

Selective annotated bibliography

HEDBIB

International Bibliographic Database on Higher Education

Higher Education and Sustainable Development

2010 - 2016

| SELECTED THEMES | |
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| Access | 1221 |
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| Doctoral Degrees | 438 |
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| Africa | 2264 |
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HEDBIB

International Bibliographic Database on Higher Education

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| COLLECTIONS | |
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| Monographs | 14479 |
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| Periodical Articles | 18982 |
| TOTAL | 35440 |

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September 2016

| SELECTED THEMES | |
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| Access | 1276 |
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Presentation

This Bibliography provides references of monographs, documents, reports and periodical articles on Higher Education and Sustainable Development. The first section of the Bibliography details Declarations on Sustainable Development by higher education networks and institutions, both internationally and regionally.

The second section of the Bibliography details a selection of publications (books, reports, periodical articles) from the last five years. It begins with “Global initiatives and global actions” which provides a thematic overview of higher education and sustainable development as well as specific university strategies for sustainable development from universities around the world. This is followed by publications which analyse specific sub-themes: Campus greening; Curriculum and Education for Sustainable Development (ESD), Research; Student engagement; Sustainability evaluation and reporting; and Teacher education.

The Bibliography is compiled from *HEDBIB*, the International Bibliographic Database on Higher Education (<http://hedbib.iau-aiu.net>). HEDBIB is managed by the International Association of Universities (IAU), with contributions from UNESCO Headquarters; UNESCO International Institute for Educational Planning (IIEP); UNESCO International Institute for Higher Education in Latin America (IESALC). In 2012, the following IAU Member organisations became contributing partners to HEDBIB : Agence universitaire de la Francophonie (AUF), Associació Catalana d'Universitats Públiques (ACUP), Higher Education South Africa (HESA), Southern African Regional Universities Association (SARUA), Union de Universidades de América Latina (UDUAL).

Hard copies of documents which have a classmark number are available within the IAU-UNESCO Information Centre on Higher Education. The majority of the periodical articles are from periodicals which are also available at the IAU. Where available, a link to the full text electronic document is included.

Please note that the IAU holds all back copies of the periodical *International Journal of Sustainability in Higher Education*. For a complete list of all articles in this publication please consult the HEDBIB database (<http://hedbib.iau-aiu.net>).

Please also note that all IAU Member institutions and organisations have access to Member Services in the HEDBIB database, including access to abstracts and to all full text articles from the IAU quarterly periodical *Higher Education Policy*.

For more information about HEDBIB, to receive your Member login details, to provide your feedback, or for specific information services, please contact Amanda Sudic, IAU Librarian / Documentalist (a.sudic@iau-aiu.net).

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Declarations

A selection of texts from the IAU Higher Development for Sustainable Development Portal

<http://www.iau-hesd.net/en/ressources.html>

Aichi-Nagoya Declaration on Education for Sustainable Development / UNESCO. - World Conference on Education for Sustainable Development, Aichi-Nagoya, Japan, 10-12 November 2014. – Paris: UNESCO, 2014. – 2 p.

Abstract: This Declaration adopted by the participants of the UNESCO World Conference on Education for Sustainable Development calls for urgent action to further strengthen and scale up Education for Sustainable Development (ESD).

URL : http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ERI/pdf/Aichi-Nagoya_Declaration_EN.pdf

IAU Iquitos Statement on Higher Education for Sustainable Development / International Association of Universities. -Blending Higher Education and Traditional Knowledge for Sustainable Development, Iquitos, Peru, 19-21 March 2014. - Paris: IAU, 2014.

Abstract : The Iquitos Statement was produced following the conclusions of the IAU 2014 International Conference and the input of the wider higher education community. It advocates for the recognition of the important role higher education can play in the post-2015 Agenda.

URL : http://www.iau-hesd.net/sites/default/files/documents/iau_iquitos_statement_on_hesd_2014.pdf

Charte biodiversite des établissements d'enseignement supérieur / Conférence des Grandes Ecoles [France]; Conférence des Présidents d'Université [CPU][France] . – Paris : CGE, CPU, 2013. - 2 p.

Abstract : This Charter on Biodiversity in higher education institutions has been produced in view of the creation of a French National Agency on Biodiversity in 2014.

URL : <http://www.cpu.fr/wp-content/uploads/2013/09/130925-Charte-Biodiversite.pdf>

Bonn recommendations on Education for Sustainable Development beyond 2014 / German Commission for UNESCO . - International Education for Sustainable Development Workshop, Bonn, 27–28 February 2012 . - Bonn, Germany : German Commission for UNESCO, 2012 . - 4 p.

Abstract : The Bonn Recommendations on ESD beyond 2014 was developed during the Horizon 2015 Workshop organized by the German Commission for UNESCO. They offer 17 recommendations to continue the Education for Sustainable Development (ESD) efforts after the end of the UN DESD in 2014.

URL : http://www.unesco.or.kr/upload/data_center/2012_Bonn_Recommendations_eng.pdf

Commitment to sustainable practices of higher education institutions on the occasion of the United Nations Conference on Sustainable Development : Rio + 20 Declaration / Higher Education Sustainability Initiative . - HESI, 2012 . - 1 p.

Abstract : On the occasion of the UN Conference on Sustainable Development in 2012, the leaders of the international academic community were called upon to commit to the development of sustainable practices for Higher Education Institutions by signing this declaration.

URL : <http://rio20.euomed-management.com>

People's sustainability treaty on higher education / European Network on Higher Education for Sustainable Development [Copernicus Alliance] . - Copernicus Alliance, 2012. - 15 p.

Abstract : This Treaty, developed in 2012, emerged out of a need to rethink higher education and its role in a transition towards a more sustainable society. It provides an action plan which demonstrates the collective visions of representatives from twenty five higher education agencies, organisations, associations and student groups rooted in different parts of the world. The cross-cultural dialogue and development process underpinning this document has served to build collaborative links and ownership. It has paved the way for a new consolidated platform for cooperation beyond the Rio+20 event.

URL :

<http://insight.glos.ac.uk/sustainability/Education/Documents/People%27s%20Sustainability%20Treaty%20on%20Higher%20Education%20-%20Final.pdf>

Declaración de las universidades del Perú por la educación para el desarrollo sostenible = Declaration of the Peruvian Universities on Education for Sustainable Development / Asamblea Nacional de Rectores [Peru] . - Lima : Asamblea Nacional de Rectores, 2012 . - 2 p.

Abstract : The rectors of the Peruvian universities, assembled in Lima on 16 March 2012, signed a Declaration on Education for Sustainable Development in which they agreed to make sure that each University had its Education Plan for Sustainable Development and would promote activities in this field. They also agreed to create networks in this domain.

URL : <http://www.iau-hesd.net/sites/default/files/documents/compromisodelasuniversidades.pdf>

Declaración de las Américas “Por la sustentabilidad de y desde la universidad” / Inter-American Organization for Higher Education [OUI-IOHE] . – Loja, Ecuador : OUI-IOHE, 2011. - 6 p.

Abstract: This Declaration for Sustainability to and from the university is addressed to the Inter American university community.

URL : <http://iau-hesd.net/sites/default/files/documents/declaracion.pdf>

Unica Green Academic Footprint Pledge / UNICA, Jorulf Brøvig Silde, Maryam Faghihimani. –In: Unica Green Academic Footprint, pp. 6-8 . - UNICA, 2010.

Abstract: This Pledge was adopted by UNICA, a network of 46 universities from 35 capital cities of Europe, at the UNICA Rectors' Seminar in Tallinn 2010.

URL: http://iau-hesd.net/sites/default/files/documents/parallel_meetings_green_academic_footprint_workshop_pre-ga_tallin_from_policy_to_strategy.pdf

Universities for sustainable development : Declaration by the German Rectors' Conference and the German Commission for UNESCO on Higher Education for Sustainable Development / Hochschulrektorenkonferenz, German Commission for UNESCO . – Bonn : Hochschulrektorenkonferenz, German Commission for UNESCO, 2010 . – 8 p.

Abstract: This Declaration was adopted by the 7th General Meeting of the German Rectors' Conference on 24 November 2009 and by the Executive Committee of the German Commission for UNESCO on 22 January 2010.

URL: http://www.iau-hesd.net/sites/default/files/documents/universities_for_sustainable_development_german_natcom_unesco.pdf

Publications

■ Global initiatives and global actions

International

Global Education Monitoring Report 2016 : Education for people and planet : creating sustainable futures for all / UNESCO . - Paris : UNESCO Publishing, 2016 . - 535 p.

Abstract : The GEM Report provides an evidence-based examination of the complex relationship between education and the 2030 Agenda for Sustainable Development, and particularly Sustainable Development Goal (SDG) 4. This report shows that education will not deliver its full potential unless participation rates increase dramatically and sustainable development guides education system reform. It also warns of the destructive impact that climate change, conflict, unsustainable consumption and the increasing gap between rich and poor have on education.

URL : <http://unesdoc.unesco.org/images/0024/002457/245752e.pdf>

Responsible living : concepts, education and future perspectives / Robert J. Didham, Declan Doyle, Jørgen Klein, Victoria W. Thoresen . - Heidelberg, New York, Dordrecht, London : Springer International Publishing, 2015 . - 283 p. ISBN 978-3-319-15305-6

Abstract : Focusing on the challenges of the transition to responsible, sustainable lifestyles, this book examines developments over the last decade, and specifically in the context of global development agendas: Education for Sustainable Development (ESD); Education for All (EFA) and the forthcoming Sustainable Development Goals (SDGs). Contributors focus on the creation and implementation of relevant teaching methods and materials and examples of ESD projects with teacher education in Southern Africa and Southern Asia; the development of responsible interdisciplinary 'Living Curricula'; policies on education for sustainable consumption and lifestyles; and global processes for education on sustainable development. The book also looks at the roles that central actors such as PERL (The Partnership for Education and Research about Responsible Living) play in this process.

Classmark : INT-71 THO

Progress and potential : higher education playing its part in the Sustainable Development Goals / Association of Commonwealth Universities [ACU] . - London : ACU, 2015 . - 8 p.

Abstract : This report is published in the framework of ACU's campaign *The world beyond 2015, is higher education ready?*

URL : <https://beyond2015.acu.ac.uk/about/final-reports>

Rethinking education : towards a global common good? = Repenser l'Éducation : Vers un bien commun mondial ? = Replantear la educación: ¿Hacia un bien común mundial? / UNESCO . - Paris : UNESCO Publishing, 2015 . - 84 p.

ISBN 978-92-3-100088-1

Abstract : This book is intended as a call for dialogue. It is inspired by a humanistic vision of education and development, based on respect for life and human dignity, equal rights, social justice, cultural diversity, international solidarity and shared responsibility for a sustainable future. It proposes that we consider education and knowledge as global common goods, in order to reconcile the purpose and organisation of education as a collective societal endeavour in a complex world.

URL : <http://unesdoc.unesco.org/images/0023/002325/232555e.pdf> (English)

<http://unesdoc.unesco.org/images/0023/002326/232696f.pdf> (French)

<http://unesdoc.unesco.org/images/0023/002326/232697s.pdf> (Spanish)

<http://unesdoc.unesco.org/images/0023/002325/232555r.pdf> (Russian)

<http://unesdoc.unesco.org/images/0023/002325/232555c.pdf> (Chinese)

<http://www.unescocat.org/fitxer/3683/Repensar> (Catalan)

Sustainable development in action : Special report on voluntary multi-stakeholder partnerships and commitments for sustainable development / United Nations. Department of Economic and Social Affairs . - New York : United Nations, 2015 . - 28 p.

Abstract : This report reviews progress and knowledge sharing of a number of action networks and multi-stakeholder partnerships and voluntary commitments to sustainable development, including the higher education sustainability initiative.

URL : <https://sustainabledevelopment.un.org/content/documents/1855SD%20in%20Action%20Report%202015.pdf>

World Education Forum 2015: Final report / UNESCO . - World Education Forum, Incheon, Korea, 19-22 May 2015 . - Paris : UNESCO, 74 p. . - 74 p.

Abstract : This report is based on the proceedings of the World Education Forum held at Incheon, Republic of Korea, in May 2015. It reframes the global education agenda within the Sustainable Development Goals (SDGs) for 2030. This new agenda is outlined in the Incheon Declaration 'Education 2030: Towards inclusive and equitable quality education and lifelong learning for all' which was adopted at the conference and which is included in the appendix.

Classmark : INT 711.2 UNE

URL : <http://unesdoc.unesco.org/images/0024/002437/243724e.pdf>

Shaping the Future We Want: UN Decade of Education for Sustainable Development (2005-2014) : final report / UNESCO . - Paris: UNESCO, 2014. - 201 p.

ISBN 978-92-3-100053-9

Abstract : This report focuses on the outcomes of 10 years of work around the world to advance education as a critical tool for moving societies towards sustainability. It also provides insights on the impact of the call for a UN Decade of Education for Sustainable Development (DESD) on all levels and areas of education, including higher education. Detailing activities in different regions and countries, the report notes that there has been considerable progress in higher education for sustainable development during the DESD.

URL : http://www.iau-hesd.net/sites/default/files/documents/shaping_the_future_we_want.pdf

UNESCO Roadmap for implementing the Global Action Programme on Education for Sustainable Development / Paris : UNESCO Publishing, OECD Publishing, 2014 . - 38 p.

The Global Action Programme on Education for Sustainable Development was endorsed by the UNESCO General Conference in 2013. It comes at a time when the international community is charged with proposing a new set of sustainable development goals that are action-oriented, global in nature and universally applicable. As a follow-up to the UN Decade of Education for Sustainable Development, the Global Action Programme is also designed as a concrete, tangible contribution to the post-2015 development and education agendas. The Roadmap explains the Programme's goal, objectives and priority action areas in order to enable strategic focus and stakeholder commitment, together with implementation and monitoring strategies

URL: <http://unesdoc.unesco.org/images/0023/002305/230514e.pdf>

Towards the sustainable university : progress and prospects / Stephen Stirling, Larch Maxey, Heather Luna, Eds . - Abingdon, New York : Routledge, 2013 ; 323 p. (Routledge Studies in Sustainable Development)

ISBN 978-0-415-62774-0

Abstract : This book springs from the recognition that the world that today's graduates are entering is already – and will increasingly – very different from that inherited by previous generations. Whilst there is a growing response in higher education to the sustainability agenda, particularly in campus management and revision of selected courses and curricula, the contributors argue that an integrative whole institutional response is called for, which embraces all areas including governance and leadership, learning and teaching, campus operations, research, community wellbeing, student experience and organisation learning and change. Written by leading exponents of sustainability and sustainability education, this book brings together examples, insight, reflection and strategies from the contributing universities, drawing on a wealth of experience to provide reflective critical analysis of barriers, achievements, strategies and potential. While it is based on UK experience, it will be relevant to universities in other countries that are seeking to respond to the rising agenda of sustainability since many of the issues are common across higher education systems.

