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Crossing Boundaries for Institutional Sustainability

Helen Hasan
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Abstract
Being multidisciplinary is an essential element of the field of IS and working across boundaries is what we have always done so we are well placed to lead and enable sustainability programs. Unfortunately most of institutions are structured in ways that limit our ability to cooperate across departmental and other boundaries. We notice this when we try to develop multi-disciplinary courses on sustainability, to set up climate-change research teams across schools and faculties or to involve both administrative and academic/teaching staff on environmental projects. We can truly make a different not only if we set an example by supporting programs to create decent sustainable workplaces in our institutions but also if we promote sustainability through what we teach and what we research. However to do this we must create mechanisms that allow us to cooperate across the traditional workplace silos. In this short paper I describe some aspects of the challenges and some of activities happening in our University in this regard.

Keywords: Crossing Boundaries, Triple bottom line, Insitutions

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INTRODUCTION

One of the mantras of the green movement is to "think globally and act locally" and we, as Information Systems (IS) scholars professionals, should reflect on how we can best do this. I suggest that we have two options in acting locally: one is to use our particular knowledge and skills to promote the sustainability of our own workplace and the other is to include issues of environmental responsibility in our teaching and research programs. It is probably the latter that can make the most impact globally as our students graduate take their place in the workforce. One of the main challenges we face is that issues of sustainability, particularly those to do with the environment, cut across many of the traditional within our academic institutions and solving sustainability problems requires the combination of knowledge and skills from many different areas.

The field of IS spans many of the traditional discipline boundaries and also those between academics, administrators, industry and community. I particularly like the Triple Bottom Line (Brown et al 2006 and see Figure 1) as an example of spanning the boundaries: economic, social and environmental or people, profit, and planet. Not that this is the solution to every problem but it does get business o take a broader perspective in their decision-making.

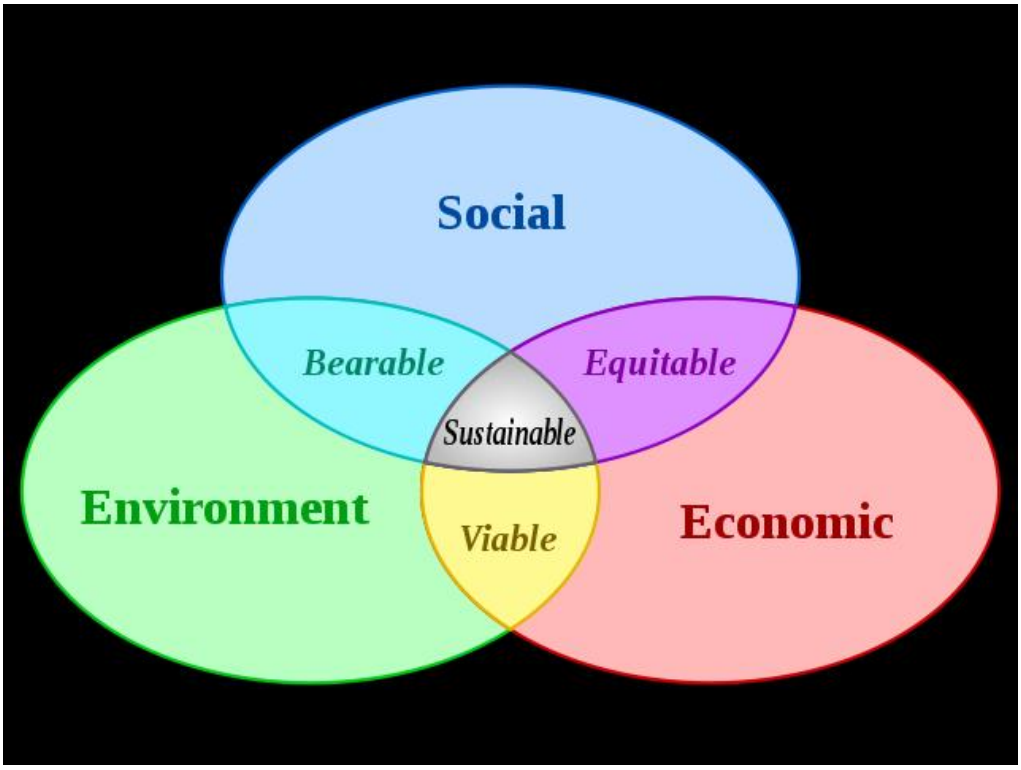

Figure 1 The Triple Bottom Line (from Wikipedia)

Being multidisciplinary is an essential element of the field of IS and working across boundaries is what we have always done so we are well placed to lead and enable sustainability programs. Unfortunately most of institutions are structured in ways that limit our ability to cooperate across departmental and other boundaries. We notice this when we try to develop multi-disciplinary courses on sustainability, to set up climate-change research teams across schools and faculties or to involve both administrative and academic/teaching staff on environmental projects. We can truly make a different not only if we set an example

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by supporting programs to create decent sustainable workplaces in our institutions but also if we promote sustainability through what we teach and what we research. However to do this we must create mechanisms that allow us to cooperate across the traditional workplace silos. In this short paper I describe some aspects of the challenges and some of activities happening in our University in this regard.

