

BRINGING SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE MATERIALS INTO THE CURRICULUM: Assessing Current Practices

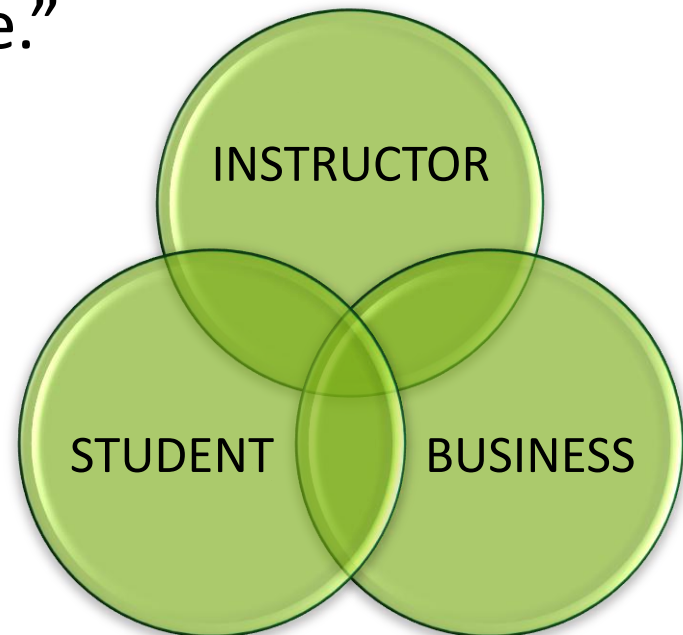
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A Workshop Prepared for:
The PRME /CBS International Conference on Responsible Management
Education: Sustainable Leadership in the Era of Climate Change

WHAT PROBLEM IS BEING ADDRESSED?

Purpose

Business schools need to design courses, modify curriculum, and retool instructors for appropriate delivery of information on “Climate Change.”



WHAT APPROACH IS BEING USED TO EXPLORE THIS PROBLEM?

Procedure

Survey of
Deans at
Schools of
Business

Examination
of Syllabi
posted by
AASHE

Examination
of *The
Sustainable
MBA (Aspen
Institute)*

Examination
of syllabi
posted on the
internet

WHAT ASSUMPTIONS ARE MADE ABOUT INSTRUCTORS?

Assumptions

Business instructors are committed to disseminating valid and reliable information about the environment.

Many instructors are concerned about their lack of technical training in sustainable development and climate change topics.

A knowledge gap about the language of “Climate Change” creates a significant challenge to successful course design and curriculum modification

WHAT ASSUMPTIONS ARE MADE ABOUT STUDENTS?

Assumptions

Students are introduced to topics such as “Acid Rain” and “Climate Change” in pre-college studies (K-12) and in lower division college courses.

Students, both undergraduate and graduate, are not convinced that addressing “Climate Change” problems are the responsibility of business.

Students want evidence that developing KSAs in “Climate Change” topics will make them more competitive in the job market.

WHAT ASSUMPTIONS ARE MADE ABOUT BUSINESS?

Assumptions

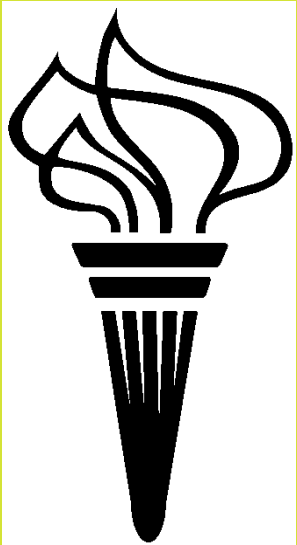
In spite of skepticism, industry leaders are creating pressure on businesses to adopt environmentally friendly practices.

Business leaders want evidence of benefits to their organization if environmentally-friendly policies are adopted.

Business expects business schools to prepare students with the KSAs that support implementation of the new environmentally-friendly initiatives.

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QUESTIONS NEEDING ANSWERS



- ⊙ What do business organizations need to know about Climate Change initiatives?
- ⊙ What do students need to know about Climate Change initiatives?
- ⊙ What are the implications of these Climate Change initiatives for schools of business?

WHAT DO AVAILABLE SYLLABI IMPLY ABOUT COURSE OFFERINGS?