World social science report : changing global environments = Rapport mondial sur les sciences sociales : changements environnementaux globaux; Informe mundial sobre ciencias sociales : cambios ambientales globales /

International Social Science Council [ISSC]; UNESCO . - Paris : UNESCO Publishing, OECD Publishing, 2013 . - 609 p. ISBN 978-92-3-104254-6 (UNESCO); 978-92-64-203340-2 (OECD) . - Online ISBN 978-92-3-104254-6 (UNESCO); 978-92-64-20341-9 (OECD)

Abstract : Produced by the International Social Science Council (ISSC) and UNESCO, and jointly published by the OECD, the 2013 edition of the World Social Science Report focuses on the transformative role of the social sciences in confronting climate and broader processes of environmental change, and in addressing priority problems from energy and water, biodiversity and land use, to urbanisation, migration and education. The report includes 100 articles written by 150 authors from 41 countries all over the world. Authors represent some 24 disciplines, mainly in the social sciences. The contributions highlight the central importance of social science knowledge for environmental change research, as a means of understanding changing environments in terms of social processes and as framework for finding concrete solutions towards sustainability.

Classmark : INT-141 UNE

URL : <http://unesdoc.unesco.org/images/0022/002233/223388e.pdf> (English summary);

<http://unesdoc.unesco.org/images/0022/002233/223388f.pdf> (French summary);

<http://unesdoc.unesco.org/images/0022/002233/223388s.pdf> (Spanish summary)

Higher Education in the World 4: Higher education's commitment to sustainability : from understanding to action / Global University Network for Innovation [GUNI] . - Basingstoke : Palgrave Macmillan, 2012 . - 341 p. (GUNI Series on the Social Commitment of Universities)

Bibl. - ISBN 978-0-230-53555-8

Abstract : This book explores higher education's commitment to sustainability. It includes papers by 86 authors from 36 countries. The first part of the book presents the context of the role higher education can play in sustainability and provides an overview of the movements and milestones to date. The second part of the book, 'Regional perspectives: what has been achieved at this stage' illustrates how Africa, the Arab States, Asia and the Pacific, Europe, Latin America and the Caribbean, and the USA and Canada have introduced sustainability in higher education and explores issues of leadership, management research, curriculum, networks and community engagement. These regional reports are complimented with national analyses and case studies of good practices within and between institutions. Part III identifies the barriers that prevent HEIs from finding responses to challenges posed by sustainability. It presents the findings from a GUNI research study and proposes solutions to overcoming these barriers. In the fourth section of the book 'Visions for transformation' the authors propose innovative ideas and sustainability paradigms.

Classmark : INT-71 GUNI

Shaping the education of tomorrow : 2012 full length report on the UN Decade of Education for Sustainable Development / Arjen E. J. Wals / UNESCO . - Paris : UNESCO, 2012 . - 102 p.

Incl. bibl.

Abstract : This report represents the second review of the UN Decade of Education for Sustainable Development and is conducted in the context of its Global Monitoring and Evaluation Framework (GMEF). The report shows that many governments, NGOs, UN agencies and indeed, companies are increasingly emphasising the importance of learning and capacity-building as they search for solutions to sustainability challenges including climate change, disaster risk management, biodiversity loss and sustainable production and consumption. At the level of higher education, this review shows that colleges and universities around the world are beginning to make more systemic changes towards sustainability amidst educational reforms towards efficiency, accountability, privatisation, management and control that often hamper their possibilities to do so. Alternative benchmarking and ranking systems now being established for universities include indicators of a university's contributions to sustainability.

URL : <http://unesdoc.unesco.org/images/0021/002164/216472e.pdf>

In Focus: The contribution of higher education to sustainable development = Dossier thématique : la contribution de l'enseignement supérieur au développement durable / International Association of Universities [IAU] . - In: IAU Horizons / AIU Horizons, v. 18, no. 2, pp. 14-38, June 2012

ISSN 2076-2194 . - Online ISSN 2076-2208

Abstract : Recently the attention has shifted from sustainable development to ESD (Education for sustainable development) as universities see the criticality of embedding sustainability into its core business - education. This issue of IAU Horizons includes 26 articles presenting a rich set of briefs, explaining the diversity of actions undertaken around the world in the fields of policy advocacy, leadership and management, education and curriculum reform, research,

outreach, campus greening, student initiatives and assessment tools. It also includes a paper on the People's Sustainability Treaty on Higher Education.

URL : [http://www.iau-](http://www.iau-aiu.net/sites/all/files/IAU%20Horizons%20Vol%20%2018%20N%20%20EN%20%28Internet%29.pdf)

[aiu.net/sites/all/files/IAU%20Horizons%20Vol%20%2018%20N%20%20EN%20%28Internet%29.pdf](http://www.iau-aiu.net/sites/all/files/IAU%20Horizons%20Vol%20%2018%20N%20%20EN%20%28Internet%29.pdf) (English);

http://www.iau-aiu.net/sites/all/files/AIU_Horizons_Vol18n2_FR_Web.pdf (French)

The midway point of the UN Decade of Education for Sustainable Development : Where do we stand? [special issue] / De Hann, I Bormann, A Leicht, Eds. / UNESCO Institute for Lifelong Learning . - In: International Review of Education, v. 56, no. 2-3, pp. 199-372, 2010

ISSN 0020-8566 . - Online ISSN 1573-0638

Abstract : This collection of papers on education and sustainable development covers all areas of education and education levels including higher, adult or vocational education — and in formal, non-formal or informal learning settings. Contents include: current research and practice in ESD; education for sustainable development and retention: unravelling a research agenda; synergies and potential conflicts; economic dimensions of sustainable development, the fight against poverty and educational responses; implementing the UN Decade of Education for Sustainable Development: achievements, open questions and strategies for the way forward; ESD and lifelong learning; mainstreaming environment and sustainability; an ESD initiative in the Arab world; the development of ESD-related competencies in institutional frameworks; UNEP's work to implement good practice at a regional level: contribution to UNDES.

About the role of universities and their contribution to sustainable development / Walter Leal Filho / International Association of Universities [IAU] . - In: Higher Education Policy, v. 24, no. 4, pp. 427-438, December 2011

ISSN 0952-8733 . - Online ISSN 1740-3863

Abstract : The debate on sustainable development is not new and the search for new approaches, methods and means to further the case of sustainability in a higher education context is needed today more than ever. This paper reviews the status of sustainable development at universities and presents issues which need to be considered in ensuring sustainable development is integrated in higher education institutions in a systematic way.

■ Sustainability in action: university strategies

International

Climate change action for sustainable development / Higher Education Sustainability Initiative . – New York : United Nations. Division for Sustainable Development, 2015 . - 42 p.

Abstract : This paper was presented on the occasion of the “From Rio to Paris: Higher Education for Climate Change Action” event, held on 14 October 2015 at UNESCO headquarters. Meant as a contribution to the 21st Session of the Conference of the Parties to the UNFCCC (COP21), to be held in Paris, France, in December 2015, it puts forward 47 submissions presenting concrete examples of initiatives taken by institutions against climate change in terms of teaching, research, outreach, or greening their campuses. Also featured is an open letter urging Ministers and Governments to acknowledge and strengthen the research and education role that universities and colleges play in addressing climate change.

URL : <https://sustainabledevelopment.un.org/content/documents/2121HESI%20-%20Climate%20Change%20Action%20for%20SD%20final.pdf>

Integrative approaches to sustainable development at university level : making the links / Walter Leal Filho, Luciana Brandli, Olga Kuznetsova, Arminda Maria Finisterra do Paço, Eds. . - Springer, 2015 . - XII, 731 p. ISBN 978-3-319-38507-5 . - Online ISBN 978-3-319-10690-8

Abstract : This book highlights not only the challenges of integrating sustainable development into higher education, but also the many creative and innovative entry points that students, researchers and university staff find to collaboratively address it. Built largely on descriptions and analyses of practical experiences from Europe, North America, Brazil, South Africa and Australia, it showcases a variety of techniques and environments that encourage learning, as well as how these relate to the backgrounds, needs and capacities of different stakeholders. The book is divided into two parts, one of which looks at the different ways integration can be approached. The second part focuses on convergent approaches

with a wide range of good practice examples of curricula, organizational changes and training and green campus initiatives.

Participatory processes in sustainable universities : what to assess? / Antje Disterheft, Ulisses M Azeiteiro, Walter Leal Filho, Sandra Caeiro . - In: International Journal of Sustainability in Higher Education, v. 16, no. 5, pp. 748-771, 2015
ISSN 1467-6370

Abstract : This qualitative study of participants from 17 countries is part of an ongoing research project that aims to investigate participatory processes in university sustainable development initiatives. Interviews and focus groups were conducted with persons engaged in sustainability implementation in higher education institutions including lecturers, coordinators and students. The findings suggest that participatory processes can be better assessed from a social learning and organisational learning perspective, emphasising non-linear criteria for the quality of the process in terms of depth and meaningfulness as well as criteria for the quality of the outcome in terms of knowledge generation and innovation. The findings underline the high impact of institutional governance if a culture of participation towards sustainability is to be pursued.

Sustentabilidad y universidad : etos, ritos y posibles rutas = Sustainability and the university : challenges, rites and possible routes / Edgar J. González Gaudiano, Pablo Á. Meira-Carrea, Cynthia N. Martínez-Fernández / Asociación Nacional de Universidades e Instituciones de Educación Superior [ANUIES] . - In: Revista de la Educación Superior, v. XLIV (3), no. 175, julio-septiembre 2015
ISSN 0185-2760

Abstract : This article reports the challenges facing the integration of sustainability in universities in Latin America, Spain and Portugal. The authors discuss regional sustainability, societal and political challenges, and global market pressures. The focus is placed on higher education institutions' declarations and plans on sustainability, which the authors found tend to remain at a purely formal level. The authors apply the glass ceiling metaphor – adopted from gender studies - to represent the barrier towards substantive and structural changes. They emphasise that universities do not seem to be able to address many challenges, in particular in the integration of sustainability into institutional structure, operations and substantive functions.

El artículo reporta las dificultades que enfrenta el proceso de inserción de la sustentabilidad en las universidades iberoamericanas. Se recupera la discusión conceptual sobre la sustentabilidad en la región, así como los desafíos derivados de las demandas de la sociedad, del Estado y las presiones del mercado global. El punto focal está puesto en la manera en que suelen ejecutarse los pronunciamientos de las instituciones de educación superior (IES). Las principales dificultades están caracterizadas por un conjunto de declaraciones y de planes que quedan en un plano meramente formal. Asimismo, aplicamos la metáfora del "techo de cristal" -adoptada en los estudios de género- para representar la barrera que impide hacer cambios sustantivos y estructurales.

URL : http://publicaciones.anui.es.mx/pdfs/revista/Revista175_S3A3ES.pdf (Spanish)

The path to fossil fuel divestment for universities : climate responsible investment / Cutler J. Cleveland, Richard Reibstein . - Boston : Boston University, 2015 . - 60 p.

Abstract : This paper presents the case for divestment by universities from fossil fuels. The authors argue that in addition to the ethical imperative of sustainability, universities holding assets in fossil fuel companies, and in companies that are fossil fuel-intensive, poses significant risks.

URL : http://energyincontext.com/wp-content/uploads/2015/02/University-Divestment-Fossil-Fuels-Cleveland_Reibstein_02_13_15.pdf

Intergenerational learning and transformative leadership for sustainable leadership / Peter Blaze Corcoran, Brandon P. Hollingshead, Eds. . - Wageningen : Wageningen Academic Publisher, 2014 . - 431 p.
ISBN 978-90-8686-252-8 . - Online ISBN 978-90-8686-802-5

Abstract : This book explores the challenges of future learning models beyond the UN Decade for Sustainable Development. Specifically focusing on intergenerational learning and leadership, authors from 26 countries in six continents describe ESD initiatives in often under-represented regions of the world. Part one outlines key principles and the conceptual foundation of education for sustainable development, intergenerational learning, and leadership. Part two,

Perspectives, includes contributions from applied research and policy analysis. Examples include a research programme on intergenerational learning in Aboriginal Australia; implementation of university policy to promote sustainability in a Malaysian university; and developing a teacher education curriculum at a South African university to include local ecological knowledge. Part three features the work of several university centres in environmental education and sustainable development in contrasting parts of the world: China, Pacific Island countries, United States, Malaysia, Kenya and Japan. Intergenerational learning activities of several regional and international networks and partnerships for education and sustainability are detailed in further chapters. These include the Earth Charter Movement; UNEP's Global University Partnership; and UNESCO networks in Asia-Pacific.

Classmark : INT-73 COR

Green guide for universities / International Alliance of Research Universities [IARU]; Sustainia . - Zurich, Copenhagen : IARU, Sustainia, 2014 . - 143 p.

Online ISBN 978-87-93038-21-9

Abstract : Jointly developed by the ten IARU universities and the international think-tank Sustainia, this report presents key issues, recommendations and lessons learned when addressing campus sustainability, with a particular focus on environmental aspects. The guide includes 23 cases that have made a difference at the IARU universities.

URL : http://www.iaruni.org/images/stories/Sustainability/IARU_Green_Guide_for_Universities_2014.pdf

Regenerative sustainable development of universities and cities : the Role of Living Laboratories / Ariane König, Ed. . - Cheltenham, Northampton, Mass : Edward Elgar, 2014 . - xxii, 321 p.

ISBN 978-1-78100-363-3

Abstract : This book brings together diverse examples of how universities from around the world are establishing "living laboratories" for sustainable development. Living laboratories, it is argued, have the potential to integrate research, curricula, pedagogical method and community engagement. Part one of the book presents seven case studies of universities developing the campus as a site of knowledge production and sustainability initiatives across disciplinary boundaries. The role of these initiatives in institutional culture change as a starting point for mainstreaming sustainable goals and strategy within the university are detailed. Part two of the book presents case studies in which universities are engaging in joint knowledge production, research and sustainable transformation beyond the campus, in the community, within the city or region. The case studies are from mainly urban universities in Canada, Japan, Sweden, Australia, Hong Kong, Luxembourg, United States, Denmark and Croatia.

