Integrating Environmental Issues Into The Business Curriculum

Sarah D. Stanwick, (E-mail: stanwsd@auburn.edu), Auburn University

Abstract

Over the past several years, the reporting environment has changed for companies reporting environmental information. This change comes primarily from stakeholder interest in protecting the environment. This paper addresses the topic of integrating environmental issues into accounting and business courses. Background information on environmental issues is provided. In addition, suggested classroom assignments and resources that can be used to enhance the learning environment for business students are provided.

Introduction

Over the past several years, the reporting environment has changed for companies reporting environmental information. This change comes primarily from stakeholder interest in protecting the environment. The Sarbanes-Oxley Act and the most recently published Statement of Position 03-2 "Attest Engagements on Greenhouse Gas Emissions Information" provide proof that environmental issues are important to businesses and, therefore, should be discussed in the college curriculum.

A gap exists between what is being taught in classrooms and what is really needed in professional practice. Baskett and Marsick (1992) reported that professionals and educators in all fields agree that this gap exists in the college classroom. This gap certainly exists when examining the area of environmental issues taught in business curriculums in most university settings. When considering environmental issues from a business perspective, no industry is exempt. Because of this encompassing viewpoint, environmental issues should be addressed in the university curriculum. One area for doing this is through the accounting curriculum, although all areas are faced with the challenge of addressing environmental issues.

More and more companies are reporting environmental issues in conjunction with financial reports. The purpose of this paper is to give an overview of environmental issues focusing on the accounting profession and to provide specific examples of ways to integrate environmental issues into the traditional curriculums within business schools.

When faced with hiring decisions, public accounting firms, private corporations and not-for-profit organizations have high expectations for their new employees. These high expectations suggest that students must be prepared to address many of the challenges facing the business community. While the challenge of environmental issues and sustainability formally began in the late 1960's with the passage of the National Environmental Policy Act, companies have always faced environmental issues in their day to day operations. This challenge has progressed from concerns relating to investigation and disclosure in the 1980's, to remediation, measurement, and recognition in the 1990's, to protecting shareholder value in the 2000's. Companies now realize they are faced with a multitude of problems relating to risks in their business. These risks include reputational risk, litigation risk, and reporting/compliance risk.

Types of Environmental Issues

Accounting is often described as an activity which identifies, measures, records and communicates economic information to permit informed judgments and decisions by users of the information. The user groups, or stakeholders, all have different interests in the information being reported by companies. The Environmental Protection Agency (EPA) has identified three main types of environmental accounting. These include: national income accounting, financial accounting, and managerial accounting. Each has a unique focus and concentrates on either an external or internal audience, as shown in table 1.

Table 1
Types of Environmental Accounting
(Source: EPA publication (1995) "An Introduction to Environmental Accounting As A Business Management Tool: Key Concepts and Terms")

Type	*Focus*	*Audience*
National Income Accounting	nation	external
Financial Accounting	firm	external
Managerial Accounting	firm, division, facility, product line, or system	internal

Environmental accounting from a national income perspective refers to natural resource accounting. Environmental accounting from a financial accounting perspective refers to the concept of preparing financial reports in accordance with generally accepted accounting principles. Environmental accounting from a managerial accounting perspective deals with internal accounting issues, such as investment and cost decisions.

Many different areas within a company could benefit from environmental information and could result in decisions that would provide favorable results from an environmental perspective. These include (EPA 1995):

- Product design
- Process design
- Facility sitting
- Purchasing
- Operational
- Risk management
- Environmental compliance strategies
- Capital investments
- Cost control
- Waste management
- Cost allocation
- Product retention and mix
- Product pricing
- Performance evaluations

More and more companies are faced with environmental decisions because stakeholders are demanding this information. This demand deserves management attention on environmental costs for several reasons (EPA 1995):

- Environmental costs can be significantly reduced or eliminated as a result of business decisions.
- Environmental costs may be obscured in overhead accounts or otherwise overlooked.
- Environmental costs can be offset by generating revenues.
- More accurate costing and pricing of products and designing of more environmentally preferable processes, products and services may result if companies understand their environmental costs.
- A competitive advantage may result if the company is environmentally friendly.
- Support may be given to an overall environmental management system if management understands environmental costs.

Thus, accountants and managers must know how to recognize environmental problems, how to measure and account for cleanup costs, and how to find and apply authoritative accounting and auditing guidance that applies to the specific problem at hand. From an accounting perspective, the profession has been slow to respond to environmental issues, as demonstrated in the next section.

Current Topics of Interest in the Environmental Accounting Area

The accounting profession has been relatively slow in addressing the challenges of environmental issues from an external perspective. Two recent statement of positions, SOP 96-1 "Environmental Remediation Liabilities" and SOP 03-2 "Attest Engagements on Greenhouse Gas Emissions Information," address environmental issues for public companies. Table 2 provides a listing of the accounting and auditing authoritative guidance which also may be used by companies facing environmental dilemmas.

