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ANALYSING POSTGRADUATE EDUCATION FOR SUSTAINABLE DEVELOPMENT IN BUSINESS SCHOOLS

ABSTRACT Following the recent increase in importance of Education for Sustainable Development [ESD], this paper looks to use secondary research to showcase to what extent the world's top business schools are incorporating ESD courses into their postgraduate programmes¹. This paper also investigates on a global scale where Masters of Business Administration courses relating to sustainable development [Green MBAs] are taught and what they entail. In light of this, research has also incorporated networks of higher education establishments that aim to promote ESD.

Results reveal that only 21 out of 89 top business schools around the world have sustainability related postgraduate courses and that only three countries teach a total of 15 "Green MBAs". What can also be seen is that beyond higher education institutions, states generally show little commitment to ESD in either policy or strategic statements. However, the rise of research networks in higher education institutions has begun to embed the subject in curricula. To promote the highest standards in teaching and learning for sustainability, institutions must focus upon knowledge transfer, research development, innovation, and student training.

KEYWORDS

Business Schools, Sustainable Development, Education

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¹ These postgraduate courses can be found at top higher education business schools affiliated with universities.

1. INTRODUCTION

This introduction aims to highlight the current understanding of ‘Sustainable Development’, as well as the importance of international efforts to incorporate education for sustainability.

1.1. SUSTAINABLE DEVELOPMENT

Gro Harlem Brundtland’s 1987 explanation of ‘Sustainable Development’ defines the term as *‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’* (United Nations [UN], 2012). It contains within it two key concepts, that of ‘needs’ and ‘limitations’. Therefore, the goals of environmental, economic and social development in countries should always be defined in terms of sustainability (UN, 2012).

1.2. EDUCATION FOR SUSTAINABLE DEVELOPMENT

The United Nations Education Scientific and Cultural Organization [UNESCO] works to create the conditions for dialogue between peoples of different cultures, based upon a respect for commonly shared values. UNESCO’s primary aim *‘is to contribute to the building of peace, the eradication of poverty, sustainable development and*

intercultural dialogue through education, the sciences, culture, communication and information’, with a key focus on maintaining a quality education for all, lifelong learning, and knowledge and policy for sustainable development (UNESCO, 2012a).

The United Nations Decade for Sustainable Development [DESD] promotes ESD as a concept that goes far beyond environmental education. This concept is the educational process of achieving human development (through economic, environmental and social growth) in an inclusive, equitable and secure manner. In spite of multiple efforts to strengthen ESD, many challenges remain. In particular, there is a need to:

Integrate sustainable science and education

Strengthen co-ordination and collaboration between different levels of education for sustainable development

Mitigate information and knowledge gaps between different parts of the world (DESD, 2008).

1.3. THE IMPORTANCE OF EDUCATION FOR SUSTAINABILITY

UNESCO recognize that education is the means through which sustainable development can be achieved, as it enables people to develop the knowledge, values and skills needed to participate in decisions about the way they function, individually and collectively, locally and globally. These decisions will improve quality of life now, without damaging the planet of the future. There-

fore, a holistic approach to education will mean the inclusion of sustainability rather than ignoring it (UNESCO, 2012b). Professor Dr. Konrad Osterwalder, of the United Nations University further supports the view that greater importance needs to be placed upon education for sustainability (Thompson and Schansker, 2009):

“To care about sustainable development means to accept responsibility for the well-being of future generations and also of our habitat, of our planet. An affirmative attitude towards sustainability has to be an integral part of the moral foundation of our activities and of our lifestyle. This means that promoting sustainable development must be an important aspect of the educational agenda at all levels”.

Sustainable development touches upon all aspects of the social and institutional fabric. It provides a way of articulating the aim of development in general. ESD focuses on underlying principles and values that affect our livelihood and for this reason it should be a key government concern, which in turn shall give rise to the leaders of the future being of a ‘sustainable mindset’ (DESD, 2009).

1.4. EDUCATION FOR SUSTAINABILITY – CURRENT PRACTICE

During the United Nations Decade for Sustainable Development [DESD] (2004-2014), UNESCO

the lead coordinator, is seeking to integrate the principles, practices and values of ESD into all aspects of education and learning, in order to address the current social, cultural and environmental challenges that face the world (UNESCO, 2012b). The DESD is a global effort to raise public awareness and encourage wider participation in ESD. 150 countries were represented at the UNESCO World Declaration on ESD held in Germany in March 2009, and the conference issued a statement and call for action on ESD, named the Bonn Declaration.