Classmark : INT-73 KON

A comparative study of education for sustainable development in one British university and one Chinese university . - In: International Journal of Sustainability in Higher Education, v. 15, no. 1, pp. 48-62, 2014

ISSN 1467-6370

Abstract : This paper compares two different approaches to how education for sustainable development (ESD) initiatives are delivered in a University in the UK and in a university in China. Semi-structured interviews were conducted among samples of staff and students in both universities. In the British university, many students were engaged through linking extra-curriculum activities back to the curriculum and opportunities for students to take part in campus operations were offered. Second, a project-oriented approach was employed to enhance interdisciplinary cooperation. The main learning points found in the Chinese university are: pedagogic changes are required to realize a transformative education and additions of more active learning into the curriculum are needed. Third, policy support is necessary to promote the ESD agenda but significant changes will happen only when the top-down approach mixes with a bottom-up approach. The authors conclude that both initiatives comprise students' learning and living experiences in a microcosm of a pilot sustainable community through inter-disciplinary approaches. They suggest that the UK practices can be useful as a model for developed countries and the university of China as a model for developing countries

Integrating environmental sustainability into universities / Meredith Ralph, Wendy Stubbs . - In: Higher Education, v. 67, no. 1, pp. 71-90, January 2014

ISSN 0018-1560 . - Online ISSN 1573-174X

Abstract : This research explored the factors that influence the integration of sustainability into the operations, teaching and research activities of universities in Australia and England. The research, using semi-structured interviews, found that individuals, committed to the goal of a more sustainable world, play a vital role in the success of integrating

environmental sustainability into universities. The factors critical to enabling universities to undertake the transformational changes necessary to embed environmental sustainability into all university areas included: a strong policy environment, resourcing of strategies, and encouragement of leaders and environmental sustainability advocates. Educating and building the awareness of university staff of the importance of environmental sustainability to future generations was key to a successful strategy.

Quest for a sustainable university : a review / Luís P. Amaral , Nelson Martins, Joaquim B. Gouveia . - In:

International Journal of Sustainability in Higher Education, v. 16, no. 2, pp. 155-172, 2015

ISSN 1467-6370

Abstract : The paper provides a detailed review of the methods used to pursue the concept of a “sustainable university”. A literature and web review was conducted of sustainability implementation methods and assessment and report tools. The results found that due to flaws in traditional sustainability environmental sustainability initiatives, more recent tools have been developed to help manage sustainability. Two university sustainability management systems are outlined on this paper. They both emphasise the use of resources, especially energy, on campus buildings; the social responsibility of the institution; and educational and research sustainability activities.

Global sustainability and the responsibilities of universities / Luc E. Weber, James J. Duderstadt, Eds. . - Glion

Colloquium, 8th, Glion-above-Montreux, Switzerland, June 2011 . - London; Paris; Geneva : Economica, 2012 . - 283 p.

(Glion Colloquium Series, no. 7)

ISBN 978-2-7178-6113-6

Abstract : Drawn from the 7th Glion Colloquium, held in June 2011, this volume gathers contributions from university leaders around the world who discuss how research universities are adapting to the imperatives of global sustainability and how universities can develop new curricula, student experiences, research paradigms, social engagement and international alliances to better address the challenge of global sustainability, while producing globally identified citizens. Contents: Part I Elements of global sustainability. Contributions include analyses of governance; the role of university-based research institutes; how research universities can contribute to fostering sustainable societies in developing countries; university teaching and learning; and STEM education.

Classmark : INT-6 WEB

Sustainability education : perspectives and practice across higher education / Paula Jones, David Selby,

Stephen Sterling . - London, Washington D.C.: Earthscan, 2010 . - 364 p.

ISBN 978-1-84407-878-3

Abstract : How can universities make a major contribution towards a more sustainable future? Amid rising expectations from professional associations, funders, policy makers, and undergraduates, and increasing interest amongst academics and senior management, a growing number of higher education institutions are taking the lead in embracing sustainability. This response does not only include greening the campus but also transforming curricula and teaching and learning. Bringing together the experience of the HEFCE funded Centre for Sustainable Futures (CSF) at the University of Plymouth and the Higher Education Academy's Education for Sustainable Development Project, the book examines the curriculum contributions of a wide range of disciplinary areas to sustainability. The first part of the book provides background on the current status of sustainability within higher education, including chapters discussing interdisciplinarity, international perspectives and pedagogy. The second part features 13 chapter case studies from teachers and lecturers in diverse disciplines, describing what has worked, how and why - and what hasn't. Whilst the book is organised by traditional disciplines, the authors emphasise transferable lessons and interdisciplinarity. Subject areas covered include: geography, environmental and Earth Sciences, nursing/health, law, dance, drama, music, engineering, media and cultural studies, art and design, theology, social work, economics, languages, education, business and built environment

Classmark : INT-73 JON

Africa

RECP study on higher education for renewable energy in Africa / Africa-EU Renewable Energy Cooperation

Programme [RECP] . - Eschborn, Germany : EU Energy Initiative Partnership Dialogue Facility (EUEI PDF), 2015 . - 37 p.

Abstract : This report is targeted at African and European academic institutions planning to engage in the renewable

energy sector. It focuses on Master level education in sub-Saharan Africa, delivering an overview on energy supply and renewable energy, identifying challenges and needs faced by the higher education sector, providing recommendations and entry points for support activities as well as developing a conceptual framework for future interventions.

URL : <http://euei->

[pdf.org/sites/default/files/files/field_pblctn_file/RECP_Higher%20Education%20for%20Renewable%20Energy_Apr2014_EN.pdf](http://euei-)

Climate change adaptation and higher education : Securing our future / Pius Zebhe Yanda, Bruce C. Hewitson, Steve Makungwa, Dominic Mazvimavi, Heila Lotz-Sisitka, Coleen Vogel / Southern African Regional Universities Association [SARUA] . - Johannesburg : SARUA, 2010 . - 137 p. (SARUA Leadership Dialogue Series, v. 2, no. 4) ISBN 978-0-9869903-1-1

Abstract : SARUA, in partnership with the University of Mauritius, hosted a Southern African Higher Education Leadership Programme to review the present contribution of higher education in southern Africa and to explore opportunities for scaling up existing initiatives so that it can make a meaningful impact on the way the region responds to climate change, adaptation and sustainability. This publication is a result of that meeting.

URL :

http://www.sarua.org/files/publications/SARUA%20leadership%20Dialogue%20Series/Leadership%20Dialogue%20Series_Vol%202%20No%204.pdf

Education for sustainable development in Nigeria: bridging reform gaps and strengthening university development linkage / Joel Babalola, Morayo Atinmo / National University of Educational Planning and Administration [NUEPA][India] . - In: Journal of Educational Planning and Administration, v. 24, no. 1, pp. 53-69, 2010 Incl. bibl., abstract . - ISSN 0971-3859

The promotion of sustainable development by higher education institutions in Sub-Saharan Africa : survey report / Global University Network for Innovation [GUNI]; International Association of Universities [IAU]; Association of African Universities [AAU] . - GUNI, IAU, AAU, 2011 . - 101 p.

Abstract : Academic institutions vary considerably in how they approach sustainability: some concentrate on minimizing their ecological impact through changes in campus operations; others emphasize sustainability in the curriculum; yet others concentrate on university outreach and/or embed sustainable development principles in their overall development strategy. This report presents the findings of a survey conducted with African higher education institutions in Sub-Saharan Africa. The questionnaire focused on the following areas: Institutional Governance, Curriculum: Teaching and Learning; Research, Campus Operations, and Outreach and Services. From the responses obtained from 73 higher education institutions, information on the institutions; accomplishments in achieving sustainability in each of these five critical dimensions was compiled.

URL : [http://www.iau-aiu.net/sites/all/files/promotion_sd_by HEIs sub saharan africa 0.pdf](http://www.iau-aiu.net/sites/all/files/promotion_sd_by_HEIs_sub_saharan_africa_0.pdf)

UNEP's work to implement good practice at a regional level: contribution to the UNDESD / Akpezi Ogbuigwe / UNESCO Institute for Lifelong Learning . - In: International Review of Education, v. 56, no. 2-3, pp. 353-372, 2010 ISSN 0020-8566 . - Online ISSN 1573-0638

Abstract : This paper outlines the contribution made by the United Nations Environment Programme (UNEP) towards enhancing the integration of sustainable development concerns in Africa through its initiative, the Mainstreaming Environment and Sustainability in Africa (MESA) Universities Partnership, during the United Nations Decade of Education for Sustainable Development (UNDESD). The paper underscores Africa's wealth and diversity of natural resources while illuminating sustainable development challenges facing the region in order to highlight the need for African universities to respond appropriately. It furthermore outlines the role of education in sustainable development and attempts to contextualise higher education in Africa by exploring universities (historical and current) role with regard to ESD. The paper goes on to describe the MESA partnership and list the programme's key milestones by outlining ESD innovations in African universities, as well as by examining ESD in terms of its global impact and influence on policy to date.

Asia and the Pacific

Transforming higher education for a sustainable tomorrow : 2011 Delivering excellence : World's first initiative / University Sains Malaysia . - Penang : University Sains Malaysia, 2011 . - 115 p.
ISBN 978-983-861459-7

Transforming higher education for a sustainable tomorrow : 2009 Laying the foundation / University Sains Malaysia . - Penang : University Sains Malaysia, 2010 . - 196 p.
ISBN 978-983-861459-7

Abstract : These two publications document the programmes and initiatives taken by the University Sains Malaysia In a university-wide effort to become a world-renowned sustainability-led university. 'Laying the Foundation' describes Phase 1 of the Higher Education Transformation Road from 2009-2010 under the strategic plan of the Ministry of Higher Education. Phase 2 of this plan is detailed in the 2011 publication 'Delivering Excellence' and presents nine initiatives at the University which aim to deliver excellence from an indigenous base with a global outreach.

URL : <http://www.usm.my/index.php/en/info-gateway/publication>

University social responsibility and sustainability / ASEAN University Network [AUN] . - Workshop on University's Social Responsibility and Sustainability from ASEAN-Japan Perspectives , Chonburi, Thailand, October 2010 . - Bangkok : AUN, 2011 . - 159 p.
ISBN 978-616-551-292-3

Abstract : This publication brings together first-hand accounts of Asian universities' strategies and effective management structures for actively engaging in University Social Responsibility and Sustainability (USR&S) activities. The case studies are from universities in Malaysia, Thailand, the Philippines, Indonesia, Vietnam, Singapore, Japan, Cambodia and Myanmar. They include outreach programmes to eradicate poverty linked to education; educating the local community about sustainable economic activities; students' involvement in community service; providing efficient campus services such as transportation and child care; campus recycling; efficient energy consumption; and a holistic approach to disaster management.

Classmark : ASI-73 AUN

URL : <http://www.aunsec.org/site/upload/USR/USRbook.pdf>

Europe and North America

Campus sustainability governance in Canada : a content analysis in post-secondary institutions' sustainability policies / Philip Vaughter, Marcia McKenzie, Lauri Lidstone, Tarah Wright . - In: International Journal of Sustainability in Higher Education, v. 17, no. 1, 2016
ISSN 1467-6370

Abstract : The paper reports findings from a representative sample of 50 Canadian colleges and universities on the orientations to sustainability evident on how sustainability is engaged in the policies in relation to overall governance, education, operations, research and community outreach. Of the institutions surveyed, 40 (80 per cent) had some kind of policy document, 17 (34 per cent) had documents referred to as policies, 5 (10 per cent) had only plans and 18 (36%) had both sustainability policies and plans. The results showed a clear preference in the policies for the "three pillar" definition of sustainability - economic, social and environmental; and a move away from the language of environment and toward the language of sustainable development and sustainability. Many sustainability policies also connected to other external municipal or provincial policies. Campus operations was discussed by all of the policies and in the most detail, while discussions of sustainability in education (i.e. the curriculum) and in research were vague, and discussions of sustainability in relation to community outreach were included less frequently.

UE4SD Innovation Report : Year 2 (2014-2015) / University Educators for Sustainable Development [UE4SD] . - UE4SD, 2016 . - 11 p.

Abstract : This Innovation Report is the second annual review of significant developments in Education for Sustainable Development (ESD) in Higher Education (HE), as part of the University Educators for Sustainable Development (UE4SD) project. The UE4SD Consortium involves 52 partners in 33 countries across Europe. The second reports spans international developments during 2015 and the landscape for ESD professional development across the world. It outlines the significant global dialogues, initiatives and platforms on education, sustainable development and higher education that have taken place following the close of the UN Decade of Education for Sustainable Development (DESD)

and the launch of the UNESCO Global Action Programme (GAP) on ESD and national responses to this. It reports continued signs of the growth of demand for skills development and university action on ESD among higher education student populations and emerging dialogue on the competences and capabilities relevant to sustainability, both from employers and agencies that are looking for these attributes in higher education graduates, and from educators seeking to support the professional development of university educators.

An exploratory study of sustainable development in Italian universities / Emidia Vagnoni, Caterina Cavicchi . - In: International Journal of Sustainability in Higher Education, v. 16, no. 2, 2015
ISSN 1467-6370

Abstract : This paper aimed to outline the current status of the implementation of sustainability practices in Italian public universities. Based on a qualitative approach, the study uses the Deming Cycle (Glavic and Lukman, 2007) as a framework for the implementation of sustainability in universities. Information on university research and publications, academic programmes, published documents and plans, sustainability reports and charters from 67 Italian public universities were collected from their websites and analysed. The results of this exploratory study depicts that while many universities in Italy show a strong commitment to sustainability, this is approached in a fragmented way. Although there is a general lack of environmental management systems, the trend emerging is to formalise objectives of sustainability associated with the use of sustainability-related planning and reporting documents. Regarding curriculum, most sustainability training is found in second cycle (Masters) education and is relatively weak among undergraduate degrees. The study confirms university commitment to sustainable research (over 90 per cent of universities are or have recently been engaged in research activity on sustainability) and the organisation of sustainability events.

Sustainability in Canadian post-secondary institutions : the interrelationships among sustainability initiatives and geographic and institutional characteristics / Dan Beveridge, Marcia McKenzie, Philip Vaughter, Tarah Wright . - In: International Journal of Sustainability in Higher Education, v. 16, no. 5, pp. 611 - 638, 2015
ISSN 1467-6370

Abstract : This paper reports on a census of high-level sustainability initiatives at all accredited post-secondary institutions in Canada by documenting the institutions that have undertaken sustainability assessments, have signed one or more sustainability declarations, have sustainability offices or officers or have sustainability policies. The findings showed that institutions located in larger communities, and in British Columbia and Québec, tended to have higher sustainability initiative scores. Institutions in Saskatchewan and the territories had the lowest sustainability initiative scores. It was found that sustainability office(r)s, assessments and policies co-occurred disproportionately, potentially suggesting positive reinforcement mechanisms. On the other hand, having signed a declaration was not strongly linked to other sustainability initiatives. Terminological preference had shifted from “environment” and “sustainable development” to “sustainability”.