Table 2
Summary of Authoritative Accounting and Auditing Guidance for Environmental Issues

FAS 5: Accounting for Contingencies
FASB Interpretation 14: Reasonable Estimation of the Amount of a Loss - An Interpretation of FAS 5
FASB Interpretation 39 - Offsetting of Amounts Related to Certain Contracts
APB Opinion 20 - Accounting for Changes
AICPA SOP 94-6: Disclosure of Certain Significant Risks and Uncertainties
EITF 90-8: Capitalization of Costs to Treat Environmental Contamination
EITF 89-13: Accounting for the Cost of Asbestos Removal
SEC Staff Accounting Bulletin 92: Accounting and Disclosures Relating to Loss Contingencies
GASB Statement 18: Accounting for Municipal Solid Waste Landfill Closure and Postclosure Care Costs

SOP 96-1, "Environmental Remediation Liabilities," was issued on October 10, 1996. This SOP provided professional accountants with much needed guidance on dealing with several aspects of environmental law that was not provided in the authoritative guidance listed in Table 2 above. SOP 96-1 provides:

- That environmental remediation liabilities should be accrued when the criteria of FAS 5 are met.
- That an accrual for environmental liabilities should include incremental direct costs of the remediation effort and costs of compensation and benefits for those employees who are expected to devote a significant amount of time to the remediation effort.
- That the measurement of the liability include the entity's allocable share of the liability for a specific site.
- That the measurement of the liability should be based on enacted laws and existing regulations and policies and on the remediation technology used to complete the cleanup process.
- That the measurement of the liability should be based on the reporting entity's estimates of what it will cost to perform all elements of the remediation effort.
- Guidance on the display and disclosures of environmental remediation liabilities in financial statements.

SOP 03-2, "Attest Engagements on Greenhouse Gas Emissions Information," was issued on September 22, 2003. It was issued in response to the concerns of greenhouse gases existing in the atmosphere. Because of the Kyoto Protocol, a voluntary agreement signed by companies to reduce the effects of greenhouse gases, some U.S. companies with foreign operations may have to meet emission targets set forth in the Kyoto Protocol. This SOP provides guidance to professionals about engagements to examine and report on a schedule relating to information about greenhouse gases and emissions inventories and guidance for companies participating in and reporting on greenhouse gas trading programs. The SOP also provides example of letters and reports that can be used by professionals providing attest engagements in the area of greenhouse gas emissions.

In addition to dealing with these authoritative issues, some companies are exploring the concept of sustainable development. Within this concept is the idea of companies issuing sustainability reports. Professional accountants may be called upon to engage in assurance services relate to these reports. This development opens a new area for accountants to explore the concept of sustainable development for the environment, the economy, the company, and society as a whole.

Integrating Environmental Issues into the Accounting Curriculum

In attempt to adopt a proactive approach to integrating environmental issues into the business curriculum, the following are ideas that can be implemented in the classroom to help bridge the gap between what is happening in practice and what students actually understand. Assignments/activities and web based resources are provided.

Assignments/Activities

1. **Understanding Environmental Commitment:** Contact a local company and ask to interview the manager/owner about environmental issues. For example, if a fast food restaurant is contacted, students may ask about the company's commitment to recycling or if the corporate office has an environmental policy and the extent to which individual restaurants are held accountable for this policy.
2. **Understanding local government issues related to the environment:** Have students contact members of their local or state government and interview them about environmental issues being addressed in their geographical areas. For example, the students may contact the local planning committee to determine if a policy exists for greenspace issues or wetlands mitigation.
3. **Understanding compliance issues:** In order to operate efficiently as a manager, students will need to understand the various environmental regulations and compliance issues related to each of the regulations. Have students compare the compliance and reporting issues of several environmental regulations (i.e., Clean Water Act, Clean Air Act, Superfund Act, etc.). Students should include in their reports the various penalties for non-compliance with the regulations they examine.
4. **Understanding Environmental Policies:** Allow students to compare and contrast the environmental policies of several companies in the same industry. Exhibit 1 provides an example of an assignment that explores environmental policies for companies in different industries using the CERES Principles as a framework for comparison.