BACKGROUND

One of the major assets of the city of Wollongong and the Wollongong University campus is its environment set on a narrow strip between the Pacific Ocean and the Illawarra escarpment of natural bushland. It has always been assumed that the Campus environment played a key role in attracting students to the University. In addition environmental issues have been on the teaching and research agendas for some time particularly in the science and engineering schools. In the context of acting locally, there has recently been an alignment of a number of elements that I address in this paper.

In Australia the National Greenhouse and Energy Reporting Scheme (NGERS)[1] Act of 2007 requires organizations to report energy consumption and greenhouse gas emissions if they exceed thresholds of 100 TJ of energy consumed or 25kt CO_2e emissions generated**.** In 2008, the University triggered that threshold for energy consumption and emission generation at its main Campus. In anticipation of producing its NGERS report, the University had formed a new Environmental Management Unit (EMU) to collected the data for the report and this exercise revealed that our university was not nearly as "green" as was previously thought. The EMU team has enthusiastically put in place programs to remedy this, reducing the use of electricity and water while implementing an extensive recycling regime. Everyone now uses their Keep Cup pictured for their takeaway coffee from all outlets on campus.

Also over the last few years the University has been reassessing it primary research focus, which has traditionally been in the science and engineering disciplines where the University has funded several internal research institutes. The main industry in Wollongong used to be the Steelworks but these have downsized while tourism and education have taken over. In order to engage a wider range of researchers, the University has recently funded a small number of research networks, the most successful of which is the Social Innovation Network (SInet). SInet is a collection of small research centres mainly from the Faculties of Commerce, Education, Health, Arts and Informatics. Within SInet, we have formed a smaller network of researchers from several disciplines interested in environmental sustainability issues. This we have called the Environmentally Aware Research network (EARN) although we have activities that include teaching as well as research. EARN now also includes the EMU crossing the greatest boundary in our institution, namely that between the academics and the administrators. So, as depicted in Figure 2, EARN encompasses teaching research and practice.

[1] http://www.nger.com.au/)

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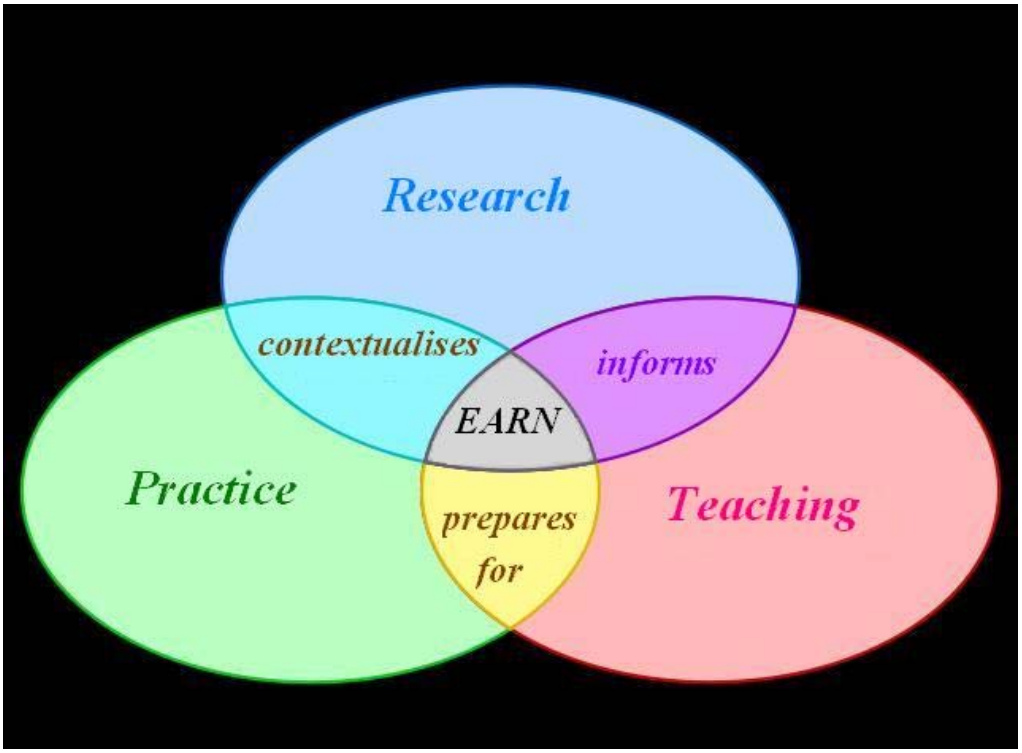

Figure 2 The overlap between Research, Teaching and Practice of the EARN group

TEACHING

In my University, as is typically the case, we are structured into Faculties and Schools based on Disciplines and these often act as "Silos" Crossing the boundaries between "silos" is rarely easy however I believe that solving environmental problems together with the imperative to be sustainable provides us with a strong motive to find ways to work across the "silos".

