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Exploring the current position of ESD in UK Higher Education Institutions

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Abstract

The purpose of this paper is to consider the position of education for sustainable development in the UK Higher Education (HE) sector with respect to the Quality Assurance Agency and Higher Education Academy Guidance for ESD. By means of a mixed-method approach underpinned by a concurrent triangulation design strategy, this research presents evidence from an online questionnaire survey and in-depth semi-structured interviews. Insights are presented from case studies of a group of UK HEIs which have made significant progress in embedding ESD in the curricula. Central to this study is an exploration of the ESD integration process of this group including a description of the approaches to integration, the challenges faced and overcome, and the critical success factors. It examines the role of a guidance instrument in simplifying and accelerating the ESD curricular integration process. The results of the study show that there is a multitude of integration approaches applied varying in their emphasis. The main challenge HEIs face is engaging staff that may question the relevance of the ESD concept, and that lack an understanding regarding its implications for their discipline. Critical success factors identified are: institution-wide people support, high-level institutional support, and funding. The QAA and HEA guidance has successfully supported HEIs in developing their ESD commitments. The results of this research can support HEIs in developing their own approach to ESD as they learn from similar UK higher education providers, particularly with respect to overcoming barriers and enhancing critical success factors to ESD curricular integration.

Keywords: Education for Sustainable Development, Higher Education, QAA and HEA Guidance, Curriculum, Integration

Introduction

The higher education sector is an increasingly competitive global marketplace that focusses on recruiting prospective staff and students to maximise revenue by pro-actively marketing the institution (Pucciarelli and Kaplan, 2016; Hannover Research, 2014). Universities and colleges attract prospective students and staff by highlighting those characteristic features that give them a competitive advantage i.e. their strengths, ambitions, values and quality of the student experience (Chapleo, Carrillo Durán, and Castillo Díaz, 2011), and by adjusting the marketing strategy to tailor to the prospective students' and employees demands (Brown, 2011). In recent years, sustainability has become one of the expectations of current and prospective students. According to the sixth annual NUS Sustainability Skills survey, increasingly UK students expect their institution to demonstrate the sustainability of their operations and to provide education for sustainable development (NUS, 2016). In addition, studies suggest that an employee's choice of prospective employer is influenced by their perception of an organisation's sustainability impact and corporate social responsibility efforts (Bustamente and Brenninger, 2013; see Kim and Park, 2011; Lin *et al.*, 2012). With the annual publication of the People & Planet university league table, which ranks UK universities and colleges on environmental and ethical performance, the pressure to be considered an environmentally-sound institution has increased (People and Planet, n.d.). It can be assumed that these trends have made it important for higher education institutions to demonstrate and showcase their sustainability credentials. This paper explores the extent to which this expectation is valid for the integration of sustainability in curricula.

ESD growth and stagnation

Education has a significant role to play in guiding society towards a sustainable future by shaping pupils and students into adults who will be conscious of their stance within the planet's system, take responsibility for their lifestyles, and attempt to design society in a way that it will nurture a healthy human-nature relationship. It can be argued that the current education system is failing to prepare students for the intricacies and challenges of the 21st century and is in fact creating graduates who go into society living and promoting highly unsustainable ways of living (Everett, 2008; Armstrong, 2011; Mochizuki and Fadeeva, 2010). Higher education institutions have addressed this issue, which is reflected in the growing number of institutions that are integrating sustainability into their institutional strategies, are signing declarations and statements of commitment to ESD, put effort into reducing the negative impacts of the estate, and offer sustainability courses and degrees (Wals, 2014; Karatzoglou, 2013; Ramos *et al.*, 2015). Whilst this is welcomed, the number of HEIs integrating ESD in the curricula is, however, limited (Lozano *et al.*, 2013; Yarime and Tanaka, 2012; Tilbury, 2011, Longhurst *et al.*, 2015; Tierney *et al.*, 2015; Wyness *et al.*, 2015). For the vast majority of HEIs their efforts start and finish with enhancing the sustainability of the estate with little or no attempt to influence the curriculum. Yet the largest sustainability impact an HEI will have is its graduates who typically will have some 60 years of life post-graduation. The sustainability knowledge, skills and attributes developed at university will influence the graduate's lifetime sustainability impacts.

This inability or reluctance of HEIs to enhance the sustainability of the curriculum could be attributed to different factors of which one is a changing landscape of policy drivers and a decline in sector support. The UK government and higher education bodies have been instrumental in supporting the integration of sustainability into the higher education sector through policy emphasis on ESD and through setting up sustainability initiatives i.e. the Students Green Fund encouraging students' unions to become active in sustainability activities supported by HEFCE, the Green Academy Programme set up by the Higher Education Academy to encourage HEIs to develop student engagement, curricula and pedagogic innovations, and support for institutional engagement in sustainability of the campus by the funding councils for England, Scotland and Wales (UK National Commission for UNESCO, 2013; HEFCE, 2013; HEA, n.d.). In the past years, these stakeholders have been struggling to deliver support in the same capacity, having to operate in a resource-constrained environment. There has not been a third round of the Green Academy Programme and even though HEFCE published the 2014 sustainability framework, it appears to have stepped down from being a strong leader in ESD integration (HEFCE, 2014).

In addition to the withdrawal of support from key stakeholders, there are a number of barriers to embedding ESD in higher education. Tilbury (2011) argues, the systemic complexity regarding ESD integration '*challenges university silos, corridors of power, and criteria and processes of decision-making*'. Gale (2015) adds that there are four impediments to embedding ESD:

1. *Contestation over sustainability*; which challenges universities to seek a coherent approach to operationalisation
2. *Intra- institutional fragmentation*; which has made interdisciplinarity difficult
3. *Academic capitalism*; where higher education is refocussed to drive economic competitiveness and capital accumulation through competitive funding models for student recruitment, quality assurance frameworks to underpin league tables, and research priorities which serve the neoliberal agenda

4. *Cognitive predispositions*; where institutions prompt staff to focus on economic and political interests, which leads them to be less inclined to think critically and question the unsustainable economic system

Thomas (2004) provides a more detailed analysis of the barriers to change, which are presented in figure 1. While some of the barriers might be less challenging today, the majority are issues that the literature and surveys highlight as problematic nationally and internationally.

List of barriers to curriculum change
Sustainability is too abstract or too broad
Sustainability lacks a scientific basis
Misconceptions related to sustainability
Institutions have no staff to work on sustainability
A lack of incentives and information on environmental issues
A lack of financial and organisational resources
A lack of staff training and development support
A lack of expertise and tradition
A lack of interest and commitment amongst administrators, students and staff
A clashing with the predominant university culture and organisational structures
Benefits of change are unclear or invisible

Figure 1: List of barriers to embedding ESD

Thomas (2004) has also identified barriers that relate to the academic specifically. First, academics may lack knowledge about the environment, about where and how to obtain relevant information, and how to link it to their discipline. Additionally, they tend to feel uncomfortable working across disciplines, feel unsupported and unrewarded, express concerns about the appropriateness and complexity of integrating –what is in their perception- a purely environmental understanding in existing programmes, and feel overwhelmed by the increasing calls on their time for administrative, research and discipline related matters.