AASHE Syllabi Bank

- ⊙ Sustainable Development
- ⊙ Sustainability
- ⊙ Environmental Management
- ⊙ Risk Management
- ⊙ Environmental Law
- ⊙ Energy and Technology
- ⊙ Product Stewardship

ASPEN Publication@

- ⊙ **Sustainable Business Strategies**, e.g., Value Creation, Business Projects, Venturing, Supply Chains...
- ⊙ **Social Entrepreneurship**, Innovation, Marketing,..
- ⊙ **Environmental Management**, Ethics, Economics
- ⊙ **Risk Management**, Environmental Law, Social Auditing...
- ⊙ **Green Technology**, Energy, Marketing...

WHAT IS THE PRIMARY FOCUS OF CURRENT COURSES?

Current Status

- ◎ Courses generally do not focus on climate change as a primary focus. (Survey of Deans)
- ◎ In *The Sustainable MBA*, only six of 100 business schools have courses using the words “climate” or “climate change” in the title.
 - ◎ A few business school use the word “energy” in course titles.
 - ◎ Many courses do have description that imply the use of modules that include information on climate change.
 - ◎ The primary channel for distribution of information on climate change appears to be done through extracurricular activities, such as student clubs.

WHAT DO INTERNET SYLLABI SUGGEST ABOUT COURSE OFFERINGS?

Current Status

A “Google Search” for Climate Change syllabi yields 217,000 hits.

- Most courses are designed for lower division science or teacher education students .

A “Google Search” for Sustainability syllabi yields 3,080,000 hits.

- Most syllabi are not from business schools; those few from business schools tend to be for MBA courses.

A “Google Search” for Environmental Risk Management syllabi yields 157,000 hits.

- Mix of disciplines offer these courses, including sciences, public administration, and business.

Only a small proportion of syllabi indicate that courses are team taught; even fewer are multidisciplinary.

HOW ARE GRADUATE SCHOOLS INTRODUCING CLIMATE CHANGE TOPICS?

- ⊙ Through broadly-based courses focusing on sustainability rather than narrowly-defined courses focusing on climate change.
- ⊙ Some graduate schools may offer the sustainability courses as electives; some include at least one as a core course.
- ⊙ Most (but not all) schools offering more than 2 courses on sustainability-related topics offer them as electives.
- ⊙ Some schools are addressing the need for more focused course work on environmental issues through offering a joint MBA/MS option.

HOW ARE COURSES INTEGRATED INTO THE CURRICULUM?

- ⊙ For non-Phd programs, 1 or 2 courses on sustainability-related topics is most common.
- ⊙ Climate change materials tend to be incorporated into one of the sustainability-related courses but not taught as a stand-alone course or as a module within a traditional business course.
- ⊙ Sustainability and climate change courses are generally global in scope and may be incorporated into international business offerings.
- ⊙ Very few schools of business cross-list courses with sustainability or climate change courses taught outside the college or approve courses taught outside the college for degree credit.

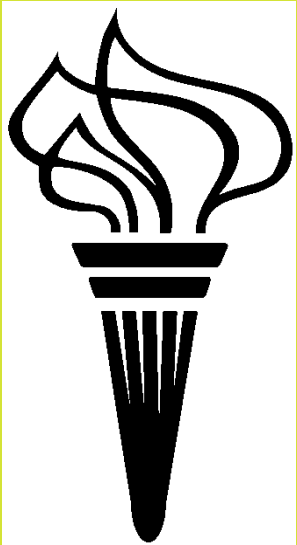
WHAT CAUSES RESISTANCE TO OFFERING COURSES ON CLIMATE CHANGE?

Sources of Resistance

- ⊙ Limitations with respect to:
 - ⊙ faculty expertise or support (skepticism and inertia)
 - ⊙ financial resources
 - ⊙ Student demand and interest
- ⊙ Challenges associated with:
 - ⊙ developing & implementing cross-disciplinary courses
 - ⊙ finding expertise outside of the business school
- ⊙ Lack of champions to lead the way
- ⊙ Concern about communicating the business rationale, i.e., the profit motive

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QUESTIONS NEEDING ANSWERS



- ③ How do you design a course and modify the curriculum to show how climate change is affecting, and thus relevant to, business?
- ③ How does the information on climate change fit into the business model?
- ③ How can a course syllabus developed in a science discipline be redesigned to meet the needs of business schools, its instructors and its students?

WHO IS TEACHING COURSES ON SUSTAINABILITY AND CLIMATE CHANGE?

Instructors

- ⊙ **Existing instructors** from traditional business disciplines
 - ⊙ Tend **not** to teach courses on Climate Change.
 - ⊙ Tend to focus on more broadly-based topics such as sustainable business practices.
 - ⊙ Tend to receive informal, but not formal, training.
- ⊙ **New instructors** hired to teach courses on climate-related topics tends **not** to be **an alternative** chosen by business schools.
 - ⊙ In the Survey of Deans, only one dean indicated that an instructors from outside the college with expertise in the sciences related to climate change is teaching courses.
- ⊙ For those schools offering courses on climate change, a majority of respondents indicated that all courses are taught by **full-time faculty**.

