should be aligned with the world for which students are being prepared.

The lectures and readings for this course enabled declarative knowledge to be gained. Functioning knowledge was gained through class discussions, student's synthesis of the learning material and other resources which they were encouraged to access and assessment components. Feedback on the assessment also played an instrumental role in the provision of functioning knowledge. Further details of the course content and assessment are discussed next.

The Syllabus

The course content is an important requirement for facilitating deep-level learning. Table 1 illustrates the syllabus for this course. Most of the course content was covered in the first 10 weeks. Two weeks were devoted to student presentations (see details in next section) while the last week was a revision lecture which reflected on the learning from the course. The course did not have a textbook, instead, journal articles and practical documents, such as the Global Reporting Initiative and AA1000 standard, constituted mandatory reading requirements. The emphasis was on addressing theoretical as well as practical aspects of sustainability accounting, thereby enabling declarative knowledge to become functional.

Students were also encouraged to refer to other journals for articles on sustainability accounting in order to complement their mandatory readings. Accounting journals such as Accounting, Auditing and Accountability Journal, Accounting and Business Research, Accounting Forum, Accounting, Organizations and Society, Australian Accounting Review, British Accounting Review, Critical Perspectives on Accounting, European Accounting Review and Qualitative Research in Accounting and Management were referred to. Management journals such as Academy of Management Journal, Administrative Science Quarterly, Journal of Business Ethics and Journal of Management were also used.

Week	Topic
1	CSR, Sustainability : An introduction
2	Corporations and CSR/Sustainability
3	Stakeholders and CSR/Sustainability
4	Accountability and theories of CSR/Sustainability
5	Trends in CSR/Sustainability
6	Management Systems for CSR/Sustainability
7	CSR/Sustainability accounting and reporting
8	CSR/Sustainability accounting and reporting: expectations gaps
9	Corporate Community Partnerships/ Public Sector Sustainability Accounting
10	Contemporary issues in CSR/Sustainability
MID SEMESTER BREAK	
11	Project Presentations
12	Project Presentations
13	Revision

Table 1: The CSR/ sustainability accounting syllabus

Moreover, sustainability specific journals such as Asia Pacific Centre for Environmental Accountability, Business Strategy and the Environment, Business and Society, Corporate Social Responsibility and Environmental Management, Greener Management International, Journal of Cleaner Production, Journal of Corporate Citizenship, and Social and Environmental Accounting Journal were identified.

In relation to reference textbooks, Unerman *et al.* (2007), Gray and Bebbington (2001), Schaltegger *et al.* (2003), and Schaltegger

and Burritt (2000) were made available to students either through the reserve collection in the library or from the lecturer. General texts such as Bakan (2004) 'The Corporation' and Al Gore (2006) 'An Inconvenient Truth' were available together with the videos. Students were also given a list of other books owned by the lecturer which were available for borrowing.

In the first week, students were introduced to the notions of corporate social responsibility (CSR) and sustainability and the distinction between these was discussed. Essentially, discussion focused on CSR being corporate responsibility and duties to society and sustainability as a long term concept that focuses on both current and future generations. Environmental and social issues were discussed and it was clear from the discussions that environmental issues, while difficult to address, were more clearly defined and could be more easily measured in physical terms (for example, tonnes of carbon emissions) when compared to social issues which were often subjective. It was also acknowledged that monetary measurements of both social and environmental issues were subjective. The lecture concluded with discussion on both Australian and global community responses to sustainable development. Parts of Al Gore's inconvenient truth video was shown and students were encouraged to watch the full documentary which was available from the library.

The second lecture focused on corporations and presented arguments for and against their involvement in social and environmental issues. Excerpts from "The Corporation" video were a critical part of the lecture. The emphasis on the need for corporate involvement in social and environmental issues then led to exploration of the relationship between accounting and sustainability.

Week three lectures focused on stakeholders and introduced students to stakeholder theory, and the notions of stakeholder management and engagement. The following week, the relationship between corporations and stakeholders was highlighted through discussion of the accountability concept. The AA1000 standard was also discussed. The second part of this lecture then addressed the theories for corporate social responsibility by focusing on the Gray and Collison (2002) classification of managerialist, middle of the road (including stakeholder and legitimacy theory), and critical theoretical paradigms. Recent theoretical advances in social and environmental accounting such as new institutional theory (Larrinaga-Gonzalez, 2007) and Bebbington *et al*'s (2009) reputation risk management were also discussed.

