Student attitudes towards and skills for sustainable development

A report for the Higher Education Academy

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Contents

1 Executive summary

Research into student attitudes towards, and skills for sustainable development (SD) was conducted in 2011 as a two-phase study in order to continue research first conducted in 2010 by:

• Understanding trends in demands and expectations from first-year students new to university;
• Longitudinal tracking of demands and expectations from second-year students as they progress their university career.

The two phase approach included a brief desk review, to update the pre-existing 2010 review with the most up-to-date secondary publications, which then informed a national online survey. The survey achieved representative samples of 1552 first-year students and 1641 second-year students. All students were in higher education and taking their first degree after not more than a year away from formal education.

The current research findings reinforce the conclusions of the 2010 research. Overall, the results for first and second-year students in 2011 showed no notable differences except where these are mentioned explicitly throughout the report. The research demonstrated the following key findings:

• Over two thirds of 2011 first and second-year respondents (66.6% and 70.3% respectively), as in 2010 (70%), believe that sustainability should be covered by their university;
• There is a continued preference among students for a reframing of curriculum content rather than additional content or courses however this needs to be considered amongst the range of options available to policy makers and curriculum planners for incorporating sustainability into their individual university's curriculum (65% stated this method was extremely relevant or somewhat relevant in 2010 and 67.4% of first-years and 69% second-years agreed in 2011);
• There is evidence to suggest that students become increasingly focused on employability throughout their time at university. Second-year students (49.7%) expressed a slight preference for employability over furthering their subject specific knowledge. The situation is reversed among 2010 (47%) and 2011 (46.9%) first-year responses, indicating that first-year students are considering employability less within their university experience;
• In terms of the skills seen as valuable by future employers, a wider range of core skills are seen as most important, relevant and valued by future employers rather than sustainability-specific skills which suggests a need to reframe the debates surrounding inclusion of education for sustainabledevelopment (ESD) (eg 17.8% of second-years in 2011 ranked the ability apply environmental and social skills as most important for employers compared to 53.4% ranking communication skills as most important);
• Alongside this, further work is needed with the business community to communicate the tangible benefits of ESD more widely, and to identify the most valuable skills, to ensure skills for SD are valued and demanded.
• A role for communication of company ethics and environmental performance exists throughout the student journey: two thirds of respondents would sacrifice £1,000 from salary to work in a responsible company.

The following two chapters of this report provide further topline findings and recommendations from the research before moving on to a full account of the work in chapter 4.

2 Policy briefing

Following on from previous research conducted in 2010, a desk research study informed an online survey of first and second-year students in 2011 across the UK. Samples of 1552 first-year students and 1641 second-year students responded to the survey. The overarching aims of the research were to understand any trends in new first-year students in 2011 as well as tracking the university careers of second-year students (surveyed as first-years in 2010) in terms of their demands and expectations. This research continues to be of value given the focus on the green economy as a solution to the economic situation currently facing the UK, the associated jobs creation linked with the green economy and the associated high levels of youth unemployment bringing a new focus to graduate skills in sustainability.

The current research findings reinforce the conclusions of the 2010 research with the results for first and second-year students in 2011 showing no notable differences (except where these are mentioned explicitly). As in 2010, the overall message from the research is encouraging:

- Students in both years continue to see sustainability skills as important and relevant, both at university and in the workplace;
- Students (79.6% 2011 second-years, 74.8% 2011 first-years and 75% 2010 first-years) see universities as key players in the delivery of these skills, though they also ascribe responsibility to business and themselves. However 2011 first-years are less likely to believe themselves to be responsible for developing skills for employment (95% compared to 96% of 2010 first-years and 2011 second-years) highlighting a role for institutions, student unions and other representative bodies to promote the skills agenda;
- Here business involvement will be key in ensuring universities, and individuals, are able to understand and develop the most appropriate and valued skills.

However a number of policy-relevant issues remain:

- Respondents in 2011 (and previously) offer somewhat contradictory results, in that while they believe universities have an obligation to act on sustainability (eg 66.6% 2011 first-years and 70.3% 2011 second-years and in 2010, 70% first-years), the sustainability performance of a university is unlikely to influence choice of university over traditional factors such as course and university reputation (eg 51% 2011 second-years ranked environmental performance as very important compared to 48.2% ranking reputation of course as very important);
- While currently not influential, increased tuition fees have the potential to increase the importance of 'non-traditional' factors such as performance on sustainability. Further research will be needed to ascertain the reality of this hypothesis once increased tuition fees are introduced alongside the possibility that action on sustainability is taken as a given;
- 2010 desk research highlighted ESD to be a nebulous concept with no nationally-accepted definition to incorporate the five core areas of SD among practitioners[1];
- The 2011 research highlights this lack of clarity continues to exist with students understanding sustainability to be environment-focused in comparison to the wider definitions offered by practitioners and academics;
- These wider concepts are ranked consistently as important and relevant, for educational and employment careers, however are not interpreted as SD (eg 48.3% 2011 first-years think the ability to act as a responsible citizen locally and globally is very important to their future employers however only 19.6% rank application of environmental and social skills as most important to employers). This will have repercussions for policy makers and practitioners developing curricula and resources for teaching sustainability;
- Similarly, this finding impacts on the transition to a green economy. In a time of economic uncertainty and high (youth) unemployment and where green 'growth' has been advocated as solution, the need for a workforce competent in 'green skills' becomes all the more pertinent;
- Regular liaison with the graduate employers is necessary to ensure any reframing captures the most valuable employability skills;
- The current debate on higher education (HE) curriculum reform and the development of graduate attributes should also take note of this finding;
- Finally, in continuing turbulent times for higher education and graduate employment, longitudinal work into student demands, aspirations and considerations will be key in understanding the impacts of increased financial pressures and ensuring higher education is able to meet expectations of both students and their future employers.

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1 The five core areas are: living within environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly.

3 Key findings and recommendations

The following chapter provides a brief overview of the key findings from both the desk review and online empirical phases of the research in 2011. Relevant findings from the 2010 research are also highlighted. As mentioned previously, overall, the results for first and second-year students in 2011 showed no notable differences except where these are mentioned explicitly throughout the report.

The desk research[2] indicated that:

- As found in 2010, delivery of ESD is disjointed at a national level. The 2010 research found limited research and evidence on student opinion of how delivery of ESD takes place post-16;
- Definitions of ESD remain varied and vague. The 2010 report suggested the need for a nationally-accepted guideline definition, standard assessment procedure and defined indicator/s could allow understanding of national progress. However given the continuing discussions surrounding the concept of SD more widely, a prudent recommendation would be to concentrate efforts on enabling the delivery of ESD in higher education institutions (HEIs);
- The tangible benefits of including SD in curricula need to be well-communicated to secure national buy-in in further education (FE) and HE and to prevent the benefits remaining nebulous;
- Excepting the precursor to this current research, student attitudes towards SD have not been extensively covered and the need to further understand student demand for learning and skills remains;
- Scotland and Wales lead the UK in understanding the impact of ESD with national baselining studies completed.

Further key findings from the online empirical research with 1552 first-year students and 1641 second-year students:

- Over two thirds of 2011 first and second-year respondents (66.6% and 70.3% respectively), as in 2010 (70%), believe that sustainability should be covered by their university;
- There is a continued preference among students for a reframing of curriculum content rather than additional content or courses. However this needs to be considered among the range of options available to policy makers and curriculum planners for incorporating sustainability into their individual university's curriculum (65% stated this method was extremely relevant or somewhat relevant in 2010 and 67.4% of first-years and 69% second-years agreed in 2011);
- There is evidence to suggest that students become increasingly focused on employability throughout their time at university. Responses in 2010 (47%) and 2011 (46.9%) indicate that first-year students consider employability less within their university experience, whereas second-year students (49.7%) expressed a slight preference for employability over furthering their subject specific knowledge;
- In terms of the skills seen as valuable by future employers, a wider range of core skills are seen as most important, relevant and valued by future employers rather than sustainability specific skills which suggests a need to reframe the debates surrounding inclusion of ESD (eg 17.8% of second-years in 2011 ranked the ability to apply environmental and social skills as most important for employers compared to 53.4% ranking communication skills as most important);
- Alongside this, further work with the business community to both communicate the tangible benefits of ESD more widely, and to identify the most valuable skills, is needed to ensure skills for SD are valued and demanded;
- Schools continue to be key vehicles of SD with awareness of SD schemes higher among first and second-year students who have attended sixth forms attached to state or private schools (eg 54% 2010 first-years who attended state sixth-forms attached to schools recognised the Eco-Schools award (http://eco-schools.org/) compared to 11% state separate sixth form alumni);
- The long-term impacts of school-based initiatives can be questioned with recall dropping among second-year 2011 respondents (15.6% 2011 second-years who attended state sixth forms attached to schools recognised Eco-Schools compared with the 54% recognising when in their first-year);
- As in 2010, the majority of respondents believe that skills for sustainability literacy were at least partially covered by their time in further education; however this partiality of coverage suggests significant scope for improvement (eg skills being partially covered range from 32% to 46.8% among 2011 first-years);
- Similarly, the majority of first and second-years report conducting sustainability skills at least sometimes (eg reported conducting of skills among 2011 second-years ranges from 16.9% to 31.5% 'sometimes' and 35% to 53.2% 'most of the time' and 14.5% to 35% 'all of the time');
- Notable exceptions are those skills surrounding nature and ethics which are consistently ranked lower than those skills applicable across a broader context;
- In most cases (77% first-year students, 2010 and 74% first and second-year students, 2011) institution coverage of sustainability is not enough to sway students from their first choice university. Monitoring the relative importance of attractants is particularly important over the coming academic year given the introduction of increased tuition fees in 2012/13;

- Student comprehension of sustainability is different to the definition currently being used in academic debates and policy making. Student understanding, across both year groups and research phases, is based on the natural world/ environment rather than including the wider range of core skills.

These findings inform the following recommendations for schools and colleges, universities, education bodies and student organisations:

- The contribution of delivery of SD in sixth-form learning is apparent across both 2010 and 2011 research, however further research is needed to uncover fully the role of further education and the legacy of impact given the low recall of initiatives among the 2011 respondents;
- There is further need to work on student and employer demand for SD in order for it to gain further foothold and importance within the overall curriculum and also given continued focus on the transition towards a green economy, for example through partnerships with business and professional organisations to improve understanding of desirable skills for employment;
- Understanding further the disconnect between definitions and understanding will be key when developing curricula, mechanisms and resources for delivery of SD;
- Understanding the strong attractants of university choice is vital given the increase in tuition fees in 2012/13 – for example should courses be priced nationally, the unique characteristics of individual HEIs, such as performance on ESD, may become the deciding factor;
- The student voice is therefore critical in vocalising demands and expectations of what they expect their time in higher education to involve and what skills they expect to leave with. The evidence base presented in this report and more widely should be used to ensure students are receiving a useful university experience and are well-prepared for their future careers and lives.

Given the similarity in responses between 2010 and 2011 research it is also worth reiterating key recommendations made at the end of the 2010 research which remain of value:

- The development of an online resource for teaching professionals in particular those delivering subjects that are distant from the more obvious ESD content, for example using case studies as a means of demystifying existing content;
- These resources, along with future policy, should focus on the full incorporation of SD principles rather than those more specific skills which are not always demanded or valued by students;
- A multidisciplinary approach should be followed when incorporating SD principles into the curriculum (given the context of reductions in funding for non-STEM subjects) to ensure each graduate leaves with 'attributes' (skills, knowledge and values) to live sustainably in the wider world;
- In order to achieve the above suggestions, the previous research noted the essential support of senior management within universities, for example through a national forum to discuss and support the work to progress holistic thinking and delivery of the ESD agenda.

4 Background

The next two sections of this report builds on the stand-alone nature of the executive summary and policy briefing to provide the full report of findings

4.1 Context of the research

The UK is currently facing a continued period of economic difficulty and uncertainty, resulting in spiralling unemployment figures. Particularly notable is the high proportion of young people within those who are unemployed with numbers topping one million in November 2011[3] (Office for National Statistics, January 2012). With youth unemployment reaching new highs, a need exists to ensure graduates are fully equipped with the skills desired and valued by their future employers. The focus of the incumbent government on a 'green economy' as a major part of the solution to the current situation means that the burgeoning field of ESD bears increasing relevance. Recognition that all businesses will need to develop resilience to climate change and to use natural resources efficiently and that a workforce with appropriate skills is required is increasing[4]. This is matched by an expectation among the vast majority of recent graduates (96%) that they will be involved in sustainability in some way during their careers[5].

This research, first conducted in 2010, was designed to improve the limited base of research on ESD beyond the setting of further education. It aimed to better understand student attitudes to and aspirations towards developing skills in SD both within and beyond higher education as well as understanding the policy context within which higher education institutes (HEIs) are operating. This longitudinal research aims both to further our understanding and build a further picture of how attitudes may change throughout university careers.

Auxiliary influences on the research included the vote, in December 2010, to increase student tuition fees, likely to have a shaping influence on student choice and demand. Therefore a clear and detailed understanding of student expectations is necessary to ensure graduates leave university with optimal skills from the perspective of students, employers and policy makers.

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4.2 History of the research: 2010

As outlined above, the current research is a development of research conducted in 2010 by NUS and sister company NUS Services again on behalf of the Higher Education Academy (HEA). This pioneering piece of research aimed to go some way to fill the gap in understanding student attitudes towards and skills for SD in the UK. This two-phase study incorporated a purposive desk review informing an online survey, conducted in October 2010, which gained 5,763 responses. Respondents were first-year students who had not taken more than a year away from formal education, and were taking their first degree. The final report detailing the findings for the 2010 research can be found on the HEA website http://www.heacademy.ac.uk/resources/detail/sustainability/esd_First_Year_Students_report.

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3 http://www.guardian.co.uk/news/datablog/interactive/2011/nov/16/youth-unemployment-map

4 BIS, (2011), Skills for a green economy: A report on the evidence

5 Sky (2011), The Sustainable Generation: The Sky Future Leaders Study. Results based on research with 751 graduate trainees and recently graduated MBA students and potential middle managers earmarked for leadership positions.

5 Aims and objectives

5.1 Project aims

The overarching aims of this research are to build on the findings and recommendations from the research conducted in 2010 in order to further develop the understanding of literature and the ongoing attitudes of students in terms of:

- Trends in demands and expectations from first-year students new to university;
- Longitudinal tracking of demands and expectations from second-year students as they progress their university career.

With this in mind, the following objectives were defined for the research.

1 To construct a team of ESD policy and research experts to provide the HEA with a history and overview of SD as delivered in schools and FE from both policy, and skills and attitudes perspectives
2 To augment the existing literature review through post 2010 review of the effect of SD in terms of student attitudes and skills within HE
3 To engage with a representative sample of first-year HE students from a wide number of HEIs within the UK in order to understand:
   - Existing skills and knowledge
   - Attitudes to SD
   - Unmet needs in SD
4 To engage with a representative sample of second-year HE students from a wide number of HEIs within the UK in order to understand how time at university impacts on:
   - Existing skills and knowledge
   - Attitudes to SD
   - Unmet needs in SD
5 To produce a report including recommendations to the HE sector in order to enhance ESD in terms of meeting student needs through creation and development of sustainable policy.

5.2 Research objectives

A two-phase research approach was designed to meet these objectives, following the approach adopted in the 2010 research, namely a desk-review phase feeding in to a phase of UK-wide empirical research.

The objectives for each of these phases can be broken down as follows:

Desk review

- To focus on advances made in understanding and delivery of ESD (including the transition from schools to HE) since research was historically conducted in 2010;
- To understand evidence of existing student attitudes and skills in ESD and how ESD is currently being delivered in the UK.

Empirical research

- To replicate the 2010 empirical research, with pertinent updates where necessary in order to determine first-year students' understanding of and attitudes towards SD issues with a view to understanding how this has changed since the previous wave;
- To replicate and update where necessary the 2010 empirical research in order to understand the impact and influence of universities, if any, on student attitudes towards and skills in SD;
- To understand stated aspirations to study SD and gain insight into the degree to which first-year students in higher education feel that these aspirations are being met;
- To repeat this among second-year students;
- For both cohorts; to understand existing provision and interpretation of ESD and any stated unmet needs in ESD through empirical research;
- For both cohorts; to use the empirical research to clarify what measures HEIs could take to meet stated unmet needs in terms of aspirations to study SD and improvements to existing provision of ESD;
- To assess any significant differences between cohorts (first-year and second-year students);
- To assess any significant differences between first-year attitudes between years (2010 data versus 2011 data).

5.3 Methodology

As outlined above, a two-phase methodology was conducted; a desk-based research period reviewed existing policy-based research and existing research into student attitudes and skills feeding into empirical research, which took the form of a national online survey. These two phases are demonstrated in Figure 1.

Figure 1: Research methodology
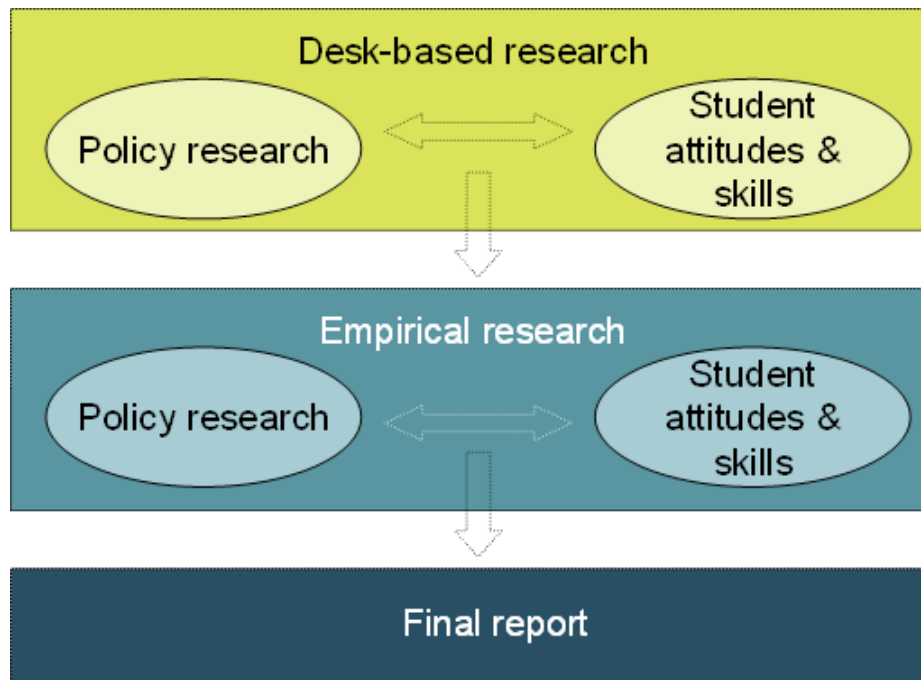
A project steering group consisting of representation from the HEA, NUS Services, Business in the Community (BitC), and Change Agents (formerly StudentForce for Sustainability) met on two occasions to discuss:

1 project set-up and methodologies;
2 initial empirical research findings and reporting strategy.

Desk research

To provide a foundation for the empirical work and as part of the robust analysis, this project featured a short desk-based research phase covering:

• Existing publications and datasets on student attitudes, skills, unmet needs and perceived wants, which have been published since the 2010 wave of research;
• Recent historical policy (post 2010) in ESD.

Core documents for inclusion in the desk research were identified through a process of consultation with the expert steering group along with purposive literature searches online (eg using Google search and Google Scholar). The consultation and search aimed only to discover sources published post-June 2010 to provide an update to the desk review conducted as part of the previous research. Identified documents were summarised into a summary table (see appendix 2 for further detail) and findings were consolidated into a working review document with conclusions and recommendations for the next phase of the project – the empirical research (appendix 1).

Empirical research

Informed by the findings of the desk review, along with consultation with the steering group, surveys were designed for first and second-year students around the following core themes:

- Student attitudes to SD issues;
- Student definitions of SD;
- Student aspirations towards ESD;
- Student attitudes towards potential future policies to include SD within the curriculum;
- Student awareness of the future green economy and skills needed.

Empirical research was run via an online survey, applying quantitative methodologies to measure attitudes and skills. The skills under investigation in this research matched those developed for the previous research to be key indicators of the core skills in SD: living within environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly.

Two surveys were designed, one for first-year students, one for second-years. The overall content of the surveys was a deliberate repeat of those used in the 2010 research in order to capture comparable longitudinal data. Additions were made to capture further data on attitudes towards skills and employability, hypothesised to be increasingly important as each cohort progresses through their university career. Figure 2 outlines the overall flow of the surveys.

Figure 2: Survey flow

Demographics

ESD in FE

Attitudes towards SD

Skills in SD

Unmet needs (aspirations in SD)

Projective (future) policy testing
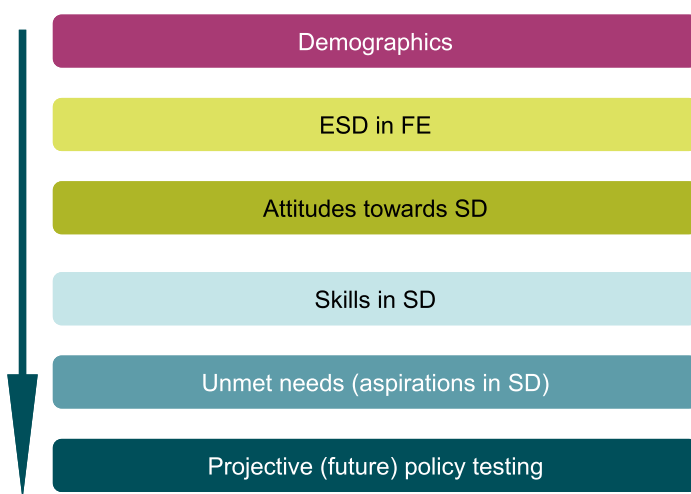
The final first and second-year survey materials can be found at appendix 4 of this report.

Recruitment

The NUS Extra mailbase was used to provide access to 25,000 first-year students and 25,000 second-year students who were targeted with an HTML email. The HTML email directed respondents to an allocated web page for the project where the surveys could be accessed.

Within the second-year sample were respondents who completed the 2010 research as first-years and gave their permission to be recontacted for future research by NUS Services. A total of 4599 students, now in their second year of study, were recontacted. 428 of these completed the survey in 2011.

Support of a range of HEIs was also secured to promote the surveys. This was typically through notifying interested members of staff to highlight to their first and second-year students, and advertising though email or newsletter notifications.

The surveys were additionally incentivised with a £1000 prize fund, including first prize of £500.

The universities recruited to assist with the promotion of the research faced difficulties in doing so, namely due to the timing of the fieldwork period during the Christmas vacation period. However despite these issues with timing and promotion, representative samples of 1552 first-year students and 1641 second-year students were achieved. Of the second-year respondents, 428 had completed the 2010 survey as first-years.

6 Outputs and findings

6.1 Desk research – headline findings

The aim of this desk research is to provide an update to the research carried out previously for the HEA and to use existing work to inform empirical research. The core findings can be summarised as follows.