The first Curriculum challenge is to create new subjects within existing courses, say for example a Green IT unit within the undergraduate IS program. We would have to justify it and find resources for it but these are common problems that can usually be overcome.

Creating new cross-discipline courses is a greater challenge. This may mean giving students access to advanced units in other disciplines without the traditional pre-requisites or giving teachers access to resources from other disciplines. We need to do without overloading students and teachers and without diluting disciplinary knowledge. In time however we may expand multi-discipline epistemic communities to enable a way forward.

RESEARCH

As mentioned we are here now supported to form networks across the disciplines to promote cross-disciplinary research particularly in areas other than science and engineering. The Social Innovation Network is the most extensive of these and reaches across the traditional institutional hierarchical structures. Within the broad scope of SInet are some more focused themes one of which is EARN, the "Green" Theme.

One of the outcomes of this experience is a conviction that networks are a useful way to facilitate and encourage cross-disciplinary research. As a network is a relatively unfamiliar

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configuration for a university we are including a study of “research networks” in our program. We are asking questions such as:

- What is a network?
- Why have one?
- How do the attributes of a network compare to a more traditional hierarchical institution?
- How can it be created, sustained and its value determined?
- What does it mean for those in it?

We believe that a network provides identity to a research collective that is real, having status and support, but is fundamentally different to a hierarchy. In a network, connections and flows of knowledge tend to be horizontal not vertical. A network is flexible, re-configurable, responsive to change, and less formal with potential for lower administrative overheads.

The success of networks dependents on the vitality of loosely coupled small autonomous, self-directed and self-coordinating groupings. Networks require a supportive culture, with appropriate leadership styles, rewards structures, infrastructures and technologies. In a network, integrity, maturity, adaptability, flexibility, job competency, and a sense of humour emerged as highly rated skills.

PRACTICE

The institutional Environment Policy of the university calls for cooperation between all staff and so the Environment Management Plan includes call for connections between the practice of the EMU and the teaching and research programs of the University. An Environment Advisory Committee has been set up with representations from staff, students, academia and administration to facilitate communication and engagement across the traditional “silos”. This has succeeded in getting academics and administrators involved in many of the University’s environmental initiatives. Energy and water consumption has gone down and recycling has increased dramatically. In the area of transport there has been successful introduction of two free Shuttle bus services which have replaced much of the car traffic on campus and pressure of parking. Despite the cost to the university these services have increased in frequency due to demand. There have also been increased numbers of free parking spaces allocated to those taking advantage of a successful Carpooling scheme.

THE IS EXPERIENCE

The field of Information Systems spans many of the traditional discipline boundaries and also those between academics, administrators, industry and community. Looking at the intersection of teaching, research and practice within academic institutions, IS should have ideas and experiences that can be shared and leveraged to promote cooperation on sustainability programs within and possibly also between institutions. Some particular roles for IS

- Introduce and support networks
- Collecting and managing relevant data
- Providing information from the data
- Adding live feedback to websites

An example of the latter in our case is the EMU website which has a live feed of energy consumption of the whole campus as shown below.

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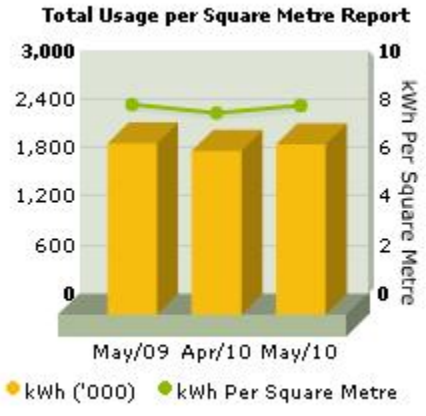

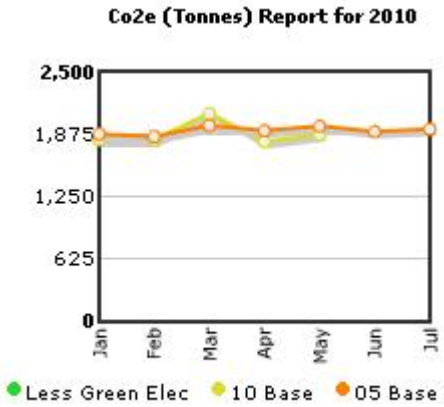

It has been suggested that if this feedback were done for each school of Faculty the element of competition could be used to increase the trend downwards.

CONCLUDING THOUGHTS

We should promote the sustainability of our own workplaces and include issues of environmental responsibility in our teaching and research programs Sustainability issues cut across every work-unit within our work-places and educational institutions but most of our firms and institutions are structured in ways that limit our ability to cooperate across work-units. So we must learn to cooperate to meet sustainability challenges.

In our experience a network of diverse members of our university (academics and others) brings together different perspectives, knowledge and skill that can be shared and leveraged to promote cooperation on sustainability programs within and possibly also between institutions. IS could play an important role here.

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