The fifth week of lectures took a practical perspective and focused on both historical and current trends in CSR. Numerous global and local initiatives in CSR such as the Global Compact, Global Reporting Initiative (GRI), National Pollutant Inventory and Public Environmental Reporting were also discussed. The lecture concluded with a real world example of CSR in action; practices in the Australian Minerals industry were discussed.

Week six focused on the internal organizational perspective through emphasis on environmental management, environmental management accounting and carbon pollution reduction techniques while week seven focused on triple bottom line reporting with emphasis on performance indicators, the media used for communication and motivations for reporting. The following lecture then focused on the expectations gaps in sustainability accounting with emphasis being on stakeholder expectations gaps, limitations of Triple Bottom Line report assurance and the distinction between triple bottom line reporting and sustainability reporting as identified by authors such as Rob Gray and Markus Milne (see for example, Gray and Milne, 2002).

Week 9 lectures moved beyond the business emphasis of earlier weeks and discussed corporate community partnerships as well as providing an overview of public sector sustainability accounting. The role of NGOs in sustainability was also addressed. The final lecture discussed contemporary issues in sustainability with the major emphasis being emissions trading.

Weeks 11 and 12 concentrated on student presentations and the final week brought the lectures together and identified the learning gained and the skills acquired from the course. Reflection of the learning process is essential for both students and the lecturers, enabling all parties to receive vital feedback (Ramsden, 1992, Brookfield, 1995).

Assessment

Table 2 addresses the assessment components which were the other major difference from the course in previous years.

Assessment item	Due date	Weighting (%)
Assignment 1	Week 5	15
Research Proposal	Week 8	15
Assignment 2	Week 10	15
Project Presentation	Weeks 11, 12	15
Class Participation/Reflective Journal	Weeks 1-13	10
Research Paper	Exam week	30

Table 2: The assessment components

This course did not have a final exam. Emphasis was on two assignments, class participation (including maintaining a learning journal), and a major research project which was subdivided into a proposal, a presentation and a final paper. These requirements linked assessment to learning and enabled functioning knowledge to be obtained.

The assignments were individual and helped to identify the various capabilities of each student. The first assignment was based on the proposed emission trading scheme (ETS) for Australia. Students were required to discuss the challenges to the establishment of an ETS for Australia, highlight the accounting implications of the ETS and to specify what responsibilities they would have as a business consultant hired by a company to respond to the ETS. The second assignment was based on a case study. Students were given a case study of the Bhopal chemical disaster in India and had to address a number of questions. They were asked to highlight the difficulties associated with making multinational corporations (MNCs) accountable for their social and environmental impacts in foreign operations, discuss stakeholder engagement and reporting strategies that could have been undertaken and assess the effect this incident could have had on other companies operating in the same industry.

A major part of the course assessment was the research project and its assessment was divided into a number of specific components. The research project had to be completed in groups of three to five students for the undergraduates while for the graduate course, projects were undertaken either individually or in a group of two. As Biggs and Tang (2007) posit, group work is a vital component in disseminating functioning knowledge, enabling peer to peer interaction to capture the intricacies of the learning process. Some undergraduate students did elect to complete the project individually and were able to convince me that they were capable of undertaking a major project on their own.

Students initially had to propose a major research topic in social and environmental accounting. Feedback was then provided to the students which assisted them to complete

the research project. Emphasis was on whether they had a "doable" research question and objectives, the literature and theory they would use for the project, the appropriateness of the methods for the study and the significance of the study, thereby addressing the 'so what' question associated with all academic research.

Students had to present their proposal and preliminary findings after the two week semester break. Presentations allowed students to explain their learning to others in the class, enabling them to prepare for the 'real world' (Biggs and Tang, 2007). Undergraduate presentations were for twenty minutes while graduate presentations lasted thirty minutes. Based on the feedback from presentations, students were required to submit the final paper, which replaced the final exam assessment that is associated with most courses.