DESD (2008) explain that since the Earth Summit on Sustainable Development in Rio de Janeiro (1992) sustainable development has been high on the political agenda. In Agenda 21, (a non-binding international Sustainable Development Action Plan), Chapter 36 specifically discusses promoting education, public awareness and training with a special emphasis on:

1. Reorientation of education towards sustainable development
2. Increasing public awareness
3. Promoting training

The furthering of ESD is very much a universal process whether as part of the UN's DESD programme, it be in Kenya where lifelong learning and capacity building are included within their ‘ESD Strategy for Kenya’ policy (National Environment Management Authority, 2012); in the Arab States where the ‘Arab States Regional Initiatives’ programme has been running since 2005 whereby countries in the region have undertaken

a dialogue in order to define the roles of different stakeholders for the DESD and have elaborated an ESD Regional Framework for the Arab States (UNESCO, 2012c). Or in the United Kingdom, where the Higher Education Funding Council for England set out strategic statements and action plans on sustainable development in the higher education sector and claim that 'within the next 10 years, the higher education sector in this country will be recognised as a major contributor to society's efforts to achieve sustainability – through the skills and knowledge that its graduates learn and put into practice, its research and exchange of knowledge through business, community and public policy engagement, and through its own strategies and operations' (HEFCE, 2009). Such policies provide the backdrop and the context for the work going on in business schools and should supply added incentive and capacity to harness this potential and maximise it yet further.

2. AIMS, OBJECTIVES AND METHODOLOGY

2.1. AIMS AND OBJECTIVES

This paper aims to assess the commitment to education for sustainable development within business schools through four objectives:

1. To assess the number of business schools² providing postgraduate courses specialising in sustainable development.
2. To assess the number of world-class business schools working with sustainability research centres.
3. To analyse where Green MBAs are being taught.
4. To present case studies of business schools around the world incorporating ESD through higher education networks.

2.2. METHODOLOGY

A mixed method quantitative and qualitative approach was taken when gathering data. Each methodological approach stated below follows the objectives above.

1. To achieve objectives one and two, research was conducted from league tables to investigate each continent's top business schools. Seven recognised websites were used to compile a list of the world's top 89 schools. Using each university's website an investigation was conducted into what postgraduate courses are available relating to sustainable development, and whether they are home to a research centre. This process was repeated by way of a case study with all the business schools in Portugal. Due to the nature of this paper investigating business school's current commitment to ESD, it should be noted that

² Business schools were selected upon academic excellence within league tables.

the sources used ranked the institutions based upon academic excellence.

2. To achieve objective three, a list of Green MBA courses was compiled from a selection of websites, and the validity of the course was ascertained from the website of the institution, to ensure the course was 'green' in its entirety, as opposed to offering a focus on sustainability or a selection of modules in sustainability subjects. Courses with a smaller content of sustainability were analysed through The Aspen Institute's 'Beyond Green Stripes' research.
3. To achieve objective four, three case studies are presented which show best practice for sustainable development research networks and collaboration between institutions. This was included to complement the quantitative data, and to show what institutions can achieve when thinking in an original manner, and working as a team.

3. RESULTS

3.1. NUMBER OF TOP BUSINESS SCHOOLS PROVIDING SUSTAINABILITY RELATED COURSES

Results showed that only 23% of the world's top business schools offer a master's degree in a subject relating to sustainability (Figure 1). All of these courses came from universities with business courses. For example The Duke University

(North Carolina, USA) offered a MBA, but also a MSc in Environmental Management.

However, other top institutions, such as Harvard Business School with its affiliated university, did not offer a recognized course. The sustainability-based masters courses on offer from all 89 schools are summarised in Table 1.

Figure 1. Doughnut graph showing that only 23% of top business schools in the world offer sustainability-related postgraduate courses (N=89 (61, 28)).