- As found in 2010, delivery of ESD is disjointed at a national level. The 2010 research found limited research and evidence on student opinion of how delivery of ESD takes place post 16;
- Definitions of ESD remain varied and vague. The 2010 report suggested the need for a nationally accepted guideline definition, standard assessment procedure and defined indicator/s could allow understanding of national progress;
- The tangible benefits of including SD in curricula need to be well-communicated to secure national buy-in in FE and HE and to prevent the benefits remaining nebulous;
- Communication of the tangible benefits of ESD more widely, eg among the business community, is needed to ensure skills for SD are valued and demanded;
- Excepting the precursor to this current research, student attitudes towards SD have not been extensively covered and the need to further understand student demand for learning and skills remains;
- Scotland and Wales lead the UK in understanding the impact of ESD with national baselining studies completed.

6.2 Empirical research – headline findings

The online survey was designed to build on the findings of the desk review and provide new insight and add further clarification to the 2010 research, both longitudinally at point of entry to university and throughout university career, on what students' attitudes are to and skills in SD in terms of:

- Existing skills;
- Understanding, attitudes and behaviour for SD;
- Importance of SD during HE and beyond; and
- Preferences for learning in SD.

6.2.1 Existing skills

Existing skills: Influence of further education

The surveys included an exploration of the influence of and exposure to initiatives and teaching during respondents' time in FE. The 2010 research found schools to be the key vehicles of SD schemes. This remains the case in 2011 with respondents having attended state-owned and private schools with integrated sixth form colleges showing the highest recollection of sustainability initiatives and schemes. However recognition is significantly lower across the board in 2011 than among the 2010 survey respondents (at the 95% confidence level). Comparing the 2010 data with 2011's second-year responses suggests that SD schemes in FE are not making a lasting impact on students, however the responses from 2011 first-years suggests that recognition overall is lower.

Figure 3: What awards/initiatives did the last place you studied before your current university/college take part in, if any?
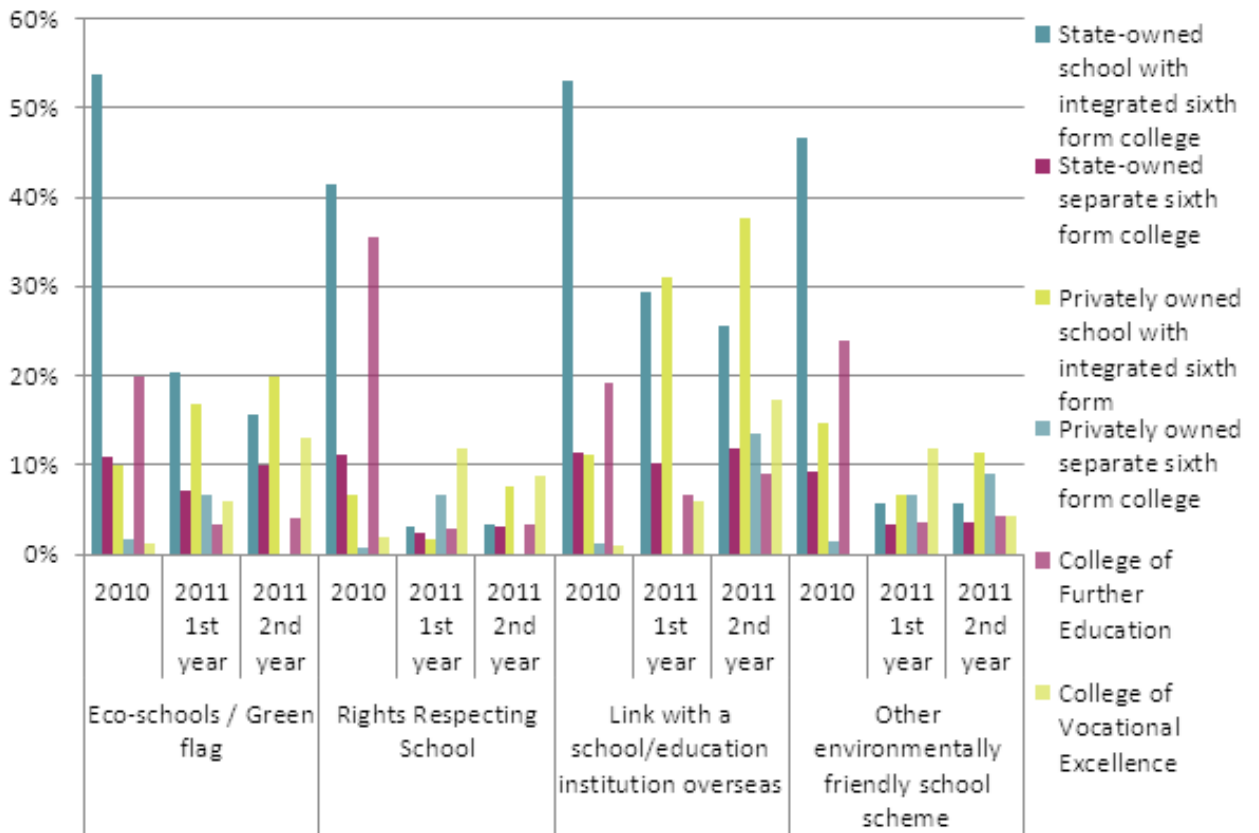
Respondents were also asked to retrospectively recall coverage of the core skills defined as SD in the 2010 research during their time in FE. The majority of first and second-year students believe that all skills, apart from developing an ability to 'understand people's relationship to nature', were at least partially covered during their time in FE. This reflects the findings of the 2010 research and suggests that the opportunity for core competencies to be formalised and deepened remains. As understanding of and focus on skills for sustainability and employability increases, it is worth continuing to assess student perception of coverage to understand the immediate and longitudinal impacts of any changes to FE (and HE) curriculums.

Figure 4: Please tell us to what extent you believe these skills were covered in your curriculum at your last place of study.

6.2.2 Understanding, attitudes and behaviour for SD

Understanding of SD

Respondents were asked to define SD in their own words, without prompting. Respondents were not provided with a definition of sustainability until after this question (at the end of the survey) so as to avoid influencing responses and ensure responses were based on their own understanding of the environmental and social skills associated with SD.

Figure 5: What do you understand the term 'sustainable development' to mean?

2010 Responses

2011 First Year Responses

It is clear that the wider concept of sustainability as conveyed within the Brundtland

(1987) definition is still considered relevant by many of the respondents in the survey, both in 2010 and the current research although in practice most focus on the environmental dimensions of sustainability as shown by figure 5.

It is worth considering that within the eight skills used to describe sustainable behaviours, one specifically focused on the environment and another on ethics. The remaining six were deliberately broad in order to reduce the risk of leading respondents into associating the survey with the environment. Only two standalone questions within the survey directly addressed the environment (see appendices 3 and 4 for the full survey). In order not to bias the bulk of the survey, a definition of sustainability was taken towards the end of the survey to allow analysis of the different understandings of the term. With student respondents placing weight upon understanding sustainability within a narrow spectrum, associated with the environmental needs of today rather than the wider global needs of tomorrow, standalone research of the definition of sustainability could be conducted to ensure no positioning effect is in place.

SD behaviour

Respondents continue to believe themselves to be generally positive in terms of demonstrating environmentally friendly behaviours.

Figure 6: Which of these statements would you say best describes your current lifestyle?

Following the progress of the 2010 first-year cohort (second-years in 2011), figure 6 shows a slight increase in the proportion of respondents who see themselves as being environmentally friendly in most things they do (16% of 2010 first-years, compared to 20% 2011 second-years) suggesting that this year group has made a slight improvement to its environmental behaviour. It is important to bear in mind that these are self-reported behaviours and may not reflect true action. Across both 2010 and 2011 research, the proportion of respondents stating they are environmentally friendly in everything or most things they do is low, indicating opportunities remain to facilitate environmental action while at university. This question is asked on a national basis by Defra's tracker survey, and results from 2009 show the student population to be slightly behind the national average with 25% of people across the UK self-reporting that they are environmentally friendly in most things they do[6].

Additionally, the intention to carry out behaviours while at university is strong among first-year students where the behaviour has become a 'social norm' and can be conducted individually, see figure 7 below. Reducing flying is also considered less likely than other core pro-environmental behaviours. The 2011 results on the whole mirror the 2010 research though a slightly higher proportion of 2011 respondents anticipate participation in recycling while at university than in 2010 (55% in 2010, compared to 67% in 2011).

Figure 7: How likely, if at all, are you to take part in the following actions during your time at university?
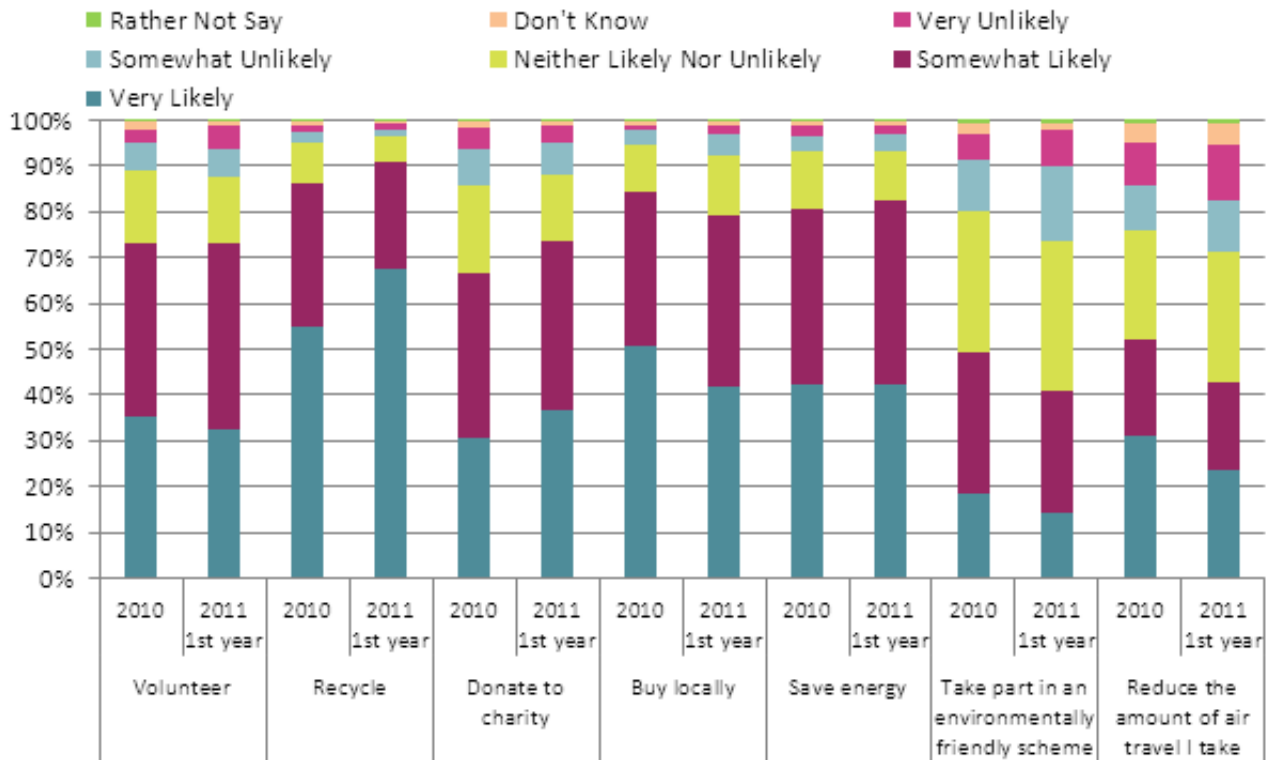
Previous work (for Defra, unpublished) has demonstrated that collectivism is often a barrier to uptake of pro-environmental behaviours, and fewer respondents anticipate participating in environmentally friendly schemes or volunteering their time. This has implications for the finding highlighted in the desk review that informal learning experiences offer important opportunities for learning skills for sustainability.

Figure 8 shows that the intentions for their time at university iterated by first-year students are largely reflected in the actions being taken by second-year students with high proportions of respondents to the 2011 second-year survey stating that they recycle (81%) and save energy (74%)[7]. Approximately a quarter have also acted to reduce the amount of air travel taken. Again reflecting the intentions of first-years, few second-year students are taking part in environmentally friendly schemes at their universities.

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7 While the 2011 second-year cohort does contain 428 respondents who completed the 2010 first-year survey, additional responses from current second-years were also collected to account for attrition.

Figure 8: Have you taken part in the following actions during your time in university?
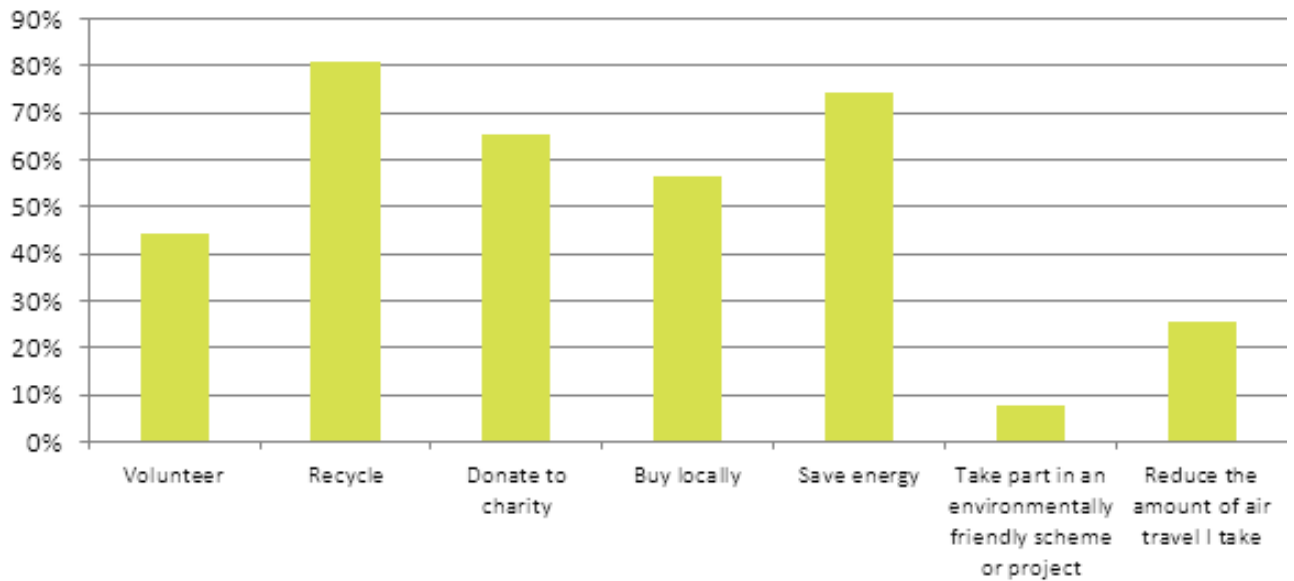
Skills

The impact of the coverage of skills in both FE and at their current institutions results in the response to one of the most fundamental aspects of this research: to what extent are students in higher education practising these skills?

Figure 9: To what extent, if at all, do you think that you personally carry out the following skills?
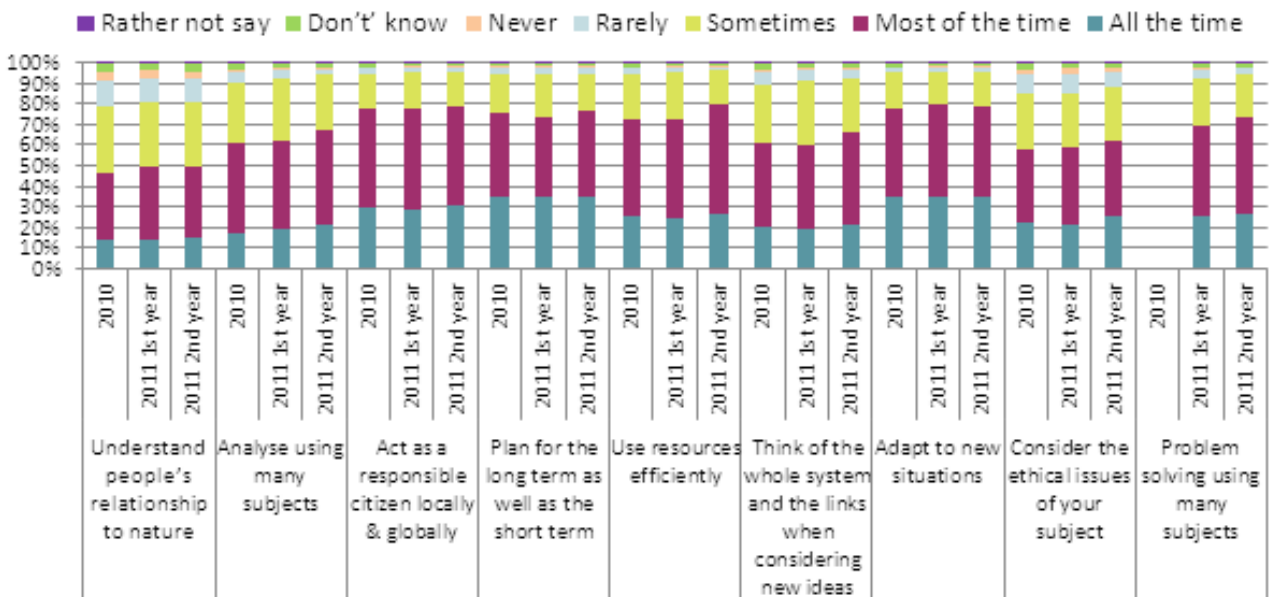
Relatively low numbers of respondents cite conducting sustainability skills 'all the time' and the difference between year groups for each skill is minor (eg responses to 'Understand people's relationship with nature include 13% 2010 first-years, 13.6% 2011 first-years and 14.5% 2011 second-years). A larger proportion of students report conducting these skills 'most of the time', and with the addition of those who conduct behaviours 'sometimes', the question raised in the 2010 research remains - 'how, if at all, do these students conduct these behaviours?'.

6.2.3 Importance of SD in HE and beyond

Importance of SD skills for graduates

There is little variation in ranking of skills according to importance in being included in their course between first and second-year students, with the generic skills being ranked higher by both year groups (eg 31.9% of first-years and 33.2% of second-years rank 'Adapt to new situations' as 1) than the specific sustainability skills listed (eg understanding people's relationship with nature (9.5% first-year and 8.3% second-year); acting as a responsible citizen locally and globally (16.4% first and second-year); and considering the ethical issues of their subject (20.1% first-year and 19.1% second-year)).

Figure 10: Please rank the following skills in terms of their importance in being included in your course for a graduate in your field, where 1 is the most important and 8 is the least important.
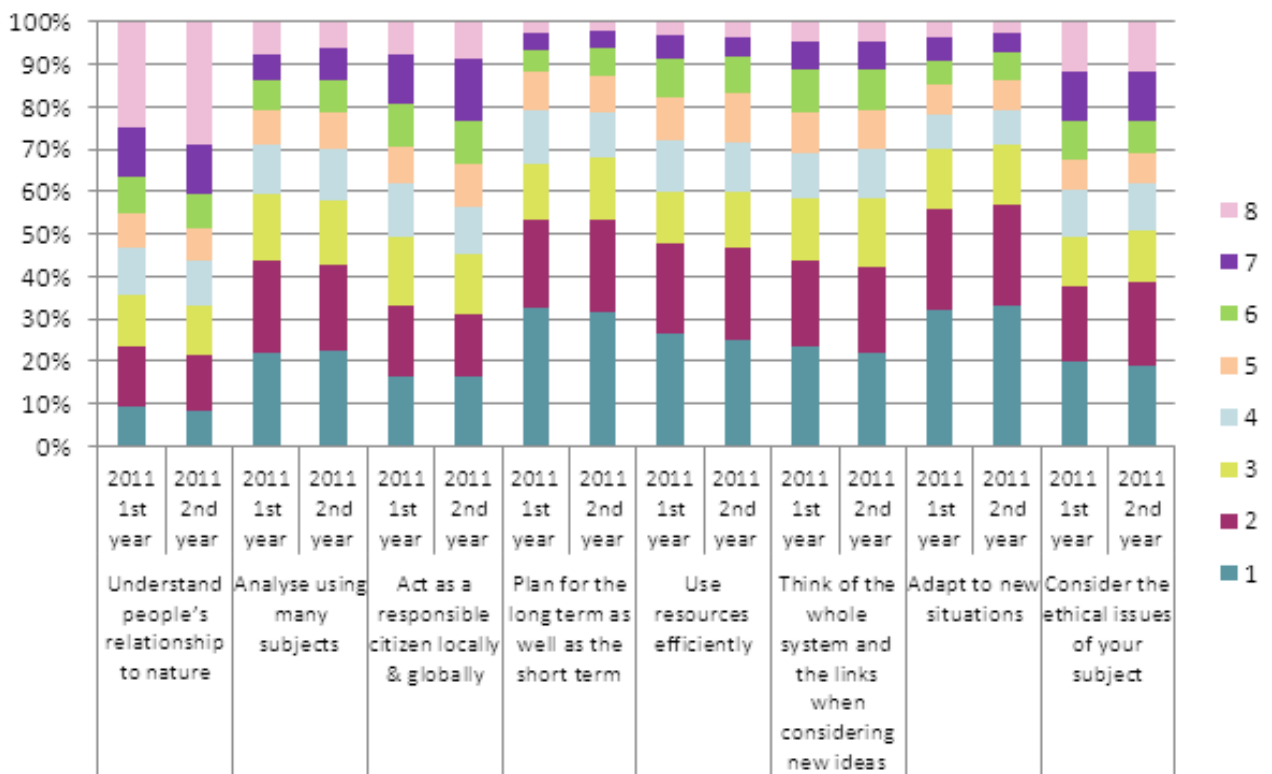
Respondents cite university and course reputation, league tables and entry requirements as more powerful attractants to a university than SD metrics; university reputation and delivery act as a match for respondent aspirations. These are the main attractants both in the 2010 research and across first and second-years participating in the current research.