Class discussions were an integral part of the course and students were also rewarded for their contribution to this through the assessment. The final ten marks for the course were for class participation as well as for the learning diary. At the end of the teaching period, students had to submit a one page summary of their learning/reflective diary which had to specify what they had learnt from the course. Learning diaries are also beneficial to instructors, allowing them to reflect upon their teaching style and gaining useful feedback from students (Ramsden, 1992, Brookfield, 1995).

Student performance

Students were exposed to deep-level learning in this course and they had to go beyond their usual comfort zone to perform well. The assignments required independent research and built upon the declarative knowledge gained from lectures and associated readings.

Both academic and practical information was required. For instance, for the first assignment, students had to be aware of contemporary developments in ETS and this required an understanding of current news items in order to comprehend the challenges to the establishment of an ETS in Australia. Moreover, students needed to assess the academic literature and use their knowledge of accounting to highlight the accounting implications of ETS. For the second project, students drew upon the concepts of stakeholder engagement and triple bottom line reporting discussed in the lectures and applied this to a real world incident. They also had to assess how the chemicals industry responded to the Bhopal chemical leak of 1984 and had to assess the complexities associated with holding MNCs accountable in the underdeveloped and developing world.

The research project required team work for a majority of the students. The research proposal was something that the undergraduates were not exposed to previously and therefore, they required a lot of assistance. However, the "leap" in their learning process occurred from the presentations till the submission of the final paper as they realized that in essence, they were replicating one of the many research papers they had read in the course. All students gained in confidence in presenting as well as writing. Research skills became integral to their acquisition of knowledge and they began to realise the benefits of academic research. Thus, functioning knowledge was enhanced through authentic learning.

Students provided a number of very interesting research topics. These ranged from CSR in developing countries such as Malaysia, Singapore and China, to contemporary issues, such as the impact of the global financial crisis on CSR. A major emphasis was also on sustainability reporting but the context chosen for this research by the students differed from sensitive industries such as mining to automobile and banking industries. Other unique topics include CSR in small to medium sized enterprises, sustainability reporting by NGOs, water accounting, the sustainability balanced scorecard, corporate responses to the

proposed ETS in Australia and the climate change policy of companies.

In addition to the theoretical and practical understanding of sustainability accounting, students gained a number of transferrable skills. These included the ability to undertake independent research, to work as a team and the ability to write a paper and address a case study. Time and project management, presentation, communication, critical thinking, analytical, and interpretive skills were also enhanced. Thus, the functioning knowledge extended beyond application of course content to the real world and included lifelong skills.

Lessons learned

The insights gained from the course can be applied to the introduction of sustainability accounting courses in other universities. Student learning diaries and evaluation sheets suggest that despite the prior perceptions and biases that students had, this was a course from which they learnt much. They valued the structure of the course and enjoyed the assessment components. Working as a group and the requirement to present to the rest of the class was something that the students really benefitted from. The research project was a challenge but the functioning knowledge gained was something that students could easily use when undertaking research projects in their workplace or undertaking a higher research degree.

Students also mentioned that the learning diary enabled them to reflect upon the learning process in the course. Some of them even stated that this form of learning was more useful to them than the learning gained from sitting an exam. They also appreciated the discussion about the lecturer's current research areas and felt that this provided a human face to the numerous papers they had read – these papers were written by individuals with similar experiences to the researcher and even the students themselves. However, they did appreciate that the scale of their projects differed from that undertaken by these academics.

Some of the course evaluation sheets suggested that students valued a course where they received hands on experience on a practical matter (sustainability). They felt that this was different from other mainstream accounting courses where emphasis was on financial figures. The lessons learnt from this course extended beyond practical and theoretical skills. Learning diaries indicated that a number of students had started considering the social and environmental aspects of their actions. Some even claimed that the course helped them in being a better person, even though this statement could be tested.

The key insight from the course is that academics must continue to move beyond the traditional course structure, prescriptions and exams and be ready to challenge mainstream perceptions. Sustainability accounting is a discipline which enables intuitive learning and students need to be exposed to different approaches to learning where emphasis is on acquiring both declarative and functioning knowledge. Sustainability accounting academics can play a role, albeit a small one, in sustainable development and this extends beyond pure research and includes the dissemination of knowledge through teaching. Based on the limited experience discussed in this article, research led teaching is critical for sustainability accounting education.

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