Advancing campus and community sustainability : strategic alliances in action / Leanne Bilodeau, Jackie Podger, El-Aziz . - In: International Journal of Sustainability in Higher Education, v. 15, no. 2, pp. 157-168, 2014
ISSN 1467-6370

Abstract : This article summarises the experience of the University of British Columbia (Canada) in leveraging key drivers to develop sustainability initiatives and partnerships for greater operational efficiencies, cost savings, environmental stewardship and applied research. The university's leadership commitment to sustainability, economic opportunities and provincial legislative requirements are among the drivers discussed. This paper also provides an innovative partnership framework to support sustainable community development.

Sustainable development in higher education : consultation on a framework for HEFCE / Higher Education Funding Council for England [HEFCE] . - Bristol : HEFCE, 2013 . - 26 p.

Abstract : This document sets out some of the ways higher education can contribute to sustainable development, and proposes an overall framework for how HEFCE will support sustainable development in the UK higher education sector. It includes policy statements on sustainable development and carbon reduction.

URL : http://www.hefce.ac.uk/media/hefce/content/pubs/2013/201331/2013_31.pdf

2012 Higher Education Sustainability Review / Association for the Advancement of Sustainability in Higher Education [AASHE] . - Denver : AASHE, 2013 . - 34 p.

Abstract : Focusing on higher education in the USA, this review reveals that sustainable investment, affordability and access, and global sustainability initiatives are key areas of focus in higher education initiatives. New initiatives have arisen particularly in the areas of curriculum, research, funding, and staffing. In addition to highlighting trends, this review describes the impacts of campus sustainability achievements from over 40 higher education institutions.

URL : http://www.aashe.org/files/publications/he-review/2012/he_sustainability_review_2012.pdf

Liberal education for sustainability [Special issue] . - **In:** Liberal Education, v. 98, no. 4, pp. 6 - 27, Fall 2012
ISSN 0024-1822

Abstract : Sustainability and Liberal Education: Partners by Nature (Neil B. Weissman); Curricular Innovation for Sustainability: The Piedmont/Ponderosa Model of Faculty Development (Peggy F. Barlett and Geoffrey W. Chase) - The Piedmont/Ponderosa model is a successful approach to curricular change that has inspired faculty at dozens of colleges and universities in the United States of America to integrate sustainability issues across the curriculum; Energizing Liberal Education (Mary Finley-Brook, Megan Zanella-Litke, Kyle Ragan, and Breana Coleman) - Renewable energy projects provide important opportunities for advancing liberal education.

URL : <http://www.aacu.org/liberaleducation/>

The sustainable university : green goals and new challenges for higher education leaders / James Martin, James E. Samels, Eds . - Baltimore : John Hopkins University Press, 2012 . - 331 p.
ISBN 978-1-4214-0459-2

Abstract : This book includes contributions on measuring sustainability on campus, the impact of sustainability on institutional quality assurance and accreditation, and sustainability in campus housing, food services, and athletics. Contents: 1. Sustainable university: a need to move forward (James Martin and James E. Samels); 2. Promises made and promises lost: a candid assessment of higher education leadership and the sustainability agenda (Anthony D. Cortese); 3. Trends, skills, and strategies to catalyze sustainability across Institutions (Debra Rowe and Aurora Lang Winslade); 4. Measuring campus sustainability performance: implementing the first Sustainability Tracking, Assessment, and Rating System (STARS) (Judy Walton and Laura Matson); 5. Institutionalizing sustainability: achieving transformations from the Inside (Leith Sharp and Cindy Pollock Shea); 6. Sustainability: shifting definitions and evolving Meanings (Davis Bookhart); 7. Sustainable citizenship: the challenge for students and their institutions (Terry Link). II. Sustainability and the leadership team: New assignments: 8. Sustainability and the presidency: five starting points (Jo Ann Gora and Robert J. Koester); 9. Not so fast: a dose of reality about sustainability (Thomas Buchanan and Tara Evans) ; 10. Importance of sustainability in the Community College setting (Mary Spilde) ; 11. Sustainability, leadership and the role of the Chief Academic Officer (Geoffrey Chase, Peggy Barlett, and Rick Fairbanks). III. Fresh agendas for campus operations. 12. Greening the endowment (Mary Jo Maydew); 13. Sustainability and higher education architecture: best practices for institutional leaders (Scott Carlson) ; 14. Sustainable campus housing: building a better place (Norbert W. Dunkel and Lynne Deninger); 15. Food for thought: building sustainable food systems and healthy communities (Howard L. Sacks); 16. University athletics and sustainability: start on the field (Dedee DeLongpre Johnston and Dave Newport); IV. Beyond the green gates: sustainability and the Institution's external partners; 17. Impact of sustainability on institutional quality assurance and accreditation (Sandra Elman). 18. Green legal: creating a culture of vigilance, compliance, and sustainability thinking (James E. Samels and James Martin). V. Complex path ahead. 19. Conclusion: new goals and new challenges for institutional leaders (James Martin and James E. Samels).

Classmark : US-14 MAR

Responsabilidad social de la universidad y desarrollo sostenible / Spain. Ministerio de Educación, Cultura y Deporte . - Madrid : Spanish Ministry of Education, 2011 . - 219 p
ISBN 978-84-369-5227-8

Abstract : This publication offers a diagnosis of the present situation; defines the concepts of social responsibility, sustainable development and sustainable universities and offers recommendations for its implementation in all areas of academic life.

URL : https://sede.educacion.gob.es/publiventa/descargas.action?f_codigo=14925&codigoOpcion=3

Latin America and the Caribbean

El plan de acción para el desarrollo sustentable en las instituciones de educación superior : Escenarios posibles / Blanca Estela Gutierrez Barba, María Concepcion, Martinez Rodriguez / Asociación Nacional de Universidades e Instituciones de Educación Superior [ANUIES] . - **In:** Revista de la Educación Superior, v. 39, no. 2, pp.

111-132, Abril-Junio 2010

ISSN 0185-2760

Abstract : Sustainable development is related to the environment, equitable distribution, participation, multiculturalism, creativity, self-fulfillment, cultural autonomy and even, for some authors, spiritual aspects. Universities could help lead the whole society towards a more sustainable future through more sustainable development in HE institutions at all levels.

URL : http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-27602010000200006&lng=es&nrm=iso

Educación superior, colaboración intercultural y desarrollo sostenible : buen vivir, experiencias en América Latina / Daniel Mato, Ed. / UNESCO International Institute for Higher Education in Latin America and the Caribbean [IESALC] . - Caracas : IESALC, 2009 . - 264 p.

ISBN 978-980-7175-05-0

This book brings together a set of eight case studies on the experiences of Higher Education Institutions (HEIs) from five countries in Latin America (Brazil, Chile, Colombia, Mexico and Peru) that have developed modalities of intercultural collaboration with communities and / or indigenous peoples' organisations

URL :

http://www.iesalc.unesco.org.ve/index.php?option=com_fabrik&c=form&view=details&Itemid=851&fabrik=10&rowid=84&tableid=10〈=en

Dimensiones de sustentabilidad en las instituciones de educación superior : propuesta para un censo de investigación / Blanca Estela Gutierrez Barba, Maria Concepcion Martinez Rodriguez / Asociación Nacional de Universidades e Instituciones de Educación Superior [ANUIES] . - In: Revista de la Educación Superior, v. 38 (4), no. 52, pp. 113-124, Octubre-Diciembre 2009

ISSN 0185-2760

Abstract : This study evaluates the establishment of the UNESCO framework of implementation of sustainable development in higher education institutions. The study is undertaken at the Research and Studies Center on the Environment and Development (CIIMAD) of the Instituto Politécnico Nacional (IPN) in Mexico. Six dimensions, based on the integration of different sectors that lead to sustainable development, were identified and analysed: academic, research, environmental, economic, philosophical-political, and social-personnel.

URL: <http://seminariorepensarlabioquimica.files.wordpress.com/2013/07/dimensionessustentabilidad.pdf>

■ Campus greening

Developing skills for future leaders : 2015 sustainable campus best practices from ISCN and GULF Schools / International Sustainable Campus Network [ISCN] . - Boston : ISCN, 2015 . - 67 p.

Abstract : This looks at best practice cases from 15 countries in 5 continents to develop a concrete sustainability skill set for future leaders. It includes chapters on Buildings that teach; Campus as a laboratory; teaching by example; Cross-curricular integration; and Holistic approaches to sustainability topics.

URL : <http://www.international-sustainable-campus-network.org/resources/iscn-sustainable-campus-best-practices.html>

Advancing grassroots climate change awareness in Botswana : BCA campus greenhouse gas baseline inventory / Nnyaladzi Batisani, Abijah Ndiane . - In: International Journal of Sustainability in Higher Education, v. 15, no. 3, pp. 304-313, 2014

ISSN 1467-6370

Abstract : This paper provides the process of undertaking a campus greenhouse inventory within an Agricultural College of a University in Botswana. The procedure in carrying out the study provided learners with an opportunity to appreciate emissions from developing countries and also gain technical skills in conducting a greenhouse inventory using the Clean Air-Cool Planet (CACP) campus calculator to calculate emissions within the college. It also sensitised campus administrators about the scale of emissions and possible ways of reducing them. Furthermore, it highlights the fact that developing countries also produce significant emissions, hence the need for mitigation measures.

Barriers to energy efficiency and the uptake of green revolving funds in Canadian universities / John Maiorano, Beth Savan . - In: International Journal of Sustainability in Higher Education, v. 16, no. 2, pp. 200-216, 2015
ISSN 1467-6370

Abstract : This paper investigate the financial and economic barriers to the implementation of energy efficiency projects in Canadian universities. Methods to address these barriers were investigated, including evaluating the efficacy of revolving funds. Senior administrators responsible for investment in energy efficiency of 15 Canadian universities were interviewed. The results showed that 'access to capital' was the largest barrier to energy efficiency and respondents agreed that green revolving funds are both an effective method to address these constraints and to implement energy conservation projects at their university. However, only 2 out of the 15 interviewees and 7 out of the 98 universities in Canada currently make use of a green revolving fund. The authors suggest that a reluctance to formalise processes to prioritise energy efficiency limits the associated benefits of mechanisms such as revolving funds to implement energy efficiency projects at Canadian universities.

Campus sustainability in Chinese higher education institutions : focuses, motivations and challenges . - In: International Journal of Sustainability in Higher Education, v. 16, no. 1, 2015
ISSN 1467-6370

Abstract : This study examines sustainability in eight diverse higher education institutions in Changchun City, Jilin, China. Structured interviews were carried out with managers, students and government officials in addition to document analysis. The focus of sustainability among the studied HEIs was on water and energy conservation and on non-technical initiatives, rather than more expensive technical initiatives, due to limited accessibility to funding. Significant variation was found among the institutions: central-level HEIs are the best resourced and therefore able to implement more intensive programmes in water and energy conservation. The study also found that the reliance of non-technical initiatives has negatively impacted student welfare and has become unpopular among students.

Design of higher education teaching models and carbon impacts / Sally Caird, Andy Lane, Ed Swithenby, Robin Roy, Stephen Potter . - In: International Journal of Sustainability in Higher Education, v. 16, no. 1, pp. 96-111, 2015
ISSN 1467-6370

Abstract : This research examines the main findings of the SusTEACH study of the carbon-based environmental impacts of 30 higher education courses in 15 UK institutions, based on an analysis of the likely energy consumption and carbon emissions of a range of face-to-face, distance, online and information and communication technology (ICT)- enhanced blended teaching models. The findings showed that the main sources of carbon emissions were travel, residential energy consumption and campus site operations. Distance-based HE models reduced energy consumption by 88 per cent and achieved significant carbon reductions of 83 per cent when compared with campus-based HE models. The online teaching model achieved the lowest energy consumption and carbon emissions.

Energy efficiency of higher education buildings : a case study / Nelson Soares, Luísa Dias Pereira, João Ferreira, Pedro Conceição, Patrícia Pereira da Silva . - In: International Journal of Sustainability in Higher Education, v. 16, no. 5, pp. 669 - 691, 2015
ISSN 1467-6370

Abstract : This paper proposes an energy efficiency plan for a higher education building at the University of Coimbra (FEUC) in Portugal. The plan was developed in the context of both the "Green Campus – Challenge for Energy Efficiency in Higher Education" and the Energy for Sustainability Initiative at the university. An energy audit was conducted and patterns of energy-environmental behaviours of the academic community were investigated through a web-based survey.

Greening the campus of a Brazilian university : cultural challenges / Giovana da Silveira Marques Pereira, Charbel Jabbour, Sonia V. W Borges de Oliveira, Adriano Alves Teixeira . - In: International Journal of Sustainability in Higher Education, v. 15, no. 1, pp. 34-47, 2014
ISSN 1467-6370

Abstract : This study examined the relationship between environmental management practices developed at a campus of a Brazilian university (University of Sao Paulo) and the greening of its organizational culture. The study found that the studied university has an environmental management programme that is sometimes constrained in the following ways: the university bureaucracy and hierarchy; the main performance indicators for lecturers and professors are based on scientific production and publication, giving them little time for complementary activities; and some units develop their own environmental management practices, but they are not disseminated as best practices for use by other units. Some academic units showcase the proactive actions of professors who incorporate environmental management into their daily

activities. The general perception is that the phrase 'environmental management' is almost synonymous with solid waste management.

Greening universities toolkit : transforming universities into green and sustainable campuses / United Nations Environmental Programme [UNEP] . - Nairobi : UNEP, 2013 . - 93 p.
ISBN 978-92-807-3345-7

Abstract : This Toolkit aims to provide University staff and students with a selection of strategies, tools and resources, gleaned from the literature, from global case studies and from practice which are intended to inspire, encourage and support Universities to develop and implement their own transformative strategies for establishing green, resource-efficient and low carbon campuses. In turn, it is hoped the "green campus" will help inform the "green curriculum", and by extending beyond institutional boundaries, help to catalyse more sustainable communities. The Toolkit is part of a wider Greening Universities Initiative established through UNEP's Environmental Education and Training Unit, in collaboration with other UN agencies.

URL : http://www.unep.org/training/docs/Greening_University_Toolkit.pdf

Promoting sustainable campus landscapes : how-to guide / Association for the Advancement of Sustainability in Higher Education [AASHE] . - Denver : AASHE, 2013 . - 25 p.