Figure 11: How important were the following when choosing which university or college to apply to? (Responses ranked very important)
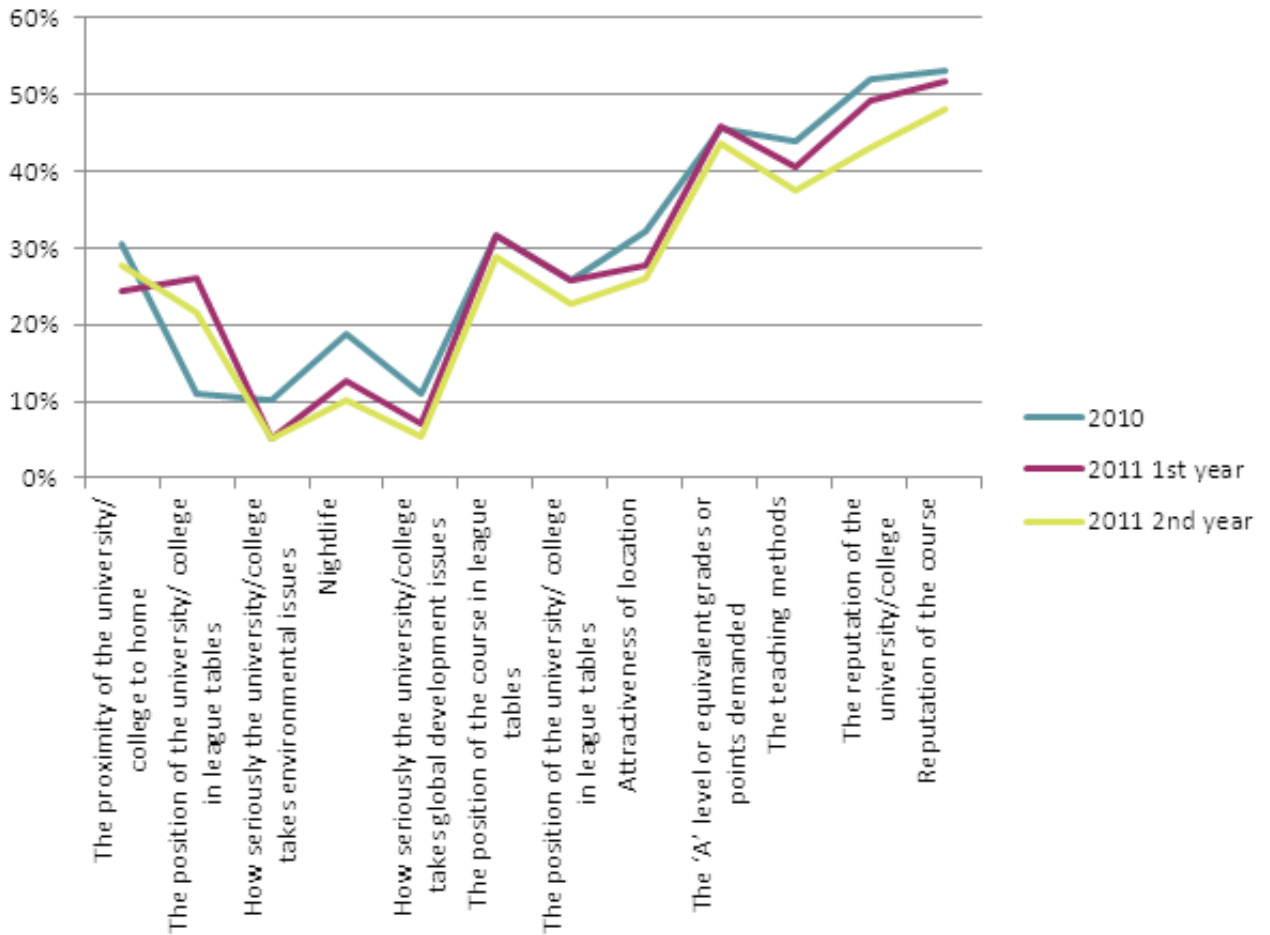
With the introduction in 2012-2013 of increased tuition fees, it will be important to track if and how the second-tier attractants, eg a university's environmental performance, change along with further analysis of how these elements can be incorporated into the current core drivers. The current levels of unemployment may also influence university applicants to take into account a wider or different range of attractants when choosing their course and university.

Currently and historically respondents demonstrate that a holistic package is needed to attract students to university and that inclusion of skills for SD alone is not enough to raise respondents' second choice institution to a first choice institution (figure 12). This demonstrates the need to integrate sustainability content into all courses. Further research into understanding which qualities would tip a second choice institution into a first choice institution, eg league table positioning, teaching methods, will support a holistic understanding on how sustainability impacts university choice. It is of particular importance with the finding below that universities challenge this perception of sustainability and ensure the wider values are better communicated to students.

Figure 12: We are interested in your prioritisation of social and environmental aspects in the future. Please select which option you would choose.
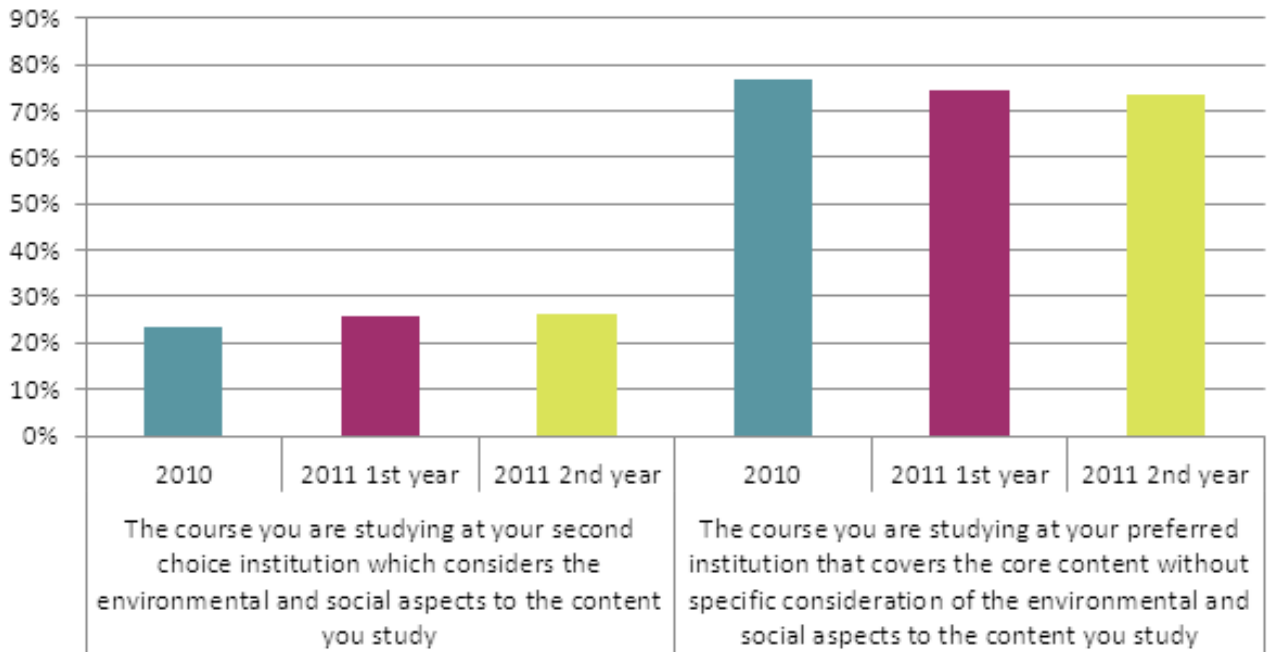
Relevancy to course

Further to the practice of skills for SD, respondents place high value on many of the aspects of SD for use in HE in increasing their ability to perform well in their course (see Figure 13 below, which demonstrates those who selected extremely relevant or somewhat relevant).

Figure 13: Thinking only of your own personal view, how relevant is it to you that the following skills are developed through your university education?
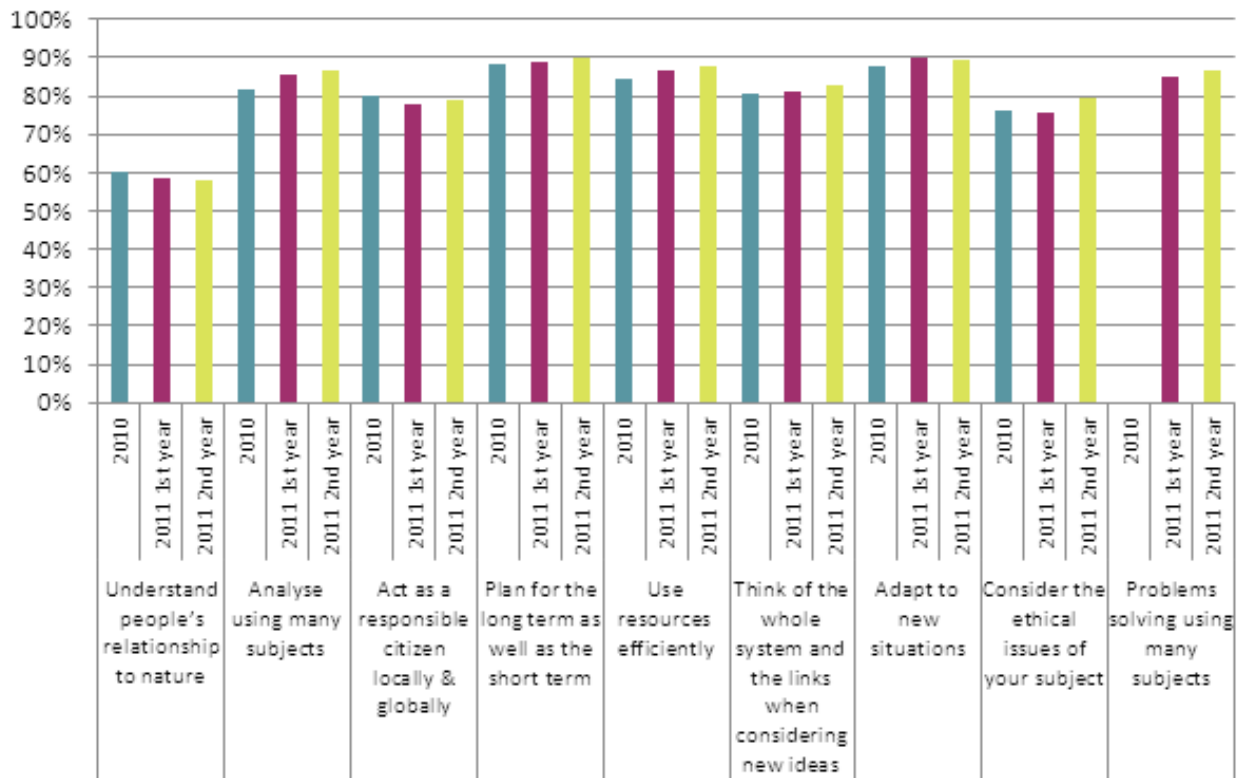
With the exception of skills regarding people's relationship to nature, where a lower proportion of respondents both longitudinally and across the year groups, felt that these were directly relevant to them. Overall relevance of remaining skills ranged from 75% to more than 90%, with only 'being able to consider the ethical issues of your subject' being ranked significantly different between first and second-year students (at the 95% confidence interval level). As was suggested in the previous 2010 research, this is indicative of an opportunity to formalise this demand towards a receptive student demographic.

Importance of skills for employers

Overwhelmingly, skills in SD are expected to be important for employment (see figure 14; responses shown for very important and somewhat important) again with the exception of the ability to 'understand people's relationship to nature' which is seen as less important by first and second-years alike. A selection of skills is also seen as important for employers by a statistically significantly higher proportion of second-years than first-years (at 95% confidence interval level). Comparing the longitudinal first-year responses, only 'acting as a responsible citizen locally and globally' showed any difference between 2010 and 2011 first-year cohorts with 2010 respondents seeing this as more important (85% in 2010 (n=5612) compared with 82.3% (n=1517) in 2011).

Figure 14: How important do you think the following skills are to your future employers?
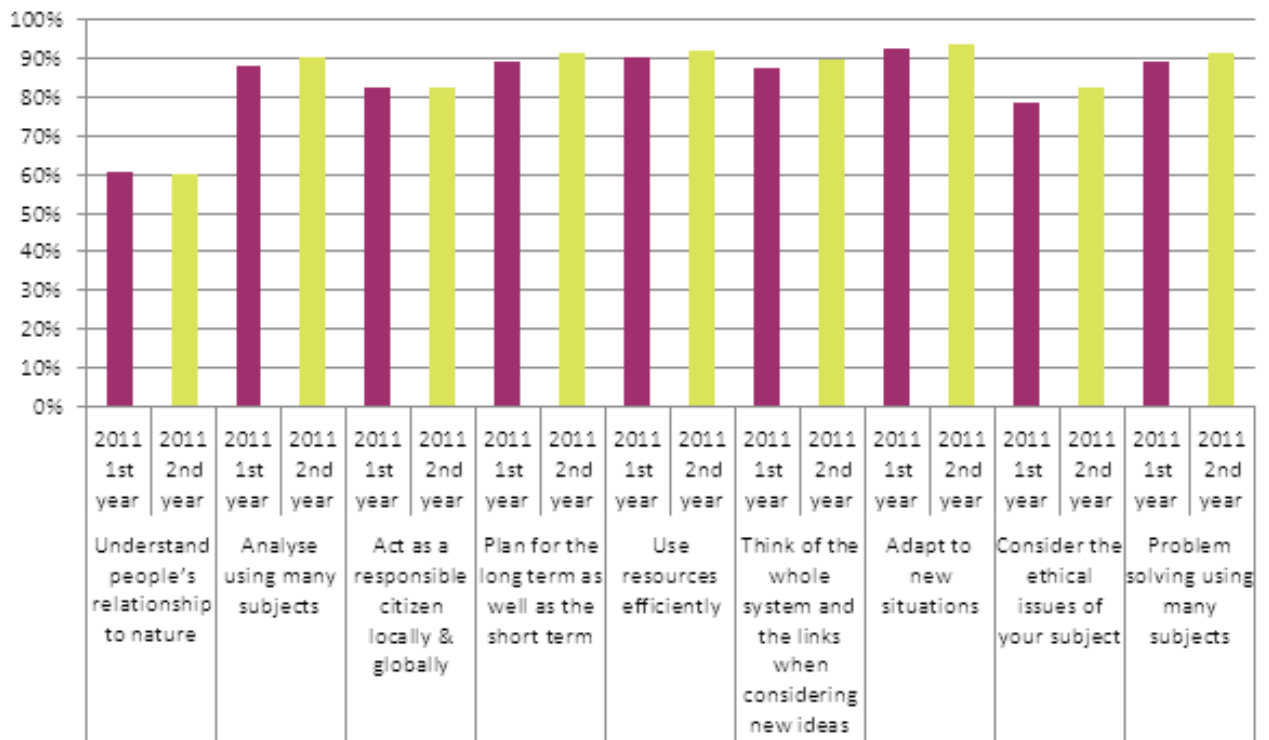
Reiterating the recommendations from the 2010 research, and reflecting the findings of the desk review, there is an opportunity to further explore how this impacts on universities in terms of:

- Communication with businesses in order to determine priority skills, if and how they recognise sustainably-literate graduates in the short-term and, how to equip graduates with the ability to adapt for the future;
- Supporting employment for the student body in creating a pool of graduates with strong skills for employment;
- Attracting and retaining students and securing positive employment figures post-graduation.

The rankings shown above and below (figures 14 & 15) indicate that skills in adaptability and communication are valued more highly than those towards the environment and ethics in relation to employment.

Figure 15: How important do you think the following skills are to your future employers when compared against each other? (1 is the most important)
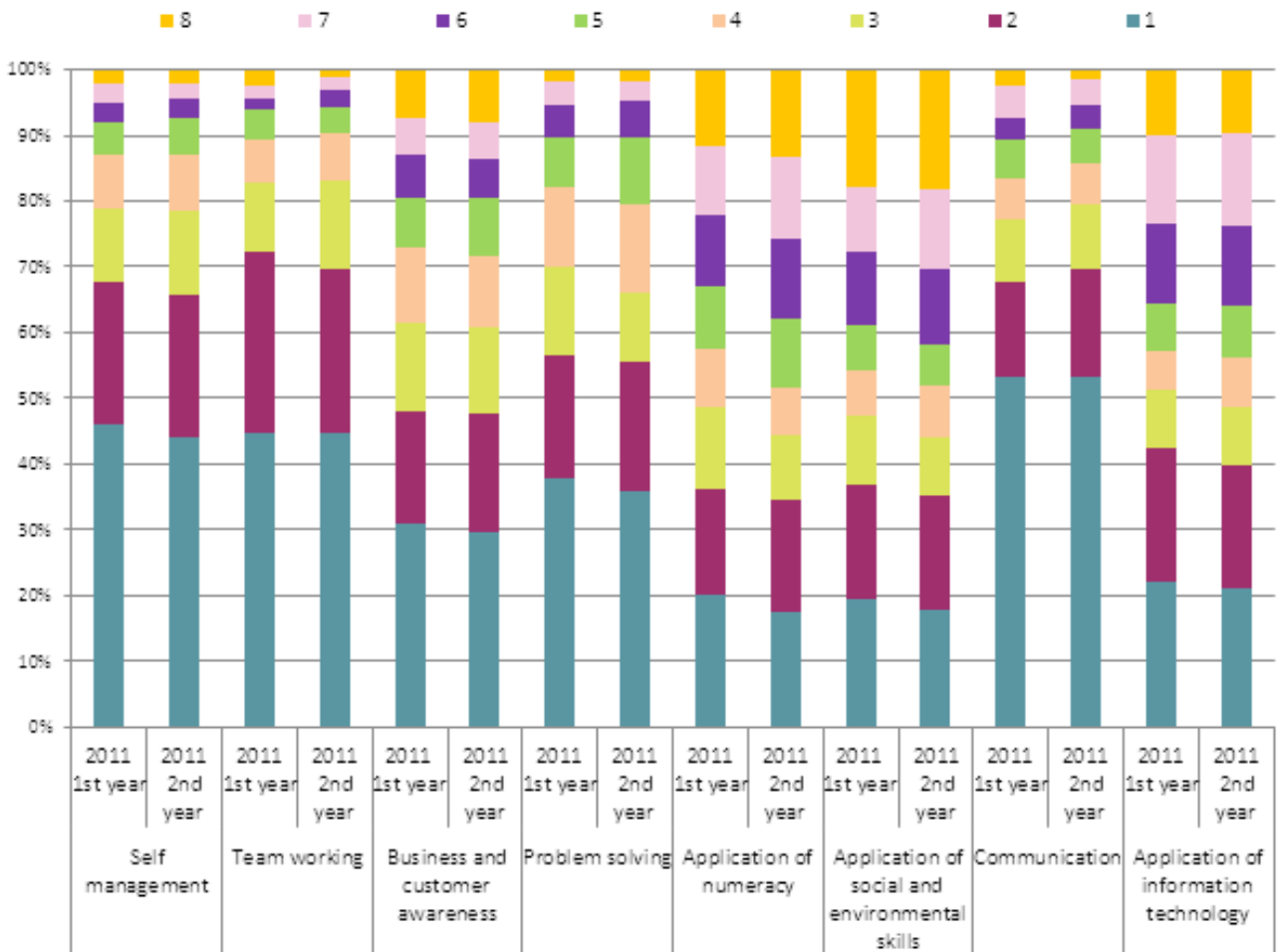
Here, the ability to use social and environmental skills is ranked relatively low in terms of importance for both first and second-year respondents to the 2011 research with less than a fifth (19.6% first-years and 17.5% second-years in 2011) ranking this as 1 (most important). Other key skills such as application of information technology (22.2% first-year and 21.1% second-year ranked as 1), application of numeracy (20.1% first-year and 17.5% second-year ranked as 1) and business and customer awareness (30.9% first-year and 29.5% second-year ranked as 1) receive low ranking by students suggesting that further work is needed to ensure student perceptions match with the reality of employer preferences and demands.

The results shown in figure 15 above also highlight the differences in understanding of what skills are included under the definition of 'environmental and social skills'. Comparing these and the previous responses suggests that it is the 'pure' SD skills eg 'understanding people's relationship with nature' that is defined by students as 'social and environmental skills' rather than the more generic skills listed eg 'plan for the long term as well as the short term'. This reflects the focus of student understanding of SD on the environment (see figure 5). It also highlights potential differences in understanding between thinkers and educators on SD and their students.

6.2.4 Preferences for learning in SD

Despite the perception of a lack of demand for environmental and social skills among respondents by future employers, there is a clear demand for universities to support the development of the wider suite of skills associated with sustainability literacy and thereby improving employability. There is a significant difference in the responses of 2010 and 2011 first-years, with 2010's first-years more likely to agree that universities should be obliged to develop their students' social and environmental skills. 2010 first-years hold the same opinion, having now progressed to become 2011's second-years.
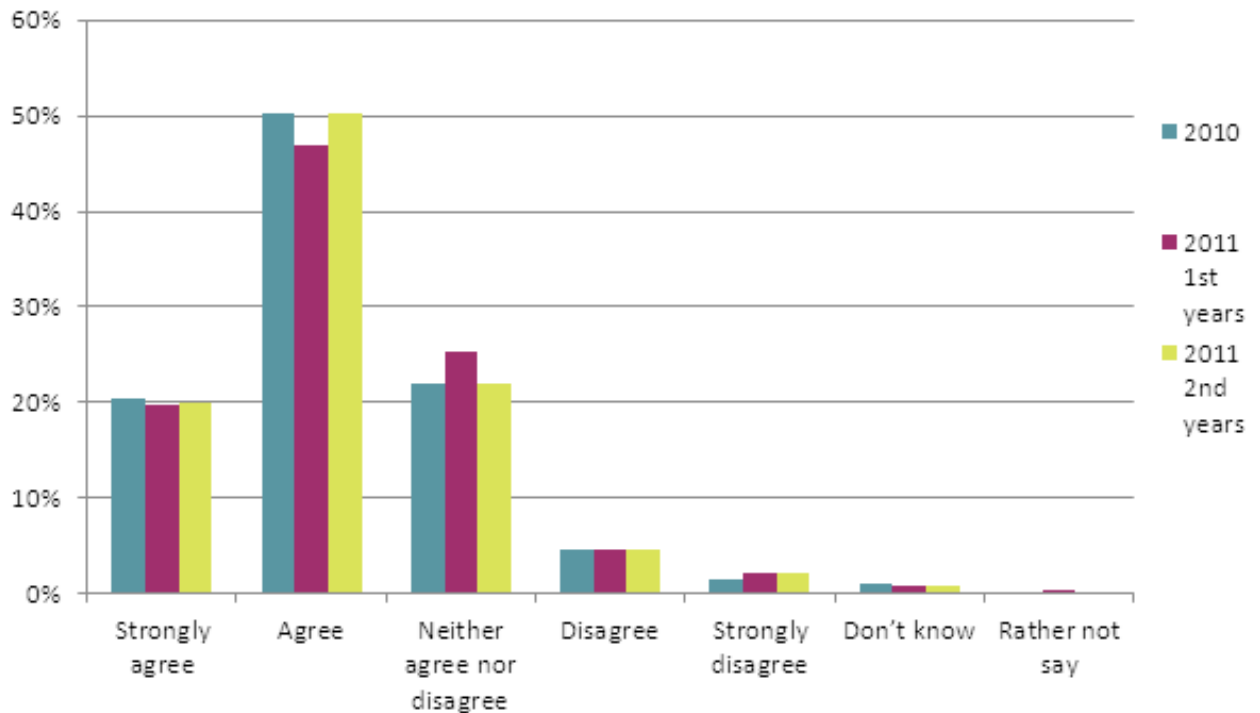
This sentiment echoes the context of developing skills to prepare students for employment through increasing sustainability literacy. Approximately 50% of respondents across both first and second-years, and longitudinally, agree that their university and course leaders share responsibility for imparting skills and knowledge that will prepare them for the graduate job market. However the relationship is symbiotic as respondents overwhelmingly (96% 2010 first-years; 95% 2011 first-years; 96% 2011 second-years) believe themselves to be responsible for preparation for entering the world of employment.

Longitudinally, 2010's first-years (now second-years) are more likely to ascribe responsibility for skills development to themselves than the current intake of first-year students. In terms of graduates, Sky's research into future business leaders revealed that only 35% of respondents felt they have received sufficient sustainability training from their business school or employer suggesting that these responsibilities are, for the majority of graduates, not being met[8].

8 Sky (2011), The Sustainable Generation: The Sky Future Leaders Study. Results based on research with 751 graduate trainees and recently graduated MBA students and potential middle managers earmarked for leadership positions.