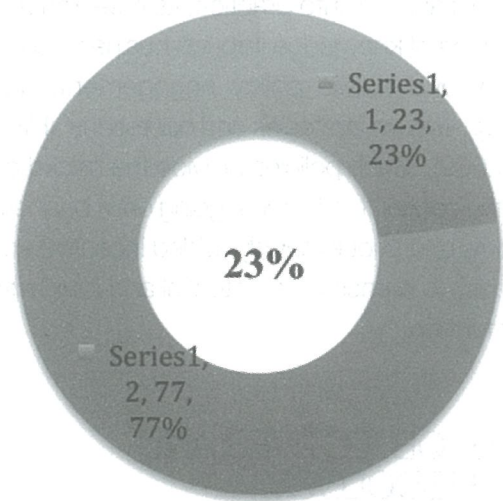


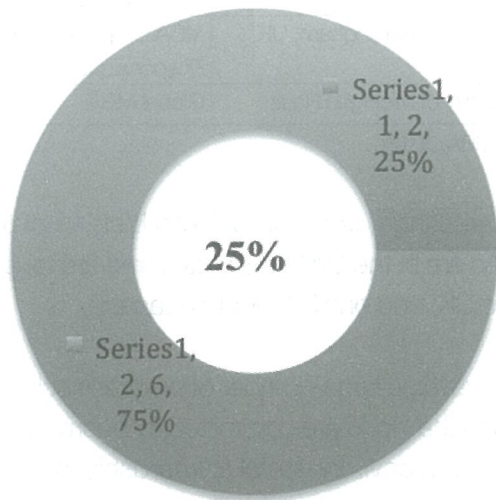
Table 1. Masters degrees in sustainability offered from top business schools

Environmental Management*	Global Affairs	Geography	Agro-energy
Environmental Planning	Sustainable Development*	Agri-Business Management*	Environmental Science and Policy
Energy Management*	Environmental Change	One Planet Leaders	Creative Sustainability
Bioentrepreneurship	Environmental Engineering	Future Studies	Urban and Regional Planning

N.B. Where there is more than one course with the same or similar title and course structure, an * has been inserted to avoid repetition.

Case Study: Portugal

Figure 2. Doughnut graph showing that 25% of Portuguese business schools offer sustainability-related postgraduate courses (N=8 (6, 2)).



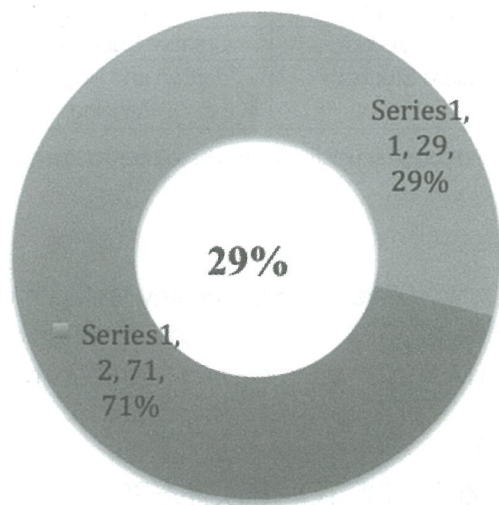
In Portugal, a very similar pattern applies (Figure 2), whereby two out of eight business schools in the country offered courses relating to sustainability. That being the Instituto Superior de Ges-

tão, which offered a MSc in Energy Management, and the ISCTE (University of Lisbon), which offered a MSc in Environment and Sustainability.

3.2. NUMBER OF TOP BUSINESS SCHOOLS WITH SUSTAINABILITY RESEARCH CENTRES

With regards to research centres in the top 89 business schools, slightly more (26) have research centres than those who offer postgraduate courses (21) (as seen in Figure 3). Only one of the eight Portuguese business schools had a research centre, that being Instituto Superior de Gestão, the home of CIGEST (Centro de Investigação em Gestão). One of the research areas within CIGEST is Environment and Sustainability, which addresses ecological economics, the green economy and advanced training and development programmes of awareness and education (CIGEST, 2012).

Figure 3. Doughnut graph showing that 29% of business schools around the world offer sustainability-related research centres (N=89 (26, 63)).



3.3.

WHERE ARE GREEN MBAS TAUGHT?

After analysing the list of the top 100 MBAs, it was discovered that only 15 were specifically designed to incorporate sustainability at the core of the programme. These courses are taught in the USA, the UK, and Canada. They introduced the history of sustainability, evolving debates, and thinking that relates to sustainability in business, the wider local, national and global economy, and how sustainability impacts on communities. These MBAs teach widely accepted principles of sustainability and present opportunities for business development and sustainable growth (Exeter University, 2012).