The above-mentioned barriers have serious implications on the integration of ESD in the curricula of higher education institutions. Nonetheless, there are universities and colleges that can demonstrate their ability to implement sustainability across the institution. In which ways did they adopt and implement ESD? Which factors have been key in driving change? Sterling and Thomas (2006) suggest that there are four levels and types of responses to the adoption and implementation of ESD. The first response is denial, which implies there is no change. The second response is a 'bolt-on' approach also called '*education about sustainability'*, which reflects the change in the content of education. The third response is a 'build-in' approach named '*education for sustainability*', which focuses on changing pedagogy and learning vision (Hofman, 2012). Curriculum redesign is the final implementation response. Lozano (2010) has found four approaches that would fit within Sterling and Thomas' bolt-on approach; (1) limited coverage in an existing module, (2) specific sustainable development modules, (3) discipline-oriented modules with integrated sustainability topics, and (4) sustainable development as an optional specialisation within courses. Similarly, Barth and Timm (2011) highlighted four forms of integration, namely; the inclusion of sustainability-related topics in conventional learning settings, the adoption of new learning approaches, the development of independent courses, and integration in existing

curricula. Others have attempted to explain what distinguishes the successful institutions from those that have to deal with resistance. Cotton (2006) remarks that staff support and uptake is essential for the implementation of curriculum guidance. According to De La Harpe and Thomas (2009), the critical success factors for introducing ESD are: developing guiding policy, engaging stakeholders, having a support system for staff, and ensuring ongoing communication. They argue that interaction, communication and leadership are essential preconditions.

Considering both the barriers that HEIs face and the driving factors that could help facilitate the transition, to what extent have UK higher education providers integrated ESD into curricula? Fiselier and Longhurst (in press) examined the representation of ESD in HEI web environments by exploring the presence, extent or absence of reference to the guidance on ESD published by the Quality Assurance Agency for Higher Education (QAA) and the Higher Education Academy (HEA). A systematic web-based analysis was performed on the websites of 139 higher education institutions. Of these, 120 institutions provided information about estate sustainability, 82 provided general information on ESD, whilst only 16 institutions reported about their use of the QAA and HEA guidance for ESD. This study set the stage for researching the extent to which sector wide interventions, i.e. the guidance, are effective in supporting and possibly driving the integration of ESD in curricula across universities and colleges, and indeed in finding out what is required to make this change happen.
The purpose of the QAA and HEA guidance for ESD is to help higher education institutions with training sustainability literate graduates to become environmentally and ethically responsible individuals. The guidance supports educators in embedding ESD in curricula in order to enhance knowledge, understanding and awareness of sustainable development among students by addressing four core themes (QAA and HEA, 2014):
   •global citizenship,
   •environmental stewardship,
   •future thinking,
   •social justice, ethics & well-being

This paper extends beyond the digital realm and presents research on current practice at UK higher education institutions. It explores the distinguishing features of 16 institutions, which have made significant progress in embedding ESD within curricula, from the rest and by doing so identifying the challenges HEIs might face and identifying the factors which encourage institutions to integrate ESD into their educational offer.

Methods
The approach used for this research is a mixed-method approach underpinned by the philosophical worldview pragmatism. Applying a pragmatist position involves emphasising the research problem by using pluralistic approaches to provide the best solution to the problem and focusses on application, instead of methods (Creswell, 2014).
The mixed method approach comprises of both quantitative and qualitative methods, which are a structured online questionnaire survey, and semi-structured interviews. The quantitative method was aimed at providing a sectoral analysis of the UK higher education sector, whilst the qualitative method was deployed for a more in-depth investigation of a small sample of HEIs. More specifically this study has used the mixed method design strategy: concurrent triangulation. The design strategy is characterised by application of quantitative and qualitative methods to collect data simultaneously. The motivation for using this strategy is to be able to address the research questions through verification and cross-validation of the

results of two datasets (Mengshoel, 2012).

The online survey questions were created to provide insight on the adoption and implementation of the QAA and HEA guidance and ESD more broadly, and to identify factors that could enhance or undermine adoption and implementation. Questions about embedding in policy and practice were incorporated. Additionally, care was taken to follow the guidance document in highlighting the four core themes and the teaching approaches (QAA and HEA, 2014). For reference see Figure 2 below. A pilot test was undertaken to ensure that any ambiguity in the questions could be rectified. The sample population was identified from the recognised bodies list by Gov.uk, which includes 159 higher learning institutions that can award degrees. The institutional websites of all HEIs have been reviewed. A small number of highly specialised institutions (e.g. Music Conservatoires) provided little or no SD or ESD information on the institution's website and consequently were removed from the study population. Another 31 institutions were disregarded, because of missing and incorrect contact details. The questionnaire was distributed by email to the deputy-vice-chancellor academic or the pro-vice-chancellor teaching and learning of 108 institutions with the expectation that the senior staff recipient would respond. The overall response rate was 17% indicating, amongst other things, that the expectation of a widespread response from senior staff was not forthcoming. It is likely that because of workload issues the request was forwarded to another party or the request resided unanswered in an inbox.

For more in-depth research semi-structured interviews were conducted with representatives of a selection of six higher education providers; Abertay University, Keele University, Plymouth University, the University of Sheffield, the University of Southampton, and the University of Worcester. The aim was to select cases in which progress with integrating ESD had been made and whose experiences in overcoming institutional barriers might be useful examples for other to consider. Institutions that contributed to the guidance document were selected to be part of the group of six HEIs in order to explore the effect, if any, on ESD integration by virtue of participation in the drafting of the guidance document. The selection process was as follows: an assessment of the 139 institutional websites with the purpose of finding sector leading practice HEIs. From the best practice HEIs, an initial selection of 17 institutions was made to which invitations were sent, of which seven universities contributed to the QAA and HEA guidance document. The final selection comprised of those institutions that responded to the invitation. The interview topics covered institutional engagement with the guidance, the motivations and benefits of usage, driving factors and barriers, staff and student engagement, further steps for guidance use, and ESD integration more broadly. Those institutions, which had contributed to the guidance were asked whether the involvement could have had an influence on the extent to which the guidance was used. The interviews were conducted via telephone over a course of three weeks. The duration of the interviews was less than an hour. The six interviews were recorded and have been transcribed verbatim.
The questionnaire responses have been synthesised and clustered according to questionnaire themes. A distinction was made between QAA and HEA guidance and ESD responses.
A grounded theory approach was chosen for the analysis of the interview transcripts as it is a method that "*enables the identification and the description of phenomena, their main attributes, and the core, social or social psychological process....*" and "*....provides us with the tools to synthesise these data, develop concepts, and midrange theories that remain linked to these data....*" (Morse *et al.*, 2016).

Ethical approval has been granted by UWE's Faculty Research Ethics Committee (see endnote for details).

1: Was the institution aware of the QAA and HEA Guidance before taking part in this study?

2: Has the institution made use of the QAA and HEA Guidance?

3: To what extent has the institution embedded the QAA and HEA Graduate Learning Outcomes in the curricula? Please select all that apply. The institution has:

☐ embedded QAA/HEA outcomes in (an) existing course(s)
☐ used QAA/HEA outcomes to create (a) new sustainability module(s)
☐ used QAA/HEA outcomes to create (a) new sustainability course(s)
☐ not used QAA/HEA outcomes
☐ other

4: Has the institution used the QAA and HEA Guidance for any of the options described above? Please select one of the options below.