Figure 17: To what extent, if at all, do you agree with the following statements:
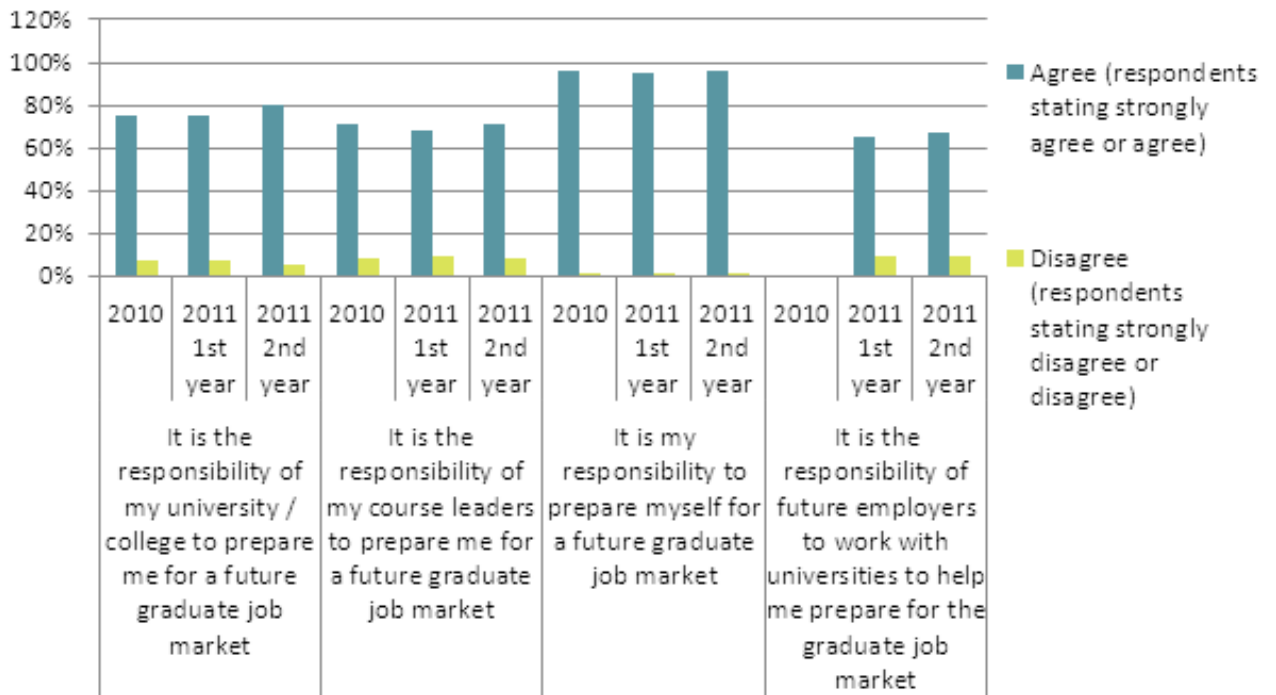
In terms of translating these aspirations to their current place of study, a role for curricular inclusion of SD skills is evident and a large proportion of respondents share the belief that the university they attend (77% 2010 first-years; 81.5% 2011 first-years; 78.4% 2011 second-years agree or strongly agree), its course leaders (64% 2010 first-years; 68.3% 2011 first-years; 64.6% 2011 second-years agree or strongly agree) and, to a slightly lesser extent, the clubs and societies (60.4% 2011 first-years; 57.1% 2011 second-years agree or strongly agree) they belong to promote good social and environmental skills. This finding suggests that informal learning opportunities, identified as important by the desk review, may be currently under-used.

Figure 18: To what extent, if at all, do you agree with the following statements: (Statement three not asked in 2010)
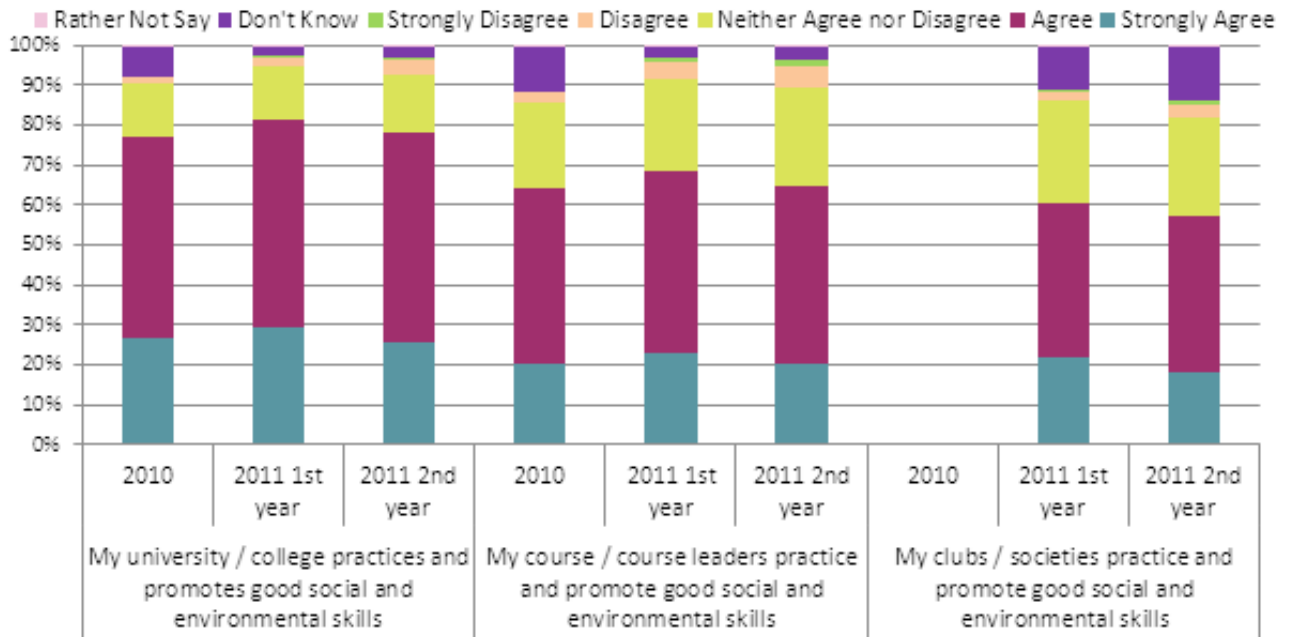
However despite these positive responses, the responses to the following question demonstrate the further scope for incorporation of sustainability within university practices and course leadership as three fifths of respondents state a desire to learn more about SD (64% 2010 first-years; 59.5% 2011 first-years; 60.6% 2011 second-years agree or strongly agree). There is no significant change in desire to learn more about SD between the historic and current research or between year groups, again suggesting capacity for increased coverage. Student understanding of sustainability is key here in comprehending where coverage can be improved.

Figure 19: To what extent, if at all, would you say that you personally agree with the following statements:
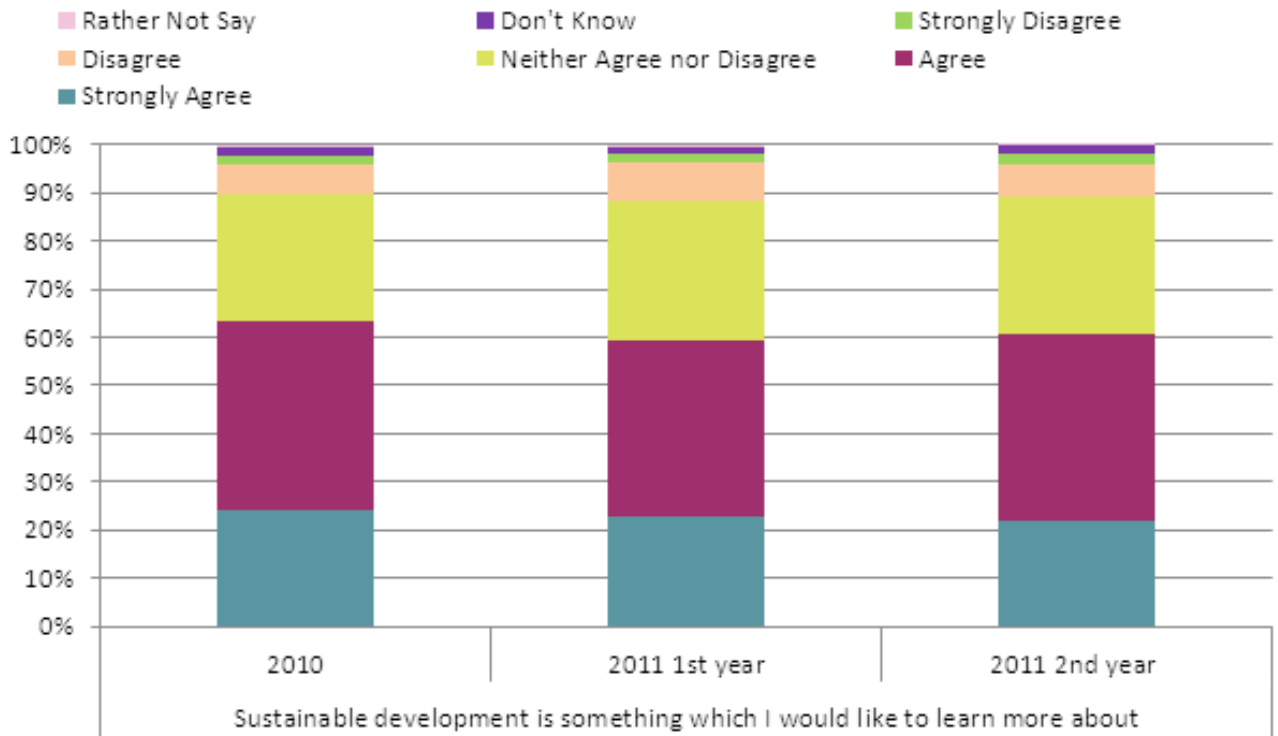
Methods of including SD

Respondents across both 2010 and 2011 first-years and 2011 second-years are amenable to inclusion of skills for SD in their courses, with a non-significant preference for sustainability content to be intertwined with existing content rather than creating additional or specialised sustainability modules or courses.

Figure 20: To what extent, if at all, do you agree with the following statements:
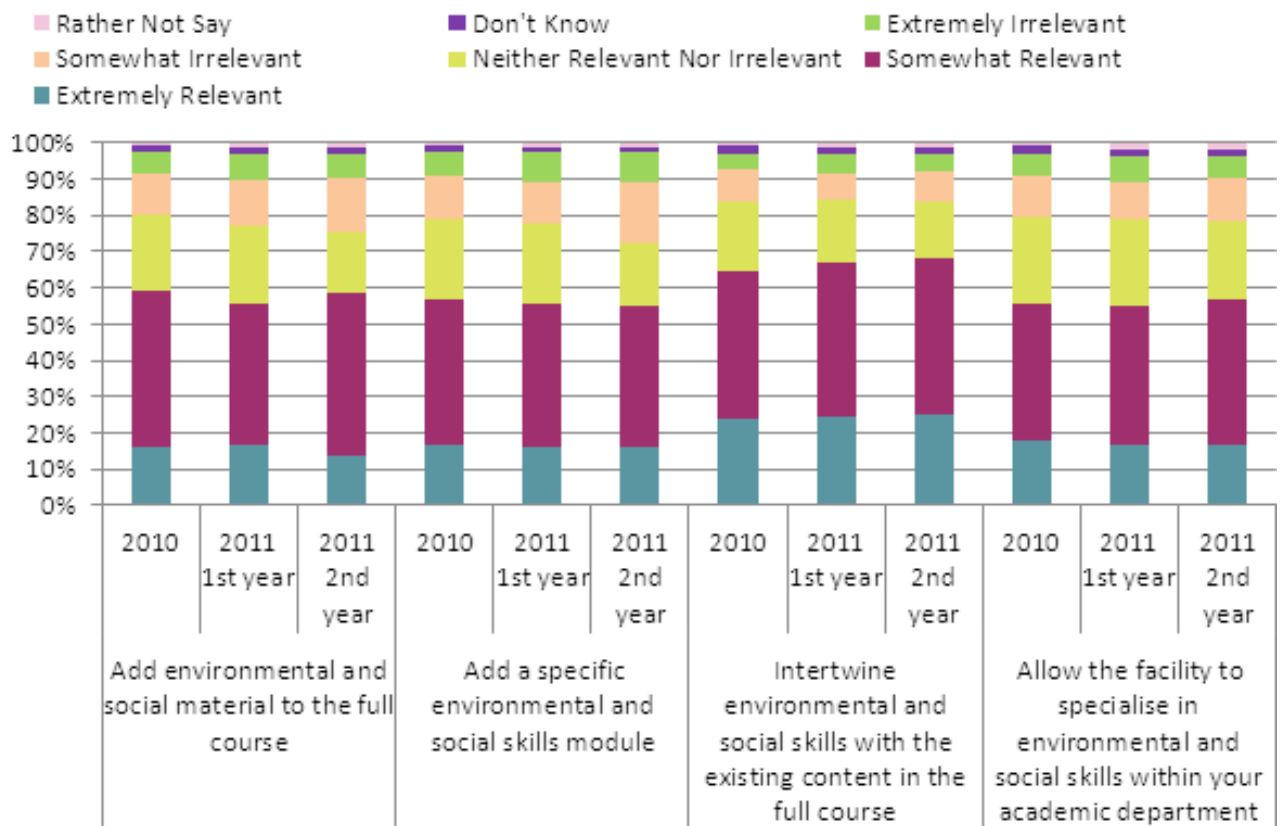
In terms of developing 'missing skills' second-year students in the current research see further academic study or completing an internship or work placement as the main means by which to increase their skills base (41%). This reinforces the earlier findings highlighting the opportunity to increase coverage of sustainability within undergraduate courses, and to further investigate the skills demanded and developed by businesses.

Figure 21: If you answered disagree or strongly disagree to the previous question (Thinking about the skills presented in this survey – to what extent do you agree that upon finishing your course you will be able to put these skills into action within the workplace?), what steps do you think will be necessary to develop these skills following completion of your course?
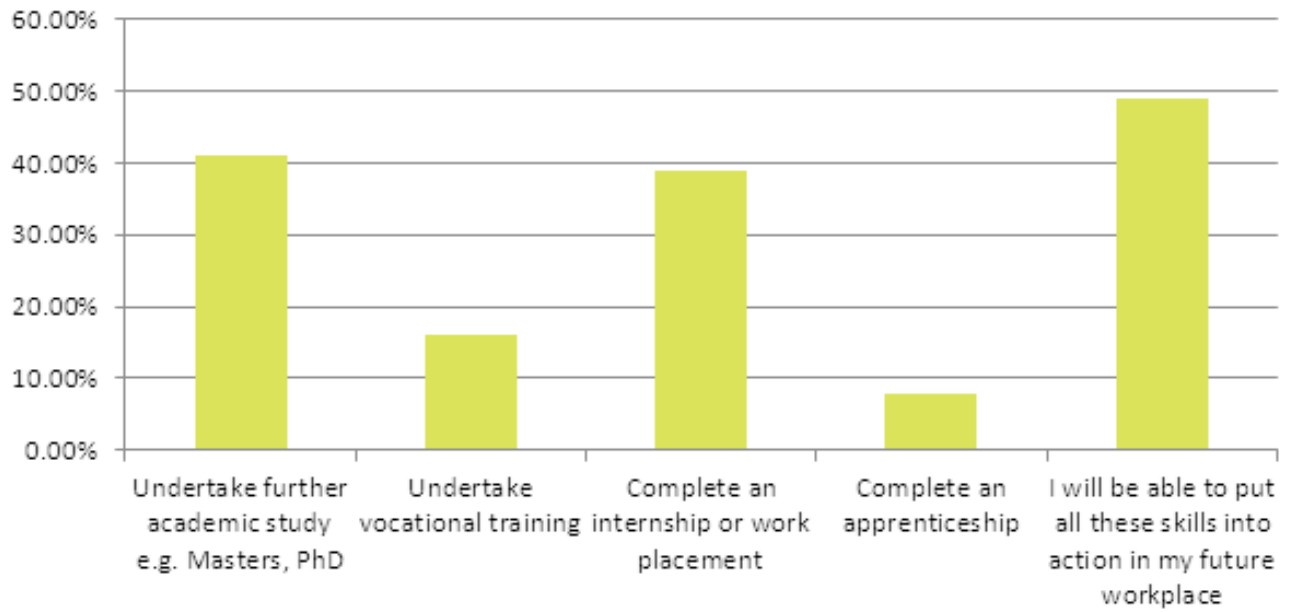
6.5 Entering employment

Encouraging attitudes towards skills for employability can be seen, with almost half of first-year respondents stating that they felt they would choose a module that expressly developed skills for employability (47% 2010 first-year; 46.9% 2011 first-year) although slightly more first-year respondents would prefer to develop their knowledge of their chosen subject (53% 2010 first-year; 53.1% 2011 first-year). This preference is much less defined among second-year respondents, reflecting a slightly increased focus on employability as they progress through university (49.7% 2011 second-years prefer employability, 50.3% prefer their chosen subject). This finding also reflects the preference for developing skills through intertwining with existing course content rather than developing existing courses and modules.

Figure 22: We are interested in your prioritisation of social and environmental aspects in the future. Please select which option you would choose.
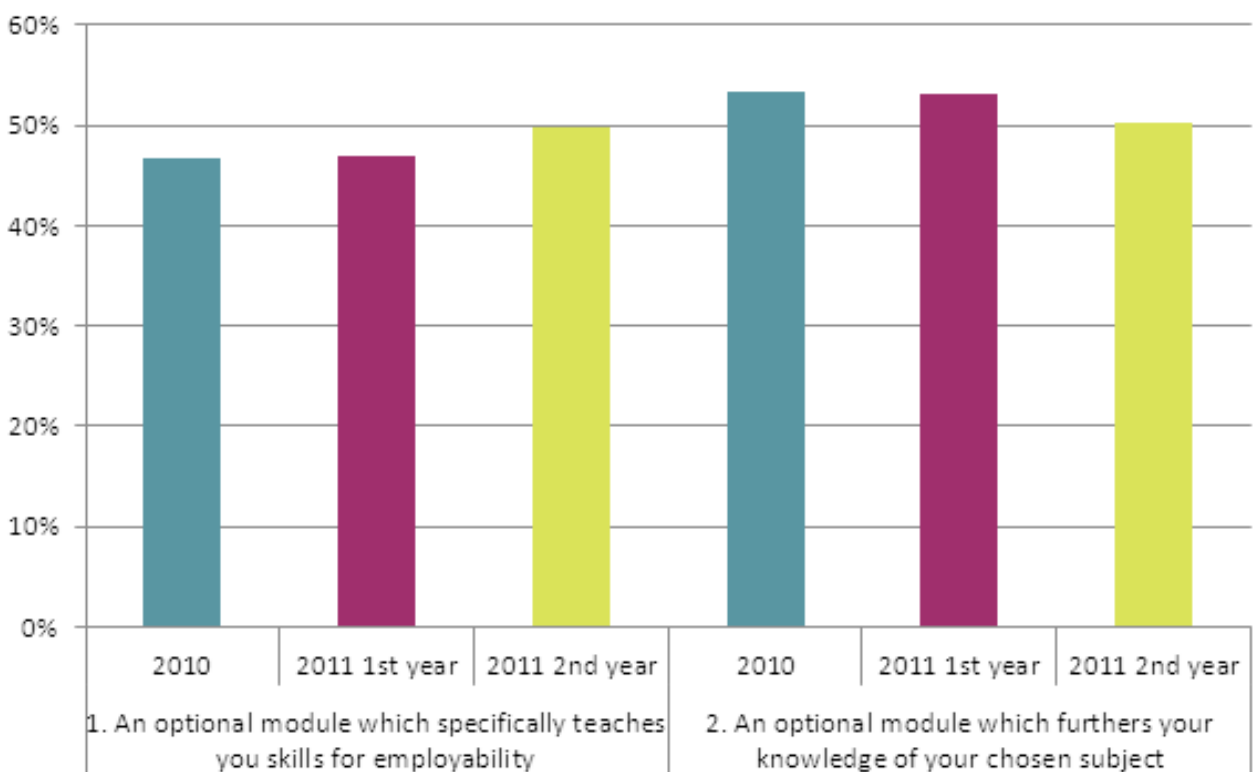
A role for communication of company ethics and environmental performance exists throughout the student journey: two thirds of respondents would sacrifice £1,000 from salary to work in a responsible company. The proportion of second-year students stating they would be willing to make a salary sacrifice is non-significantly higher than first-year respondents supporting the hypothesis that employment becomes an increasing focus for students as they progress through their university career.

This trend is however reversed when the sacrifice is increased to £3,000. Altruistically, two-fifths of respondents report that they would still sacrifice £3,000 of salary to work in an environmentally and socially responsible company (see figure 23 below). These findings add further depth to the recently-released research on 'Future Business Leaders' which revealed that, while 41% of respondents cited an impressive sustainability record as an important factor when looking at potential employers, 88% would be influenced by the pay and benefits package[9].

Please note that in 2010 this question was asked before the vote on fees, and the 2011 data has been captured before the first-year group to pay increased tuition fees, which may have an impact on these thresholds in the future. It will be interesting to see the effect of increased tuition fees on student preferences for good ethical and environmental performances among future employers over increased salaries. A possible prediction is that concern over repayment and debt may focus graduates attention on higher salaries rather than company ethics and environmental performance.

9 Sky (2011), The Sustainable Generation: The Sky Future Leaders Study. Results based on research with 751 graduate trainees and recently graduated MBA students and potential middle managers earmarked for leadership positions.

Figure 23: We are interested in your prioritisation of social and environmental aspects in the future. Please select which option you would choose.

2010	2011 1st year	2011 2nd year	2010	2011 1st year	2011 2nd year
1. Assuming all other factors are equal, a graduate position with a starting salary of £1000 higher than average (£20,000) in a company with a poor environmental and social record			2. Assuming all other factors are equal, a graduate position with a starting salary of £1000 lower than average (£20,000) in a company with a strong environmental and social record		

Figure 24: We are interested in your prioritisation of social and environmental aspects in the future. Please select which option you would choose.

