



An International Review of Sustainability in Higher Education Studies: A Messy Concept with Contradictory Attitudes

SUMMARY

1 INTRODUCTION

Evolution of Environmental Education concept - “Decade” (UN)

EE, ESD, EfS, ... SHE

The reaching to SHE concept and attributes

2 QUESTION - OBJECTIVES

What is the scenary of SHE around the world – according to academic research?

3 METHOD

Exploratory – Bibliographic - Explanatory

4 MAIN RESULTS

There are leading countries, main issue is the view of students and pedagogical practices on sustainability

5 CONCLUSIONS

Gap between knowledge and attitudes, sustainability as messy concept.



1 INTRODUCTION

Environmental Education (EE) is “a process of understanding and clarifying the value of the environment and the relevance of environmental resources with a view to encouraging people to use such resources in a more sustainable way” (Holt, 2003: 324).

EE arose in the 60's focused on natural environment.

It evolved to other forms as Environment for Sustainability (EfS), which embraced “cultural, environmental, health, peace, social justice, scientific and technological dimensions of any given problem” (Christie *et al.*, 2013: 387).



1 INTRODUCTION

Another concept is Education for Sustainable Development (ESD), as a learning and literacy concept to support action on, through, and for environment (Ellis and Weekes, 2008).

the United Nations

Sustainability in Higher Education (SHE), as a broader form of linking education and sustainability, has blossomed when the UN launched the Decade of Education for Sustainable Development, embracing the years from 2005 to 2014.



1 INTRODUCTION

What is SHE?

- Represents a comprehensive and complex set of plans and initiatives for promoting environment in teaching, learning, and community values.
- It involves institutional context - universities and their management board for “greening the campuses” - and
- educational actors - students, teachers, community stakeholders.
- SHE represents the incorporation of sustainability in
- all policies, especially in the educational system (Kagawa, 2007; Ellis and Weekes, 2008; Christie *et al.*, 2013; Breunig *et al.*, 2014; Christie *et al.*, 2014).



1 INTRODUCTION

What is SHE?

- SHE embraces actions and reflections about
- academic community responses to sustainability challenges, involving curricula addressed to a
- transition society, teachers and students initiatives in this field, inside and outside campuses, mainly
- with community participation, as well as institutional movements for “greening the campuses and/or
- the curricula” (Evangelinos *et al.*, 2009).



2 QUESTION - OBJECTIVES

- What is the scenery of SHE around the world – according to academic research?

OBJECTIVES

To review practical research that unveils:

how academics (including students) understand sustainability;

to what extent they can be considered literate in this subject;

whether their attitudes match their beliefs;

what are the main pedagogical practices on sustainability;

what are the roles of universities on sustainability – *greening the campuses?*



3 METHOD

- Exploratory and explanatory study
- Systematic, bibliographic review

Key words – “sustainability” and “higher education”

2000- 2014

Data bases: Scopus/Science Direct, Web of Knowledge, Emerald, and Taylor & Francis

137 articles were found, and 26 were selected because they contain practical research.



4 MAIN RESULTS

Year	N of studies	Author(s)
2003	1	Holt (England)
2006	4	Bremerand López-Franco (Mexico); Ramirez (Australia); Stir (Australia); Velazquez et al.(Mexico).
2007	2	Kagawa (England); Murray and Murray (England).
2008	2	Carew and Mitchell (Australia); Ellis and Weekes (England).
2009	2	Erdogan and Tuncer (Turkey); Qablan et al.(Jordan).
2010	2	Davidson et al. (U.S.); Desha and Hargroves (Australia).
2011	2	Kitamura and Hoshii (Japan); Mingue et al. (Spain).
2012	3	Glasse and Haile (England); Richter and Schumacher (Germany); Wright and Wilton (Canada).
2013	5	Christie et al. (England); Mintz and Tal (Israel); Shephard and Furnari (New Zealand); Yuan and Zhuo (China); Zsóka et al.(Hungary).
2014	3	Breunig et al. (Canada); Christie et al. (England); (Zsóka et al. (Hungary)
Sum	26	