☐ Yes, the institution has appropriated all the graduate outcomes
☐ Yes, the institution has selected the most appropriate gradaute outcomes
☐ Yes, the institution has adapted the graduate outcomes to fit the (inter)disciplinary context
☐ No, the institution has created sustainability graduate outcomes of its own
☐ No, the institution has used another framework/guidance
☐ No, the institution does not have sustainability graduate outcomes
☐ No, but the university/college is planning on using the QAA and HEA Guidance

5. Please indicate which of the following options has been informed by the QAA and HEA Guidance and/or ESD (please select all that apply):

	QAA/HEA Guidance	ESD
Vision statement	☐	☐
Strategic Plan	☐	☐
Sustainability/Environment Strategy	☐	☐
Learning and Teaching Strategy	☐	☐
Sustainability/Environment Action Plan	☐	☐
Sustainability/Environment Policy	☐	☐
Annual Report	☐	☐
Sustainability/Environment Report	☐	☐

6. The QAA and HEA Guidance has outlined four core themes on which sustainability graduate learning outcomes should be based: (1) global citizenship, (2) environmental stewardship, (3) social justice, ethics and wellbeing, and (4) future-thinking. Please indicate to what extent the core themes are present in the graduate learning outcomes of the institution's degree programmes:

○ In all degrees
○ In most degrees
○ In some degrees
○ In none

7. Does the institution offer staff development sessions to build staff capacity and capability to integrate sustainability into the curricula?

Figure 2: Selection of online survey questions

Results

The questionnaire has been completed by 16 out of 108 institutions: Bucks New University, Cardiff Metropolitan University, University of Chester, University of East Anglia, London Institute for Banking and Finance (formerly known as ifs University College), Keele University, King's College London, Kingston University London, Manchester Metropolitan University, Northumbria University, Plymouth University, University of Portsmouth, University of Sheffield, and University of the West of England. Two institutions chose not to reveal their name. These institutions are referred to as Anonymous1 and Anonymous2. Plymouth University and the University of the West of England contributed to the QAA and HEA guidance. The results have been grouped into the following categories: awareness and use, adoption and implementation, policy integration, engagement, and staff support. The categories are guided by the QAA report structure, the literature review and a synthesis of the structures used by HEIs to present their web information. The results section has been divided in two sections; the first section will provide evidence on the QAA and HEA guidance being used by HEIs and the second section gives a broader view of sustainability and the curriculum, which goes back to the purpose of this paper to consider 'the position of education for sustainable development in the UK higher Education sector in particular relevance to the Quality Assurance Agency and Higher Education Academy Guidance for ESD'.

QAA and HEA guidance for ESD

Only one of the 16 institutions indicated that it was unaware of the QAA and HEA guidance prior to completion of the questionnaire. Thirteen institutions confirmed that they used the guidance of which five institutions used the document in its entire form, three adapted it to the institution's context, and five HEIs used elements of the document.

Adoption and implementation

Thirteen higher education providers state their definition of education for sustainable development to broadly align with the definition provided by the guidance. Interestingly two HEIs responded that the institution does not seek to define ESD. One institution uses the UNESCO definition as it provides a broader definition of ESD.

The institutions have also provided insights in the extent to which they have adopted the four core themes identified in the guidance (QAA and HEA, 2014). All higher education providers have adopted the themes. They vary in the extent to which the themes were adopted:
   •six institutions adopted the themes in all degree programmes
   •three institutions partially adopted them into relevant degree programmes
   •seven institutions adopted them in some programme degrees
The six HEIs that integrated into all degrees are: Northumbria University, University of East Anglia, University of Portsmouth, London Institute for Banking & Finance, Anonymous1 and University of the West of England.

Ten institutions have adopted the graduate learning outcomes identified in the guidance by:
   •incorporating each of the outcomes,
   •selecting the most appropriate ones,
   •adapting the guidance's graduate outcomes to fit the (inter)disciplinary context
From the six institutions, which did not adopt the graduate outcomes;
   •three have created their own,
   •one used another framework or guidance,
   •one does not have sustainability graduate outcomes

The QAA and HEA graduate learning outcomes have been embedded in various ways:
  •eight institutions embedded in (an) existing course(s),
  •three used them for sustainability curriculum design,
  •four institutions did not use the graduate outcomes
  •four HEIs selected 'other' in the questionnaire
Other is specified by the HEIs as not being at that stage yet, using the outcomes for
curriculum design and review, not knowing the graduate outcomes, and using multiple
sources to define the graduate outcomes.

The bar chart in figure 3 illustrates the extent to which HEIs have included learning and
teaching approaches from the QAA and HEA guidance, in the institutions' Learning and
Teaching Strategy. Problem-based learning and participative learning feature the most in
institutions' Learning and Teaching Strategy. Simulation and campus learning are amongst
the least common approaches. From the 16 institutions the University of the West of England
and Plymouth University have included all the approaches. Northumbria University, the
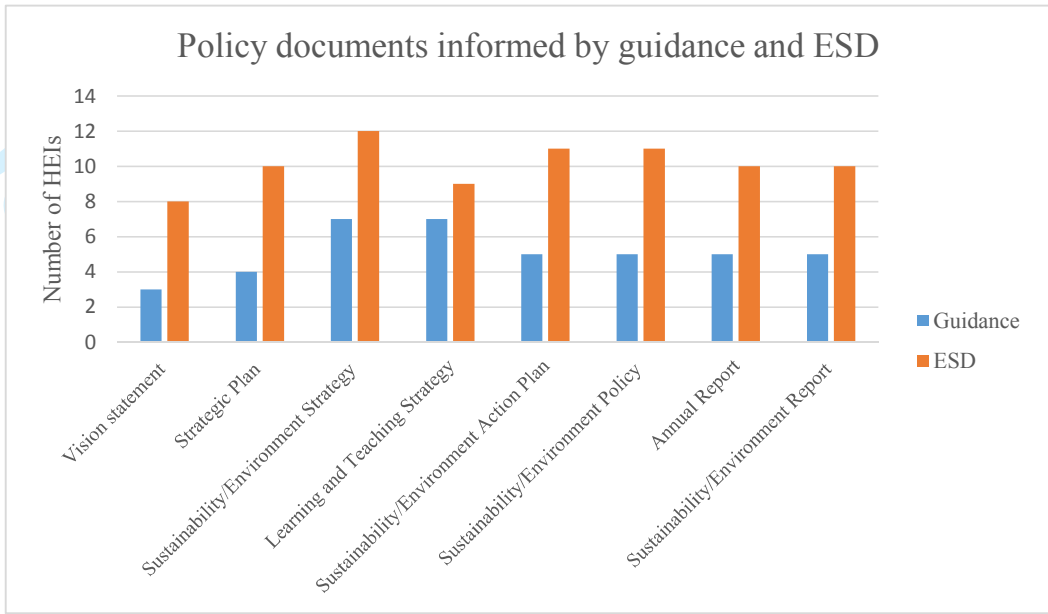University of Sheffield and Anonymous2 also scored high with 9 out of 10 approaches.

Integration of learning and teaching approaches
in the Learning & Teaching Strategy

Policy documents informed by guidance and ESD
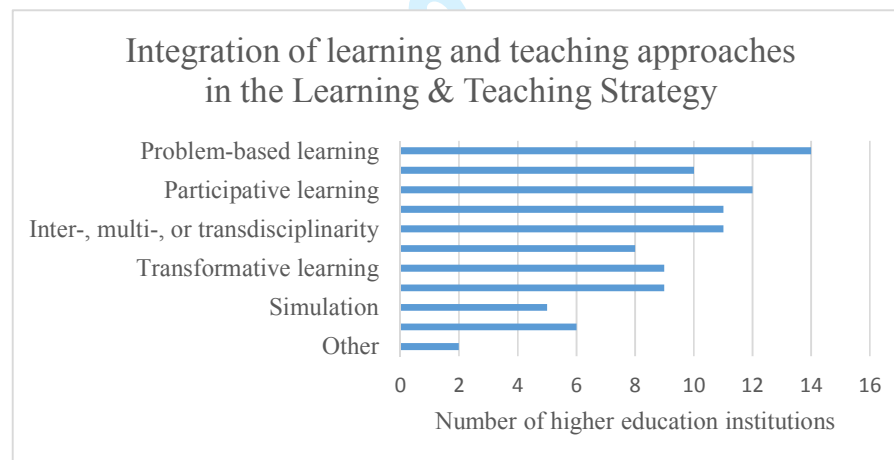
Figure 4: Policy integration QAA and HEA guidance and ESD   *Polic y integ ration*

Figure 4 shows that the guidance and ESD have been used to inform a variety of policy documents. Most of the institutions have used the guidance to inform the Sustainability or Environment Strategy, and the Learning and Teaching Strategy. Only three HEIs reported their use of the guidance in the institutional vision statement.