2010	2011 1st year	2011 2nd year	2010	2011 1st year	2011 2nd year
1. Assuming all other factors are equal, would you choose a graduate position with a starting salary of £3000 higher than average (£20,000) in a company with a poor environmental and social record			2. Assuming all other factors are equal, would you choose a graduate position with a starting salary of £3000 lower than average (£20,000) in a company with a strong environmental and social record		
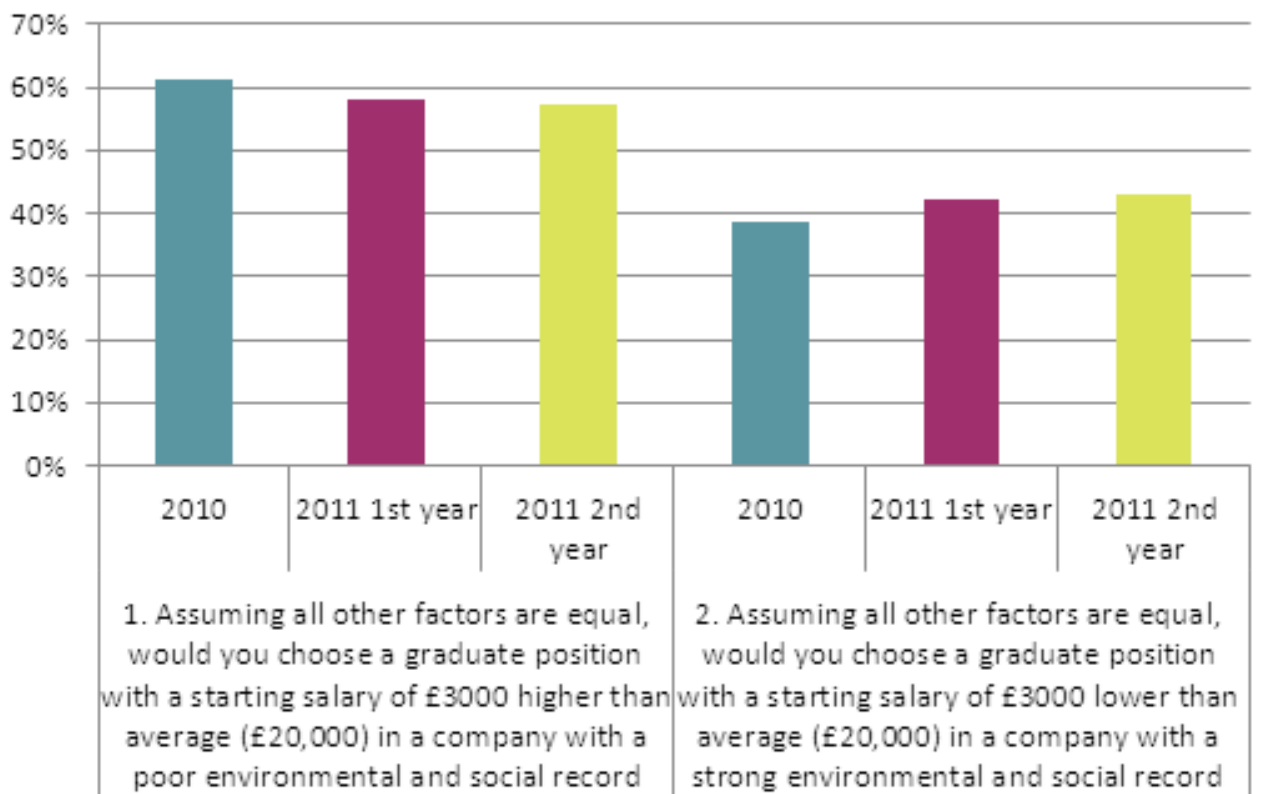
7 Conclusions and implications

The following section provides an overview of the findings of the research. Overall, the findings of the research are broadly reflective of the 2010 research serving to reinforce the conclusions presented previously.

Existing skills: Influence of further education

The 2010 research found schools to be a key vehicle of ESD despite a patchy overall coverage of aspects of sustainability in further education uncovered in the desk review. The empirical research found that first-year students who have come from a sixth form attached to a school are significantly more likely to recognise SD schemes. This remains the case in the 2011 research, with both first and second-year respondents exhibiting the same characteristic. However recognition in both groups is significantly lower than in 2010. For second-years, this suggests that the long term recognition, and possibly therefore impact, of further education schemes and initiatives is limited.

Respondents to the 2011 research also concur with the 2010 findings that the majority of skills named in the research have been covered at least partially during their time in further education. The partiality of coverage in some cases suggests that the potential to further increase coverage in the curriculum remains.

Practising SD

Environmental behaviour reported by all groups of respondents is broadly in line with the behaviour reported across the UK generally. High levels of intended behaviour are also reported, particularly for those behaviours which are seen as the 'norm' such as recycling, and saving energy. Contrastingly, the intention to participate in environmental initiatives while at university is low in both 2010 and 2011 first-years. This is reflected in the participation results from 2011's second-year students with low numbers reporting being involved in environmental initiatives during their time at university so far. The finding from the desk review that informal learning opportunities offer an important way to improve skills for sustainability therefore has the potential to be improved and capitalised upon.

Skills for sustainability literacy in HE

Second-year students in 2011, and first-years in 2010 and 2011, believe that the core skills for sustainability identified in the research are both relevant to their course and important for graduates in their field. The notable exceptions in each case are the skills surrounding nature and ethics which are consistently ranked lower than the more 'generic' skills throughout the research.

Despite the perceived relevance and importance of social and environmental skills expressed by respondents throughout the surveys, they are not yet enough to draw students away from their first choice institution in 2010-11, and subsequently in 2011-12. Factors such as university and course reputation are ranked significantly above performance on environmental and global development issues when students are choosing which institution to attend. It will be important to monitor these drivers over the coming academic years as increased tuition fees are introduced, potentially increasing the importance of second tier attractants. It is also possible that action on sustainability is seen as a given, again needing further investigation.

Understanding of SD

Combining these findings with the respondents' own definitions of SD, which were focused on environmental protection, would suggest that student understanding of skills for sustainability is limited to those surrounding nature and ethics. The wider set of skills defined by the research does not appear to be defined under sustainability by students. These findings are reflected in both first and second-year responses. While the relevance and importance placed on wider SD skills are conducive to students thinking about their roles in more sustainable ways this finding calls into question the relevancy of debates surrounding ESD. Would a focus on wider skills and competencies, ie graduate attributes, be more relevant?

Opportunities and demands for delivering SD

The overwhelming expectation among students for universities to provide skills for sustainability and employability uncovered in the 2010 empirical research remains among both first and second-year students in 2011. There is however a significant difference between their preferences, with second-year students exhibiting a greater focus on employability over furthering their knowledge of their specific subject.

While respondents demonstrate an acceptance for responsibility for developing their skills for the future job market, there is wider expectation for both universities and business to take an active role in developing such skills. The 2011 first-year cohort are however less likely to ascribe responsibility for skills development than the previous first-year group (now second-years).

Overall, respondents to both 2010 and 2011 surveys demonstrated a preference for reframing course content to 'intertwine' environmental and social skills rather than adding further course content or components. Responses to these types of teaching were also broadly positive among both first and second-year respondents in 2011 and 2010 research. This is not to say that other methods of incorporation should be ignored with solutions needing to be tailored to the needs of individual HEIs and their students.

Sustainability and skills beyond education

The skill-set outlined in the research is also seen by respondents across the research as important beyond their time in education and into the workplace. Sustainability skills are seen as valued by future employers by both first and second-year students in the 2011 research, mirroring the findings of the research conducted in 2010. There are however some contradiction in results which is indicative of conflicting understanding and definitions of skills for sustainability. While individual skills defined by the research as being skills for sustainability were rated highly by respondents, when presented with a list of 'traditional quality indicators' for graduates (eg numeracy skills, teamwork) which included 'environmental and social skills' more generally these were ranked bottom by both first and second-year students. This finding bears particular relevance given the focus of the current government on the green economy as a means for rectifying the economic uncertainty of recent years. While estimates vary, as many as one million additional jobs have been predicted through the green economy in the UK10.. Ensuring the UK workforce, current and future, is equipped with the skills to carry out these jobs is therefore essential.

Communication skills and team working are seen by respondents as the most valued skills however the desk review found employers often find graduates to be lacking in both generic and technical skills. This suggests a better understanding of what skills are valued by business is needed both by universities and students. The desk review also suggested a need for businesses to better understanding of the contribution of skills for sustainability, and it will be important that this is translated within universities as well.

The future-facing questioning revealed the value placed on future employers' performance and reputation on environmental and social issues. Continuing the trend found in the 2010 research, respondents in their first and second-years in 2011 agreed they would choose a job with a £1000 decrease in salary in a company with a strong ethical/environmental performance rather than earning £1000 more on average in an unethical company. This trend is reversed however at the point of a £3000 salary sacrifice. Tracking this through the introduction of increased tuition fees will be key to understanding any changing preferences among students.

8 Recommendations

Recommendations for FE

The contribution of delivery of SD in sixth form learning is apparent across both 2010 and 2011 research, both from the existing skills and knowledge in first-year students and from recognition of environmental initiatives taking place in their previous education establishments.

Recommendation: Further research is however needed to uncover fully the role of further education and the length of impact given the low recall of initiatives among the 2011 respondents.

Recommendations for HEIs

There is further need to work on student, and employer, demand for SD in order for it to gain further foothold and importance within the overall curriculum. Given the increased focus on employability throughout university careers, as evidenced by this research, links with the business sector to improve sustainability skills for employment is likely to be supported by the student population.

Recommendation: Developing partnerships with business and professional organisations will be particularly relevant to improve understanding and prioritisation of desirable skills for employment, for business, HEIs and students alike.

The understanding and interpretation of SD by students is significant. The research here suggests that SD is narrowly defined by the student population as those skills association with the natural environment. Student definitions are not currently matching those of academics and policy makers.

Recommendation: Understanding further the mismatch between definitions and understanding will be key when developing curricula, mechanisms and resources for delivery of SD.

Recommendation: With the increase in tuition fees in England, understanding what qualities are strong attractants of university choice is key. HEIs will need to respond to these attractants, with the student taking on the role of a client.

Recommendations for student organisations

Recommendation: Taking on the role of a client will mean the student voice is critical in vocalising demands and expectations of what they expect their time in higher education to involve and what skills they expect to leave with.

Recommendations for policy makers and education agencies

Given the similarity in responses between 2010 and 2011 research it is worth reiterating the recommendations made at the end of the 2010 research. These included:

Recommendation: The development of an online resource for teaching professionals in particular those delivering subjects that are distant from the more obvious ESD content. Part of this resource could involve using case studies as a means of demystifying existing content. These resources, along with future policy, should focus on the full incorporation of SD principles rather than those more specific skills which are not always demanded or valued by students.

Recommendation: The 2010 research also recommended that when incorporating SD principles into the curriculum, a multidisciplinary approach is followed given the context of reductions in funding for non-STEM subjects.

These points are particularly relevant to current discussions around reform of the HE curriculum and in particular the idea of 'graduate attributes' – a set of skills, knowledge and values that each graduate from a given institution will take away from their time at university and be able to live out in the wider world. The focus on the transition to a green economy adds weight to the argument for a set of attributes should that enable graduates to adapt socially, economically and environmentally.

Recommendation: In order to achieve the above suggestions, the previous research noted the essential support of senior management within universities, for example through a national forum to discuss and support the work to progress holistic thinking and delivery of the ESD agenda.

Appendix 1: Desk review interim report

1 Executive Summary

1.1 Aim

NUS Services are conducting work on behalf of the Higher Education Academy (HEA) into student attitudes towards, and skills in, sustainable development (SD). The aim of this desk research is to provide an update to the research carried out previously for the HEA and to use existing work to inform empirical research which will input into a report including recommendations to the Academy on current attitudes towards, and skills in, SD in light of historical, current and likely future policy.

1.2 Methodology

A structured desk review to inform empirical research was conducted in November 2011 and recorded on desk research summary grids covering:

- Education for Sustainable Development (ESD) policy in further education and higher education
- Existing research into student attitudes towards, and skills in, SD
- Exemplary case studies with current and future facing relevance

The review was limited to work published since the end of the desk review (June 2010) conducted as part of the previous research for the HEA.

1.3 Core findings

- Delivery of ESD is disjointed at a national level and a paucity exists of research and evidence on how delivery takes places in particular post-16;
- Definitions of ESD remain varied and vague, while attitudes are mixed, it's felt that a nationally accepted definition, standard assessment procedure and defined indicator/s could allow understanding of national progress;
- The tangible benefits of including SD in curricula need to be well-communicated to secure national buy-in in FE and HE and to prevent the benefits remaining nebulous;
- Communication of the tangible benefits of ESD more widely, eg among the business community, is needed to ensure skills for SD are valued and demanded;
- Excepting the precursor to this current research, student attitudes towards SD have not been extensively covered and the need to further understand student demand for learning and skills remains;
- Scotland and Wales lead the UK in understanding the impact of ESD with national baselining studies completed.

1.4 Recommendations for empirical research

The recommendations following the previous desk review still hold for current research. Phase two of the project, the empirical research, will aim to:

- Understand student attitudes to sustainability issues;
- Understand student definitions of sustainability;
- Explore aspirations towards ESD;
- Identify student attitudes towards potential future policies to include SD within the curriculum;
- Examine student awareness of the future green economy and skills needed.

In addition, reflecting the findings of the current desk review:

- To whom do students ascribe responsibility for SD skills development;
- What do students think are the best methods of skills development;
- What importance do students place on SD skills in relation to more generic skills.

2 Introduction

Desk research has been conducted to review a range of documents relating to ESD policy, existing research and strategy. The research aims are threefold:

- To provide a wider policy context for SD in Further Education in the UK with a key focus on advances made post 2005;
- To illustrate existing policy with short case studies indicating the principal initiatives for SD in Further Education in the UK, based on existing research;
- To understand historically student skills and knowledge in relation to SD based on existing research.

This summary document provides an overview of the structured search methodologies and discusses the pertinent issues from policy documents, research reports, case studies and summaries of national approaches.

3 Methodology

The materials which form the base for the desk review have been sourced through a two-stranded approach. Initially steering group members, including the HEA, Business in the Community, Change Agents UK and independent experts were consulted to provide a set of core documents. Further material was uncovered through additional literature searches for example through web and academic search engines. The platform of knowledge formed from this review will inform the delivery of the empirical work, which will take the form of a national online survey.

To provide an update to NUS Services' previous research, existing publications and datasets on student attitudes, skills, unmet needs and perceived wants have been examined in a purposive review into recent (post June 2010) policy documents relating to ESD.

Reports have been critically reviewed and a robust recording strategy onto structured review grids has allowed evaluation of the methodological approaches undertaken to inform the documents and outlined any issues of validity or potential bias.

4 Desk research summary

In keeping with the three core content aims of the historic desk research, the current review was structured to uncover any updates to the pivotal aspects to ESD:

- Policy within the UK (post June 2010);
- Research into existing student attitudes and skills in ESD;
- ESD at local levels within the UK.

Given the relatively short time gap between the initial NUS desk review and this follow-up this report has been structured to provide a summary reminder of the findings from the previous research along with an update on findings from publications within the last year where possible along with any new relevant research.

4.1 Policy within the UK (post June 2010)

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2010 Research summary | Policy within the UK (post 2005)

- The desk research revealed a trend in ESD towards policy setting on the triple bottom line – environmental, social and economic sustainability;
- Progress has been made regards increased embedding ESD into the curriculum of FE and HE institutions with four key methods being adopted (covering environmental material in the course, adding a specific ESD course, incorporate ESD with existing courses; and specialise in SD within academic facilities) however there is no set development route or process;
- FE and HE institutions are facing the following challenges when implementing ESD:
  - The perception of an already overcrowded curriculum to add SD would be to compromise educational quality.
  - Perceived irrelevance of ESD to many subject disciplines meaning failure to see how to include ESD in teachings
  - Lack of knowledge and training in ESD among teaching staff
  - Limited institutional drive to encourage embedding of ESD;
- Addressing these challenges requires the development of a consistent definition of SD across the sector and a standard assessment procedure for inclusion of ESD. Development of tailored toolkits to incorporate good practice will also help address inconsistencies;
- The link between skills taught through ESD and employability requires further investigation.

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Research under review in the precursor to this project found that progress had been made with regards increased embedding of ESD into FE and HE institutions however publications since have highlighted that while levels of activity and action may have increased a prominent gap in the field of ESD is the lack of an overview of what progress has been made (9 UK - UNESCO). The findings of the IfL Green Economy (6) survey suggest one solution to this issue – the development of a nationally consolidated database containing case studies and teaching resources.

The lack of a universally accepted definition of ESD was again highlighted, along with a lack of agreement on what indicator(s) can be used to assess performance and progress on ESD. This will inevitably impact on the quality and consistency of ESD available nationally and the relevancy of policy designed to improve delivery (9 UK-UNESCO).

Coverage of skills and employability featured fairly highly in the reports and publications reviewed in this phase of the desk research – a likely reflection of the current economic climate. One debate focuses on responsibility for developing and improving skills. The Department for Business, Innovation and Skills' latest policy document 'Skills for Sustainable Growth' (2) suggests that employers and individuals must take greater responsibility for ensuring skills needs are met. The role of academia also needs to be considered. Additionally BIS announce plans to free training providers from centrally determined targets. While this will ensure that education and training is appropriate to the needs of the local economy and individuals there is a risk of ESD losing out. Often employers see environmental issues and locally-removed and long-term therefore assigning the associated skills as low priority. As a result, teachers and trainers of green skills have reported difficulty engaging with employers on green issues (6 IfL).

In terms of delivery of ESD, research reviewed here highlights the potential for learning outside the realms of formal education. Acknowledging the challenges faced by FE and HE institutions outlined in the summary above, one report (9 UK-UNESCO) suggests that ESD frequently occurs in contexts or initiatives not labelled as education, and that the impact of these projects may be more far-reaching that those traditionally thought of as education interventions. This suggests that involvement in community, social and professional experiences while at university may be key influencers of student attitudes and skills for SD.

4.2 Research into existing student attitudes and skills in ESD

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2010 Research summary | Existing research on student attitudes and skills in ESD

- The student experience of ESD has not been well documented;
- Educational institutions are perceived by university applicants to be the third highest contributors to the encouragement of positive environmental behaviours and attitudes (behind campaign charities and government);
- In terms of importance in choosing a university, environmental issues are not highly rated indicating a distance between attitudes and behaviours and a lack of awareness of the skills emerging from ESD and how they can be applied to employment and careers;
- Graduates want to work for ethical employers who are environmentally and socially responsible however limited effort has been observed with regards highlighting the importance of SD concepts in employment.

</div>

Reflecting the findings of the previous desk review, reports currently under review highlight the lack of research in the area in particular a paucity of research in ESD in post-16 learning and skills (9 UK-UNESCO). Despite a lack of data, policy has made a commitment to improving these skills for example through the provision of a national career service with improved information and guidance on careers and associated skills needed for a green economy (Skills for a green economy). This matches the expectations of students, with the finding that 80 per cent of first-year students expecting ESD to improve their employability in the NUS Services' precursor to this research.

Several reports make suggestions of what the skills for ESD 'look' like (4 HEA Centre for GEES, 10 UNEP). They include:

- Developing skills in communication (oral and written), teamworking and cooperation, and understanding stakeholder perspectives;
- Learning to think about systems in place and time, risk and uncertainty analysis;
- Ability to think critically about values (values analysis and values clarification);
- Ability to separate number, quantity, quality and value;
- Capacity to apply learning and move from awareness to knowledge to action, to be a 'change agent';
- Ability to recognise and reward actions that favour the future.

While ESD plays an important role in developing these more high-level skills, the need for SD specific skills is also identified and not just for graduates wishing to enter employment within the sustainability sector. 'Skills for a green economy' (3 BIS) recognises that all businesses need to ensure they use natural resources efficiently and sustainably and develop a resilience to climate change and therefore the UK requires a workforce with these skills.

However, working to develop these skills within the future workforce can be a fine balance. In terms of the things which motivate students to become better environmental citizens education is cited as playing a key role, with many students citing pre-university experiences and A-level teachers, in addition to things they had learnt in degree courses, as inspiration. However research with Geographical, Environmental and Earth Science students alongside those studying other subjects highlighted the potential for ESD fatigue or overload (8 Robinson and Greenhough).

As mentioned earlier, a focus of a number of the reports in the current desk review has been the impact of skills development on employability, both within the sustainability sector and more widely. Research has found that employers often think graduates lack the skills – both generic and technical - required to take on an entry level positions and also perceive it to be easier to train existing staff in sustainability rather spend time and money training new staff in more business-specific skills (5 IES, 7 HEFCE, 1 Demos) suggesting that there is further work to be done in developing skills within graduates, or enabling the translation of skills developed in academia to those appropriate and practical to the workplace. This is reflected in the recent Higher Education White Paper which called on institutions to deliver a better student experience – improving, among other things, the student preparation for the world of work.

Two reports under review focused specifically on the role internships and work placements play in developing skills (7 HEFCE, 5 IES). Students taking part in these felt that they were an important way of gaining specific skills for work in the sector, familiarise themselves with the language and ways of working and therefore increasing their chances of employment. This has led to suggestions that 'industry' placements or secondments are an important way to develop skills for SD. However contrasting IES research (5) shows that participation in an internship is not necessarily a predictor of future employment suggesting that further research is needed into how students can best develop the SD skills employers expect and need.

4.3 ESD at local levels within the UK

> ### 2010 Research summary | ESD at local levels within the UK
>
> - Case studies from across the four member nations in FE and HE revealed a patchy coverage of ESD in curriculum, typically as 'bottom-up' strategies lacking national leadership;
> - Case studies in FE typically cover two core functions:
>   - Embedding ESD into vocational courses eg the sustainable use of resources
>   - Embedding ESD into academic courses eg reading a topic with a sustainability ethics agenda;
> - Reflecting the lack of coherence and consistency of coverage within FE, first-year HE students have a mixed awareness of SD. The patchy coverage, reflective of a lack of national SD governance, is also mirrored in HE institutions.

The UK-UNESCO review of ESD in the UK in 2010 suggests that FE is lagging behind schools and universities in England in its development of ESD. Reflecting the findings of the previous desk review UK-UNESCO (9) suggest that Scotland and Wales have made more progress with ESD becoming more deeply embedded in policy and a number of projects taking place.

Across the board however, the review identifies that estates and management within both HE and FE are achieving more on SD and providing themselves with opportunities for learning (eg through conferences and training) however this is not reflected in teaching practice which is likely to have the most direct impact on student attitudes and skills for SD. This is reflected in the findings of the IfL survey (6) which found an appetite among teachers and trainers for improved training and resources for delivering ESD.

5 Discussion and recommendations

5.1 Discussion

Policy at a national level

Delivery of ESD remains disjointed within FE and HE curricula, in part due to the lack of universally recognised definition of ESD and accepted indicators to assess progress and performance. Developing these two aspects will be necessary to fill gaps in knowledge on the quality and delivery of ESD in the UK.

Policy-makers have recognised the need to develop a workforce with skills in ESD however plans for delivery appear contradictory to the current values and priorities of a high proportion of businesses within the UK. Alongside developing a workforce with the appropriate skills, work needs to take place to ensure that employers recognise the need and benefit of employees with skills in ESD.

In addition to developing more consistency of delivery of ESD within FE and HE institutions, consideration of for informal learning opportunities also needs to take place. Student involvement either in community initiatives or indeed more professional experiences (eg sandwich placements) presents a prime opportunity for learning on ESD.

Student attitudes and skills

Information on the student perspective of ESD in FE and HE remains limited, excepting the contribution of the precursor to this follow-up research.

Further evidence supports the finding students recognise that education institutions can play an important role in developing environmental awareness and behaviours however institutions must be wary of 'overloading' students with ESD.

There is an increased recognition of the need for a workforce with 'green' skills within the UK. ESD can be a way of providing both generic high-level skills as well as the SD specific skills identified by policy as being necessary for a sustainable economy. However acceptance of this need for green skills is not universal with many employers seeing green issues as a distant problem. This has potential impacts on the prioritisation of skills and desire to learn among students.

Curricular inclusion of SD

Discrepancy as to how to best deliver ESD remains. As described previously, the merits of informal, extra-curricular learning are receiving greater attention. Similar warnings are being sounded as to the danger of saturating the curriculum with ESD leading to student fatigue with the subject. There is however agreement that teaching of ESD needs further attention and improvement.

National variations

Confirming the findings of the historic desk review Scotland and Wales were found to have made the most significant steps towards including ESD.

5.2 Recommendations for empirical research

This research into student attitudes towards, and skills in, SD presents the opportunity to build on the previous research and develop further insight into the factors leading up to starting an undergraduate course in terms of awareness and importance of social and environmental competencies.