Table 2. Green MBAs across the globe

University	Course Title
Anaheim University	Green MBA
Antioch University	Sustainability MBA
Bainbridge University	Sustainable MBA
Clark University	Sustainability MBA
Dominican University of California	Green MBA
Duquesne University	Sustainable MBA
Green Mountain College	Green MBA
Marlboro College	MBA Managing for Sustainability
Marylhurst University	MBA Sustainable Business
Presidio Graduate School	MBA Sustainable Management
Schulich School of Business, Canada	MBA Management for Sustainable Business
University of East Anglia, UK	MBA Carbon Management
University of Exeter, UK	One Planet MBA
University of Nottingham, UK	MBA Corporate Social Responsibility
University of Michigan Ross	Global MBA

(Top MBA, 2012)

Interestingly, from this selected list, 11 of the MBAs are in the United States, three are taught in the UK, and one is taught in Canada.

However, a large number of business schools around the world are committed to incorporating social and environmental stewardship in some form into their curriculum. The Aspen Institute's Beyond Grey Pinstripes research rank MBA programmes based on a range of academic factors, such as 'business impact' and 'faculty research', but also commitment to ESD. They note 'there

has been a significant increase in submitted faculty research published on renewable energy, climate change and carbon markets [in 2011] (The Aspen Institute, 2013).

3.4. ANALYSIS OF HIGHER EDUCATION NETWORKS

There are a variety of higher education networks around the world with academic excellence, concentrating on research and excellent teaching (Russell Group, 2012). In addition, a few networks across the globe are implemented solely to promote postgraduate education for sustainable development.

ProSPER

'Promotion of Sustainability in Postgraduate Education and Research' [ProSPER.net] is a network of several leading higher education institutions in Asia and the Pacific, who are committed to working together to integrate sustainability into postgraduate courses and curricula, through partnership with the United Nations University (UNU, 2011a). The network is made up of 28 higher education institutions teaching postgraduate business courses who undertake the following activities:

- Annual colloquia to discuss research on sustainable development
- A summer school on sustainable development
- Faculty exchange schemes for knowledge sharing

- Development of sustainable development courses
- Collaboration in developing courses at individual member institutions
- Joint research activities
- Building alliances with business and industry (UNU, 2011b, 2011c)

COPERNICUS Alliance

The COPERNICUS Alliance is the European Network on Higher Education for Sustainable Development. The vision is to promote the role of sustainable development in European higher education and improve education and research for sustainability in partnership with society. There are 21 member institutions who share five common goals:

- Networking: exchanging and enhancing knowledge on ESD between European institutions
- Policy: promoting European policy making
- Service: disseminating tools for sustainability integration
- Outreach: promoting the subject in higher education
- Representation: of sustainability at international committees on education (Copernicus, 2011)

The International Association of Universities [IAU]

The IAU is a worldwide higher education community, founded in 1950, and a UNESCO-based association. It brings together institutions and organisations from 120 countries for reflection and action on common concerns, and collaborates

with various international and national bodies on higher education [IAU, 2012a). In October 2012, there were 601 member institutions, 40% of which are in Europe (including those in Portugal), and 24% in Asia and Pacific [IAU, 2012b). Sustainable development has been the latest action area for the IAU, with the first activity being the promotion of sustainable development by Sub-Saharan African higher education institutions (IAU, 2012c).

4. **REVIEW OF RESEARCH RESULTS**

4.1. **WHAT IS BEING TAUGHT, AND WHERE?**

Surprisingly, the results have shown sustainability is not widely incorporated into postgraduate education curricula. Only 23% of top business schools around the world offer sustainability related masters degrees, and following the same pattern, only 25% of Portuguese business schools offer sustainability postgraduate degrees (two out of eight universities). It is both interesting and unfortunate to think that these institutions are producing leaders of the future who do not necessarily have a sustainable business mindset. Research centres also are not widespread in higher education institutions, with just 29% of business schools around the world acting as host to these, and only one of eight in Portugal. This

shows that business schools have not yet taken advantage of the variety of opportunities available to them to be at the forefront of sustainability through research centre operations. The provision of research centres and masters degrees in this area will continue to retain the high credentials of these institutions, whilst also helping to achieve the goals of UNESCO.

Green MBAs are all taught in the western world, specifically North America and the UK. The management of environmental and social sustainability is a key subject that needs to be incorporated into today's business practice. Whilst the small number of courses on offer pride themselves on having a range of diverse students, Green MBAs should be taken into consideration in rapidly developing states such as Brazil, Russia, India, and China.