Figure 3: Integration of learning and teaching approaches in Learning and Teaching Strategies

Engagement

Twelve out of sixteen institutions engaged their students and staff with the QAA and HEA guidance in the following ways:
- •Continued Professional Development activities
- •educational committee discussions structured around the guidance
- •a teaching toolkit as online resource for staff
- •informing them about the institution's ESD approach via their website
- •inviting staff to an ESD special interest group
- •the Teaching and Learning Postgraduate Certificate
- •organising workshops for students and staff
- •a presentation at the Learning and Teaching Conference

ESD integration
Curriculum integration
From the 16 universities and colleges six have integrated ESD in all undergraduate and taught postgraduate courses that the institution offers; Northumbria University, the University of East Anglia, London Institute for Banking & Finance, Cardiff Metropolitan University, Anonymous1 and the University of the West of England. Additionally, seven institutions have embedded ESD in courses designed around sustainability. Furthermore, five institutions offer a few courses in which ESD is embedded and five comment that ESD is integrated in elective modules. Finally, one institution created an institution-wide module that includes the principles of sustainable development.

Policy integration
The issues of policy integration are similar to those identified above for the guidance, namely: there are great inter-institutional differences regarding the number of policy documents by which ESD is informed. ESD has mainly informed the Sustainability or Environment Strategy, the Sustainability or Environment Action Plan, and the Sustainability or Environment Policy. Only 8 out of 16 institutions included ESD in the vision statement and 9 out of 16 included it in the Learning and Teaching Strategy.
Co- and extra-curricular activities
The higher education providers stimulate students to engage with sustainability by organising co- and extra-curricular activities, see figure 5. All institutions offer sustainability volunteering opportunities and most universities and colleges engage students through sustainability teams or societies and by offering dissertation and PhD opportunities.

Three institutions created an online module and less than half of the group has organised sustainability debates. The 'other' category comprises of sustainability research groups and sustainability work placements opportunities. The survey results showed that the amount of activities offered per institution ranges from 2 to 12 with the majority offering between 9 and 12 co-and extra-curricular activities.
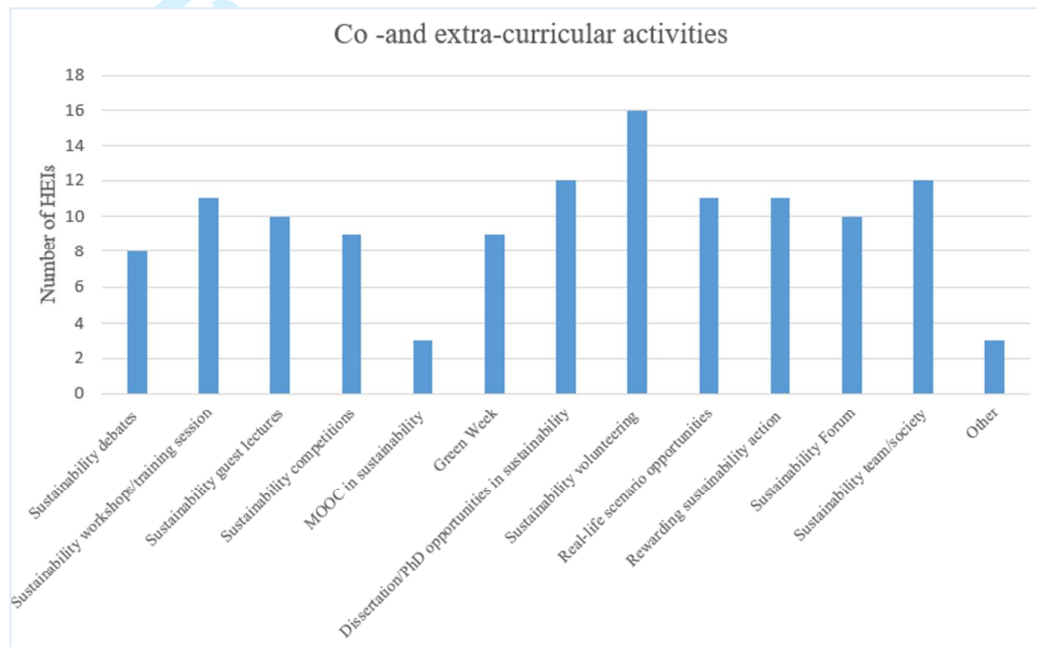

Figure 5: Informal education activities

Staff support
The majority of the institutions offer staff development sessions. Most HEIs provide workshops on ESD or Continued Professional Development workshop with an ESD focus. Alternative support is provided with online resources, a sustainability themed staff development day or sustainability symposium, and the appointment of a fulltime ESD assistant for staff development purposes.

Comparative assessment HEIs' ESD integration
In order to explore the differences in approaches and level of ESD integration, the 16 HEIs have been scored on the following nine criteria: ESD definition, four core themes, graduate attributes, teaching approaches, guidance policy integration, ESD policy integration, curricular integration, informal education, and staff support. These criteria are derived from the questionnaire survey questions and have been discussed in the results section above. Table 1 below presents the results of this assessment. It provides an overview of the advancement of ESD integration within each institution and offers a comparison. Next will be an explanation of how each criterion should be interpreted (for further reference see notes below the table).
•*Definition*: In the survey HEIs were asked whether their definition of ESD broadly aligned with the one in the QAA and HEA guidance for ESD. Those five institutions that answered

'yes' were scored 2 points and the remaining three universities replying 'no' got a score of 1.

•*Four core themes*: The four core themes criterion refers to the extent to which each institution has adopted the four core themes from the guidance –global citizenship, environmental stewardship, future thinking, and social justice, ethics and well-being- into curricula. Adoption in some degrees scored 1 point, mostly adopted scored 2 points and full adoption scored 3 points.

•*Graduate attributes*: HEIs were also surveyed on the adoption of the QAA and HEA graduate attributes. Having no ESD graduate attributes received the lowest score of 1. Institutions that adapted the guidance's graduate attributes to fit the institutional context, integrated them into (an) existing course(s) and/or indicated to have their own graduate attributes, were scored 2. The last group of HEIs that were scored 3 used the guidance's graduate attributes for curriculum design and/or delivery.

•*Learning & Teaching approaches*: the surveyed universities and colleges were scored according to the extent to which they used the guidance's ESD learning and teaching approaches. Score 1 was given to those which only used between 0-3 approaches, score 2 for 4-7 approaches and score 3 for applying 8-10 approaches.