Abstract : This guide of campus outdoor spaces identifies ways to build awareness of the benefits of sustainable practices, engage others in projects, garner external recognition, and effectively communicate the institutional value of sustainable campus landscapes in order to achieve a lasting impact. An important rationale behind this focus is that ultimately, long-term support from administrators, faculty, staff, students, and the community will be essential to the success of sustainable campus landscapes for future generations.

URL : http://www.aashe.org/files/publications/monographs/landscaping-2013/sustainable_campus_landscape_guide.pdf

Rationale of early adopters of fossil fuel divestment / Christopher Todd Beer . - In: International Journal of Sustainability in Higher Education, v. 17, no. 4, pp. 506-519, 2016
ISSN 1467-6370

Abstract : This research analyses the rationale used by the early-adopting universities of fossil fuel divestment in the USA. Through analysis of qualitative data from interviews with key actors at the universities that divested their endowments from fossil fuels, the paper examines how institutions navigate competing logics and frame their rationale. The results show that while many institutions relied on ecological values embedded in their missions to justify their decision to divest, many also continued to embrace an altered version of market logic.

Recycling as a result of "cultural greening"? / Julia A. Flagg, Diane C. Bates . - In: International Journal of Sustainability in Higher Education, v. 17, no. 4, pp. 489-505, 2016
ISSN 1467-6370

Abstract : This study examines whether faculty and students who have developed the most pro-environmental values and concerns are also the most likely to reduce the on-campus waste stream. Questionnaires were disseminated to a representative sample of 590 undergraduate students and faculty at a higher education institution in the USA. This research took place after widespread efforts were made to increase faculty and student knowledge of the college's recycling guidelines. The findings showed that among the measures of environmental orientation (values, concern about pollution and green consumption), only environmental values were associated with claiming to know guidelines and self-reporting higher levels of recycling effort. None was associated with knowledge about local recycling guidelines.

The future is now : Summary report / International Sustainable Campus Network [ISCN] . - ISCN Conference, Singapore, June 2013 . - ISCN, 2013 . - 40 p.

Abstract : This Summary Report is from the ISCN 2013 Conference on The Future is Now, organised by the International Sustainable Campus Network and the National University of Singapore in June 2013. It contains section on the themes addressed at the Conference: Beyond carbon: the next generation of sustainability goals; Growth vs sustainability: are these mutually exclusive goals? and Engaging universities in co-creation for urban sustainability.

URL : <http://www.international-sustainable-campus-network.org/latest-news/iscn-2013-conference-summary-now-available.html>

Using energy profiles to identify university energy reduction opportunities / Nandarani Maistry, Harold Annegarn . - In: International Journal of Sustainability in Higher Education, v. 17, no. 2, pp. 188-207, 2016
ISSN 1467-6370

Abstract : This paper details efforts at the University of Johannesburg, to examine energy efficiency within the context of the green campus movement, through the analysis of electricity consumption patterns. The study is particularly relevant in light of the cumulative 230 per cent increase in electricity costs between 2008 and 2014 in South Africa that has forced institutions of higher education to seek ways to reduce energy consumption. Average diurnal consumption profiles were plotted according to phases of the academic calendar, distinguished by specific periods of active teaching and research. It was found that the academic calendar has profound effects on energy consumption. Diurnal maximum consumption corresponds to core working hours, peaking at an average of 2,500 kWh during “in-session” periods, 2,250 kWh during “out-of-session” periods and 2,100 kWh during recess. A high base load was evident throughout the year (between 1,300 and 1,650 kWh), mainly attributed to heating and cooling. By switching off the 350 kW chiller plant on weekdays, a 9 per cent electricity reduction could be achieved during out-of-session and recess periods. Similarly, during in-session periods, a 6 per cent reduction could be achieved.

A-broad spectrum : sustainability in educational travel / Brack W. Hale, Alison Vogellar, Joshua Long . - In: International Journal of Sustainability in Higher Education, v. 14, no. 4, pp. 349-366, 2013
ISSN 1467-6370

Abstract : Although sustainability issues and initiatives have become popular on campuses across the globe, little has been written specifically about efforts within higher educational travel programmes. The authors conducted an online survey of practitioners in the field of higher education travel about attempts, if any, to incorporate themes of sustainability and sustainable travel into travel programmes at the institutions. In general, results showed that sustainability-related themes and concerns have yet to develop to the level of campus sustainability. The paper also found three additional themes: a disparity between sustainability in discourse and practice; sustainable measures that focus on local organisations/relationships and external programs; and the financial, marketing and relational offsets associated with the implementation of sustainability.

A systems approach to reducing institutional GHG emissions / Sean R. Williamson . - In: International Journal of Sustainability in Higher Education, v. 13, no. 1, pp. 46-59, 2012
ISSN 1467-6370

Abstract : The purpose of this paper is to establish necessity and methods for considering greenhouse gas (GHG) mitigation policies at a system-level. The research emphasizes connecting narrowly focused GHG mitigation objectives (e.g. reduce single occupancy vehicle travel) with broader institutional objectives (e.g. growth in student population) to demonstrate how policies operating at different scales individually and collectively influence GHG reductions. The central finding is that broad level policies associated with housing stock and student growth are more capable of influencing GHG emissions than traditionally classified mitigation policies such as investing in alternatives transportation services.

Eco-campus : applying the ecocity model to develop green university and college campuses / Jessica Finlay, Jennifer Massey . - In: International Journal of Sustainability in Higher Education, v. 13, no. 2, pp. 150-165, 2012
ISSN 1467-6370

Abstract : This paper examines the theory of the ecocity and investigates the implications for its proposed building strategies for university and colleges in Canada and the United States, as institutions seek to create more sustainable campuses. The paper examines previous efforts to achieve sustainability and how the concept of the eco-campus can be practically and productively applied.

Environmental and social management plan for infrastructure development projects in universities and HEIs in Pakistan / Pakistan. Higher Education Commission . - HEC, 2011 . - 60 p.

Abstract : This plan aims at alleviating the negative social and environmental impacts that may be caused by construction and infrastructure development projects in universities and higher education institutions.

URL : <http://www.hec.gov.pk/Documents/HEC%20ESMP%20TESP%202011.pdf>

■ Curriculum and Education for Sustainable Development (ESD)

Adding value to education for sustainability in Africa with inquiry-based approaches in open and distance learning / Rudi Pretorius, Andrea Lombard, Khotoo Anisa . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 2, pp. 167-187, 2016
ISSN 1467-6370

Abstract : This paper aims to map the benefits and challenges online distance learning using inquiry-based learning in education for sustainability in Africa. Evidence-based reflection is used to provide a narrative assessment of the experience gained with inquiry-based learning in two undergraduate sustainability-focused modules in the Geography department at the University of South Africa (Unisa), an online distance learning provider in Africa and the Global South. The findings indicated that although constraints are experienced, adoption of inquiry-based learning approaches holds potential as pedagogic for education for sustainability in Africa, due to grounding of learning in theory and applied to local places/context. The authors note that implementing place-based and contextual inquiry-based learning is innovative in online distance learning. It adds value to learning experiences and supports transformative learning, addressing a need in the African context.

An overview of management education for sustainability in Asia / Yen-Chun Jim Wu, Ju-Peng Shen, Tsuang Kuo . - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 3, pp. 341-353, 2015
ISSN 1467-6370

Abstract : Content analysis was conducted on web-based sustainability-related courses of management education for sustainability in higher education in 136 universities in China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Korea, Singapore, Taiwan, Thailand and Viet Nam. Additionally, differences were analysed between online courses arrangement, teaching methods and instructors' educational background. The results show that 50% of the universities studied have sustainability-related courses. The authors note that there is an opportunity for interdisciplinary integration, as there are imbalanced sustainability courses offered by business, science and engineering schools. Additionally, business schools in Asia offer sustainability-related courses as electives, rather than as required courses, often at graduate level.

Collaborative framework for designing a sustainability science programme : lessons learned at the National Autonomous University of Mexico / Lakshmi Charli-Joseph, Ana E. Escalante, Hallie Eakin, Ma. José Solares, Marisa Mazari-Hiriart, Marcia Nation, Paola Gómez-Priego, César A. Domínguez Pérez-Tejada, Luis A. Bojórquez-Tapia . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 378-403, 2016
ISSN 1467-6370

Abstract : The authors describe the challenges and opportunities associated with developing an interdisciplinary sustainability programme in an emerging economy and illustrate how these are addressed through the development of the first postgraduate programme (MSc and PhD) in sustainability science at the National Autonomous University of Mexico (UNAM). The implemented collaborative framework enabled a transformation of disciplinary research and teaching at UNAM into a postgraduate programme designed to generate cutting-edge educational and research capabilities. The approach to curriculum and programme design emphasized the process and methodological framework for curriculum development as much as the outcome itself. Several of the challenges faced were related to the nature of the institution (mainly because of the complexity of its organization and the emphasis in maintaining disciplinary boundaries), as well as to the curriculum development and design approach (acceptance of a competency-based programme appropriate for the MSc but considered restrictive for the PhD). The approach enabled the emergence of a shared vision that was appropriated by all the participants. This ultimately empowered them in the presentation of the curriculum to their disciplinary peers. Furthermore, the approach facilitated the creation of a programme that remained salient along the process, while increasingly gained legitimacy and credibility among the academic community.

Determining factors of environmental education in Spanish universities / Manuel Larrán, Javier Andrades. - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 2, pp. 251-271, 2015
ISSN 1467-6370

Abstract : This paper analyses environmental integration in curricula in Spanish universities. The authors conducted web content analysis and statistics of the curricula of undergraduate management degrees at all universities in Spain. One of the main findings is that public universities in Spain are more likely to require an environmental course than private universities. Other factors, such as size, political orientation or chairs/research institutes are not statistically explanatory

of environmental education. Another finding is that environmental training in management courses offered by Spanish universities is still relatively underdeveloped. Comparatively, the authors found that the most common method of teaching environmental issues in Spain is by means of embedded subjects (horizontal integration) in comparison with stand-alone subjects (vertical integration). From this perspective, the main topics covered in curriculum are environmental management, sustainable tourism, environmental economy and environmental impact.

Experiential learning for sustainability leadership in higher education / Emma Savage, Tara Tapics, John Evarts, Jeffrey Wilson, Susan Tirone . - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 5, pp. 692-705, 2015

ISSN 1467-6370

Abstract : This article describes key design elements of a sustainability leadership certificate programme for undergraduate from various disciplines. The programme was framed around five key sustainability competencies which were tested in 32 participants using a pre/post self-assessment. The results indicate that the programme participants were generally motivated by the programme's experiential format and supportive community. They felt that they had improved their confidence and competence in the key sustainability competencies. Three themed clusters, community, future and personal development, emerged from the participants' open-ended responses. This supports the programme design and can inform further programme development. The authors note that the importance of the third theme, personal development, as it is not a typical focus of sustainability in higher education, but held high importance to participants.

Higher education curriculum for sustainability : course contents analyses of purchasing and supply management programme of polytechnics in Ghana / Daniel Etse, Coral Ingley . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 2, pp. 269-280, 2016

ISSN 1467-6370

Abstract : The purpose of this study is to determine the degree of attention to and the nature of sustainability issues in the curriculum of the Higher National Diploma (HND) Purchasing and Supply Management programme of Ghana. Documentary research was used to analyse the curriculum document for the programme of study. The findings reveal a low presence of sustainability in the curriculum, and most of the sustainability sub-topics address issues of social justice, while economic sustainability issues feature the least.

Integrating sustainability education into international marketing curricula / Chamila Roshani Perera, Chandana Rathnasiri Hewege . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 1, pp. 123-148, 2016

ISSN 1467-6370

Abstract : The study investigates the learning gaps in sustainability education among undergraduates enrolled in an International Marketing course in an Australian university. An online survey of 111 students and content analysis of essays of 60 students were carried out. The main learning gaps identified reveal that undergraduates find it difficult to view the social function of international business firms from a holistic point of view; critically assess sustainable marketing practices; and articulate views on sustainable marketing practices. The authors postulate a series of pedagogical practices to effectively integrate sustainability education into the curricula.

Sustainability champions?: Academic identities and sustainability curricula in higher education / Bronwyn E. Wood, Sue Cornforth, Fiona Beals, Mike Taylor, Rachel Tallon . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 342-360, 2016

ISSN 1467-6370

Abstract : This paper explores the experiences of academic staff who are committed to embedding sustainability within tertiary curricula and pedagogy. A survey of staff was undertaken in a New Zealand university and in-depth interviews conducted with 11 sustainability "champions". A narrative variant of thematic analysis was used to examine the ways these sustainability "champions" made sense of the work they do. This revealed a sense of the identities that they held as educators of sustainability. Three types of identities emerged – the sustainability "saviour", "nurturer" and "struggler". These identities reflected the champion's experiences, disciplinary affiliations and pedagogical approaches. Interdisciplinarity emerged as a key tenet and challenge for such sustainability champions.

Teaching sustainable development in higher education : building critical, reflective thinkers through an interdisciplinary approach / Cathy Howlett, Jo-Anne Ferreira, Jessica Blomfield . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 305-321, 2016
ISSN 1467-6370

Abstract : This paper presents a case study of innovations in pedagogy for sustainability in higher education. It evaluates the design of a course aimed to teach sustainable development to first year undergraduate students within an Australian higher education setting. Data from student reflective essays and student course evaluations are used to make an argument for the success of an interdisciplinary approach designed to promote capacities in students for critical and reflective thinking. The findings suggested that genuine transformative learning can occur within an informed pedagogical approach to teaching for sustainability. The authors argue that substantive changes are required in both curricula and pedagogical practice in higher education institutions to challenge dominant epistemologies and discourses to the environment. Central to such a shift, it is argued, is the need for higher education curricula to be interdisciplinary and for pedagogical practices to work to build capacities in students for critical and reflective thinking.

How an entry-level, interdisciplinary sustainability course revealed the benefits and challenges of a university-wide initiative for sustainability education / Nicholas C. Coops, Jean Marcus, Ileana Construt, Erica Frank, Ron Kellett, Eric Mazzi, Alison Munro, Susan Nesbit, Andrew Riseman, John Robinson, Anneliese Schultz, Yona Sipos . - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 5, pp. 729-747, 2015
ISSN 1467-6370

Abstract : In this paper, the authors describe the development, and preliminary implementation, of an entry-level, interdisciplinary sustainability course. They detail the development of a university-wide initiative, the conceptual framework for organising course content and delivery designed to bridge units on campus working and teaching in sustainability areas, and to promote and support sustainability curriculum development. The authors conclude with an informal assessment of the successes and challenges, and offer learning activities, student assessments and course administration recommendations for consideration when developing courses with similar learning goals.