One of the aims for the empirical research is to provide longitudinal data following the previous NUS research and therefore the recommendations made following the previous desk review remain pertinent. These are summarised in the box below.

2010 Research summary | Recommendations for empirical research

Policy at a national level
- Collection of data relating to current understanding of sustainability issues will provide a benchmark of SD knowledge gained throughout the schools and FE journey;
- Identification of student attitudes towards potential future policies of including ESD within the curriculum.

Student perceptions
- Examination of student attitudes towards how skills in sustainability can relate to employability;
- and whose responsibility it is to develop these skills will provide insight into first-year students' willingness to learn about SD;
- Identification of how students typically define SD will clarify the effects of what is typically understood as a nebulous definition.

Curricular inclusion of SD
- Collection of data on student opinions of the perceived relevance of ESD related skills, unmet needs and aspirations to learn more.

Based on the literature under review in this research the recommendations to examine further the perceptions on the relationship between skills in sustainability and employment and the ascription of responsibility for imparting these skills to students seem particularly pertinent. Perceptions of relative importance of skills for sustainability compared to generic or other skills will also be of interest in particular given the weight placed by policy on the development of a 'green' economy. Finally, identification of the approaches and methods through which students have or are starting to learn skills for SD eg through formal or informal education, will assist in the further development and progress of ESD. The addition of the survey of second-year students in this repeat of the previous research will provide important data on how students skills needs and expectations change as they progress closer to employment. Similarly, repeats of the survey will allow and understanding of the long term benefit of ESD policy on graduates and their futures.

Appendix 2: Desk review summary

Ref 01

Report / Article reference

DEA, 2010, The impact of global learning on public attitudes and behaviours towards international development and sustainability.

http://clients.squareeye.net/uploads/dea/documents/Impact_of_global_learning_research_paper_web.pdf

Report summary

A report presenting findings of a survey of 1017 adults (over the age of 15) conducted to gauge the extent the UK public has had an opportunity to learn about global issues – both in, and since leaving, school. The impact of this learning on their attitudes towards global issues was assessed as well as their reported interest in learning more or becoming more actively involved.

The document suggests that learning can act as a counter to feelings of powerlessness often described as a barrier to action and builds a sense of agency and support for global environmental and development issues.

The study also found feelings of social responsibility to increase following participation in learning opportunities in schools along with influencing community cohesion with those who had experienced teaching on global issues more comfortable living in a society with a variety of races and religions.

The role of the communications industry was highlighted in the report as a key opportunity for learning after leaving school with high levels of support for continuing to provide opportunities for learning outside school education.

Ref 02

Report / Article reference

Department for Business, Innovation & Skills, 2010, Skills for sustainable growth: Strategy document, Executive summary

http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/s/10-1273-skills-for-sustainable-growth-strategy-summary

Report summary

A document produced to outline the UK government's strategy for improving and using skills to return the economy to sustainable growth alongside improving social inclusion and mobility. The report summarises the means by which the skills system will be reformed in order to achieve these aims. The strategy is based on three principles, firstly fairness for example ensuring funding is directed at those who need it most to develop the most basic of employability skills. Secondly, employers and citizens are seen as needing to take greater responsibility for ensuring skills needs are met, with the support of the Government, for example through funding and information provision. Finally, greater freedom is seen as necessary from central government to citizens, employers and communities to allow them to shape services to most efficiently meet their needs.

The document sets out the specific actions and changes the Government intends to make in order to ensure these principles are put into action and the measures of success that will be used. It also recognises the role that higher education and post-graduate study play in improving skills and social mobility. Readers are referred to the higher education White Paper for more in-depth detail of the role of higher education sector.

Ref 03

Report / Article reference

Department for Business, Innovation and Skills, (2011), Skills for a green economy: A report on the evidence

http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/s/11-1315-skills-for-a-green-economy

Report summary

The aims of the project were to identify skills needed to support the transition to a strong and sustainable green economy; and to assess evidence of employer demand and potential responses from the skills system which will lead to these skills being delivered. The report highlights the need to ensure that the workforce has the appropriate skills to enable the transition to a green economy, not only in the low carbon and environmental sectors. It states a need for all businesses to use resources efficiently and sustainably and to be resilient to climate change. Actions proposed in the report include a grouping of the Sector Skills Councils for skills for a green economy; improving information available on careers in a green economy; improving green skills provision in further education; providing apprenticeships under the Green Deal and supporting STEM subjects as a priority.

Ref 04

Report / Article reference

IES, 2010, Graduate employment and internships: Issues from the environmental sciences and sustainability sectors

http://www.ies-uk.org.uk/resources/papers/graduate_employment_and_internships_report.pdf

Report summary

Report providing details of research with graduates of environmental science and employers in the environmental industry. The research was carried out following a reported increase in difficulty in finding employment among graduates and claims from employers that graduates do not have adequate work-based skills and work experience. The findings of the research include a perception of lack of available positions for graduates in the environmental industry. It also found that in fact relatively few employers think that graduates don't have the relevant skills, however where they do the key missing skills are communication skills, technical ability and working independently. Both graduates and employers see internships as an important means to develop their skills in the work environment however half of graduates had only followed the internship route due to a lack of full-time employment.

Ref 05

Report / Article reference

UNESCO, 2011, Education for Sustainable Development: An expert review of processes and learning

http://unesdoc.unesco.org/images/0019/001914/191442e.pdf

Report summary

An expert review which aimed to gather information on what learning processes are aligned with ESD and what should be promoted through ESD activities alongside the contribution of these learning opportunities and activities to sustainable development. The review identified key processes which underpin ESD practices, for example collaboration and dialogue and participatory learning. The review found it difficult to access data on the processes and opportunities for learning ESD as these are rarely documented in detail. An overall finding is that ESD remains poorly researched and weakly evidenced.

Where evidence does exist it suggests that ESD goes beyond gaining knowledge, values and theories related to SD but also includes learning to ask critical questions and think systematically for example. The review also noted the importance of informal education and learning experiences – despite these also being not well documented.

Ref 06

Report / Article reference

Demos, 2011, Youth's labour lost

http://www.demos.co.uk/files/Youths_labour_-_web.pdf?1320142580

Report summary

The report presents research into youth unemployment in the UK focusing on the impact of the education system and the workings of the labour market. The report argues that young people are being penalised relative to older workers by the labour market focus on experience. Similarly the report argues that young people often leave education ill-equipped to function in the workplace in terms of possessing the necessary and valued skills. The report is focused on employment and skills more generally rather than focusing on sustainability or skills for a green economy.

Ref 07

Report / Article reference

Robinson, Z. and Greenhough, B, (no date), Environmental citizenship: perspectives of UK HE students

Report summary

A research paper comparing the results of surveys carried out with GEES students (Geography, Earth and Environmental Sciences) with those not studying overtly environmental subjects in terms of their attitudes and behaviours on sustainable development. The research suggests that while GEES students exhibit a good understanding of environmental issues, they often experience difficulties. The motivations and barriers for students to become 'good environmental citizens' are explored through surveys and focus groups with students at Keele University. The research concluded that providing students with learning opportunities surrounding ESD is not enough, and that university experiences need to be as much about learning behaviours. However, policy makers and educators need to be wary of ESD overload, with GEES students stating that they were 'sick of hearing about climate change'.

Ref 08

Report / Article reference

Oakleigh Consulting Ltd and CRAC for HEFCE, (2011), Increasing opportunities for high quality higher education work experience

http://www.agcas.org.uk/assets/download?file=2606&parent=1028

Report summary

A report commissioned to explore how the opportunities for high quality work experience can be increased for students and graduates. Research with employers found that there are often (perceived) barriers over cost, time and effort required to set up a placement opportunity for graduates or students. The current economic situation has exacerbated these concerns for approximately a quarter of employers. Concerns were also raised over the lack of technical knowledge participants on the placements would have. Financial support was found to be a key mechanism through which employers can be encouraged to participate in placement schemes. The report offers recommendations for how policy can be adapted to encourage increased uptake and offering of placements, in particular given the finding that taking part in structured work experience increases the chance of employment following graduation.

Ref 09

Report / Article reference

Institute for Learning, (2011), Green economy survey: A survey of teachers and trainers, members of the Institute for Learning

http://www.ifl.ac.uk/__data/assets/pdf_file/0003/24483/IfL-Green-Economy-Survey-report.pdf

Report summary

Survey research with 3000 teachers highlighted a need for opportunities to share practice and methods for integrating green skills within their teaching. The authors note an overall enthusiasm for including green skills more in teaching among respondents to the survey. In addition a national database of resources is seen as key for teachers and educators to communicate green skills consistently and effectively. The research concludes that green skills are increasingly vital across a range of subjects as they are vital for a thriving economy and society. Despite this, approximately 50% of respondents felt the demand from learners for green skills was 'not very strong'. This is also reflected in respondents' opinions on coverage of green skills across programmes, with only 7% believing that teaching of green skills is integrated. Where green skills are to be included, there is strong opinion that these should be embedded within courses rather than bolted on to ensure credibility of the teaching.

Ref 10

Report / Article reference

UNEP, (2010), YouthXchange: Climate change and lifestyles guidebook

http://unesdoc.unesco.org/images/0021/002128/212876e.pdf

Report summary

A guidebook that focuses on the challenges, opportunities and good practices of climate change, produced for young people and people working with young people, educators, teachers, trainers and youth leaders around the world. Chapter 2 of the guide is focused on ESD highlighting the skills associated with sustainability under the UNESCO five pillars of learning: learning to know, learning to do, learning to live together, learning to be and learning to transform oneself and society. The key skills, attitudes and understandings that ESD should result in are highlighted including learning to ask critical questions; learning to clarify one's own values; learning to envision positive and sustainable futures; learning to think systemically; learning to respond through applied learning; and learning to explore the evidence behind tradition and innovation.

Appendix 3: Breakdown of empirical research sample

A total of 1552 first-year students and 1641 second-year students were sampled, across all four member nations. All respondents were taking their first degree and had not taken more than one year away from education.

In keeping with much social research and the evidence that there are more females in higher education than males, 53% of the first-year sample and 64% of the second-year sample are female.

Over four-fifths (86%) of first-years were 18-20 years old (only 13% are over 20 years old), and just under three quarters of second-year students are also 18-20 years old. 93% and 94% of first and second-year students respectively are UK citizens

The majority of respondents attended state-owned further education institutions.

Figure 1: Thinking about your education before university, which of the following best describes the last place that you studied?
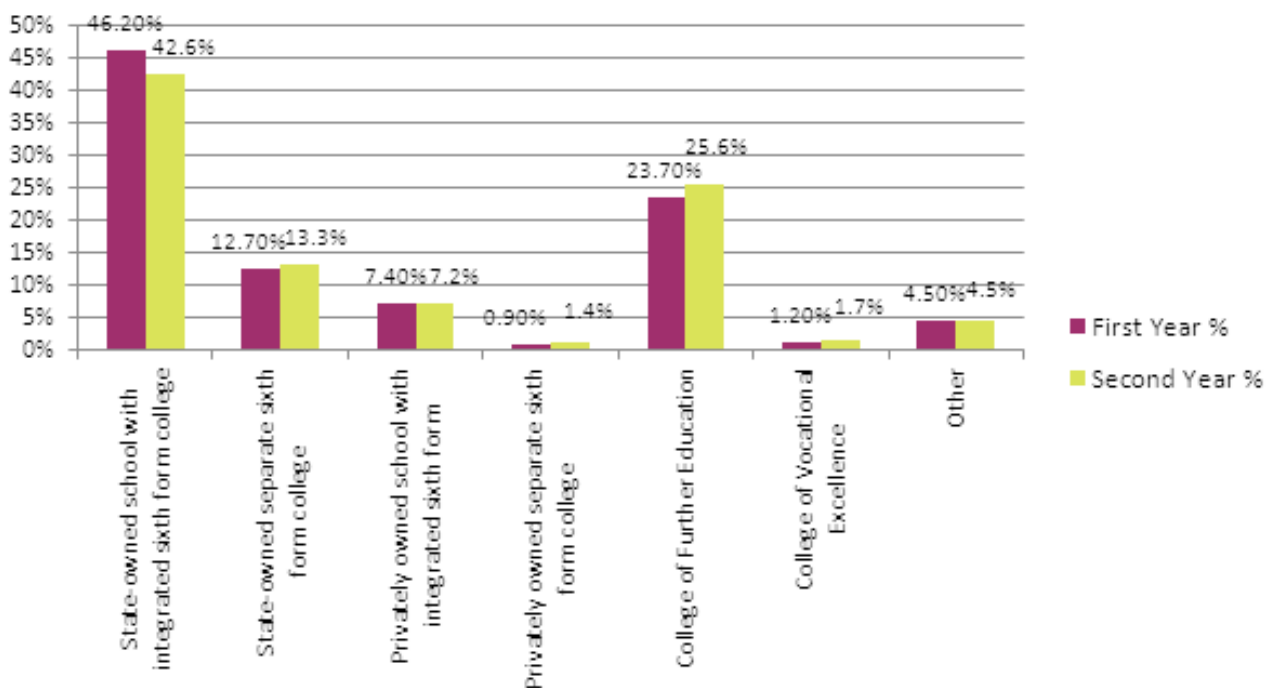
A representative sample of university types was collected across the samples.

Figure 2: Which university/college do you currently study at?
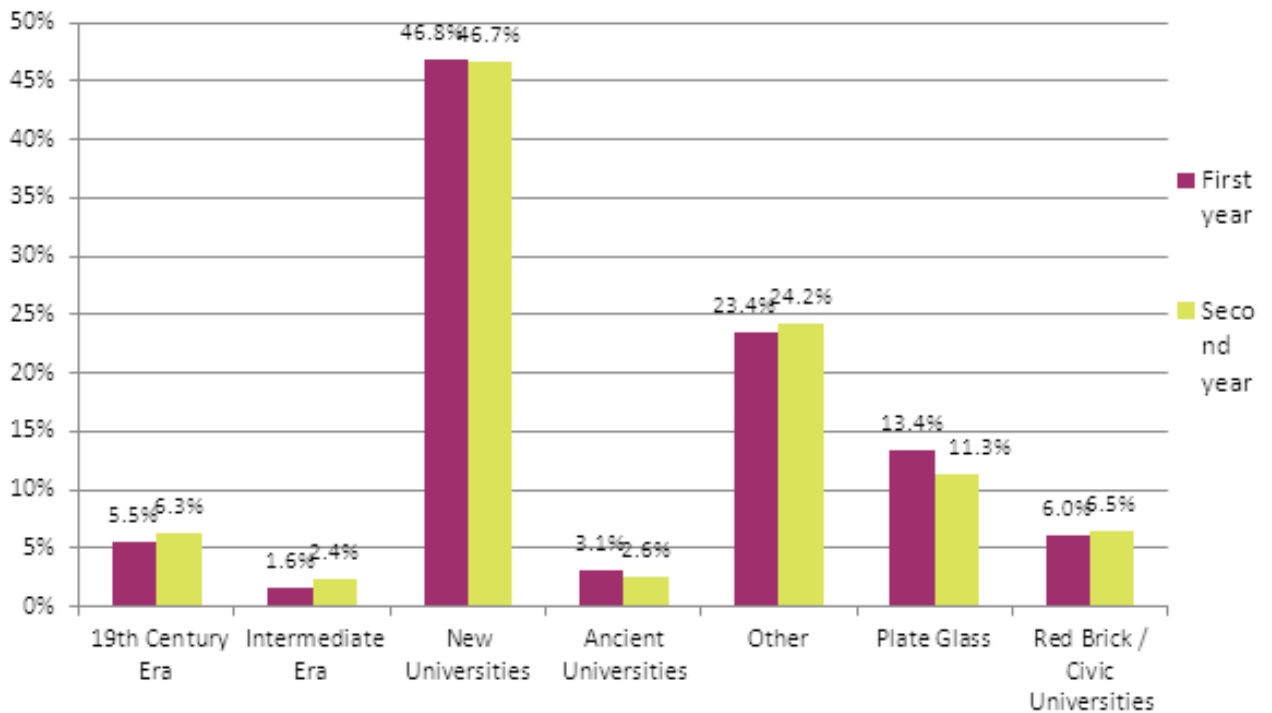
The majority of respondents took a mixture of subjects in further education and approximately one quarter of first-years and one fifth of second-years were purely STEM.

Figure 3: Which one subject best describes the subject(s) you took at the last place that you studied before your current university / college?
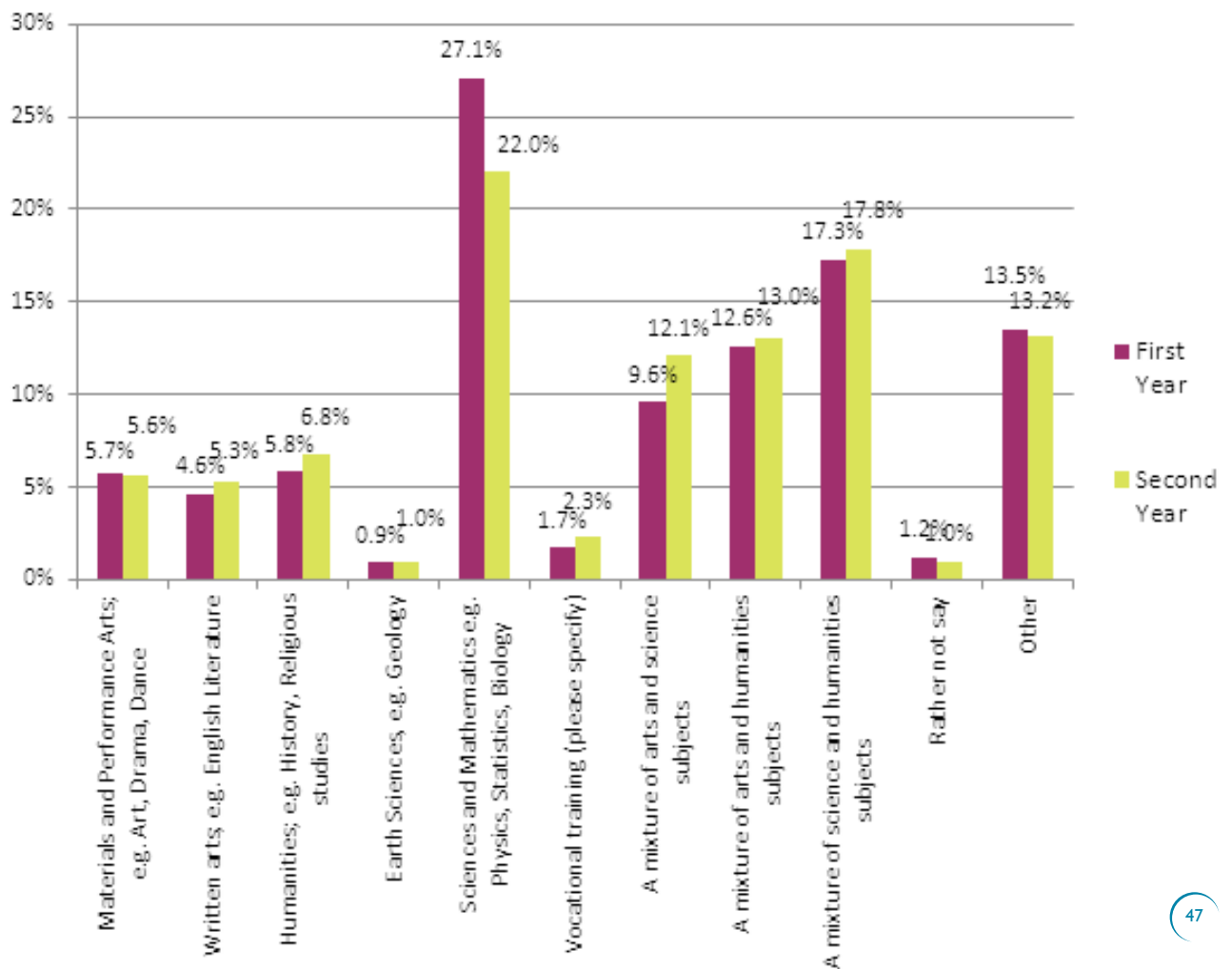
Figure 4: Which one subject best describes the subject(s) you took at the last place that you studied before your current university / college?
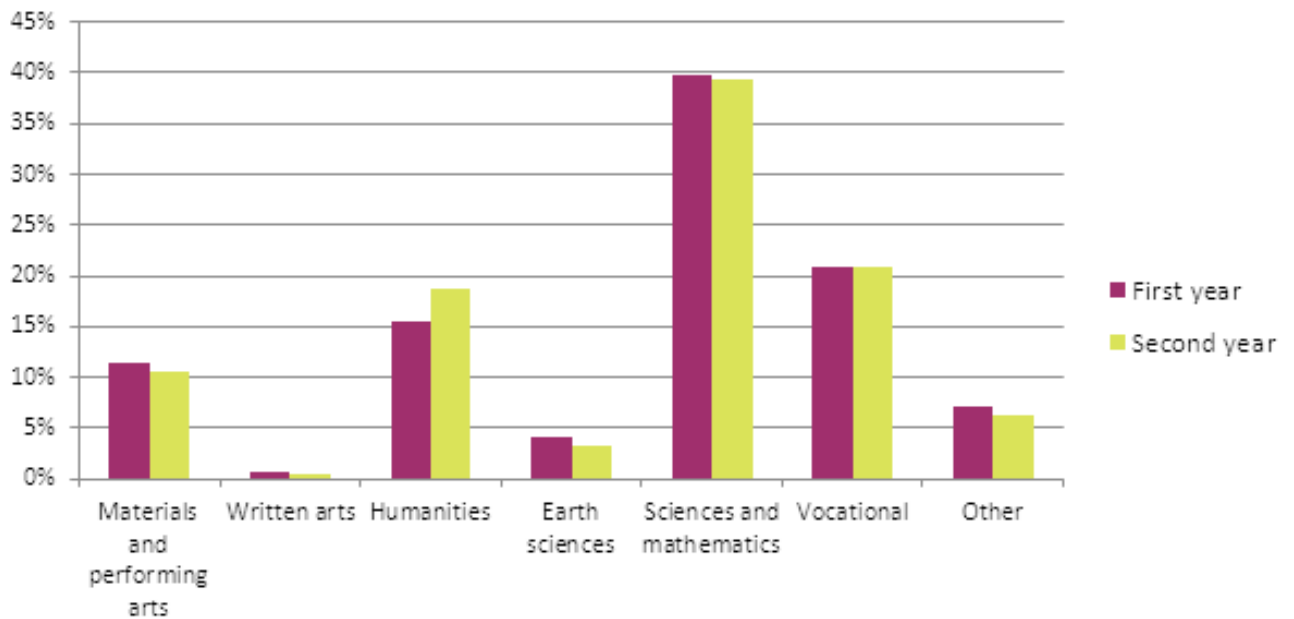
Respondents anticipate working in a range of industries, with the professional and business services and health and social care services receiving particular interest. Second-year students also show an interest in working in the education sector.

Figure 5: In which, if any, of the following industries do you anticipate a career?

University Skills Survey

NUS are conducting a short and confidential survey with students within your university to find out more about your attitudes towards your university and course and aspirations for the future. By taking part in this survey you are in with a chance of winning a fantastic cash prize!

· 1 winner will receive a very useful £500!
· 10 x runners up will receive £50!