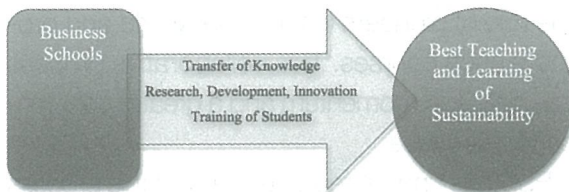
The commitment to ESD around the world also varies depending upon national policy. Only the UK has a government policy and strategic statements on how to implement ESD in higher education through HEFCE. Other nations recognise the importance of the subject, however their focus does not set out specific targets for higher education. Instead, they promote the subject and recognise the need to teach it. However, research networks appear to be emerging in the higher education sector that now undertake a wide variety of activities to integrate the subject in curricula and continue research and development in the area. Thus all institutions should become involved in local, national and international networks.

4.2.

WHAT IS REQUIRED FOR BEST TEACHING AND LEARNING OF SUSTAINABILITY?

As can be seen in Figure 4 (below), in order to successfully teach and practice sustainable development, business schools in this field need to focus on knowledge transfer, research development, innovation, and student training. Outlined below are a variety of ESD methods, which should be considered at higher education institutions.

Figure 4. Knowledge Transfer



- MSc in Sustainable Development
- Green MBA courses
- Sustainable development summer schools and conferences
- Higher education research networks
- Sustainable development modules
- Networking with businesses and higher education institutions
- Strategic statements and policy at higher education institutions
- Centres for sustainable futures (as seen at Plymouth University).

4.3.

WHAT CAN BE CONSIDERED THE BARRIERS TO ESD?

Implementing education for sustainable development in higher education business schools comes with its challenges. Firstly, transformative learning means looking at sustainability issues from a range of angles; disciplinary, cultural, time and spatial perspectives, and having to deal with attitudes and values from these varying perspectives has been shown to present important challenges. It has been argued that it is hard to find a subject matter that is more multi-disciplinary than sustainable development, and it is quite clear that traditional structuring of knowledge and research are long-term tenets of its teaching, which constitute a major challenge for business schools when implementing ESD. It has also been suggested that a separate course ought to be provided so as to give a basic understanding of the challenges associated with sustainable development; thereby delivering tools and conceptual models for dealing with dynamic and complex systems (Holmberg, 2006).

Research by Dawe et al (2005) suggests that a number of barriers to implementing ESD exist, which include an overly crowded curriculum, the lack of time to update courses, its perceived irrelevance by staff, a dearth of staff expertise, a need to acquire new knowledge, and a lack of institutional drive and commitment.

Furthermore, since ESD is about continuous learning, it is also essential to integrate the latest

innovations and developments in the sustainability sector into business courses. Institutions therefore need to provide curriculum and pedagogic support and coordinate cross-institutional research related to ESD, through resources, training, events and advice, with the aim of incorporating ESD into all aspects of the business course. An example of this is the Centre for Sustainable Futures within Plymouth University works to incorporate sustainability into their courses within Plymouth Business School's MBA programme (Plymouth University, 2013).

5. CONCLUSION

In conclusion, it is apparent that there are many paths through which sustainable development can be brought to the front of postgraduate education. ESD is a matter that at least outwardly is valued by the international community through such organizations as the United Nations, however it suffers worryingly from distinctly low representation, whether it be in business school courses (23%), green MBAs (15 worldwide) or postgraduate research centres (29%). This is borne out by the research above.

It appears that were the dedication to ESD as whole-hearted as claimed at various international summits, ESD would be in a far healthier position. Whilst the process of providing a sustainable education for the leaders of tomorrow is a global

cyclical movement this is still in its nascent stages, which in the coming years should bear fruit and lead to subsequent generations of like-minded thinkers willing to lend their weight to a cause of such great significance, which as a consequence shall lead to more focus being placed on ESD. It is through this education that the world leaders will seek to convert mere words into concrete actions and convert unsustainable policies into sustainable policies: it is for this reason that ESD is of paramount importance. Indeed, just as research centres have started forming research networks, like ProSPER, so too the postgraduate educational institutions providing Green MBAs in the USA, the UK and Canada should take on the role of pioneers in the wider world and promote such courses. This collaborative process can only add momentum and a greater coherence to this cause.

ESD has undoubted potential, but this process will be long and not without its obstacles; with greater education and understanding, greater resources are more likely to become available to integrate ESD into traditional courses, to provide more gifted and committed teachers, to differentiate between the various perspectives from which sustainable development can be viewed, and to generally sustain a continuously progressing Education for Sustainable Development. Just as ESD requires continuous learning, so too must the process of putting ESD at the forefront of education be one without end.

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