Reviewing the incidence and status of sustainability in degree programmes at Plymouth University / Lynne Wyness, Stephen Sterling . - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 2, pp. 237-250, 2015
ISSN 1467-6370

Abstract : This paper presents an overview of the design and implementation of a curriculum review undertaken at Plymouth University, UK, to gauge the incidence and status of sustainability in degree programmes across the curriculum. A top-down approach was avoided, by placing the emphasis on self-evaluation of how the degree programmes were implementing sustainability in a number of broad areas, such as curriculum content, pedagogical approaches and student engagement. A review tool was created and distributed to all undergraduate and postgraduate degree programmes in the university. In particular, the review was designed to contribute the institutional annual submissions to the university's Learning in Future Environments index. The review recognised good practices that exist and, since its completion, the approaches are being used to promote the ongoing development of sustainability in the university.

Economía ecológica y solidaria en el currículo del siglo XXI : el caso de la Maestría en Gestión de Proyectos para el Desarrollo Solidario del IPN / , Mara Rosas Bans, Santiago Jiménez, Maria Evelinda, Lidia A. Juarez Ruiz / Asociación Nacional de Universidades e Instituciones de Educación Superior [ANUIES] . - **In:** Revista de la Educación Superior, v. 43 (2), no. 170, pp. 89-112, abril - junio 2014
ISSN 0185-2760

Abstract : This paper recommends an ecological and solidarity economy as a cooperative basis to create a curriculum with a trans and interdisciplinary perspective. This approach is based on the Masters in Project management for Solidarity Development at a Mexican higher education institute.

URL : <http://publicaciones.anui.es/revista/170/2/4/es/economia-ecologica-y-solidaria-en-el-curriculo-del-siglo-xxi-el-caso>

La sostenibilidad en la formación universitaria : desafíos y oportunidades / Pilar Aznar Minguet, Angels Ull, Albert Pinero, Pilar Martínez-Agut / Universidad Nacional de Educación a Distancia [UNED][Spain] . - In: Educación XX1, v. 17, no. 1, pp. 133-158, 2014
ISSN 1139-613X

Abstract : This study aims to integrate the perspective of sustainability in higher education qualifications through the incorporation of activities in the learning process for the development of learning competencies related to sustainability. The study was conducted with a sample of faculty at the University of Valencia, Spain, within the context of the implementation of the university Strategic Plan on sustainability.

URL : <http://e-spacio.uned.es/revistasuned/index.php/educacionXX1/article/view/10708>

Using communities of practice to enhance interdisciplinary teaching : lessons from four Australian institutions / Emma Pharo, Aidan Davison, Helen McGregor, Kristin Warr, Paul Brown . - In: Higher Education Research and Development, v. 33, no. 3, April 2014
ISSN 0729-4360 . - Online ISSN 1469-8366

Abstract : This article reports on the establishment of communities of practice at four Australian institutions and evaluates their effectiveness and durability as a means of building staff and institutional capacity for interdisciplinary teaching. The communities established were anchored by a shared focus on climate change and they worked collaboratively to build relationships of trust and reciprocity between teachers in a wide range of disciplines. The aim of each community was to improve the teaching of climate change through enabling members to integrate diverse disciplinary perspectives, to teach collaboratively, to promote innovation through exchange and to demonstrate leadership within their institutions. The key factors that made the communities effective and durable are: (1) designation of two leadership roles, activator and facilitator, (2) provision for institutional autonomy in domesticating the model to fit local circumstances and (3) a pragmatic emphasis on opportunities for teaching innovation and leadership within existing administrative structures, teaching programmes and workloads. The authors conclude that suitably designed and resourced communities of practice are a viable means of improving interdisciplinary teaching of complex problems by facilitating both staff development and institutional learning.

Using e-learning for student sustainability literacy : framework and review / Susannah Diamond, Brian Irwin . - In: International Journal of Sustainability in Higher Education, v. 14, no. 4, pp. 338-348, 2013
ISSN 1467-6370

Abstract : This paper explores staff practices in using e-learning to embed sustainability literacy, highlight best practice and determine areas for improvement. A framework of four areas for developing student sustainability literacy (SSL) was proposed as a basis for analysing practice. A literature review then explored the extent to which e-learning is used to support embedding SSL in the curriculum, and the types of e-learning currently in use for this. The authors found that E-learning tools were most frequently used to provide flexible access to information, followed by support for communication and collaboration, and were less frequently used for the development of specific skills, personal identity and confidence. This study highlighted scope for a pedagogical shift away from using e-learning for information delivery and practical communication, and towards supporting rich, student-centred forms of learning in both blended and distance learning modes to more effectively develop students' personal identities and skills, and yield graduates who are more confident in their ability to create more sustainable futures.

Are we educating engineers for sustainability?: Comparison between obtained competences and Swedish industry's needs / Andreas Hanning, Anna Priem Abellsson, Ulrika Lundqvist, Magdalena Swanström . - In: International Journal of Sustainability in Higher Education, v. 13, no. 3, pp. 1467-6370, 2012
ISSN 1467-6370

Abstract : This study analysed the content of 70 courses in environment and Sustainable development at a Swedish university, the views of students and alumni - using questionnaires, and those of representatives from 16 Swedish companies and five organizations using interviews and focus groups. It was found that industry demands a broader range of competences in sustainable development amongst engineers in general than what is currently provided. In total, 35 per cent of alumni claim they encounter sustainability issues from sometimes to daily in their work. However, only half of them believe they possess enough competences to make decisions from a sustainability perspective. Quantity, coverage and the level of integration in the educational programme all appear to be important for the students' perceived competences and for the importance that they put on achieving Sustainable development.

URL : <http://www.emeraldinsight.com/journals.htm?issn=1467-6370&volume=13&issue=3&articleid=17042049&show=abstract>

Sustainability in business education in the Asia Pacific region : a snapshot of the situation / Malik Nqeem, Mark Neal . - **In:** International Journal of Sustainability in Higher Education, v. 13, no. 1, pp. 60-71, 2012
ISSN 1467-6370

Abstract : This is the first region-wide survey of sustainability in business education in the Asia Pacific region. In addition to measuring the number of courses and programs integrating sustainability, the study solicited qualitative observations by respondents, to provide information and insight into the issues. The research found that whereas corporate governance, sustainability and business ethics were quite commonly taught in business schools, they were not generally prioritized. There was also an overall lack of systematic approaches to the integration of sustainability in business curricula, and significant barriers to the integration of sustainability into programs remained.

Campus sustainability : emerging curricula models in higher education / James R. McKenna Tamara Savelyeva . - **In:** International Journal of Sustainability in Higher Education, v. 12, no. 1, pp. 55-66, 2011
ISSN 1467-6370

Abstract : This paper shows how academia can address sustainability through curricula models and provides a detailed description of the Global Seminar (GS) curricula model by exploring its on-the-ground participatory practices. The authors interviewed 20 faculty members from the USA, Mexico, Costa Rica, Italy, Australia, Sweden, Honduras, South Africa, Germany, Austria, and Denmark. They observed class sessions; and analyzed available course documents. The findings indicate that the GS model provides a broader notion of teaching and learning for sustainability that incorporates greening and education for sustainability into curricula. This participatory model proves the emerging shift towards a new paradigm of teaching and learning for sustainability in academia.

Educating engineers for a better future / Daniel Morano / UNESCO Office Montevideo and Regional Bureau for Science in Latin America and the Caribbean . - **In:** ISTIC-UNESCO-WFEO Workshop on Science, Engineering and Industry: Innovation for Sustainable Development . - Montevideo : UNESCO Office Montevideo, 2011
pp. 63-71 . - ISBN 978-92-9089-170-3

URL : <http://unesdoc.unesco.org/images/0021/002110/211091e.pdf>

Interactive and situated learning in education for sustainability / Sergio Altomonte, Brian Logan, Markus Feisst, Peter Rutherford, Robin Wilson . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 417-443, 2016
ISSN 1467-6370

Abstract : This study aims to explore the opportunities offered by e-learning and m-learning in support of education for sustainability in disciplines of the built environment. The paper illustrates the development of an online portal and a mobile app aimed at promoting students' motivation and engagement with sustainability in design. The findings add empirical evidence to the view that information and communication technology-enhanced pedagogies can substantially contribute to the agenda of sustainability in higher education, primarily due to their affordance of interactive communication and contextualisation of knowledge, while guaranteeing flexible time and pace of learning. The authors note that the tools trialled in this were mostly at their prototypical stage and their testing included a relatively short-term evaluation and a narrow, self-selected, user base. However, the approach and findings are felt to be applicable to a much wider range of educational contexts.

International field experiences promote professional development for sustainability leaders / R. Bruce Hull , David P Robertson , Michael Mortimer , Courtney Kimmel . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 1, pp. 86-104, 2016
ISSN 1467-6370

Abstract : This paper examines and analyses the international component in China of a Master of Natural Resources programme which aimed to increase students' competences in leadership for sustainable development. The results found that the international project built competencies related to collaborative problem-solving, cultural capacity to work globally and sustainable development. Six pedagogic practices were perceived as effective by students and generate learning outcomes desired by faculty: authentic problems, learning cycles, shared inquiry, transdisciplinarity, exploration and engagement.

Introducing Sustainability into business education contexts using active learning / Jason MacVaugh, Mike Norton / International Association of Universities [IAU] . - In: Higher Education Policy, v. 24, no. 4, pp. 439-457, December 2011 ISSN 0952-8733 . - Online ISSN 1740-3863

Abstract : The focus of this study is the experience of the authors in developing and implementing education for sustainability within their business-related higher education programmes in Japan and the UK. To address the inherent challenges of the task, they apply the principles of active learning, with substantial use of problem-based learning, in the classroom and engage in a process of staff development in their personal time. The method used is a simplified version of action research where the authors worked together over two years and then reflected on the experience through interviews and extensive discussions with each other, with their respective teaching teams, and with sustainability educators from outside of their programmes.

The creation of an integrated sustainability curriculum and student praxis projects / Christopher M. Bacon, Dustin Mulvaney, Tamara B Ball, et al. . - In: International Journal of Sustainability in Higher Education, v. 12, no. 2, pp.193-208, 2011 ISSN 1467-6370

Abstract : The purpose of this paper is to share the content and early results from an interdisciplinary sustainability curriculum that integrates theory and practice (praxis). It shows the development process, design and content of the interdisciplinary sustainability curriculum while enlivening campus-community relationships through student projects. However, the incentives for an integrated sustainability curriculum faced persistent obstacles including the balkanization of academic knowledge, university organizational structure, and the need for additional human and financial investments. At the time of this paper, the authors were designing the second phase of this integration and expanding a social learning network through collaborations with five universities in the Americas and Europe.

The global expansion of environmental education in universities / David John Frank, Karen Jeong Robinson, Jared Olsen / Comparative and International Educational Society . - In: Comparative Education Review, v. 55, no. 4, November 2011 ISSN 0010-4086

Abstract : University-level environmental education has proliferated spectacularly over recent years. In universities around the world, across a broad range of curricular domains, environmental degree programs have multiplied. The authors set out to explain the transformation by conducting a longitudinal analysis of environmental degree programs in a sample of 241 universities in Africa, Asia, Europe, North and Central America, Oceania and South America. The results showed that universities embrace environmental education as the substance and significance of the human-nature relationship grows in institutions and as the relationship is increasingly deemed comprehensible within the knowledge framework.

URL:

https://webfiles.uci.edu/frankd/Selected%20Publications/2011_The_Global_Expansion_of_Environmental_Education.pdf

Mainstreaming environment and sustainability: an analysis of a master's in environmental science and a tree-planting project at Chancellor College, University of Malawi / Sosten S. Chiotha / UNESCO Institute for Lifelong Learning . - In: International Review of Education, v. 56, no. 2-3, pp. 287-298, 2010 ISSN 0020-8566 . - Online ISSN 1573-0638

Abstract : In 2004, Mainstreaming Environment and Sustainability in African Universities (MESA) was formally launched by UNEP, UNESCO and the Association of African Universities. This paper sets the stage for a critical analysis of ESD by reviewing historical perspectives of conservation in Africa as a means of appreciating the need for African universities to mainstream both environmental concerns and those relating to sustainability. Two case studies from the University of Malawi are discussed to illustrate that good practice in mainstreaming environment and sustainability requires challenges to be refined and knowledge to be extended on an ongoing basis. To analyse the reorientation of the curriculum for Education for Sustainable Development (ESD), the paper examines the introduction of an Environmental Science Masters programme at the college and notes how environmental issues are covered. The article also looks at the college's tree-planting programme in terms of the training, research and outreach involved.

Sustainability curriculum in higher education : a call to action / Association for the Advancement of Sustainability in Higher Education [AASHE] . . - Denver : AASHE, 2010 . - 13 p.

Abstract : This report address how institutions of higher education can build on past initiatives in order to infuse sustainability topics into college and university curricula. It is based on the proceedings and discussions of the AASHE Summit on Sustainability in the Curriculum, held in in San Diego, USA in February 2010. A series of recommendations from the Summit is provided.

URL : http://www.aashe.org/files/A_Call_to_Action_final%282%29.pdf

The interfaculty graduate environmental sciences program of the American University of Beirut: an ESD initiative in the Arab World / Rami Zurayk, Mutasem El-Fadel, Iman Nuwayhid / UNESCO Institute for Lifelong Learning . - **In**: International Review of Education, v. 56, no. 2-3, pp. 299-314, 2010

ISSN 0020-8566 . - Online ISSN 1573-0638

Abstract : The American University of Beirut's Interfaculty Graduate Environmental Sciences Program was launched in 1997 as a means of addressing salient issues on the environment and development in Lebanon and the Arab World. The programme adopts a student-centred learning approach and aims to develop critical and systems thinking skills to produce socially and environmentally conscious leaders and agents of change in the Arab World. In this paper, the authors provide an evaluation of the programme's ESD dimensions using the criteria of interdisciplinarity, local relevance and competence-based learning. This is followed by a critical analysis of the programme's potential for use as a model in the Arab World. The authors found that, while the model may be useful in providing inspiration and a good practice case, its transfer to institutions of higher education in the Arab World or even in Lebanon is unlikely, and perhaps undesirable, in view of the inherently diverse nature of Arab universities.