Selected studies



4 MAIN RESULTS

- England and Australia are the top countries in SHE research.
- Main types of studies:

Survey	15
Experimental	4
Multiple case	2
Interviews	2
Delphi	1
Focus group	1
Theoretical and experim.	1



4 MAIN RESULTS

Identified constructs	Freq.
Students' views on sustainability	12
Students' literacy	4
Students' attitudes	5
Pedagogical practices	12
Universities' roles	2

Investigated issues in the studies



4.1 MAIN RESULTS – Students' view on sustainability

- Twelve studies investigated the view of higher education students on sustainability.
- Business students were more inclined to see sustainability as social justice and commitment with future generations than social sciences students (Holt, 2003).
- Glassey and Haile (2012) identified concern on professional future as the reason for a sustainability perspective.
- In all these cases (Holt, 2003; Bremer and López-Franco, 2006; Ellis and Weekes, 2008; Erdogan and Tuncer, 2009; Glassey and Haile, 2012), practical perspective means the way sustainability is
- understood in students' mental models.



4.1 MAIN RESULTS – Students' view on sustainability

Noticeable:

high level of knowledge does not mean more inclination towards environmental change, because university students have shown a superior standard of awareness on sustainability, but secondary school students were regarded as being more inclined to adopt pro-environmental behavior (Zsóka *et al.*, 2013).



4.2 MAIN RESULTS – Students' literacy on sustainability

- Few studies specifically address students' literacy on sustainability, because it is difficult to capture to what extent formal and informal knowledge about this issue can be translated into skills and abilities to face sustainability problems.

For instance, in a survey by Zsóka **et al.** (2013) of **2,998 students** from 70 universities of 23 countries, 52.1% have shown awareness of the need for consumption patterns change, but **they do not tend to change significantly their own consumption levels.**



4.3 MAIN RESULTS – Students' attitudes on sustainability

- Zsóka *et al.* (2013) also found an escalation of commitment with the idea that EfS brings positive attitudes in university students but most of them keep such commitments only in discourse, because when it comes to practice, they tend to stay in their own comfort zone, avoiding any actual reduction in consumption levels. Based on the broad scope of the research across 70 universities from 23 countries and 2,998 respondents, this is a compelling finding.
- It matches the results of the Breunigs *et al.* (2014) study, according to which students sense they can make a difference for sustainability, although they refrain from action when it demands personal efforts, or brings costs, or defy self-convenience



4.4 MAIN RESULTS – Pedagogies on sustainability

- There were identified pedagogies in 12 of the 26 studies.
- Preferential pedagogies are practical – conference attendance, project building participation and self-learning (Ramirez, 2006; Christie *et al.*, 2014).
- Kitamura and Hoshii (2010) observed that students lack practical tasks and interdisciplinary collaboration at under and post graduation programmes.
- In the case of pedagogies addressed to university professors, the situation is poorly investigated. Mingue *et al.* (2011) conducted research with 331 teachers which indicates that 25% are unaware of what they are doing.



4.5 MAIN RESULTS – Universities roles' in SHE

- In the selected articles, there were identified only two studies about the role of universities in fomenting SHE.
- Evangelinos *et al.* (2009) conducted - personal interviews with 155 students – their results show a balance between students that think universities' roles should be awareness stimulators (43.9%) and those that think they should be environmental management promoters (41.9%).
- Davidson *et al.* (2009) – is more assertive on the need for
- curricula reformulation in order to incorporate sustainability in regular under- and postgraduate courses.



5 CONCLUSIONS

- SHE is a complex field that involves theoretical and practical actions and reflection for society's transitions from both, concrete-instrumental, and cognitive-formative places of higher education institutions.
- There is a gap between knowledge and attitudes of students: they usually declare awareness and knowledge about the need for changing behaviour for a better society, but tend to stay in their own comfort zone of no change.
- In terms of pedagogy, practical studies are preferred to theoretical.
- There is need for universities to claim themselves means for organising their action with communities and, internally, to integrate curricula and academic activities.



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