The survey will take 10 minutes to complete.
There are no right or wrong answers, we are keen to understand what makes you tick, so please do answer as frankly and honestly as you can. You do not have to answer any questions that you feel uncomfortable with and can simply move on to the next question.

Your responses to this survey will be treated in complete confidence. The information collected will be used only for the purposes of this study.

1. **Which of the following best describes your status?**

Select one only

- ○ *Undergraduate 1st Year*
- ○ *Undergraduate 2nd Year*
- ○ *Undergraduate 3rd Year*
- ○ *Undergraduate 4th Year*
- ○ *Undergraduate 5th or greater year*
- ○ *Postgraduate (Research)*
- ○ *Postgraduate (Taught)*

2. **Thinking about your education before university, which of the following best describes the last place that you studied?**

Select one only

○ *State-owned school with integrated sixth form college*

○ *State-owned separate sixth form college*

○ *Privately owned school with integrated sixth form*

○ *Privately owned separate sixth form college*

○ *College of Further Education*

○ *College of Vocational Excellence*

○ *Higher education institute*

○ *Other*

If other, please specify

3. **What was the name of the last place that you studied?**

Please type your answer into the box below

4. **Thinking of your answer to the previous questions, how many academic years have passed since you studied prior to attending your current university / college?**

Select one only

- ○ *0, I have come straight to university*
- ○ *1 year since formal study*
- ○ *2-5 years*
- ○ *More than 5 years*

5. **Which university / college do you currently study at?**
Select one only

--Click Here-- ▾
Aberystwyth University
Anglia Ruskin University
Aston University
Bangor University
Bath Spa University
Bell College
Birkbeck College
Birmingham City University
Birmingham College of Food, Tourism and Creative Studies
Bishop Grosseteste University College Lincoln
Bournemouth University
Brunel University
Buckinghamshire New University
Canterbury Christ Church University
Cardiff University
Central School of Speech and Drama
Conservatoire for Dance and Drama
Courtauld Institute of Art
Coventry University
Cranfield University
Cumbria Institute of the Arts
Dartington College of Arts
De Montfort University
Edge Hill University
Edinburgh College of Art
Glasgow Caledonian University
Glasgow School of Art
Goldsmiths College
Guildhall School of Music and Drama
Harper Adams University College
Heriot-Watt University
Heythrop College
Imperial College of Science, Technology and Medicine
Institute of Education
King's College London
Kingston University
Leeds College of Music
Leeds Metropolitan University
Leeds Trinity and All Saints
Liverpool Hope University
Liverpool John Moores University
London Business School
London Metropolitan University
London School of Economics and Political Science
London School of Hygiene and Tropical Medicine
London South Bank University
Loughborough University
Middlesex University
Napier University
Newman College of Higher Education
Norwich School of Art and Design
Oxford Brookes University
Queen Margaret University, Edinburgh
Queen Mary and Westfield College
Ravensbourne College of Design and Communication
Roehampton University
Rose Bruford College
Royal Academy of Music

5. **Which university / college do you currently study at?**
Select one only

Royal Agricultural College
Royal College of Art
Royal College of Music
Royal Holloway and Bedford New College
Royal Northern College of Music
Royal Welsh College of Music and Drama
Scottish Agricultural College
Sheffield Hallam University
Southampton Solent University
St George's Hospital Medical School
St Martin's College
St Mary's University College
St Mary's University College, Twickenham
Staffordshire University
Stranmillis University College
Swansea Institute of Higher Education
Swansea University
Thames Valley University
The Arts Institute at Bournemouth
The City University
The Institute of Cancer Research
The Liverpool Institute for Performing Arts
The Manchester Metropolitan University
The North-East Wales Institute of Higher Education
The Nottingham Trent University
The Open University
The Queen's University of Belfast
The Robert Gordon University
The Royal College of Nursing
The Royal Scottish Academy of Music and Drama
The Royal Veterinary College
The School of Oriental and African Studies
The School of Pharmacy
The University College for the Creative Arts
The University of Aberdeen
The University of Bath
The University of Birmingham
The University of Bolton
The University of Bradford
The University of Brighton
The University of Bristol
The University of Buckingham
The University of Cambridge
The University of Central Lancashire
The University of Chichester
The University of Dundee
The University of East Anglia
The University of East London
The University of Edinburgh
The University of Essex
The University of Exeter
The University of Glasgow
The University of Greenwich
The University of Huddersfield
The University of Hull
The University of Keele
The University of Kent

5. **Which university / college do you currently study at?**
Select one only

The University of Lancaster
The University of Leeds
The University of Leicester
The University of Lincoln
The University of Liverpool
The University of Manchester
The University of Newcastle-upon-Tyne
The University of Northampton
The University of Northumbria at Newcastle
The University of Nottingham
The University of Oxford
The University of Paisley
The University of Plymouth
The University of Portsmouth
The University of Reading
The University of Salford
The University of Sheffield
The University of Southampton
The University of St Andrews
The University of Stirling
The University of Strathclyde
The University of Sunderland
The University of Surrey
The University of Sussex
The University of Teesside
The University of Wales, Lampeter
The University of Wales, Newport
The University of Warwick
The University of Westminster
The University of Winchester
The University of Wolverhampton
The University of Worcester
The University of York
Trinity College, Carmarthen
Trinity Laban
UHI Millennium Institute
University College Falmouth
University College London
University College Plymouth St Mark and St John
University of Abertay Dundee
University of Bedfordshire
University of Chester
University of Derby
University of Durham
University of Glamorgan
University of Gloucestershire
University of Hertfordshire
University of London
University of the Arts, London
University of the West of England, Bristol
University of Ulster
University of Wales Institute, Cardiff
Writtle College
York St John University
Other

6. **Which of the following age ranges do you fit into?**

Select one only

- ○ *16-17 years*
- ○ *18-20 years*
- ○ *21-24 years*
- ○ *25-29 years*
- ○ *30-40 years*
- ○ *41-54 years*
- ○ *55-64 years*
- ○ *65+ years*
- ○ *Rather not say*

7. **What is your gender?**

Select one only

- ○ *Male*
- ○ *Female*
- ○ *Self define as other*
- ○ *Rather not say*

8. **Which of the following statements best describes you?**

Select one only

- ○ *I am a UK citizen studying in the UK*
- ○ *I am an international student from a country within the EU studying in the UK*
- ○ *I am an international student from a country outside the EU studying in the UK*
- ○ *Rather not say*

9. Which one subject best describes your course or degree?
Select one only

--Click Here-- ▼

Accounting
Aerospace engineering
African studies
Agricultural sciences
Agriculture
American studies
Ancient language studies
Animal science
Anthropology
Archaeology
Architecture
Artificial intelligence
Astronomy
Aural & oral sciences
Australasian studies
Biology
Biology - Microbiology
Biology - Molecular
Biophysics & biochemistry
Biotechnology - Industrial
Botany
Building
Business studies
Celtic studies
Ceramics & glasses
Chemical, process & energy engineering
Chemistry
Chinese studies
Cinematics & photography
Civil engineering
Classical Greek studies
Classical studies
Comparative literary studies
Complementary medicine
Computer science
Crafts
Dance
Dentistry
Dentistry - Pre-clinical
Design studies
Development Studies
Drama
Economics
Economics & politics
Ecology
Education - Academic studies in
Education - Research & study skills in
Electronic & electrical engineering
English
English studies
Environmental sciences
Finance
Fine art
Food & beverage studies
Forensic & archaeological science
Forestry
French studies
General engineering

9. Which one subject best describes your course or degree?
Select one only

Genetics
Geography
Geology
German studies
History (by area, period or topic)
Human & social geography
Human resource management
Imaginative writing
Information services
Information systems
Italian studies
Japanese studies
Journalism
Landscape design
Latin studies
Law (by area or topic)
Linguistics
Management studies
Manufacturing engineering
Maritime technology
Marketing
Materials science
Materials technology not otherwise specified
Mathematics
Mechanical engineering
Media studies
Medical technology
Medicine - Clinical
Medicine - Pre-clinical
Metallurgy
Minerals technology
Modern Middle Eastern studies
Music
Naval architecture
Nursing
Nutrition
Ocean sciences
Office skills
Operational research
Ophthalmics
Pharmacology, toxicology & pharmacy
Philosophy
Physical & terrestrial geographical & environmental sciences
Physics
Physiology & pathology - Anatomy
Planning (urban, rural & regional)
Politics
Polymers & textiles
Portuguese studies
Production engineering
Psychology
Publicity studies
Publishing
Russian & East European studies
Scandinavian studies
Social policy
Social work

9. Which one subject best describes your course or degree?
Select one only

Sociology

Social science

Software engineering

South Asian studies

Spanish studies

Sports science

Statistics

Theology & religious studies

Tourism, transport & travel

Training teachers

Veterinary medicine - Pre-clinical

Veterinary medicine & dentistry - Clinical

Zoology

Other

Thinking about the last place you studied before your current university/college…

10. **Which one subject best describes the subject(s) you took at the last place that you studied before your current university / college?**
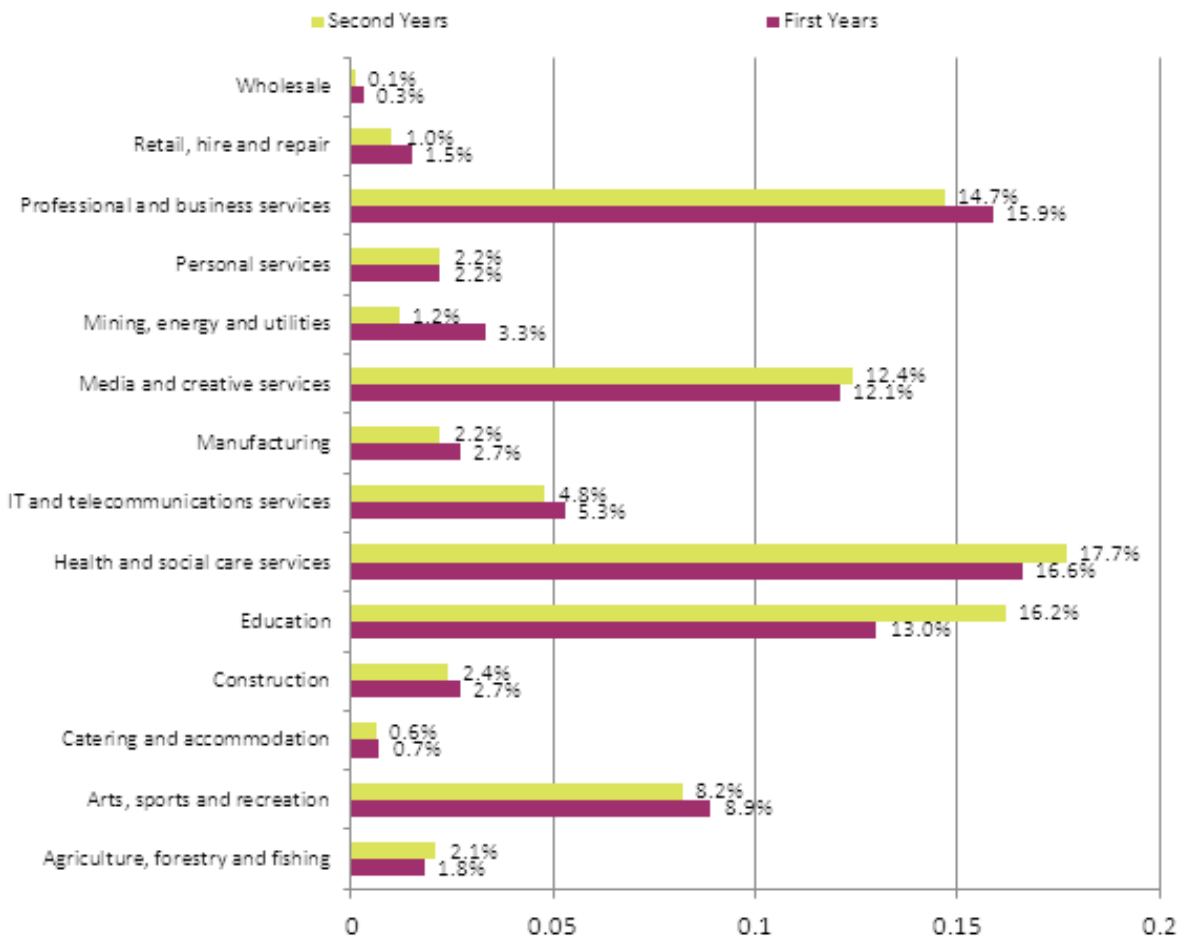
Select one only

- ○ *Materials and Performance Arts; e.g. Art, Drama, Dance*
- ○ *Written arts; e.g. English Literature*
- ○ *Humanities; e.g. History, Religious studies*
- ○ *Earth Sciences, e.g. Geology*
- ○ *Sciences and Mathematics e.g. Physics, Statistics, Biology*
- ○ *Vocational training (please specify)*
- ○ *A mixture of arts and science subjects*
- ○ *A mixture of arts and humanities subjects*
- ○ *A mixture of science and humanities subjects*
- ○ *Rather not say*
- ○ *Other*

If other, please specify

[ ]

11. **What awards/initiatives did the last place that you studied before your current university / college take part in, if any?**

Please select all that apply

- ☐ *Eco-schools / Green flag*
- ☐ *Rights Respecting School*
- ☐ *Link with a school/education institution overseas*
- ☐ *Other environmentally friendly school scheme, please specify*
- ☐ *Don't know*
- ☐ *None*

Thinking now about your current university/college…

12. **Which, if any, of the following groups, clubs or societies are you part of in your current university / college?**

Please select all that apply

☐ *Arts*

☐ *Cultural*

☐ *Departmental*

☐ *Environmental*

☐ *Faith*

☐ *Media*

☐ *Political*

☐ *RAG*

☐ *Recreational Sport*

☐ *Other*

If other, please specify

```
[                                                              ]
```

13. **Have you had a university / college course induction since beginning university?**

Select one only

○ *Yes*

○ *No*

○ *Rather not say*

Thank you! We are now going to ask you a few more questions about the last place you studied…

14. **Thinking of your time at the last place you studied before attending your current university / college, for each of the following descriptions, please tell us to what extent, if at all, you believe these skills below were covered in your curriculum:**

For each item, select one only

	Extensively covered	Partially covered	Mentioned but not covered	Not mentioned and not covered	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○
•Problem solving using different subjects	○	○	○	○	○	○

15. **Please think about your answers to the previous question.**

How important, if at all, do you feel it is that these skills were covered in the last place you studied in terms of skills you might need to study your course in your current university or college?

For each item, select one only

	Very im portant	Somew hat imp ortant	Neither importa nt nor u nimport ant	Somew hat uni mporta nt	Very un importa nt	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using different subjects	○	○	○	○	○	○	○

16. **Are there any other social and environmental skills you would have liked to have seen included in the teaching at your last place of study which would have helped prepare you for your current university or college?**

Please enter your response into the box below

17. **What other environmental or social topics, if any, would you have liked to have seen included in the teaching at the last place you studied which were not covered at the time?**

Please enter your response into the box below

The next section is about your choice of university…

18. How important were the following when choosing which university or college to apply to?

For each item, select one only

	Very important	Somewhat important	Neither important nor unimportant	Somewhat unimportant	Very unimportant	Don't know	Rather not say
•The proximity of the university/ college to home	○	○	○	○	○	○	○
•The position of the university/ college in league tables	○	○	○	○	○	○	○
•How seriously the university/college takes environmental issues	○	○	○	○	○	○	○
•Nightlife	○	○	○	○	○	○	○
•How seriously the university/college takes global development issues	○	○	○	○	○	○	○
•The position of the course in league tables	○	○	○	○	○	○	○
•The position of the university/ college in league tables	○	○	○	○	○	○	○
•Attractiveness of location	○	○	○	○	○	○	○
•The 'A' level or equivalent grades or points demanded	○	○	○	○	○	○	○
•The teaching methods	○	○	○	○	○	○	○
•The reputation of the university/college	○	○	○	○	○	○	○
•Reputation of the course	○	○	○	○	○	○	○

We are interested about your expectations from your university, please answer the following few questions about your expectations and experiences of starting university.

19. **To what extent, if at all, do you agree with the following statements:**

For each item, select one only

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Rather not say
•It is the responsibility of my university / college to prepare me for a future graduate job market	○	○	○	○	○	○	○
•It is the responsibility of my course leaders to prepare me for a future graduate job market	○	○	○	○	○	○	○
•It is my responsibility to prepare myself for a future graduate job market	○	○	○	○	○	○	○
•It is the responsibility of future employers to work with universities to help me prepare for the graduate job market	○	○	○	○	○	○	○

20. **Please rank the following skills in terms of their importance in being included in your course for a graduate in your field, where 1 is the most important and 8 is the least important.**

Please use each number only ONCE

	1	2	3	4	5	6	7	8
•Analyse using many subjects	○	○	○	○	○	○	○	○
•Understand people's relationship to nature	○	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○	○

21. To what extent, if at all, do you agree with the following statements:

For each item, select one only

	Strongly agree	Agree	Neither agree nor dis agree	Disagree	Strongly disagree	Don't know	Rather not say
My university / college practices and promotes good social and environmental skills	○	○	○	○	○	○	○
My course / course leaders practice and promote good social and environmental skills	○	○	○	○	○	○	○
My clubs / societies practice and promote good social and environmental skills	○	○	○	○	○	○	○

22. What other, if any, social or environmental skills do you think should be covered in your course in addition to those mentioned in this survey and why?

Please enter your answer into the box below

Thanks for your answers so far, you can check your progress on the progress bar below. Now for a couple of questions about yourself…

23. **Which of these statements would you say best describes your current lifestyle?**

Select one only

- ○ *I don't really do anything that is environmentally friendly*
- ○ *I do one or two things that are environmentally friendly*
- ○ *I do quite a few things that are environmentally friendly*
- ○ *I'm environmentally friendly in most things I do*
- ○ *I'm environmentally friendly in everything I do*

24. **How likely, if at all, are you to take part in the following actions during your time in university?**

For each item, select one only

	Very likely	*Somew hat likely*	*Neither likely nor unlikely*	*Somew hat unlikely*	*Very unlikely*	*Don't know*	*Rather not say*
•Volunteer	○	○	○	○	○	○	○
•Recycle	○	○	○	○	○	○	○
•Donate to charity	○	○	○	○	○	○	○
•Buy locally	○	○	○	○	○	○	○
•Save energy	○	○	○	○	○	○	○
•Take part in an environmentally friendly scheme or project	○	○	○	○	○	○	○
•Reduce the amount of air travel I take	○	○	○	○	○	○	○

25. **To what extent, if at all, do you think that you personally carry out the following skills?**

For each item, select one only

	All the time	Most of the time	Someti mes	Rarely	Never	Don't' know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

Thinking about the future…

26. **Thinking only of your own personal view, how relevant is it to you that the following skills are developed through your university education?**

For each item, select only one

	Extremely relevant	Somewhat relevant	Neither relevant or irrelevant	Somewhat irrelevant	Extremely irrelevant	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

27. How important do you think the following skills are to your future employers?

For each item, select one only

	Very important	Somewhat important	Neither important nor unimportant	Somewhat unimportant	Very unimportant	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

28. **How important do you think the following skills are to your future employers when compared against each other?**

For each item, select one only where 1 is the most important and 8 is the least important.

	1	2	3	4	5	6	7	8
•Self management	○	○	○	○	○	○	○	○
•Team working	○	○	○	○	○	○	○	○
•Business and customer awareness	○	○	○	○	○	○	○	○
•Problem solving	○	○	○	○	○	○	○	○
•Application of numeracy	○	○	○	○	○	○	○	○
•Application of social and environmental skills	○	○	○	○	○	○	○	○
•Communication	○	○	○	○	○	○	○	○
•Application of information technology	○	○	○	○	○	○	○	○

29. **In which, if any, of the following sectors do you anticipate a career?**

Select one only

○ *Multinational business*

○ *Public body or Education*

○ *Small and Medium sized businesses*

○ *Voluntary or not-for-profit organization*

○ *Other*

If other, please specify

[   ]

30. **In which, if any, of the following industries do you anticipate a career?**

Select one only

○ *Agriculture, forestry and fishing*

○ *Arts, sports and recreation*

○ *Catering and accommodation*

○ *Construction*

○ *Education*

○ *Health and social care services*

○ *IT and telecommunications services*

○ *Manufacturing*

○ *Media and creative services*

○ *Mining, energy and utilities*

○ *Personal services*

○ *Professional and business services*

○ *Retail, hire and repair*

○ *Wholesale*

○ *Other*

If other, please specify

[   ]

We are interested in your prioritisation of social and environmental aspects into the future. For the following pairings, please select which option you think that you would choose in the future.

31. **Please select which option you think that you would choose.**

Select one only

○ *1. An optional module which specifically teaches you skills for employability*

○ *2. An optional module which furthers your knowledge of your chosen subject*

32. **Please select which option you think that you would choose.**

Select one only

○ *1. The course you are studying at your second choice institution which considers the environmental and social aspects to the content you study*

○ *2. The course you are studying at your preferred institution that covers the core content without specific consideration of the environmental and social aspects to the content you study*

33. **Please select which option you think that you would choose.**

Select one only

○ *1. Assuming all other factors are equal, a graduate position with a starting salary of £1000 higher than average (£20,000) in a company with a poor environmental and social record*

○ *2. Assuming all other factors are equal, a graduate position with a starting salary of £1000 lower than average (£20,000) in a company with a strong environmental and social record*

34. **Please select which option you think that you would choose.**

Select one only

○ *1. Assuming all other factors are equal, a graduate position with a starting salary of £3000 higher than average (£20,000) in a company with a poor environmental and social record*

○ *2. Assuming all other factors are equal, a graduate position with a starting salary of £3000 lower than average (£20,000) in a company with a strong environmental and social record*

The next few questions are about your expectations of your university in delivering social and environmental skills…

35. **To what extent, if at all, do you agree that universities should be obliged to develop student's social and environmental skills as part of their courses?**

Select one only

○ *Strongly agree*

○ *Agree*

○ *Neither agree nor disagree*

○ *Disagree*

○ *Strongly disagree*

○ *Don't know*

○ *Rather not say*

36. **Thinking of your course only, if a policy were passed to include social and environmental skills within all university courses, what do you think the most relevant way of including social and environmental skills within your own course would be?**

For each item, select one only

	Extremely relevant	Somewhat relevant	Neither relevant or irrelevant	Somewhat irrelevant	Extremely irrelevant	Don't know	Rather not say
•Add environmental and social material to the full course	○	○	○	○	○	○	○
•Add a specific environmental and social skills module	○	○	○	○	○	○	○
•Build environmental and social skills into the existing content in the full course	○	○	○	○	○	○	○
•Allow the facility to specialise in environmental and social skills within your academic department	○	○	○	○	○	○	○

37. **Do you have any other suggestions for how social and environmental skills can be developed and included in your time at university?**

Finally, a couple of questions on your understanding of Sustainable Development...

38.   **What do you understand the term 'sustainable development' to mean?**

Please write your answer into the box below

39. Taking the definition of sustainable development to mean:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

to what extent, if at all, would you say that you personally agree with the following statements:

	Strongly agree	Agree	Neither agree nor dis agree	Disagree	Strongly disagree	Don't know	Rather not say
•Sustainable development is something which universities should actively incorporate and promote	○	○	○	○	○	○	○
•Sustainable development is something which all university courses should actively incorporate and promote	○	○	○	○	○	○	○
•Sustainable development is something which I would like to learn more about	○	○	○	○	○	○	○

Thank you for your participation!
To be entered into the free prize draw, please enter your first name, last name and e-mail address into the boxes below so that we can contact you if you win.