The Methodist university sustainable program : using the earth charter to mainstream sustainability / Waverli Maia Matarazzo-Neuberger, Vicente Manzione Filho . - **In**: Journal of Education for Sustainable Development, v. 4, no. 2, pp. 271-278, September 2010

ISSN 0973-4082

Abstract : This article describes a pioneering initiative of a Brazilian university to introduce sustainability in all undergraduate curricula and in its operations. The Methodist University Sustainable Program was developed in a bottom-up way and began with the introduction of sustainability as a core value in the Institutional Political-Pedagogical Plan, followed by the creation of a Sustainability Committee and actions defined in an Education Program and Structural Diagnosis of three environmental resources: water, energy and greenhouse gas emissions. The first step of the Education Program was to establish how and where sustainability could be included within the curricula of undergraduate courses. The second step was to prepare the professors and lecturers of the identified subjects to mainstream sustainability in their curricula using the Earth Charter as a guideline. The first module of an education leadership programme was conducted and resulted in the Sustainability Academy seed. The second module is already planned and will be implemented soon.

■ Research

Data networks and sustainability education in African universities : a case study for Sub-Saharan Africa / Gregory D. Bothun . - **In**: International Journal of Sustainability in Higher Education, v. 17, no. 2, pp. 246-268, 2016
ISSN 1467-6370

Abstract : This paper provides a case study report of the development of data networks and initial connectivity in the Sub-Saharan African (SSA) region and how that development evolved into the formation of research and education (R & E) networks that enable new collaborations and curriculum potential. This case study is presented through the past 20 year's operations and field activities of the Network Startup Resource Center (NSRC) at the University of Oregon, who in partnership with the National Science Foundation has worked together to significantly train network engineers in Africa on how to develop regional R & E networks that can link together the various research universities in Sub Saharan Africa. The author shows how the development of these networks have fostered improved collaboration between African and US scientists, particularly around issues that relate to climate change. This paper contains testimonials from both scientists and on-the-ground key directors in Africa about the value of these improved networks. The expansion of regional R & E networks has allowed the Association of African Universities (AAU) to launch sustainable development as one of its new core programs over the period 2013-2017.

Reflections on interdisciplinary sustainability research with undergraduate students / Can Baran Aktas . - In: International Journal of Sustainability in Higher Education, v. 16, no. 3, pp. 354-366, 2015
ISSN 1467-6370

Abstract : This article examines experiences with involving students in initiating and conducting multiple research projects spanning engineering and sustainability. Three separate research projects are used as case studies with specific examples as to how those projects were developed. Results of the three projects indicate that faculty should not refrain from working with students from other disciplines. If successful, bringing different backgrounds and perspectives to a project enables a big picture view of problems at hand and leads to better solutions that are more in line with the three pillars of sustainability, while at the same time providing valuable hands-on experience to undergraduate students.

Climate change counts: Strengthening SADC universities' contributions to climate compatible development : Final scoping report / Southern African Regional Universities Association [SARUA] . - Johannesburg : SARUA, 2013 . - 25 p.

Abstract : This report describes the scoping stage of the SARUA Climate Change Counts project, one of the key outcomes of which is the development of a transdisciplinary research programme to address climate compatible development needs in the SADC region. The report provides an analysis of workshop design, main outcomes and learning from the scoping stage of the project from consultative workshops conducted in Namibia, Botswana, Mozambique, Swaziland and Zambia.

URL : <http://www.sarua.org/?q=publications/climate-change-counts>

Contribution des établissements d'enseignement supérieur et de recherche au développement durable et au redressement productif de la France / Conference des Présidents d'Université [CPU][France]; Conférence des grandes écoles [France] . - Paris : CPU, CGE, 2012 . - 4 p.

Abstract : This contribution to the French government *Assises de l'Enseignement supérieur et de la Recherche* in September 2012, describes research on sustainable development in higher education and research institutions.

URL :

http://www.cpu.fr/fileadmin/fichiers/Developpement_durable/VF_propositions_communes_CGE_CPU_DD_assises_V180_912_vf_2_2_revu_BP_3_.pdf

Assessing institutional frameworks of inter- and transdisciplinary research and education / Gerhard Weiss, Regina Steiner, Otto Eckmüller / International Association of Universities [IAU] . - In: Higher Education Policy, v. 24, no. 4, pp. 499-516, December 2011

ISSN 0952-8733 . - Online ISSN 1740-3863

Abstract : This paper presents a concept for analysing the bearing of institutional settings on inter- and transdisciplinary research and education for sustainable development and applies it to a concrete case example. It asks how far the funding programme requirements and the institutional project arrangements impacted on the research process and project results. The example demonstrates not only the well-known difficulties of inter- and transdisciplinary research, but also steering possibilities. The involvement of co-financing project partners and partners from schools secured the inter- and transdisciplinary project implementation. However, they also influenced the project outcomes according to their organisational interests. They prioritised economic and ecological over social issues, which in consequence limited the sustainability discourse within the project with regard to its breadth and inclusiveness. The paper concludes that the appropriate selection of research and practice partners as well as the sufficient budget, time and professional resources for inter- and transdisciplinary cooperation management, are crucial for the successful implementation of inter- and transdisciplinary research or educational projects for sustainable development.

Undertaking individual transdisciplinary PhD research for sustainable development : case studies from South Africa / John van Breda, Josephine Musango, Alan Brent . - In: International Journal of Sustainability in Higher Education, v. 17, no. 2, pp. 150-166, 2016

ISSN 1467-6370

Abstract : This paper aims to improve the understanding of individual transdisciplinary PhD research in a developing country context, focusing on three individual PhD case studies at Stellenbosch University in South Africa. They were coordinated through the TsamaHub, an inter-faculty platform at the University which organises educational modules for transdisciplinary research. Using actual research experiences and reflections of the three individual PhDs. Analysis

showed that the central challenge to individual PhD researchers is engagement with non-academic actors to enable joint problem formulation, analysis and transformation. To overcome this, the paper suggests that developing individual epistemic relationships to build “transdisciplinary epistemic communities” should be considered for inclusion as an intentional aspect of transdisciplinary research design.

■ Student engagement

Assessing students' motivation to engage in sustainable engineering / Mary McCormick, Angela R. Bielefeldt, Christopher W. Swan, Kurtis G. Paterson . - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 2, pp. 136-154, 2015
ISSN 1467-6370

Abstract : This study designed and used an assessment instrument to evaluate students' attitudes toward sustainable engineering (SE). The survey was undertaken at three diverse universities in the United States with 515 responses from undergraduate and graduate students. The survey instrument was validated and internal reliability was established. The results indicate that participation in more experiential, enriching learning experiences correlated to higher sustainable engineering self-efficacy, value and affect. A number of other variables were linked positively to sustainability beliefs, interest and affective relationship. These include extracurricular club involvement; participation in undergraduate research; participating in internships; volunteering; and academic rank. Female students possessed higher sustainability value and affect than male students, but self-efficacy was not significantly different.

Educating for sustainability in language degrees : a tale of 2 case-studies / Séverine Hubscher-Davidson, Stéphanie Panichelli-Batalla . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 404-416, 2016
ISSN 1467-6370

Abstract : This paper aims to assess language students' understanding of sustainable development issues. Study 1 surveys two cohorts of final-year language students in a university in the United Kingdom about to enter the graduate job market, and Study 2 surveys first-year language students before and after the inclusion of SD content in one of their modules. The questions to the students are provided along with qualitative and quantitative results. Results showed that only 48 per cent of language graduates are currently aware that they will need to take account of the environmental impact of their work as professional practitioners and 52 per cent do not consider it appropriate to learn about sustainable development (SD) during their degree. However, results also suggest that incorporating SD early on in the language curriculum could contribute positively to the development of sustainability literate graduates.

The sustainability literacy test : can universities be sure they are producing sustainability literate graduates? / Higher Education Sustainability Initiative . - HESI, 2014 . - 52 p.

Abstract : The Sustainability Literacy Test is a tool created by the academic community to evaluate students' knowledge of key areas of economic, social and environmental sustainability. This report, launched at the UNESCO World Conference on Education for Sustainable Development in Nagoya, Japan, 2014, details the Test and initial results of this pilot version which has been customised in 17 countries and regions and in 8 different languages.

Classmark : INT-73 HESI

URL : <http://www.comite21.org/docs/actualites-adherents/2014/sustainability-literacy-test-report---dec-2014.pdf>

Motivating students and lecturers for education in sustainable development / Karel F. Mulder, Didac Ferrer, Jodi Segalas Coral, Olga Kordas, Eugene Nikiforovich, Kateryna Pereverza . - **In:** International Journal of Sustainability in Higher Education, v. 16, no. 3, pp. 385-401, 2015
ISSN 1467-6370

Abstract : This paper aims to identify factors linked students' motivations in sustainable development education. A brief literature review is followed by a report of case studies of elective international project-based programmes in Sustainable development in Barcelona Tech (Spain), Delft University of Technology (Sweden) and Kyiv Polytechnic Institute (Ukraine). The results showed that four motivators for students that had been identified in the literature review - a sense of autonomy, a challenge of reflection on the future role, connection with others, self-fulfillment, focus on the individual learning need - could be observed in the cases of successful SD education, although to various degrees. Individual autonomy in learning was not observed, but group autonomy was present in all cases.

Assessing sustainability knowledge of a student population / Adam Twickle, Tomas M. Koontz, Kristina, M. Slagle, Jeremy T. Bruskotter . - In: International Journal of Sustainability in Higher Education, v. 15, no. 4, pp. 375-389, 2014
ISSN 1467-6370

Abstract : This article presents a tool for assessing the sustainability knowledge of an undergraduate population. It was developed within a United States higher education by using expert input, focus groups, pilot testing, and a large-scale online survey. The assessment tool can be used via a campus-wide survey or distributed at the classroom level by institutions to gauge current levels of knowledge and track changes over time, as well as assess the effectiveness of courses and curricula at meeting sustainability knowledge goals.

First-year student attitudes towards, and skills in, sustainable development / Elizabeth Bone, Jamie Agombar / The Higher Education Academy [UK] . - York : Higher Education Academy, 2011 . - 122 p.

Abstract : This is the final report from a project on student attitudes in the Higher education (HE) institutions in the United Kingdom towards, and skills in, sustainable development. The findings result from an online survey of 5,763 first-year HE students, across all four UK member nations to investigate the role of developing skills for sustainability literacy. The overall findings from this research show that sustainability concerns are significant. Additionally, where exposure to sustainable development is greatest within further education (FE) and HE, first-year students place a higher value on skills for sustainable development, believing their role in the university and the graduate workplace to be more significant. 80% of respondents believed sustainability skills are going to be important to their future employers and the majority of first-year students surveyed believe that it is the role of universities and courses to prepare them for graduate employment.

URL : http://www.heacademy.ac.uk/assets/York/documents/ourwork/sustainability/FirstYearAttitudes_FinalReport.pdf

Student engagement with sustainability : understanding the value-action gap / Gareth Chaplin, Paul Wyton . - In: International Journal of Sustainability in Higher Education, v. 15, no. 4, pp. 404-417, 2014
ISSN 1467-6370

Abstract : This paper presents the findings of research that aimed to determine what university students living in student halls of residence in the UK understand about the concept of sustainable living. The research was carried out using semi-structured interviews and focus groups. The results found that students believed sustainable living to be important, yet levels of understanding were very low and there appeared to be a wide value-action gap. Reasons for this are varied; however, there was a very strong association between sustainable living and recycling, which saw the lack of adequate recycling facilities as a significant barrier to sustainable living. There were also issues around a lack of information, cost and respondents' flatmates as further barriers. However, the most significant barrier was the displacement of responsibility for sustainable living to other people or organisations.

Commitment to environmental sustainability in the UK student population / D.R.E. Cotton, Ian Alcock / Society for Research into Higher Education [SRHE][UK] . - In: Studies in higher education, v. 38, no. 10, pp. 1457-1471, December 2013
ISSN 0307-5079 . - Online ISSN 1470-174X

Abstract : Although environmental sustainability is the most frequently identified of the three pillars of sustainability (social and economic sustainability being less widely understood), there has been little previous research which has explored the relationship between university attendance and commitment to environmental sustainability. This article presents the results of an analysis of data from the British Household Panel Survey (BHPS), which compared young adults at UK universities with other respondents of a similar age in order to explore this relationship. Commitment to environmental sustainability was measured on a scale developed from seven questionnaire items, and the relationship between university attendance and subsequent scale scores was examined. Results show that university attendance has a significant positive association with commitment to environmental sustainability over other adult transition pathways, including participation in other forms of full-time education, when gender and social class are taken into account and when prior educational attainment is held constant. Thus, the authors argue that UK universities may have a desirable impact on environmental commitment, and explore possible explanations for these findings.

The myth of the 'green student' : student involvement in Australian university sustainability programmes / L. But, E. More, G. C. Avery / Society for Research into Higher Education [SRHE][UK] . - In: Studies in higher education, v. 39, no. 5, pp. 786-804, June 2014
ISSN 0307-5079 . - Online ISSN 1470-174X

Abstract : The paper questions the prevalence of 'green students' and their impact on decision-making in sustainability programmes in Australian universities. While the universities studied provide numerous opportunities for student involvement in sustainability programmes, comparatively few students actually become involved, making student impact on decision-making in these programmes low. University employees are the primary drivers of university sustainability programmes, with the 'green student' not highly visible in these universities. The paper concludes by suggesting that all four universities in the sample could enhance their sustainability programmes by adopting a more evidence-based understanding of student attitudes towards sustainability. [Abstract from publisher]

■ Sustainability evaluation and reporting

Higher education institution sustainability assessment tools : considerations on their use in Brazil / Heloisa Cronemberger de Araújo Góes, Alessandra Magrini . - In: International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 322-341, 2016
ISSN 1467-6370

Abstract : This paper proposes a sustainability assessment tool (SAT) to be used in higher education institutions (HEIs) in Brazil and the related program to be created for SAT dissemination and monitoring, publication of results and benchmarking. The characteristics of eight sustainability assessment tool were identified, seven of which are applied through widely known international programmes to identify aspects to be considered in the definition of the Brazilian model. This paper provides a base on which to construct SAT and program models tailored for Brazil.

