From Data to Wisdom: Towards the Maturation of Sustainability in Welsh HE Institutions through Effective Strategic Alignment (0218)

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Introduction

Sustainability matters. To improve the quality of life for current and future generations requires considerable change to the behaviours of individuals, communities and institutions working together to address global challenges such as climate change, depleted resources, energy security and environmental damage. Known as Education for Sustainable Development (ESD) in England and ESDGC in Wales to include Global Citizenship, the overall aim for education policy-makers is to develop the knowledge, skills and understanding of individuals at all education levels to inform their future actions and career roles with regard to global citizenship and sustainability. D'Cruz et al (2009) argued that influencing actions and enabling 'better' behaviours was preferable to simply locating it in the educational curriculum. This paper adopts a parallel perspective by identifying how data from various sources such as ESD/GC research should align strategically, and what the implications are for leading, managing and governing sustainably in Higher Education.

The need to promote better behaviours and derive tangible benefits or positive impacts is an integral ESDGC driver. Learners at all levels need to not only just understand the imperatives but take action to facilitate improvements in their immediate and wider environments. The Sustainable Development Charter (Welsh Assembly Government, 2010) sets out the following imperatives to enhance the wellbeing of people and communities living in Wales:

- Live within our environmental limits;
- Support healthy, biologically diverse and productive ecosystems;

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- Build a resilient and sustainable economy;

- Enjoy communities which are safe, sustainable and attractive;

- Be a fair, just and bilingual nation.

Education is a devolved issue for policy-makers in Wales, and it is clear that HE institutions play an important role in delivering on these imperatives. The Sustainable Development Charter articulates the benefits and outlines the required commitments of the signatories. HE institutions in Wales typically also subscribe to the Environmental Association for Universities and Colleges (EAUC), and key academic staff may belong to the Sustainability in Higher Education Developers (SHED Act) network that is linked to the Higher Education Academy (HEA). There are now plans to integrate these two communities to benefit cumulative experience and the sharing of better practice across the FE and HE sectors (EAUC, 2010).

Sustainability in an Education Management Context

Sterling (2001) advocated a radical transformative paradigm shift in education to strongly emphasize change with success emerging from the ownership and empowerment of principles. He argued that political and academic rhetoric should emerge as a reality that can be measured in some way, suggesting that the strategic planning and policy formulation process must establish ownership of changes and identify the key stakeholders involved. It is also important to determine whether any policy that is an output of the strategic planning process has an impact on successful operational implementation. D'Cruz et al. (2009) discussed the drivers for sustainable development from an educational design and delivery perspective, and the challenges presented by the diverse and sometimes differing interpretation of ESDGC and its implementation leading to instances of 'green wash' and 'green bling'. In such cases the actual outcomes and their impacts were often superficial, although the underlying activities and outputs may have seemed significant when first

presented in strategic plans. This has resulted in much "tick boxing" and the need to present those that manage, govern or fund HE institutions with less than innovative progress against indicators to map against regional, national and often international policies or targets. Dawe et al. (2005) presented a report to the Higher Education Academy (HEA) that looked at sustainable development in Higher Education, and outlined a set of recommendations for HEA development and further research that primarily related to increasing awareness of ESD specific to subject areas and promoting areas of good practice. Some five years later it can be argued that many Environmental Management System (EMS) initiatives seen in Higher Education have been more motivated by concerns about potential funding restrictions where there is no evidence of action, risks to reputation, or as the basis for competition between institutions rather than to make a significant difference aligned with intended ESDGC benefits. Indeed the People and Planet green league table (http://peopleandplanet.org/greenleague) tries to compare institutional sustainability indicators that may have some benefits for student recruitment and institutional reputation, but as with all league tables the benefits are only accrued if the majority of people take the league table positions seriously. Therefore alternative models to help measure progress and "maturity" against some acknowledged criteria and agreed sustainability benchmarks are needed to improve policy-making, and a Ph.D. study is currently underway to investigate and develop this further (Glover, 2009).

Current Research

Hedderman et al (2009) discussed the 'Realising Benefits and Behavioural Change through ESDGC' project that examined how the learning experience impacted upon current and future student behaviour within a real world context. This study emphasised curriculum design and delivery against perceptions, and tried to relate

this to actual behaviours. Shepherd (2008) in his work was primarily concerned with the ecological world views of students and staff, and categorised students on the basis of his findings using principal component analysis. Both of these studies are ongoing and have produced some very interesting datasets, the findings of which are published elsewhere. There are similar studies underway that have been recently funded by the HEA, and this growing body of work is leading to more practical insights about what works well in progressing the sustainability agenda in HE.

From Data to Wisdom through a Maturation Process

"Data is a record of a fact or an event"

It is widely accepted by those in the Information Science area that data is the lifeblood of organisations, and is also one of the products of research. As we create, gather and store more and more data, the benefits for policy formulation to help transformation are numerous providing we know why we want the data. As studies come up with new insights, there will be much more sustainability data relevant to HE that can be mined or analysed in depth for findings and inferences.

"Information is data that is processed for a purpose"

Data can be processed in many different ways i.e. it can be sorted, aggregated, selected from, calculated, clustered, etc. The notable point is that the data has to have some form of purpose relevant to those that are collecting the data to become information, and this implies that contextual meaning is important. For example, is it useful to know that certain curriculum designs lead to better behaviours? Or that a given institutional policy detracts significantly from beneficial behavioural changes?

"Knowledge is information that has a value"

The next step in the transformation to wisdom is making sense of the information, and ensuring that knowledge is captured, stored, used and disseminated

appropriately. Strategic planning and policy formulation are underpinned by knowledge, and the field of Knowledge Management has for many years tried to increase the value of information using new technologies and better processes. The HE context is no different, but many institutions lack maturity in their systems and processes to enable even simplistic knowledge management capability with respect to sustainable development to capitalise on educational research to realise benefits.

"Wisdom is knowledge that is acquired through experience"

The highest level in the hierarchy is wisdom, and it is likely that as HE gets better at ESDGC and EMS activity, institutions will start to align their varied processes and develop tools and frameworks to achieve goals more systematically to underpin effective policy-making. Educational research often sits uncomfortably with this as it is often seen as having different goals, outputs and drivers, and is often funded separately. For institutions to become more "mature" and arguably appear higher up the league tables, taking more than an *ad hoc* approach to sustainability and embedding this into vision, mission, strategies and plans at all levels with direct linkages to the student experience is essential. Indicators of progress can then be articulated and monitored against defined metrics such as Critical Success Factors (CSFs) using Key Performance Indicators (KPIs), and mechanisms should be in place to determine information requirements that will enable effective coordination, communication and control of sustainable development activities. This may identify the need for more research and data collection, and across the sector comparisons will be enabled through the sharing of wisdom leading to better practice.

Summary

There are varied interpretations on the terms discussed here (e.g. Bellinger et al., 2004; Sharma, 2008), however for the purposes of this paper the authors believe that the working definitions are useful in explaining how "wisdom" leads to better policies,

decisions and actions thus influencing behaviours. The salient observation is that ESDGC and EMS initiatives should not be separable, and strategic plans aligned closely because the information and knowledge needed may derive from the same underlying data sources. Therefore the interface between ESD/GC research, institutional progress monitoring and wider societal drivers for sustainability should no longer be disconnected, and could help to realise the benefits and imperatives such as outlined in the Sustainable Development Charter for Wales.

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