•*Policy QAA & HEA and ESD*: in some cases the QAA and HEA guidance and/or ESD informed the institutional policy documents i.e. the vision statement, the sustainability strategy and the learning & teaching strategy. The lowest score 1 signified incorporation of ESD or the guidance in a maximum of 2 documents. Those that had embedded in 3 to 5 policy documents received a score of 2. Finally, the best scoring institutions were those that incorporated ESD or the guidance in 6 to 8 policy documents.

Table 1: Scores of ESD and guidance integration per HEI

Higher education institution	Definition	4 themes	Graduate Attributes	Learning & Teaching	Policy QAA/HEA	Policy ESD	ESD integration	Co -and extra-curricular	Staff support	Total score
Bucks New Uni.	2	1	2	1	1	2	2	1	2	12
Cardiff Metropolitan Uni.	2	2	3	1	1	2	3	2	2	16
Uni. of Chester	2	1	1	1	1	1	2	3	1	10
Uni. of East Anglia	2	3	3	3	1	3	3	3	2	21
London Inst. For Banking & Finance	2	3	2	2	2	2	3	3	2	19
Keele Uni.	2	2	2	1	1	3	2	3	2	16
King's College London	2	1	2	2	1	1	2	1	1	12
Kingston Uni. London	2	1	2	2	3	3	1	2	1	15
Manchester Metropolitan Uni.	2	1	2	2	3	3	2	3	2	17
Northumbria Uni.	2	3	2	3	3	2	3	2	1	19
Plymouth Uni.	2	1	3	3	3	3	2	3	2	20
Portsmouth Uni.	1	3	2	2	1	3	2	1	1	14
Uni. of Sheffield	1	1	2	3	1	1	1	3	2	13
Uni. of the West of England	2	3	3	3	2	3	3	3	2	22
Anonymous 1	1	3	3	3	1	3	3	3	2	20
Anonymous 2	2	2	2	1	3	1	2	1	2	13

•**Definition: 1= no, 2= yes**

•**4 themes:**
   1=adoption in some degrees
   2=adoption in most degrees
   3=adoption in all degrees

•**Graduate Attributes:**
   1=no ESD GAs
   2=adapted GAs to fit institutional context/
   integrated in (an) existing course(s)/own GAs
   3=used GAs for curriculum design & delivery

•**L&T: 1= 0-3 learning approaches**
   2= 4-7 learning approaches
   3= 8-10 learning approaches

•**Policy QAA/HEA and ESD:**
   1= 0-2 policy documents
   2= 3-5 policy documents
   3= 6-8 policy documents

•**ESD integration:**
   1= specific sustainability courses/electives
   2= few undergrad and/or postgrad courses
   3= all undergrad and/or postgrad courses

•**Co- and extra:**
   1= 0-4 activities
   2= 5-8 activities
   3= 9-12 activities

•**Staff support:**
   1= no
   2= yes

Semi-structured interviews

Representatives of the six higher education providers from across England, Scotland and Wales have been interviewed about the institution's use of the QAA and HEA guidance for ESD and the general integration of ESD across curricula. From the set of interviews a range of themes have emerged from which the similarities and differences between HEIs will be elaborated upon.

Guidance use

When analysing the use of the QAA and HEA guidance by the six HEIs it becomes apparent that there are two separate rationales behind it. One rationale is to support and enable the institution's own work and commitment to ESD and to help move the ESD agenda along. These HEIs seem to be embracing the document and using it where deemed most appropriate. The universities differ in the level of engagement with the guidance ranging from merely using the guidance to structure the process of integrating ESD in curricula to using it for virtually anything related to the curriculum i.e. using it as a reference point for curriculum design or the creation of institutional graduate attributes, to help create an ESD definition or framework, to run ESD workshops, and to help create materials. Some of the institutions also use the guidance and the 4 core themes to show staff that ESD is broader than just the environmental aspect and that most academics are already applying ESD principles in their teaching. This misinterpretation of the concept being merely an environmental matter has some significant implications on the engagement with ESD, which will be further discussed in the 'barriers' theme. Finally, one of the HEIs argues that the academics can be convinced about the relevance of embedding ESD in curricula by engaging them with the guidance as the guidance highlights that ESD is a sector-wide priority, which gives more authority to the institution's own ESD work.

The second rationale for using the ESD guidance document is to support staff with ESD related activities whenever they demand such support. For this group of institutions it appears as though there is a sense of independence where they have their own approach to embedding ESD in curricula and are less open to external input. Additionally, it was felt inappropriate by these HEIs to require staff to abide by a guidance document.

ESD adoption and/or implementation approach

As with the guidance use, there are two main approaches to embedding ESD in curricula. The first approach focusses on making sustainability and education for sustainable development core to the institution, rather than leaving it as a stand-alone additional subject that students can get involved with. People from within these universities have an expectation that ESD is embedded within all degree programmes as is specifically stated within the strategic plan. The second group of institutions adopts more of a laissez-faire approach. Institutions apply an integrated approach by making sustainable development part of their mission. However, they do not require incorporation of sustainability in each course recognising that disciplines have differing abilities to respond and academics may respond negatively to such demands. Staff are encouraged to engage with ESD in a manner appropriate to disciplinary or local requirements. Consequently, an HEI can claim sustainable development is part of the institutional mission whilst recognising that all disciplines and all students do not have the opportunity to engage with that aspect of the mission. However, one of the interviewees argues, even though commitment to ESD is not necessarily explicitly communicated, ESD is very much part of the institution's culture and ethos.

Drivers to ESD curricular integration

A set of factors have been identified, which have had a positive effect on the process of

embedding education for sustainable development into curricula within the HEIs. There are three direct drivers of ESD integration within the curriculum: support for ESD from people across the institution, high level institutional support and funding. The most critical driver, as argued by the institutional representatives, is people support.

Having someone in a leadership position who is committed to promoting the ESD agenda is deemed critical to the integration process, since this individual can influence the institutional approach to ESD. According to the interviewees, the individual needs to be prepared to navigate barriers, take advantage of opportunities, and needs to be able to relate to academics and their pressures. Second, the HEIs have greatly benefitted from getting a critical mass of staff on-board. In most institutions there is a core group of ESD champions who have a special interest in sustainability and are actively engaging others to get involved. All interviewees acknowledged the importance of staff engagement and stressed the need for development opportunities to build understanding and capability to engage with ESD. The manner in which the ESD incentive is communicated with staff is also an issue that requires careful consideration. Interviewees reported that during conversations with academics about the aim of ESD to create graduates with a particular skillset, they realise that the institution has been doing that without knowing it to be ESD. Getting people to understand why ESD is relevant and emphasising that it is nothing new, is therefore an important step in engaging staff. Third, a student body interest in sustainability and the buy-in of senior-management in ESD have also been argued by the institutions' representatives to be driving factors. It is fundamental to the change process to get ESD support on every level within the institution; from students, staff and senior-management.

The second driver derived from the interview process is high level institutional support. Incorporating ESD in institutional documents like the strategic plan will send a signal to staff that the integration of ESD in curricula is taken seriously, which might prompt staff to notice and act accordingly.
Finally, funding has been key for supporting and motivating institutions in embedding ESD across the university.