WHAT DO THESE FINDINGS IMPLY?

Implications

The Bottom Line:

- ⊙ For non-Phd programs, schools of business are
 - ⊙ Not hiring instructors specifically to teach courses on sustainability or climate change.
 - ⊙ Not using instructors from outside the college with expertise in the sciences.
 - ⊙ Not using multi-disciplinary instructor teams.
 - ⊙ Not providing formal training for instructors whose courses include modules on climate change.

ARE IMPLICATIONS SUPPORTED BY OTHER EVIDENCE?

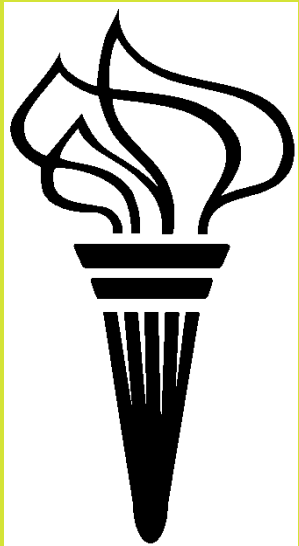
Instructors

Examination of non-PhD level syllabi and instructor profiles for those syllabi yields similar findings.

- ⊙ Instructors tend **not** to have backgrounds in the sciences but in CSR, business ethics, law, or a related field. There is no suggestion of formal training to teach courses on climate-related topics.
- ⊙ Utilizing instructors with experience or a background in other sustainability-related areas did appear to be considered a viable option for most business schools.
- ⊙ There was **no evidence** that instructors are being hired specifically to teach climate-related topics, especially from outside disciplines.
- ⊙ Multi-disciplinary instructor teams are **not** being used. (A few syllabi identify teams, but they are clearly in the extreme minority.)

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QUESTIONS NEEDING ANSWERS



- ③ Who should be teaching courses on sustainability? Why?
- ③ Who should be delivering information about climate change? Why?
- ③ Can one instructor be expected to have the depth of knowledge required for both the broad-based sustainability course and the narrowly-based climate change course?

WHY SHOULD COURSES INCLUDE CLIMATE CHANGE INFORMATION?

Students

Students need to be convinced of the need to study the relationship between climate change and business.

Students need the knowledge, skills, and abilities required to work in new or redefined business functions,

- corporate accountability and reporting systems, environmental data and risk management, and product stewardship (to name only a few)

Students need to understand the business/government/NGO relationships that support implementation of standards

- GRI; SA8000; ISO 14001; EPEAT

WHAT NEW KSA'S SHOULD STUDENTS MASTER?

Example

Example: GRI

- ⦿ Corporate Social/Environmental Reporting
 - ⦿ GRI's mission is to create conditions for the transparent and reliable exchange of sustainability information through the development and continuous improvement of the GRI Sustainability Reporting Framework.
 - ⦿ Environmental Measures are designated as “EN”

GRI CONTINUED:

Example

Energy

- ⊙ EN3: Direct energy consumption by primary energy source. (Core)
- ⊙ EN4: Indirect energy consumption by primary source. (Core)
- ⊙ EN5: Energy saved due to conservation and efficiency improvements.
- ⊙ EN6: Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.
- ⊙ EN7: Initiatives to reduce indirect energy consumption and reductions achieved.

GRICONTINUED:

Example

Emissions

- ◎ EN16 : Total direct and indirect greenhouse gas emissions by weight. (Core)
- ◎ EN17 : Other relevant indirect greenhouse gas emissions by weight. (Core)
- ◎ EN18 : Initiatives to reduce greenhouse gas emissions and reductions achieved. (Additional)
- ◎ EN19 : Emissions of ozone-depleting substances by weight. (Core)
- ◎ EN20 : NO_x, SO_x, and other significant air emissions by type and weight. (Core)

GRI CONTINUED:

Example

Products and Services

- ⊙ EN26: Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. (Core)
- ⊙ EN27 : Percentage of products sold and their packaging materials that are reclaimed by category. (Core)

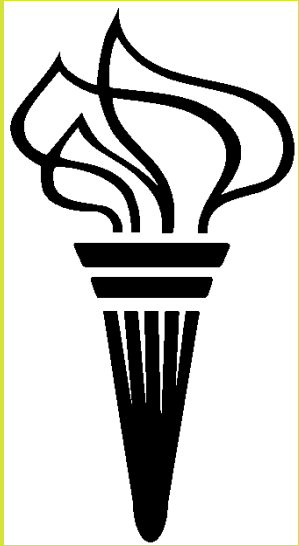
WHAT OTHER TOPICS SHOULD BE INTRODUCED TO BUSINESS STUDENTS?