Exhibit 1
Environmental Issues for Accounting: The CERES Principles

Investors have exerted pressure on companies to address environmental problems. For example, a group of institutional investors known as the Coalition for Environmentally Responsible Economies, or CERES, developed a statement of principles of environmental conduct. Named the CERES Principles (formerly the Valdez Principles in recognition of the Alaskan oil spill tragedy), CERES has communicated with hundreds of companies and urged them to sign the principles. By 2003, seventy-one companies had endorsed these principles. CERES hopes that these reports serve as benchmarking and accountability tools for measuring corporate environmental performance (www.ceres.org). The real goal of these principles is to get corporations to pay attention to environmental issues and to realize that stakeholders are interested in these issues. With billions of investor dollars behind the current effort, it seems unlikely that companies will be able to ignore the pressure. The guiding principles and introduction are:

Introduction: *By adopting these Principles, we publicly affirm our belief that corporations have a responsibility for the environment and must conduct all aspects of their business as responsible stewards of the environment by operating in a manner that protects the Earth. We believe that corporations must not compromise the ability of future generations to sustain themselves. We will update our practices continually in light of advances in technology and new understanding in health and environmental science. In collaboration with CERES, we will promote a systematic process to ensure that the Principles are interpreted in a way that accommodates changing technologies and environmental realities. We intend to make consistent, measurable progress in implementing these principles and to apply them in all aspects of our operations throughout the world.*

Protection of the Biosphere: *We will reduce and make continual progress toward eliminating the release of any substance that may cause environmental damage to the air, water, or the earth or its inhabitants. We will safeguard all habitats affected by our operations and will protect open spaces and wilderness while preserving biodiversity.*

Sustainable Use of Natural Resources: *We will make sustainable use of renewable natural resources such as water, soil and forests. We will conserve non-renewable natural resources through efficient use and careful planning.*

Reduction and Disposal of Wastes: *We will reduce, and, where possible, eliminate waste through source reduction and recycling. All waste will be handled and disposed of through safe and responsible methods.*

Energy Conservation: *We will conserve energy and improve the energy efficiency of our internal operations and of the goods and services we sell. We will make every effort to use environmentally safe and sustainable energy sources.*

Risk Reduction: *We will strive to minimize the environmental, health and safety risks to our employees and the communities in which we operate through safe technologies, facilities and operating procedures, and by being prepared for emergencies.*

Safe Products and Services: *We will reduce and, where possible, eliminate the use, manufacture or sale of products and services that cause environmental damage or health or safety hazards. We will inform our customers of the environmental impact of our products or services and try to correct unsafe use.*

Environmental Restoration: *We will promptly and responsibly correct conditions we have caused that endanger health, safety or the environment. To the extent feasible, we will redress injuries we have caused to persons, or damage we have caused to the environment and will restore the environment.*

Informing the Public: *We will inform in a timely manner everyone who may be affected by conditions caused by our company that might endanger health, safety or the environment. We will regularly seek advice and counsel through dialogue with persons in communities near our facilities. We will not take any action against employees for* *reporting dangerous incidents or conditions to management or to appropriate authorities.*

Management Commitment: *We will implement these Principles and sustain a process that ensures that the Board of Directors and Chief Executive Officer are fully informed about pertinent environmental issues and are fully responsible for environmental policy. In selecting our Board of Directors we will consider demonstrated environmental commitment as a factor.*

Audits and Reports: *We will conduct an annual self-evaluation of our progress in implementing these Principles. We will support the timely creation of generally accepted environmental audit procedure. We will annually complete the CERES Report, which will be made available to the public.*

Disclaimer: *These Principles establish an environmental ethic with criteria by which investors and others can assess the environmental performance of companies. Companies that sign these Principles pledge to go voluntarily beyond the requirements of the law. These Principles are not intended to create new legal liabilities, expand existing rights or obligations, waive legal defenses or otherwise affect the legal position of any signatory company and are not intended to be used against a signatory in any legal proceeding for any purpose.*

Required:

1. Analyze the ten points of the CERES Principles. Do these seem reasonable to you? Why or why not? Comment specifically on the effect on/of managerial behavior of these principles. In addition, comment on the effect of managerial accounting data involved with each of these principles.

2. Contact three companies in different industries to request a copy of their annual report, Form 10-K and environmental annual report (if available). Some of these items may be available on company websites. Prepare a matrix to analyze, at a minimum, the ten principles discussed above. Be aware that other types of environmental information may be included in the information you are requesting. You should also look for other environmental disclosures that may not fit within the CERES Principles and comment on them as well (i.e., amount of capital expenditures related to the environment, information addressing the company's involvement with specific environmental information, etc.). Your matrix should be similar to the following:

Issue	*Company 1*	*Company 2*	*Company 3*
Protection of the Biosphere			
Sustainable Use of Natural Resources			
Reduction and Disposal of Wastes			
Energy Conservation			
Risk Reduction			
Safe Products and Services			
Environmental Restoration			
Informing the Public			
Management Commitment			
Audit and Reports			
Other Information (list each item separately)			

(You will want to add your own categories of comparison in this matrix. You may even want to include some financial information in the matrix.)

Do the firms differ in the ways and amount of information presented? Should the companies' reporting of environmental information differ?