Challenges
In their journey towards whole institutional ESD integration, the six HEIs have encountered some interconnected challenges and dealt with those in different ways. What stood out from the interviews is the challenge to engage staff and to persuade them to incorporate sustainability in their degree programme. The staff initial reaction was to reject the notions of sustainability and ESD. The institutions' representatives explain that academics misinterpret ESD as they equate the concept to climate change and regard it to be solely environmentally driven. They then fail to see the links with their own discipline and to understand why ESD is relevant to it and to the overall development of the institution. They justify their reluctance to participate in the integration process by arguing that they are too busy. Most institutions' representatives observed that this is caused by a perception of ESD as 'just something else that is forced upon' and a perceived threat to their own traditional discipline and autonomy. As proposed by some HEIs, a discussion with staff about ESD could be opened up as a means to emphasising that they are already working on ESD and highlighting how ESD links to their particular discipline. However, they note that rarely are resources allocated within the institutions to overcome this challenge, because of other higher priorities.
The universities have approached this challenge in several ways. The first approach is to give staff the time to recognise and acknowledge the relevance of embedding education for sustainable development into curricula. The second approach is to refrain from labelling ESD.

Since there is a lot of confusion around sustainability concepts it is deemed appropriate by some HEIs representatives to follow a no-label policy. Institutions recognised the implication of this approach, namely that the institution will be unable to demonstrate what it is offering with regard to the sustainability curriculum making it unclear to students and to other key stakeholders what to expect. In turn this might have an impact on student recruitment. The third and final approach is to find mechanisms to convince senior-management to increase support for efforts to integrate ESD into curricula. One of the interviewees suggests institutions should collect data about the importance of the institution's sustainability offer to students. Senior-management could be persuaded by the potential of selling a sustainability image to prospective students.

Contribution
The institutions, which contributed to the QAA and HEA document, were asked whether the involvement had an influence on the guidance use. The interviewees believe this to be true. The institutions had an individual on the guidance group, who had a strong influence on the extent to which the guidance was used by their institution. The individuals fulfilled leadership positions and could therefore more easily introduce the guidance and support its implementation.

Discussion
Although a low questionnaire response rate has limited this study in its effort to generalise results to the larger population, the insights from the results add value to the current positioning of ESD in the UK higher education sector, in particular regarding the ways in which a guidance instrument could support the integration of ESD in curricula. It should be noted that those who responded deliberately chose to participate to share their ESD achievements and their learning processes. The questionnaire was distributed to senior staff in HEIs with an email address verified from the external web page of the HEI. Follow up reminders were sent. Having ensured appropriate targeting of the communications it can be surmised that the low response rate indicates one or more reasons for non-engagement such as workload pressure at the time for receipt, lack of interest in the subject or that the message was forwarded to another party who did not consider it a priority to respond.

The UK has a relatively long engagement with the ideas of ESD. HEIs have developed under- and postgraduate degree programmes and specific modules to address some or all of the curriculum challenges posed by sustainable development. More recently some HEIs have considered the position of sustainable development within the institutional mission stimulated by internal recognition of the opportunity, in response to student concerns or positioning of competitor institutions (Longhurst *et al*, 2015). Such institutions will walk a fine line between 'green wash' and being able to demonstrate prioritisation of actions and systemic engagement with education for sustainable development. In 2014 the QAA and HEA published their guidance on ESD. This was applicable to the whole sector but was deliberately framed as guidance not as a mandatory requirement (QAA and HEA, 2014). An HEI or an individual academic could respond to the guidance as their circumstances and inclinations allowed.

Currently, the higher education sector is becoming ever more competitive in its pursuit of prospective students and staff. Projecting an image of managing the institution in a sustainable manner is part of the branding that institutions may wish to project in response to growing interest in sustainability from students and prospective employees. Only a small number of higher education providers have, however, succeeded in making sustainability one of the core components of the institutional mission. Whereas there was an increase in

sustainability support and activity by HEIs and by sector agencies after the launch of the UN
Decade for ESD in 2005, this appears to have diminished in recent years. This is exemplified
by HEFCE's change from a position of initial strong policy support for sustainable
development and behaviour change in the HE sector to a more muted and limited
engagement in their most recent publication. (HEFCE, 2014). One of the barriers to further
ESD integration within institutional missions and in curricula is the absence of strong and
contemporary policy signals from the sector agencies overseeing UK HE (Leal Filho, 2010).
However, a group of HEIs that have made significant progress in embedding ESD across the
institution has been identified within this study. In a similar fashion to the UK National
Commission for UNESCO report (UK National Commission, 2017), this paper provides a
series of case studies from across the UK that illustrates how these universities and colleges
have used the QAA and HEA guidance, what their approach to ESD integration is and how
they have gone through the overall process of integration including the challenges faced,
responses to challenges and critical success factors applied.

The results of this study show that the QAA and HEA guidance for ESD has been used in a
variety of ways by HEIs. These range from individual academics selecting specific elements
to institutions adopting the guidance document in its entirety. Most survey respondents
indicate their institutional ESD definition broadly aligns with the QAA and HEA's ESD
definition. These HEIs have addressed the four core themes of global citizenship,
environmental stewardship, future thinking, and social justice, ethics & well-being in degree
programmes. Many HEIs have used the graduate attributes matrix within existing courses and
in some cases, they have used the guidance to support the design and development of new
ones, and to incorporate ESD approaches in their pedagogic practices. The analysis of six
HEIs case studies adds another layer to the exploration of guidance use. It highlights the
presence of a clear inter-institutional division where one group uses the guidance to support
and inform the institution's own work and commitment to ESD, whilst the other group merely
uses it as a resource in times when a demand for extra support from academic staff arises.
One can deduce from the survey and interview analyses that the higher education providers
each have their own approach, as might be expected from autonomous institutions, for
integrating ESD in the institution's curricula and that they are at different stages of the
integration process. They are scattered across the spectrum from exhibiting low to high
presence of ESD integration, graduate attributes, teaching approaches, policy integration, staff
support, and co- and extra- curricular activities. This is reflected in a significant variation
regarding the extent of ESD embeddedness within HEIs' curricula from merely embedding it
in a sustainability-specific course or elective module to institution-wide ESD curricular
integration. A similar variation can be found regarding the degree to which ESD has been
incorporated within high level institutional support documents. This is where the interview
analysis offers an explanation. Whereas one group of institutions applies a top-down approach
where every academic staff member is expected to integrate ESD in their course aiming for a
holistic whole-institutional implementation approach, the other group refrains from internal
policy drivers and relies on the power of the institutional identity of which ESD is an integral,
but potentially invisible component.
As higher education providers have been developing their ESD portfolio they have had to
enhance their strengths and respond to certain challenges along the way. The variable proven
to be most reliable and critical to the overall ESD integration process is the support and
commitment of staff. This commitment is not the preserve of one group of staff but
encompasses senior leaders, professional administrators and academic staff. This corresponds
to the position reported in the literature, which emphasises this factor to be the backbone of
the transition to a whole-institutional ESD position (Barth and Rieckmann, 2012; Ralph and

Stubbs, 2014; Disterheft *et al*., 2015; Ramos *et al*., 2015). One important driver of change is the allowance of time for staff to engage with, understand the disciplinary context of ESD and to develop appropriate pedagogic responses to the opportunity of ESD. Additionally, it is necessary for an institution to guide academic staff in this process by enabling conversations about what ESD entails, what it already means to them and their discipline with an emphasis on making current invisible ESD practices tangible, and what it could mean in the future in terms of changes to the curriculum. This is an important step in overcoming the most commonly cited barrier to ESD integration; a reluctance to change amongst staff members caused by a misinterpretation of the ESD concept and a lack of understanding of its implications for and impacts on traditional disciplines.