The application of a resilience assessment approach to promote campus environmental management : a South African case study / Irene Muller, Johann Templehoff . - In: International Journal of Sustainability in Higher Education, v. 17, no. 2, pp. 228-245, 2016
ISSN 1467-6370

Abstract : This paper outlines the benefits of using resilience assessment to evaluate sustainable campus environments. It details a case study at a university campus in South Africa on the Vaal River. The campus is situated in a nature reserve with various animal and plant species which share the campus habitat with students and university staff. An exploratory mixed-method design was followed for the project. During the first qualitative phase, a historical timeline of the focal system was created. In the quantitative phase, the resilience assessment guided the investigation. Data was gathered from reviewing documents, semi-structured interviews, observations and the systematic implementation of the resilience assessment approach. The authors conclude that the resilience assessment approach enables the environmental status of university campuses to be considered relevant to the local community and immediate environment. Knowledge of the finite resources and their capacity in the context of the social-ecological system may increase the resilience of a campus.

The comprehensiveness of competing higher education sustainability assessments / Graham Bullock, Nicholas Wilder . - In: International Journal of Sustainability in Higher Education, v. 17, no. 3, pp. 282-304, 2016
ISSN 1467-6370

Abstract : The paper uses an evaluation framework (the GRI-HE) consisting of criteria developed by the Global Reporting Initiative and the Association of University Leaders for a Sustainable Future to analyse the comprehensiveness of nine publicly-available frameworks that have been used to assess higher education institution sustainability. While finding that in general these assessments are not comprehensive and particularly lack coverage of the social and economic dimensions of sustainability, the paper identifies the Pacific Sustainability Index and Sustainability Tracking and Assessment Rating System (STARS) as the most comprehensive assessments in the sector. The analysis highlights areas where each HEI sustainability assessment framework can add criteria and improve their comprehensiveness and validity. Future research should explore the causes and relative importance of the gaps in these frameworks.

Evaluating sustainability education : lessons from international development experience / Peter H. Koehn, Juha I. Uitto . - In: Higher Education, v. 67, no. 5, pp. 621-635, May 2014
ISSN 0018-1560 . - Online ISSN 1573-174X

Abstract : This article presents a framework for assessing higher-education curricular, research, and community-outreach programmes devoted to sustainability. The evaluation framework links process, outputs, outcomes, impacts, and continuous programmatic improvement. It engages three core purposes: management evaluation, capacity- and

capability-development evaluation, and sustainability evaluation. Evaluation criteria adapted from an assessment of UNDP contributions to national development are embedded into the framework. Examples of sustainability evaluation approaches used by universities in Europe, Japan, and the United States are outlined and graduate competencies from sustainability programmes are identified.

Stars quarterly review : the role of institutional diversity [Whole Issue] / Association for the Advancement of Sustainability in Higher Education [AASHE] . - Fall 2012

Abstract : This edition of Stars quarterly review highlights case studies in higher education institutions which deal with institutional diversity and how it impacts sustainability performance. The case studies are taken from the participant higher education institutions in the USA and Canada who participate in the Sustainability tracking, assessment and rating system (Stars) framework.

URL : http://www.aashe.org/files/documents/STARS/sqr_fall_2012-final.pdf

A methodology for sustainability evaluation and reporting in higher education institutions / Ana C. Madeira, Maria Antonia Carravilla, José F. Oliveira, Carlos A. V. Costa / International Association of Universities [IAU] . - **In:** Higher Education Policy, v. 24, no. 4, pp. 459-479, December 2011
ISSN 0952-8733 . - Online ISSN 1740-3863

Abstract : The purpose of this paper is to present a methodology that allows higher education institutions (HEIs) to promote, evaluate and report on sustainability. First, a model entitled Sustainability in Higher Education Institutions (SusHEI) that generally describes and characterizes the functioning of an HEI was defined. SusHEI takes into account the core activities of any HEI (education and research), its impacts at economic, environmental and social levels, and the role of its community. SusHEI allowed for the establishment of internal dimensions interrelated to the functioning of an HEI. Then, a matrixial representation of the model was developed. The matrix crosses internal dimensions (and eventually sub-dimensions) with sustainability dimensions (and eventually sub-dimensions) and it is quantified through indicators. There is a wide range of possible sustainability indicators that can be chosen, depending on the purpose and the public to whom the indicators/reports are addressed. The methodology is illustrated by a case-study — the Faculty of Engineering of the University of Porto (FEUP) (Portugal).

An integrated decision-making framework for sustainability assessment : a case study of Memorial University / Bushra Waheed, Faisal Khan, Brain Veitch, Hawboldt / International Association of Universities [IAU] . - **In:** Higher Education Policy, v. 24, no. 4, pp. 481-498, December 2011
ISSN 0952-8733 . - Online ISSN 1740-3863

Abstract : This article presents an overview of the sustainability initiatives at the St. John's campus of Memorial University in Newfoundland and Labrador (Canada). The key initiatives include setting a realistic goal for energy efficiency, becoming carbon neutral, and conducting various research and outreach projects related to sustainability. As sustainability initiatives are relatively new, many recommendations have been made including: the integration of sustainability efforts across campus and lobbying networks in the Atlantic Region with other institutions and to leverage current assets into further opportunities for research, teaching and institutional development in the Atlantic Region. For developing a more robust and integrated decision-making, a tool based on driving force-pressure-state-exposure-effect-action framework and multi-bottom line approach is introduced. Various aspects of this framework are demonstrated through examples.

Sustaining change on a Canadian campus : preparing Brock University for a sustainability audit / Richard C. Mitchell . - **In:** International Journal of Sustainability in Higher Education, v. 12, no. 1, pp. 7 - 21, 2011
ISSN 1467-6370

Abstract : An inductive, qualitative approach was undertaken with data comprised of analyses of key stakeholder interviews, a review of literature, and a systematic collation of campus-based sustainability initiatives taking place in 2008 - 2009. The Results showed that even smaller and mid-size Canadian campuses with limited budgets can successfully move forward with sustainability initiatives in multi-systemic, synergistic partnerships that cross-professional and disciplinary boundaries. While most of the sample of interviewees in this exploratory study agreed to be involved in current and future sustainability initiatives, interestingly, there were also concerns that discovery of any negative findings could cast a shadow on "green" efforts already underway. The findings also indicate a number of leading edge initiatives taking place at Brock University including a co-generation power plant, and "green" construction of new buildings as well as those in the planning stages. Without a formal governance structure or a common theoretical framework in place, a

broad spectrum of definitions on “sustainability” from key stakeholders was found ranging from an environmental focus to those based solely upon economics, and a combination of the two. The absence of any systemic, coordinated and comprehensive approach on the university's main campus was the main negative finding – one that previously hampered growth of synergistic partnerships.

The state of sustainability reporting in universities / Rodrigo Lozano . - **In:** International Journal of Sustainability in Higher Education, v. 12, no. 1, pp. 67 - 78, 2011
ISSN 1467-6370

Abstract : This study reports on the performance level of 12 universities sustainability reports using the Graphical Assessment of Sustainability in Universities tool. The results show that sustainability reporting in universities is still in its early stages (both in numbers of institutions reporting and in level of reporting) when compared to sustainability reporting in corporations. The author suggest that universities could learn from the experiences of corporate sustainability reporting efforts, and incorporate them into their efforts as learning organisations to better align their systems with sustainability.

Transformative learning : innovating sustainability education in built environment / Usha Iyer-Raniga, Mary Myla Andamon . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 1, pp. 105-122, 2016
ISSN 1467-6370

Abstract : This paper reports on the ProSPER.NET project undertaken to integrate sustainability thinking and practice into engineering/built environment curricula in Asia-Pacific universities. The project drew from the experiences of academics in built environment programmes and espoused a collaborative inquiry process wherein the role of the industry was vital. A literature review focusing on sustainability integration into curricula was followed by a workshop which brought together academic and industry participants. The authors noted the slow progress of integration of sustainability in the built environment curricula, despite the general direction of education for sustainability towards integration and innovation. They suggest that this may be due in part to the outcome/practice-led approach of built environment education, which is the hallmark of the discipline and lends to a largely discipline-based curriculum framework.

Values as a bridge between sustainability and institutional assessment : a case study from BOKU University / Maria Miguel Ribeiro, Elona Hoover, Gemma Burford, Julia Buchebner, Thomas Lindenthal . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 1, pp. 40-53, 2016
ISSN 1467-6370

Abstract : This paper examines the use of values-focused assessment for integrating sustainability and institutional performance assessment in universities. It provides results of questionnaires and a workshop to evaluate a pilot project at BOKU University, Vienna. The results indicate that many of the values held by university staff and students are pro-sustainability values. The authors suggest that starting from these values may be a useful way of engaging university stakeholders in sustainability dialogues. The paper illustrates how values-based indicators can be integrated into university performance assessments.

■ Teacher education

Enhancing sustainability curricula through faculty learning communities / L. W. Natkin, Tammy Kolbe . - **In:** International Journal of Sustainability in Higher Education, v. 17, no. 4, pp. 540-558, 2016
ISSN 1467-6370

Abstract : This paper reports findings from an evaluation of sustainability faculty fellows (SFF) programme in a university in Vermont, USA. It discusses how utilisation-focused programme evaluation is an important tool for developing and improving sustainability-focused faculty learning communities. The programme aims to enhance sustainability education by bringing faculty members together to expand their knowledge of sustainability concepts and offer pedagogical support for integrating those concepts in higher education curricula. The evaluation's findings suggest that the programme expanded faculty understanding of sustainability concepts, encouraged curricular and instructional reform and made progress toward developing a community of faculty interested in sustainability education. The evaluation's utilisation focus was instrumental in providing useful information for improving the programme.

Experiential learning for sustainability leadership in higher education / Emma Savage, Tara Tapics, John Evarts, Jeffrey Wilson, Susan Tirone . - In: International Journal of Sustainability in Higher Education, v. 16, no. 5, pp. 692-705, 2015

ISSN 1467-6370

Abstract : This article describes key design elements of a sustainability leadership certificate programme for undergraduate from various disciplines. The programme was framed around five key sustainability competencies which were tested in 32 participants using a pre/post self-assessment. The results indicate that the programme participants were generally motivated by the programme's experiential format and supportive community. They felt that they had improved their confidence and competence in the key sustainability competencies. Three themed clusters, community, future and personal development, emerged from the participants' open-ended responses. This supports the programme design and can inform further programme development. The authors note that the importance of the third theme, personal development, as it is not a typical focus of sustainability in higher education, but held high importance to participants.

Mapping opportunities for professional development of university educators in Education for Sustainable Development : a state of the art report across 33 UE4SD partner countries / M. Mader, D. Tilbury, J. Dlouhá, J. Benayas, G. Michelsen, C. Mader, S. Burandt, A. Ryan, A. Barton, J. Dlouhý, D Alba . - Cheltenham : University of Gloucestershire, 2014 . - 53 p.

Abstract : This report has been developed as part of a three-year project entitled University Educators for Sustainable Development (UE4SD), funded by the European Commission. It captures recent efforts across Europe to support the development of education for sustainable development (ESD) competences of university educators. The aim is to draw on best practices, new initiatives, and usable tools for professional development in ESD for university educators.

URL : http://www.ue4sd.eu/images/2014/UE4SD_State-of-the-art-report_FINAL.pdf

Sustainable consumption : a teaching intervention in higher education / Pedro Alvarez-Suarez, Pedro Vega-Marcote, Ricardo Garcia Mira . - In: International Journal of Sustainability in Higher Education, v. 15, no. 1, pp. 3-15, 2014

ISSN 1467-6370

Abstract : This paper aims to analyse a teaching strategy designed to increase the awareness of trainee teachers and educate them with regard to sustainable consumption. Ninety-four trainee teachers in the University of A Coruña (Spain), enrolled in the subject "teaching environmental education" were assessed on their knowledge of the environmental impacts of consumerism, their attitudes to sustainable consumption and their behavioural intentions before (pre-test) and after (post-test) the teaching intervention took place. Statistical analysis of the results obtained revealed that subjects increased their knowledge of the social and environmental impacts of consumerism, became more aware of the need to take action in this regard, and developed behaviours oriented towards a sustainable model of consumption.

The status of education for sustainability in initial teacher education programmes : a Canadian case study / Thomas Falkenberg, Gary Babiuk . - In: International Journal of Sustainability in Higher Education, v. 15, no. 4, pp. 418-430, 2014

ISSN 1467-6370

Abstract : Education for sustainability is one of the five Priority Action Areas of the Ministry of Education in Manitoba, Canada. This study examined sustainability education in teacher education in the province, drawing on both online information of all initial teacher education programmes (data from 2009-2010) and interviews with a sample of deans and associate deans. The results showed that there was no systematic and focused preparation of teachers for education for sustainability in any of the Manitoba teacher education programmes. Three challenges for mainstreaming of education for sustainability are identified: lack of leadership, an unfavourable view of the role of education for sustainability and the silo-ing within faculties of education.

Malaysian teacher trainees' practices on science and the relevance of science education for sustainability / Subadrah Madhawa Nair, Abdul Rashid Mohamed, Nagamah Marimuthu . - In: International Journal of Sustainability in Higher Education, v. 14, no. 1, pp. 71-89, 2013

ISSN 1467-6370

Abstract : This paper investigates the practice of teacher trainees on science teaching and its relevance to understanding science education in a sample of 80 teacher trainees, majoring in Science Education, from a teachers training institute in Malaysia. The teacher trainees were asked to complete a set of questionnaires on the relevance of their content knowledge of science to Science Education; the application of student's home culture in classroom science; and in ethical education in classroom lessons. The results showed gender differences between the teacher trainees: the female trainees' practice of science and Relevance of Science Education (ROSE) are significantly higher than their male counterparts. However, there was no significant difference between the male and female trainees on their practices of students' home culture applied in classroom science and applying ethical education in teaching science. The authors suggest that there is a need to bring in students' home culture into the teaching and learning of science.

Education for sustainable development in Canadian faculties of education = L'éducation en vue du développement durable dans les facultés d'éducation au Canada / Canada. Council of Ministers of Education . - Toronto : CMEC, 2012 . - 120 p.

Abstract : This report analyses how Education for Sustainable Development (ESD) is expressed and taught and proposes suggestions for moving forward.

URL : http://www.cmec.ca/Publications/Lists/Publications/Attachments/279/ESD_Dean_reportEN.pdf (English) ; http://www.cmec.ca/Publications/Lists/Publications/Attachments/279/ESD_Dean_reportFR.pdf (French)

Education for sustainable development for changing the climate of teacher education to address sustainability / UNESCO Office Jakarta and Regional Bureau for Science in Asia and the Pacific . - Capacity Development of Teacher Education Institutions (TEIs) of Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste in Reorienting Teacher Education to Address Sustainability, Jakarta, 2010 . - Jakarta : UNESCO Office Jakarta, 2011 . - 181 p., illus. (Electronic version) . - ISBN 978-602-98372-5-4

URL : <http://unesdoc.unesco.org/images/0021/002152/215227e.pdf>