3. Assume you are a manager in a large manufacturing firm. Comment on the impact of addressing environmental issues from a corporate perspective. Should these issues be important in your position? Why or why not? Would your answer change if you are a loan manager in a large regional bank?

5. Current Environmental Issues addressed in the Press: *Have students find articles related to the topics explored in class. For example, in an intermediate accounting class, students could report on articles related to recognizing environmental costs on the income statement and reporting contingent liabilities on the balance sheet.*

6. Understanding Environmental Costs: *Have students read the EPA publication, "An Introduction to Environmental Accounting As A Business Management Tool: Key Concepts and Terms." Then, have them complete the assignment shown in Exhibit 2.*

Exhibit 2
Understanding Environmental Costs

The EPA as identified a multitude of environmental costs incurred by companies. An environmental cost is identified differently by different types of companies, typically through examining how a company will use the information in decisions. The spectrum of these environmental costs identified by the EPA goes from easier to measure to more difficult to measure. The environmental costs, as identified in their publication, "An Introduction to Environmental Accounting As A Business Management Tool: Key Concepts and Terms," are identified below:

- *Potentially Hidden Costs: include regulatory, up-front, back-end, and voluntary costs that may be hidden from management*
- *Contingent Costs: costs that may or may not be incurred at some point in the future.*
- *Image and Relationship Costs: costs incurred which affect subjective perceptions of management, customers, employees, communities, and regulators*
- *Conventional Costs: costs usually addressed in cost accounting and capital budgeting.*

Required: Choose a company who publishes an environmental progress report on its website. Using the list of costs in Exhibit 2 of the EPA publication mentioned above, identify as many of the environmental costs in this exhibit as you can in the report. What is your definition of environmental cost? Do you think the information in the company's environmental report is adequate for stakeholders?

7. Understanding the concept of stakeholders: *Have students identify an environmental problem occurring in their area. Then, identify all of the stakeholder groups and their interest in the problem.*
8. Understanding ISO 14001: *Have students read the article, "Help Keep the World Green" by Zabihollah Rezaee, available online at WWW.AICPA.org. Students should evaluate the concept of standards related to environmental management and compare those to the ISO 9000 series of standards related to quality.*
9. Understanding the integration of ethics and environmental issues: *Have the students read "Instructional Case: Ethical Dilemmas in Reporting Environmental Liabilities" by Gail Eynon and Kevin Stevens (Issues in Accounting Education, Fall 1996). This case provides material for a rich discussion of the ethics involving the reporting of environmental liabilities from a management and accounting perspective.*

Web Based Resources

1. WWW.AICPA.org: This website provides information on accounting and auditing issues. It provides summaries of environmental publications and of the Sarbanes-Oxley Act.
2. WWW.xerox.org: This website provides a full text version of Xerox's Environment, Health and Safety Progress Report. This document allows students to examine a report which deals specifically with the

environmental reporting aspects of a company.
3. WWW.plasticsindustry.org: This website provides general information about environmental issues in the plastics industry, as well as a list of resources for businesses.
4. WWW.EPA.gov: This website provides a multitude of information related to environmental issues. In particular, there is a section devoted specifically to environmental accounting. Case studies and benchmarking studies are also provided.
5. WWW.emawebsite.org: This website is devoted to Environmental Management Accounting. Current news, books and conferences are discussed. Also included on this website is a series of syllabi used by instructors who teach various environmental courses.
6. WWW.kodak.com: This website provides an example of a comprehensive environmental report. It allows exploration of the company's goals and performance, including an analysis of fines and penalties for the year.

Summary

This paper has provided an overview of the topic of integrating environmental issues into the business curriculum. It is important to explore the concept of environmental issues in the college classroom since companies are receiving an increase in the pressures they face from different stakeholder groups. Governments, customers, competitors, and employees all are showing an interest in environmental issues from a corporate perspective. In incorporating the ideas presented in this paper, the instructor should use discretion based on time available, the size of the classes and availability of supporting resources. By incorporating some aspect of environmental issues into the business classroom, students should be more equipped to face the challenges of tomorrow.

References

1. Baskett, H.K.M. and Marsick, V.J. 1992. Confronting New Understandings about Professional Learning and Change. In H.K.M. Baskett and V.J. Marsick (Editors*) Professionals' Ways of Knowing: New Findings on How to Improve Professional Education. No 55: New Directions for Adult and Continuing Education* (pp. 7-15). San Francisco, CA: Josey -Bass (fall).
2. CERES: Coalition for Environmentally Responsible Economies. WWW.ceres.org.
3. United States Environmental Protection Agency. 1995. *An Introduction to Environmental Accounting As A Business Management Tool: Key Concepts and Terms.* Washington, DC: EPA 742-R-95-001.