This approach to ESD integration is, however, not shared by every institution. Some apply a non-label policy in order to avoid conflict where academic staff disagree with integrating its principles in their degree programmes. In these institutions, the decision making relationship between the central administrative unit and individual academics and their disciplines may be one where academic autonomy is stronger and academics have a stronger say over content and pedagogic practices. Approaches that focus on strengthening stakeholder engagement with ESD seems to find more support within the academic community. This is demonstrated by Barth and Rieckmann's proposal (2012) to boost staff motivation and confidence in teaching abilities through the institutional provision of ESD academic staff development programmes. Verhulst and Lambrechts (2015) add to this argument by systematically identifying the presence of human factors i.e. resistance, communication, empowerment & involvement, and organisational culture, across four integration stages providing a change management perspective. The first stage is characterised by intrinsically motivated individuals working without support. The second stage is marked by the involvement of a larger group of staff to raise awareness and acceptance. The third stage comprises of a bottom-up approach guided by a top-down approach that includes communicating sustainability initiatives to staff and students to enhance participation and empowerment. Finally, the fourth stage highlights the necessity of informing and involving a larger staff group facilitated by top-level support and attention for empowerment and communication. Where there is a lack of these crucial elements, universities will slip back into business-as-usual as staff feel abandoned, demotivated and plagued by sustainability fatigue. Most of the institutions surveyed and interviewed for this study seem to have hit that point and are on the verge of moving from stage 3 to 4. Time will tell whether they will get wide-spread support and subsequently will successfully integrate ESD across the institution.

Conclusion

This exploration of the current position of ESD in UK higher education has enabled a better understanding of the ESD integration process and the use of the QAA and HEA guidance for ESD to facilitate this process. In a time of declining sector support for sustainability initiatives from policy bodies and increasing pressures from a global competitive knowledge marketplace, a group of higher education institutions has managed to make education for sustainable development an institutional priority and have integrated it into the institutional curriculum. This paper has provided examples of the integration process of this group of HEIs including an exploration of the challenges and the critical success factors.

There is no single approach to ESD curricular integration that is applied by higher education providers. Instead, there is a multitude of approaches applied varying in their focus of attention, from a pure emphasis on incorporating ESD in high level support documents, to the development of ESD graduate attributes, teaching approaches, informal education activities, and ESD staff support. A clear division in approaches was found between institutions that

took part in the interview process. Whereas one group of institutions applied a top-down approach requiring each degree programme to contain ESD aiming for a holistic whole-institutional implementation approach, the other group refrained from exerting pressure on academic disciplines and relied on their institutional identity of which ESD is an integral, but mostly invisible component. Both approaches have achieved successful outcomes but the culture of an institution will determine which approach is most likely to succeed in a given context.

In their attempt to transition towards whole-institutional ESD curricular integration, the HEIs have been challenged by a sometimes reluctant staff community, which can be prone to misinterpret ESD equating it to environmental phenomena, and that lacks an understanding regarding ESD's implications for their discipline. They perceive ESD simply as an add-on and a threat to their traditional disciplines. The longer-term solution to integrating and embedding ESD as a whole institution mission is providing staff with the time and resources to engage with the concepts of ESD within the context of their own discipline. In so doing staff will challenge prevailing orthodoxies and consider new pedagogic practices.

The QAA and HEA guidance has in most cases been a significant factor in promoting the ESD agenda within the institutions by supporting and underpinning the institutions' own ESD commitments. Some HEIs have, however, chosen to follow their own direction without being influenced by external views and to use the guidance document as an extra resource available for staff development purposes.

The findings of this study are of particular relevance to those HEIs that wish to find support in the process of integrating ESD across curricula in their respective institution. It provides a learning environment, which could encourage HEIs to make an assessment of the presence of the barriers and drivers identified in the study and of the current state of ESD across the institution. The institutions should focus their attention where any gaps are identified. As the results of this study suggest, there is a variety of approaches and levels of ESD integration, which implies that the HE provider in question should determine its stance in the ESD matter and its ambitions for the overall institution. The strength of each individual university or college researched in this study has been the institution's own identity, which has largely influenced the approach to ESD curricular integration. It is therefore important that those HEIs that wish to move the ESD integration process along form an approach to ESD curricular integration that fits with the institution's culture and ethos. Finally, these institutions are encouraged to use a guidance instrument that they feel can support building up the driving factors and eliminating the barriers to ESD curricular integration.

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Exploring the current position of ESD in UK Higher Education Institutions

List of barriers to curriculum change
Sustainability is too abstract or too broad
Sustainability lacks a scientific basis
Misconceptions related to sustainability
Institutions have no staff to work on sustainability
A lack of incentives and information on environmental issues
A lack of financial and organisational resources
A lack of staff training and development support
A lack of expertise and tradition
A lack of interest and commitment amongst administrators, students and staff
A clashing with the predominant university culture and organisational structures
Benefits of change are unclear or invisible

Figure 1: List of barriers to embedding ESD

1:    Was the institution aware of the QAA and HEA Guidance before taking part in this study?

2:    Has the institution made use of the QAA and HEA Guidance?

3:    To what extent has the institution embedded the QAA and HEA Graduate Learning Outcomes in the curricula? Please select all that apply. The institution has:

☐ embedded QAA/HEA outcomes in (an) existing course(s)
☐ used QAA/HEA outcomes to create (a) new sustainability module(s)
☐ used QAA/HEA outcomes to create (a) new sustainability course(s)
☐ not used QAA/HEA outcomes
☐ other

4:    Has the institution used the QAA and HEA Guidance for any of the options described above? Please select one of the options below.

☐ Yes, the institution has appropriated all the graduate outcomes
☐ Yes, the institution has selected the most appropriate gradaute outcomes
☐ Yes, the institution has adapted the graduate outcomes to fit the (inter)disciplinary context
☐ No, the institution has created sustainability graduate outcomes of its own
☐ No, the institution has used another framework/guidance
☐ No, the institution does not have sustainability graduate outcomes
☐ No, but the university/college is planning on using the QAA and HEA Guidance

5.   Please indicate which of the following options has been informed by the QAA and HEA Guidance and/or ESD (please select all that apply):

	QAA/HEA Guidance	ESD
Vision statement	☐	☐
Strategic Plan	☐	☐
Sustainability/Environment Strategy	☐	☐
Learning and Teaching Strategy	☐	☐
Sustainability/Environment Action Plan	☐	☐
Sustainability/Environment Policy	☐	☐
Annual Report	☐	☐
Sustainability/Environment Report	☐	☐

6.   The QAA and HEA Guidance has outlined four core themes on which sustainability graduate learning outcomes should be based: (1) global citizenship, (2) environmental stewardship, (3) social justice, ethics and wellbeing, and (4) future-thinking. Please indicate to what extent the core themes are present in the graduate learning outcomes of the institution's degree programmes:

○ In all degrees
○ In most degrees
○ In some degrees
○ In none

7.   Does the institution offer staff development sessions to build staff capacity and capability to integrate sustainability into the curricula?