Example

- ⊙ How the following are negotiated, i.e., where they come from and how they develop :
 - ⊙ Multilateral Environmental Agreements
 - ⊙ Regional Environmental Agreements
- ⊙ How to read and interpret agreements

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QUESTIONS NEEDING ANSWERS



- ⊙ Can one assume with confidence that climate change information receives adequate coverage in a course focusing on sustainability?
- ⊙ What are the barriers to adding programs that focus on climate change within schools of business?
- ⊙ How do these barriers differ from the resistance to designing courses to incorporate climate change information?

WHAT PROGRAMS ARE U.S. BUSINESS SCHOOLS IMPLEMENTING?

Current Initiatives

- ⊙ While programs on sustainability are increasingly being implemented, the **primary focus** is not on climate change.
- ⊙ PhD –level sustainability degrees incorporating a **greater technical focus** are beginning to surface at the research universities such as Arizona State and the University of Alaska Fairbanks. Programs are interdisciplinary or multidisciplinary.
- ⊙ **Graduate certificate programs and MBA concentrations** in sustainability are increasingly visible at larger and more affluent business schools but less frequently in smaller, less affluent institutions.
- ⊙ At present, greater emphasis appears to be placed on graduate education than on **undergraduate education** in promoting sustainability-related initiatives.

WHAT IS IMPORTANT IN REDESIGN OF PROGRAMS AND CURRICULA?

Planning Initiatives

Deans in our survey indicate that they consider

- ⊙ Strategic initiatives at the Deans level and support from top administration to be **very important**.
- ⊙ Strategic initiatives within programs and additional training for instructors to be **somewhat important**.
- ⊙ Recruitment of new faculty with expertise in sustainability-related topics to be **important** (but more indicated “not important” than for other categories)
- ⊙ Use of special taskforces, special curriculum committees, and regular faculty curriculum committees to have essentially the **same effectiveness** in facilitating incorporation of sustainability topics into business curriculum.

WHAT DO BUSINESS SCHOOLS NEED TO CHANGE?

Ideas to Consider

Schools of business need to give serious consideration to how courses containing content on climate change are staffed, especially in the short run.

Deans do indicate that it is “somewhat important” to “very important” that they

- ⊙ Provide instructors with formal training.
- ⊙ Hire instructors with expertise.
- ⊙ Use multi-disciplinary faculty teams.

However, they do not see as important that they hire instructors with backgrounds in the sciences to teach focused topics such as climate change.

CHANGE CONTINUED

Ideas to Consider

Schools of business should rethink the approach to incorporating information on climate change into the curriculum by:

- ⊙ Taking advantage of campus expertise from the disciplines already teaching about climate change.
- ⊙ Identifying and rewarding one or two faculty 'champions' to lead the way.
- ⊙ Engaging instructor in reframing the content on climate change that is to be incorporated into their traditional courses.
- ⊙ Climate change material is not always perceived as belonging in the traditional business course; therefore, it is essential to build instructor support from the bottom.

CHANGE CONTINUED

Ideas to Consider

If incorporation of climate change materials into business school curriculum is valued, business schools should:

- ⊙ Support retraining of current business school instructors to incorporate appropriate materials into course content.
- ⊙ Hire new instructors with appropriate expertise in the materials needing coverage.
- ⊙ Provide support for creating interdisciplinary courses.
- ⊙ Ask the sciences to provide courses on climate change as a service to business schools.
- ⊙ Create demand for their graduates by working with employers to broaden their understanding of the value added by an environmental sustainability major as well as by an accounting major.

APPENDIX: THE SURVEY

- ⦿ An on-line survey was constructed as a first step in exploring the extent to and methods by which Colleges or Schools of Business are incorporating sustainability- and climate-related topics into curricula, programs and strategies. Thirty-two institutions completed the first phase of the survey.
- ⦿ The purpose of initiative is to determine:
 - ⦿ How courses on sustainability and climate change are being implemented by business colleges.
 - ⦿ Whether business schools are retooling current or hiring new instructors to teach the courses.
 - ⦿ Modifications in curriculum that support instruction in sustainability and climate change.
 - ⦿ Strategic initiatives being implemented to support instruction in sustainability and climate change.
- ⦿ Results are compared to published Aspen Institute descriptions of current business school initiatives, information from the AASHE syllabi bank, and web-available syllabi.