Your e-mail address will not be used for any other purposes than to notify you if you are a winner. The prize draw will take place on 16 January 2012.

40. **First name:**

41. **Last name:**

42. **Email address:**

43. **The NUS are hoping to run this research into the future. Please tick the box below if you are <u>not</u> happy to be contacted about future research into curriculum and skills for employment with cash prize draws.**

☐ *Please don't contact me about future research*

Please click submit below when you have finished.

I'm sorry - you don't make the entry criteria for this survey, however we will be running more surveys with great prizes in the future so please keep an eye out for these on www.nus.org.uk

University Skills Survey

NUS are conducting a short and confidential survey with students within your university to find out more about your attitudes towards your university and course and aspirations for the future. By taking part in this survey you are in with a chance of winning a fantastic cash prize!

· 1 winner will receive a very useful £500!
· 10 x runners up will receive £50!

The survey will take 10 minutes to complete.
There are no right or wrong answers, we are keen to understand what makes you tick, so please do answer as frankly and honestly as you can. You do not have to answer any questions that you feel uncomfortable with and can simply move on to the next question.

Your responses to this survey will be treated in complete confidence. The information collected will be used only for the purposes of this study.

1. **Which of the following best describes your status?**

Select one only

- ○ *Undergraduate 1st Year*
- ○ *Undergraduate 2nd Year*
- ○ *Undergraduate 3rd Year*
- ○ *Undergraduate 4th Year*
- ○ *Undergraduate 5th or greater year*
- ○ *Postgraduate (Research)*
- ○ *Postgraduate (Taught)*

2. **Thinking about your education before university, which of the following best describes the last place that you studied?**

Select one only

- ○ *State-owned school with integrated sixth form college*
- ○ *State-owned separate sixth form college*
- ○ *Privately owned school with integrated sixth form*
- ○ *Privately owned separate sixth form college*
- ○ *College of Further Education*
- ○ *College of Vocational Excellence*
- ○ *Higher education institute*
- ○ *Other*

If other, please specify

3.   **What was the name of the last place that you studied?**

Please type your answer into the box below

4. **Thinking of your answer to the previous questions, how many academic years passed since you studied prior to attending your current university / college?**

Select one only

○ *0, I came straight to university*
○ *1 year break between formal study*
○ *2-5 years*
○ *More than 5 years*

5. **Which university / college do you currently study at?**
Select one only

| --Click Here-- | ▼ |

Aberystwyth University
Anglia Ruskin University
Aston University
Bangor University
Bath Spa University
Bell College
Birkbeck College
Birmingham City University
Birmingham College of Food, Tourism and Creative Studies
Bishop Grosseteste University College Lincoln
Bournemouth University
Brunel University
Buckinghamshire New University
Canterbury Christ Church University
Cardiff University
Central School of Speech and Drama
Conservatoire for Dance and Drama
Courtauld Institute of Art
Coventry University
Cranfield University
Cumbria Institute of the Arts
Dartington College of Arts
De Montfort University
Edge Hill University
Edinburgh College of Art
Glasgow Caledonian University
Glasgow School of Art
Goldsmiths College
Guildhall School of Music and Drama
Harper Adams University College
Heriot-Watt University
Heythrop College
Imperial College of Science, Technology and Medicine
Institute of Education
King's College London
Kingston University
Leeds College of Music
Leeds Metropolitan University
Leeds Trinity and All Saints
Liverpool Hope University
Liverpool John Moores University
London Business School
London Metropolitan University
London School of Economics and Political Science
London School of Hygiene and Tropical Medicine
London South Bank University
Loughborough University
Middlesex University
Napier University
Newman College of Higher Education
Norwich School of Art and Design
Oxford Brookes University
Queen Margaret University, Edinburgh
Queen Mary and Westfield College
Ravensbourne College of Design and Communication
Roehampton University
Rose Bruford College
Royal Academy of Music

5. **Which university / college do you currently study at?**
Select one only

Royal Agricultural College
Royal College of Art
Royal College of Music
Royal Holloway and Bedford New College
Royal Northern College of Music
Royal Welsh College of Music and Drama
Scottish Agricultural College
Sheffield Hallam University
Southampton Solent University
St George's Hospital Medical School
St Martin's College
St Mary's University College
St Mary's University College, Twickenham
Staffordshire University
Stranmillis University College
Swansea Institute of Higher Education
Swansea University
Thames Valley University
The Arts Institute at Bournemouth
The City University
The Institute of Cancer Research
The Liverpool Institute for Performing Arts
The Manchester Metropolitan University
The North-East Wales Institute of Higher Education
The Nottingham Trent University
The Open University
The Queen's University of Belfast
The Robert Gordon University
The Royal College of Nursing
The Royal Scottish Academy of Music and Drama
The Royal Veterinary College
The School of Oriental and African Studies
The School of Pharmacy
The University College for the Creative Arts
The University of Aberdeen
The University of Bath
The University of Birmingham
The University of Bolton
The University of Bradford
The University of Brighton
The University of Bristol
The University of Buckingham
The University of Cambridge
The University of Central Lancashire
The University of Chichester
The University of Dundee
The University of East Anglia
The University of East London
The University of Edinburgh
The University of Essex
The University of Exeter
The University of Glasgow
The University of Greenwich
The University of Huddersfield
The University of Hull
The University of Keele
The University of Kent

5. **Which university / college do you currently study at?**
Select one only

The University of Lancaster
The University of Leeds
The University of Leicester
The University of Lincoln
The University of Liverpool
The University of Manchester
The University of Newcastle-upon-Tyne
The University of Northampton
The University of Northumbria at Newcastle
The University of Nottingham
The University of Oxford
The University of Paisley
The University of Plymouth
The University of Portsmouth
The University of Reading
The University of Salford
The University of Sheffield
The University of Southampton
The University of St Andrews
The University of Stirling
The University of Strathclyde
The University of Sunderland
The University of Surrey
The University of Sussex
The University of Teesside
The University of Wales, Lampeter
The University of Wales, Newport
The University of Warwick
The University of Westminster
The University of Winchester
The University of Wolverhampton
The University of Worcester
The University of York
Trinity College, Carmarthen
Trinity Laban
UHI Millennium Institute
University College Falmouth
University College London
University College Plymouth St Mark and St John
University of Abertay Dundee
University of Bedfordshire
University of Chester
University of Derby
University of Durham
University of Glamorgan
University of Gloucestershire
University of Hertfordshire
University of London
University of the Arts, London
University of the West of England, Bristol
University of Ulster
University of Wales Institute, Cardiff
Writtle College
York St John University
Other

6. **Which of the following age ranges do you fit into?**

Select one only

○ *16-17 years*

○ *18-20 years*

○ *21-24 years*

○ *25-29 years*

○ *30-40 years*

○ *41-54 years*

○ *55-64 years*

○ *65+ years*

○ *Rather not say*

7. **What is your gender?**

Select one only

○ *Male*

○ *Female*

○ *Self define as other*

○ *Rather not say*

8. **Which of the following statements best describes you?**

Select one only

- ○ *I am a UK citizen studying in the UK*
- ○ *I am an international student from a country within the EU studying in the UK*
- ○ *I am an international student from a country outside the EU studying in the UK*
- ○ *Rather not say*

9. **Which one subject best describes your course or degree?**

Select one only

--Click Here-- ▼
Accounting
Aerospace engineering
African studies
Agricultural sciences
Agriculture
American studies
Ancient language studies
Animal science
Anthropology
Archaeology
Architecture
Artificial intelligence
Astronomy
Aural & oral sciences
Australasian studies
Biology
Biology - Microbiology
Biology - Molecular
Biophysics & biochemistry
Biotechnology - Industrial
Botany
Building
Business studies
Celtic studies
Ceramics & glasses
Chemical, process & energy engineering
Chemistry
Chinese studies
Cinematics & photography
Civil engineering
Classical Greek studies
Classical studies
Comparative literary studies
Complementary medicine
Computer science
Crafts
Dance
Dentistry
Dentistry - Pre-clinical
Design studies
Development Studies
Drama
Economics
Economics & politics
Ecology
Education - Academic studies in
Education - Research & study skills in
Electronic & electrical engineering
English
English studies
Environmental sciences
Finance
Fine art
Food & beverage studies
Forensic & archaeological science
Forestry
French studies

9. **Which one subject best describes your course or degree?**

Select one only

General engineering
Genetics
Geography
Geology
German studies
History (by area, period or topic)
Human & social geography
Human resource management
Imaginative writing
Information services
Information systems
Italian studies
Japanese studies
Journalism
Landscape design
Latin studies
Law (by area or topic)
Linguistics
Management studies
Manufacturing engineering
Maritime technology
Marketing
Materials science
Materials technology not otherwise specified
Mathematics
Mechanical engineering
Media studies
Medical technology
Medicine - Clinical
Medicine - Pre-clinical
Metallurgy
Minerals technology
Modern Middle Eastern studies
Music
Naval architecture
Nursing
Nutrition
Ocean sciences
Office skills
Operational research
Ophthalmics
Pharmacology, toxicology & pharmacy
Philosophy
Physical & terrestrial geographical & environmental sciences
Physics
Physiology & pathology - Anatomy
Planning (urban, rural & regional)
Politics
Polymers & textiles
Portuguese studies
Production engineering
Psychology
Publicity studies
Publishing
Russian & East European studies
Scandinavian studies

9. **Which one subject best describes your course or degree?**

Select one only

Social policy

Social work

Sociology

Social science

Software engineering

South Asian studies

Spanish studies

Sports science

Statistics

Theology & religious studies

Tourism, transport & travel

Training teachers

Veterinary medicine - Pre-clinical

Veterinary medicine & dentistry - Clinical

Zoology

Other

Thinking about the last place you studied before your current university/college…

10. **Which one subject best describes the subject(s) you took at the last place that you studied before your current university / college?**

Select one only

- ○ *Materials and Performance Arts; e.g. Art, Drama, Dance*
- ○ *Written arts; e.g. English Literature*
- ○ *Humanities; e.g. History, Religious studies*
- ○ *Earth Sciences, e.g. Geology*
- ○ *Sciences and Mathematics e.g. Physics, Statistics, Biology*
- ○ *Vocational training (please specify)*
- ○ *A mixture of arts and science subjects*
- ○ *A mixture of arts and humanities subjects*
- ○ *A mixture of science and humanities subjects*
- ○ *Rather not say*
- ○ *Other*

If other, please specify

[   ]

11. **What awards/initiatives did the last place that you studied before your current university / college take part in, if any?**

Please select all that apply

- ☐ *Eco-schools / Green flag*
- ☐ *Rights Respecting School*
- ☐ *Link with a school/education institution overseas*
- ☐ *Other environmentally friendly school scheme, please specify*
- ☐ *Don't know*
- ☐ *None*

Thinking now about your current university/college…

12. **Which, if any, of the following groups, clubs or societies are you part of in your current university / college?**

Please select all that apply

☐ Arts

☐ Cultural

☐ Departmental

☐ Environmental

☐ Faith

☐ Media

☐ Political

☐ RAG

☐ Recreational Sport

☐ Other

If other, please specify

Thank you! We are now going to ask you a few more questions about the last place you studied…

13. **Thinking of your time at the last place you studied before attending your current university / college, for each of the following descriptions, please tell us to what extent, if at all, you believe these skills below were covered in your curriculum:**

For each item, select one only

	Extensively covered	Partially covered	Mentioned but not covered	Not mentioned and not covered	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○

14. **Please think about your answers to the previous question.**

How important, if at all, do you feel it is that these skills were covered in the last place you studied in terms of skills you might need to study your course in your current university or college?

For each item, select one only

	Very important	Somewhat important	Neither important nor unimportant	Somewhat unimportant	Very unimportant	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

15. Are there any other <u>social and environmental skills</u> you would have liked to have seen included in the teaching at your last place of study which would have helped prepare you for your current university or college?

Please enter your response into the box below

_____

16. What other <u>environmental or social topics</u>, if any, would you have liked to have seen included in the teaching at the last place you studied which were not covered at the time?

Please enter your response into the box below

_____

The next section is about your choice of university…

17. **How important were the following when choosing which university or college to apply to?**

For each item, select one only

	Very important	Somewhat important	Neither important nor unimportant	Somewhat unimportant	Very unimportant	Don't know	Rather not say
•The proximity of the university/college to home	○	○	○	○	○	○	○
•The position of the university/college in league tables	○	○	○	○	○	○	○
•How seriously the university/college takes environmental issues	○	○	○	○	○	○	○
•Nightlife	○	○	○	○	○	○	○
•How seriously the university/college takes global development issues	○	○	○	○	○	○	○
•The position of the course in league tables	○	○	○	○	○	○	○
•The position of the university/college in league tables	○	○	○	○	○	○	○
•Attractiveness of location	○	○	○	○	○	○	○
•The 'A' level or equivalent grades or points demanded	○	○	○	○	○	○	○
•The teaching methods	○	○	○	○	○	○	○
•The reputation of the university/college	○	○	○	○	○	○	○
•Reputation of the course	○	○	○	○	○	○	○

We are interested about your expectations from your university, please answer the following few questions about your expectations and experiences of your university.

18. **To what extent, if at all, do you agree with the following statements:**

For each item, select one only

	Strongly agree	Agree	Neither agree nor dis agree	Disagree	Strongly disagree	Don't know	Rather not say
•It is the responsibility of my university / college to prepare me for a future graduate job market	○	○	○	○	○	○	○
•It is the responsibility of my course leaders to prepare me for a future graduate job market	○	○	○	○	○	○	○
•It is my responsibility to prepare myself for a future graduate job market	○	○	○	○	○	○	○
•It is the responsibility of future employers to work with universities to help me prepare for the graduate job market	○	○	○	○	○	○	○

19. Please rank the following skills in terms of their importance in being included in your course for a graduate in your field, where 1 is the most important and 8 is the least important.

Please use each number only ONCE

	1	2	3	4	5	6	7	8
•Analyse using many subjects	○	○	○	○	○	○	○	○
•Understand people's relationship with nature	○	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○	○

20. **To what extent, if at all, do you agree with the following statements:**

For each item, select one only

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Rather not say
My university / college practices and promotes good social and environmental skills	○	○	○	○	○	○	○
My course / course leaders practice and promote good social and environmental skills	○	○	○	○	○	○	○
My clubs / societies practice and promote good social and environmental skills	○	○	○	○	○	○	○

21. Thinking about your current university / college, please tell us to what extent, if at all, you believe these skills below have been covered in course so far:

For each item, select one only

	Extensively covered	Partially covered	Mentioned but not covered	Not mentioned and not covered	Don't know	Rather not say
•Analyse using many subjects	○	○	○	○	○	○
•Understand people's relationship to nature	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○

22. What other, if any, social or environmental skills do you think should be covered in your course in addition to those mentioned in this survey and why?

Please enter your answer into the box below

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Thanks for your answers so far, you can check your progress on the progress bar below. Now for a couple of questions about yourself…

23.   **Which of these statements would you say best describes your current lifestyle?**

Select one only

- ○ *I don't really do anything that is environmentally friendly*
- ○ *I do one or two things that are environmentally friendly*
- ○ *I do quite a few things that are environmentally friendly*
- ○ *I'm environmentally friendly in most things I do*
- ○ *I'm environmentally friendly in everything I do*

24.   **Have you taken part in the following actions during your time in university?**

Select all which apply

- ☐ *Volunteer*
- ☐ *Recycle*
- ☐ *Donate to charity*
- ☐ *Buy locally*
- ☐ *Save energy*
- ☐ *Take part in an environmentally friendly scheme or project*
- ☐ *Reduce the amount of air travel I take*

25. **How likely, if at all, are you to take part in the following actions during the remainder of your time in university?**

For each item, select one only

	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Very unlikely	Don't know	Rather not say
•Volunteer	○	○	○	○	○	○	○
•Recycle	○	○	○	○	○	○	○
•Donate to charity	○	○	○	○	○	○	○
•Buy locally	○	○	○	○	○	○	○
•Save energy	○	○	○	○	○	○	○
•Take part in an environmentally friendly scheme or project	○	○	○	○	○	○	○
•Reduce the amount of air travel I take	○	○	○	○	○	○	○

26. **To what extent, if at all, do you think that you personally carry out the following skills?**

For each item, select one only

	All the time	Most of the time	Someti mes	Rarely	Never	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

Thinking about the future…

27. **Thinking only of your own personal view, how relevant is it to you that the following skills are developed through your university education?**

For each item, select only one

	Extremely relevant	Somewhat relevant	Neither relevant or irrelevant	Somewhat irrelevant	Extremely irrelevant	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problems solving using many subjects	○	○	○	○	○	○	○

28. **How important do you think the following skills are to your future employers?**

For each item, select one only

	Very important	Somewhat important	Neither important nor unimportant	Somewhat unimportant	Very unimportant	Don't know	Rather not say
•Understand people's relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

29. **How important do you think the following skills are to your future employers when compared against each other?**

For each item, select one only where 1 is the most important and 8 is the least important.

	1	2	3	4	5	6	7	8
•Self management	○	○	○	○	○	○	○	○
•Team working	○	○	○	○	○	○	○	○
•Business and customer awareness	○	○	○	○	○	○	○	○
•Problem solving	○	○	○	○	○	○	○	○
•Application of numeracy	○	○	○	○	○	○	○	○
•Application of social and environmental skills	○	○	○	○	○	○	○	○
•Communication	○	○	○	○	○	○	○	○
•Application of information technology	○	○	○	○	○	○	○	○

30. **Thinking about the skills presented in this survey - to what extent do you agree that upon finishing your course you will be able to put these skills into action within the workplace?**

For each item, select one only

	Strongly agree	Agree	Neither agree nor dis agree	Disagree	Strongly disagree	Don't know	Rather not say
•Understand peoples relationship to nature	○	○	○	○	○	○	○
•Analyse using many subjects	○	○	○	○	○	○	○
•Act as a responsible citizen locally & globally	○	○	○	○	○	○	○
•Plan for the long term as well as the short term	○	○	○	○	○	○	○
•Use resources efficiently	○	○	○	○	○	○	○
•Think of the whole system and the links when considering new ideas	○	○	○	○	○	○	○
•Adapt to new situations	○	○	○	○	○	○	○
•Consider the ethical issues of your subject	○	○	○	○	○	○	○
•Problem solving using many subjects	○	○	○	○	○	○	○

31. **If you answered disagree or strongly disagree to the previous question, what steps do you think will be necessary to develop these skills following completion of your course?**

Select all that apply

☐ *Undertake further academic study e.g. Masters, PhD*

☐ *Undertake vocational training*

☐ *Complete an internship or work placement*

☐ *Complete an apprenticeship*

☐ *I will be able to put all these skills into action in my future workplace*

32. **In which, if any, of the following sectors do you anticipate a career?**

Select one only

○ Multinational business

○ Public body or Education

○ Small and Medium sized businesses

○ Voluntary or not-for-profit organization

○ Other

If other, please specify

_____

33. **In which, if any, of the following industries do you anticipate a career?**

Select one only

○ Agriculture, forestry and fishing

○ Arts, sports and recreation

○ Catering and accommodation

○ Construction

○ Education

○ Health and social care services

○ IT and telecommunications services

○ Manufacturing

○ Media and creative services

○ Mining, energy and utilities

○ Personal services

○ Professional and business services

○ Retail, hire and repair

○ Wholesale

○ Other

If other, please specify

_____

We are interested in your prioritisation of social and environmental aspects into the future. For the following pairings, please select which option you think that you would choose in the future.

34. **Please select which option you think that you would choose.**

Select one only

- ○ *1. An optional module which specifically teaches you skills for employability*
- ○ *2. An optional module which furthers your knowledge of your chosen subject*

35. **Please select which option you think that you would choose.**

Select one only

- ○ *1. The course you are studying at your second choice institution which considers the environmental and social aspects to the content you study*
- ○ *2. The course you are studying at your preferred institution that covers the core content without specific consideration of the environmental and social aspects to the content you study*

36. **Please select which option you think that you would choose.**

Select one only

- ○ *1. Assuming all other factors are equal, a graduate position with a starting salary of £1000 higher than average (£ 20,000) in a company with a poor environmental and social record*
- ○ *2. Assuming all other factors are equal, a graduate position with a starting salary of £1000 lower than average (£ 20,000) in a company with a strong environmental and social record*

37. **Please select which option you think that you would choose.**

Select one only

- ○ *1. Assuming all other factors are equal, a graduate position with a starting salary of £3000 higher than average (£ 20,000) in a company with a poor environmental and social record*
- ○ *2. Assuming all other factors are equal, a graduate position with a starting salary of £3000 lower than average (£ 20,000) in a company with a strong environmental and social record*

The next few questions are about your expectations of your university in delivering social and environmental skills…

38. **To what extent, if at all, do you agree that universities should be obliged to develop student's social and environmental skills as part of their courses?**

Select one only

- ○ *Strongly agree*
- ○ *Agree*
- ○ *Neither agree nor disagree*
- ○ *Disagree*
- ○ *Strongly disagree*
- ○ *Don't know*
- ○ *Rather not say*

39. Thinking of your course only, if a policy were passed to include social and environmental skills within all university courses, what do you think the most relevant way of including social and environmental skills within your own course would be?

For each item, select one only

	Extremely relevant	Somewhat relevant	Neither relevant or irrelevant	Somewhat irrelevant	Extremely irrelevant	Don't know	Rather not say
•Add environmental and social material to the full course	○	○	○	○	○	○	○
•Add a specific environmental and social skills module	○	○	○	○	○	○	○
•Build environmental and social skills into the existing content in the full course	○	○	○	○	○	○	○
•Allow the facility to specialise in environmental and social skills within your academic department	○	○	○	○	○	○	○

40. Do you have any other suggestions for how social and environmental skills can be developed and included in your time at university?

Finally, a couple of questions on your understanding of Sustainable Development...

41.   **What do you understand the term 'sustainable development' to mean?**

Please write your answer into the box below

42. **Taking the definition of sustainable development to mean:**

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

to what extent, if at all, would you say that you personally agree with the following statements:

	Strongly agree	Agree	Neither agree nor dis agree	Disagree	Strongly disagree	Don't know	Rather not say
•Sustainable development is something which universities should actively incorporate and promote	○	○	○	○	○	○	○
•Sustainable development is something which all university courses should actively incorporate and promote	○	○	○	○	○	○	○
•Sustainable development is something which I would like to learn more about	○	○	○	○	○	○	○

Thank you for your participation!
To be entered into the free prize draw, please enter your first name, last name and e-mail address into the boxes below so that we can contact you if you win.

Your e-mail address will not be used for any other purposes than to notify you if you are a winner. The prize draw will take place on [date].

43.   **First name:**

44.   **Last name:**

45.   **Email address:**

46.   **The NUS are hoping to run this research into the future. Please tick the box below if you are <u>not</u> happy to be contacted about future research into curriculum and skills for employment with cash prize draws.**

☐   *Please don't contact me about future research*

Please click submit below when you have finished.

I'm sorry - you don't make the entry criteria for this survey, however we will be running more surveys with great prizes in the future so please keep an eye out for these on www.nus.org.uk

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