Figure 2: Selection of online survey questions

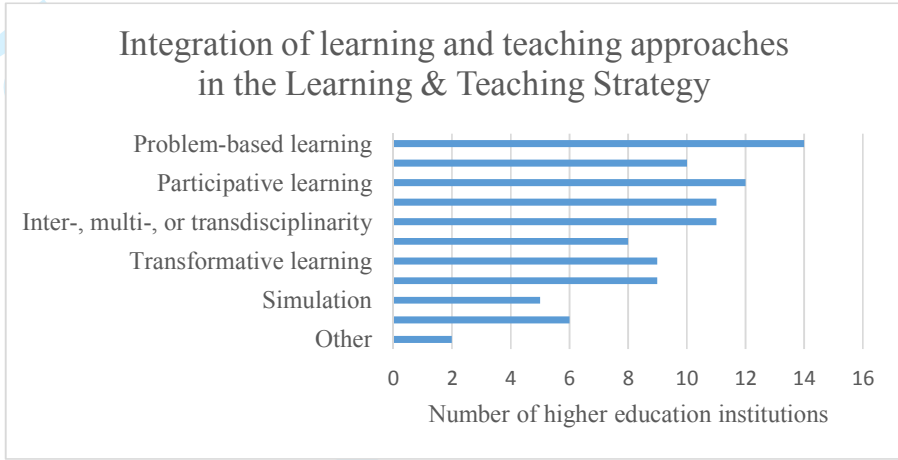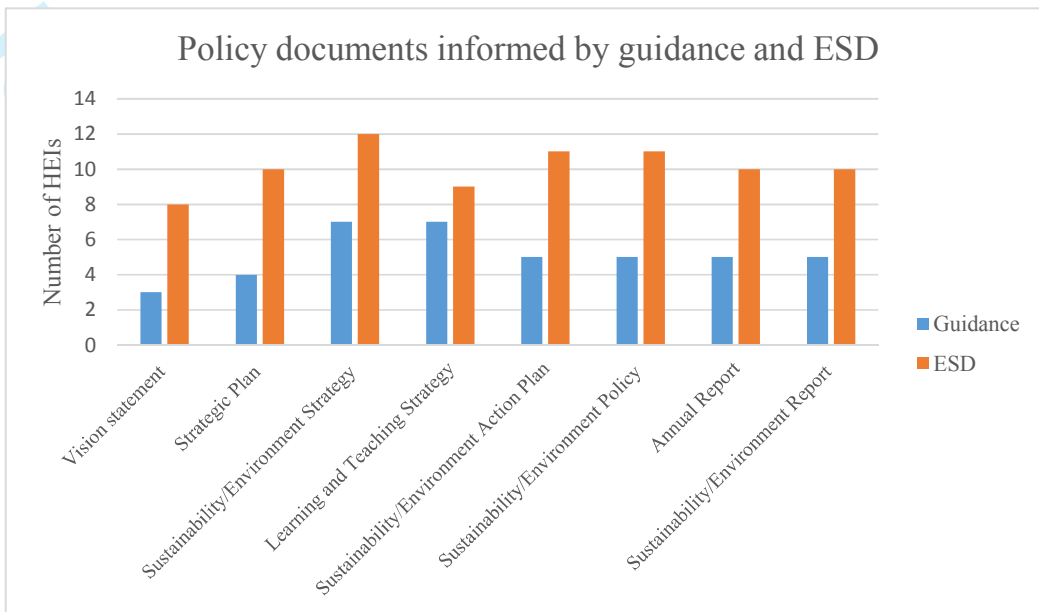*Figure 3: Integration of learning and teaching approaches in Learning and Teaching Strategies*
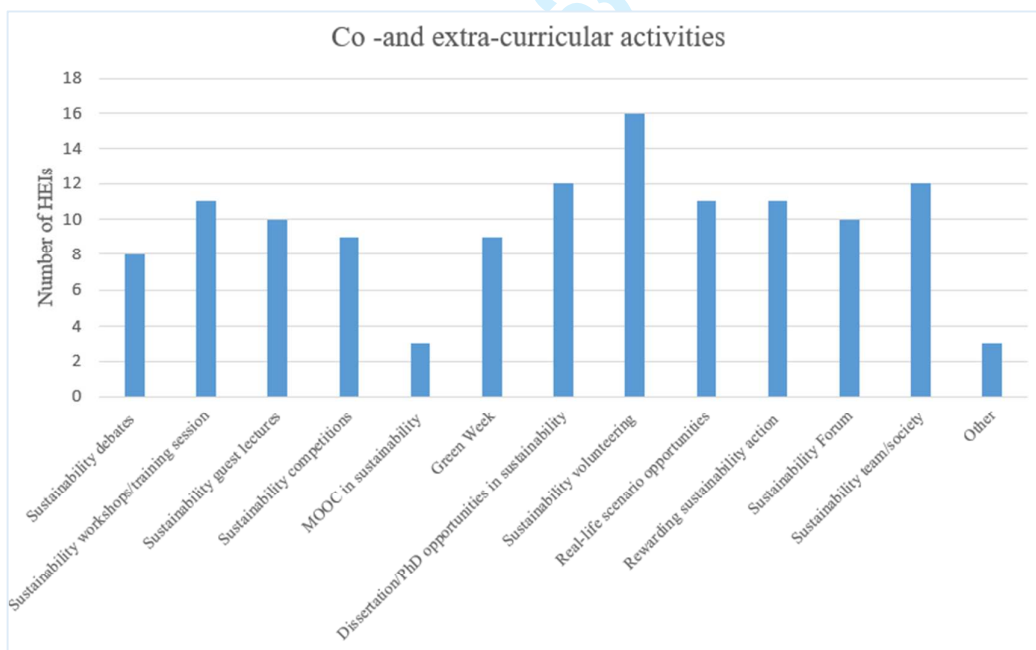
Figure 4: Policy integration QAA and HEA guidance and ESD

Figure 5: Informal education activities

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Table 1: Scores of ESD and guidance integration per HEI

Higher education institution	Definition	4 themes	Graduate Attributes	Learning & Teaching	Policy QAA/HEA	Policy ESD	ESD integration	Co -and extra-curricular	Staff support	Total score
Bucks New Uni.	2	1	2	1	1	2	2	1	2	12
Cardiff Metropolitan Uni.	2	2	3	1	1	2	3	2	2	16
Uni. of Chester	2	1	1	1	1	1	2	3	1	10
Uni. of East Anglia	2	3	3	3	1	3	3	3	2	21
London Inst. For Banking & Finance	2	3	2	2	2	2	3	3	2	19
Keele Uni.	2	2	2	1	1	3	2	3	2	16
King's College London	2	1	2	2	1	1	2	1	1	12
Kingston Uni. London	2	1	2	2	3	3	1	2	1	15
Manchester Metropolitan Uni.	2	1	2	2	3	3	2	3	2	17
Northumbria Uni.	2	3	2	3	3	2	3	2	1	19
Plymouth Uni.	2	1	3	3	3	3	2	3	2	20
Portsmouth Uni.	1	3	2	2	1	3	2	1	1	14
Uni. of Sheffield	1	1	2	3	1	1	1	3	2	13
Uni. of the West of England	2	3	3	3	2	3	3	3	2	22
Anonymous 1	1	3	3	3	1	3	3	3	2	20
Anonymous 2	2	2	2	1	3	1	2	1	2	13

•**Definition: 1= no, 2= yes**

•**4 themes:**
  1=adoption in some degrees
  2=adoption in most degrees
  3=adoption in all degrees

•**Graduate Attributes:**
  1=no ESD GAs
  2=adapted GAs to fit institutional context/
  integrated in (an) existing course(s)/own GAs
  3=used GAs for curriculum design & delivery

•**L&T: 1= 0-3 learning approaches**
  2= 4-7 learning approaches
  3= 8-10 learning approaches

•**Policy QAA/HEA and ESD:**
  1= 0-2 policy documents
  2= 3-5 policy documents
  3= 6-8 policy documents

•**ESD integration:**
  1= specific sustainability courses/electives
  2= few undergrad and/or postgrad courses
  3= all undergrad and/or postgrad courses

•**Co- and extra:**
  1= 0-4 activities
  2= 5-8 activities
  3= 9-12 activities

•**Staff support:**
  1= no
  2= yes

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