Student attitudes towards, and skills for, sustainable development

Summary 4: Sustainability, skills and employability
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**Key:**

**First Year Tracker** (following responses from 2010 to 2014 from first year students)

**2012 cohort** (following responses from 2012 first years, 2013 second years and 2014 third years)
Summary 4: Sustainability, skills, and employability

Research into student attitudes towards, and skills for, sustainable development (SD) was conducted for a fifth consecutive year in 2014. This annual study:

- updates our understanding on student attitudes towards, and skills for, sustainable development through 3,775 first year and 1,973 third year respondents in academic year 2013/14;
- identifies trends in demands and expectations from first year students new to university;
- tracks longitudinal demands and expectations from first year students as they progress through their university career;
- Analyses the longitudinal variability in approximately 27,000 student responses between 2010 and 2014.

The research content repeated the previous questions to capture comparable longitudinal data. There was no reference to sustainable development in its promotion to reduce bias. Responses were weighted to reflect the demographic makeup of the UK student population.

This summary considers respondents’ perceptions of the relevance of sustainability skills for their future employers, along with reflections on the role and achievements of higher education in preparing them for the workplace. Respondents’ preferences for types of company and role are also presented. Results from the employer-facing research are also presented to allow comparisons between student and employer perceptions.

1.1 Key Questions:

- What role do students, institutions and future employers play in preparing students for future employment?
- How important are environmental and social skills for students’ future employers?
- How important are other employability skills for students’ future employers?
- Are students confident they have the skills employers are looking for? And for those that lack confidence, what other steps are necessary?
- What preferences exist for learning for employability or learning for their chosen subject?
- Do students want to work for organisations with positive social and environmental records?
- Do students want to work in a role that achieves positive environmental and social change?
- What attributes are students looking for in their future employers?
2. What role do students, institutions and future employers play in preparing students for future employment?

Figure 2.1 | To what extent, if at all, do you agree with the following statements? [2012 COHORT]

2.2 Key findings

Continuing the trend identified across all three previous years of research, respondents most frequently allocated ascription of responsibility for developing skills and preparing for the graduate job market to their university/college or to themselves.

2.3 2012 cohort

Longitudinally, the 2012 cohort shows increased ascription of personal responsibility towards preparation for the graduate job market, with significantly more third years strongly agreeing that it is their responsibility compared to both second and first years in the cohort (for example, 66.7%, n=1,172 2014 third years compared with 62.3%, n=2,490 2012 first years).

The 2012 cohort also place increased responsibility on their institution to prepare them for the graduate job market throughout their university careers.

2.4 First Year Tracker

First year respondents also place increasing responsibility on themselves to prepare for the graduate job market (for example, 65%, n=2,404 2014 first years strongly agree compared with 62%, n=2,335 2013 first years).

2014 first years are however less likely to ascribe responsibility for job preparation to all other actors than first years taking part in previous years of the research.
3. How important are environmental and social skills for students’ future employers?

### 3.2 Key findings

Between 80% and 90% of respondents in all years continue to rank the majority of skills as important or very important in terms of employment.

#### 3.3 2012 cohort

Some significant differences occur within the 2012 cohort, notably between first years and third years.

For example, the ability to analyse using many subjects sees a significant increase in the number of respondents identifying it as very important for their future employers (60.1%, n=1,043 2014 third years compared with 54.3%, n=2,141 2012 first years ranking as very important).

The skills more overtly linked with sustainable development have seen a significant decrease in the number of respondents identifying them as very important to their future employers (for example 47.3%, n=820 2014 third years see the ability to act as a responsible citizen globally and locally as very important for future employers, compared with 50.3%, n=1,988 2012 first years).

#### 3.4 other observations

The ranking of the more overtly sustainability-related skills as of lower importance broadly matches with employer understanding of the skills that would enable them to compete in a sustainable economy, in particular around the understanding of people’s relationship to nature potentially highlighting a universal separation of human systems from the natural environment.
4. How important are other employability skills for students’ future employers?
Respondents were also asked to consider the importance of a selection of wider employability skills for their future employers on a scale of one to eight. Changes in the survey software mean that responses given were ranked using a different method, so the 2014 results have been presented independently here.

4.2 Key findings
Team working, communication and self-management are ranked as the most important skills that respondents in 2014 think future employers are looking for, with two-thirds of first and third years ranking team working as the most important skill (for example 67.2%, n=2342 2014 first years).

The application of information technology, social and environmental skills, and numeracy are seen as relatively unimportant for employers. For example, only 10.3% (n=170) 2014 third years rank application of numeracy in the top three in terms of importance.

4.3 Other observations
Comparing these result to the findings from the employers research, a disconnect between employer satisfaction and student expectation is seen, particularly in the field of business and customer awareness. Senior leaders taking part in the employers’ research highlighted a greater level of dissatisfaction with business and customer awareness in recent graduates than any other of the skills presented in this questions (12 of 51 senior leaders were dissatisfied to some extent). A third of student respondents placed this skill in the top three they believed employers to be looking for.
5. Employers: How important are skills for sustainable development?

Figure 5.1 | The following are skills that specifically relate to environmental and social responsibility. To what extent do you agree or disagree that recruiting recent graduates with the following skills would enable your organisation to participate in a sustainable economy? [EMPLOYERS RESEARCH – SENIOR LEADERS]

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving using many subjects (n=45)</td>
<td>5</td>
<td>18</td>
<td>21</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Consider ethical issues (n=45)</td>
<td>3</td>
<td>21</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adapt to new situations (n=45)</td>
<td>2</td>
<td>18</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Think of the whole system and the links when considering new ideas (n=45)</td>
<td>5</td>
<td>17</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use resources efficiently (n=45)</td>
<td>2</td>
<td>13</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan for the long term as well as the short term (n=45)</td>
<td>5</td>
<td>18</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Act as a responsible citizen locally and globally (n=45)</td>
<td>6</td>
<td>23</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyse using many subjects (n=44)</td>
<td>3</td>
<td>12</td>
<td>21</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Understand people’s relationship to nature (n=45)</td>
<td>3</td>
<td>12</td>
<td>8</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

5.2 Key findings

The ability to “use resources efficiently” is most commonly seen as enabling participation in a sustainable economy by senior leaders, with 42 of the 45 respondents agreeing. The business case for this is clear and concepts such as the circular economy and cradle-to-cradle products have the potential to draw on these well-understood benefits.

The ability to “understand people’s relationship to nature” is the least strongly rated skill to enable, with just 29 out of 45 agreeing that this skill will enable their organisations participation in a sustainable economy. This finding again can be seen as evidence of a systematic alienation of humans and nature within business contexts, and society as a whole that has been described as fundamental to address to achieve a more sustainable economy.

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6. Are students confident they have the skills employers are looking for? And for those that lack confidence, what other steps are necessary?

Since 2012, the research has also asked respondents to assess their ability to put into action the skills they perceive employers to be looking for.

**Figure 6.1 | What steps do you think will be necessary to develop these skills following completion of your course? (Those who responded negatively at when assessing whether they have the skills employers are looking for. Please note small sample sizes. Question not asked to first year students) [2012 COHORT]**

<table>
<thead>
<tr>
<th>Step</th>
<th>3rd years (n=148)</th>
<th>2nd years (n=186)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete an internship or work placement</td>
<td>70.3%</td>
<td>80.6%</td>
</tr>
<tr>
<td>Undertake further academic study e.g. Masters, PhD</td>
<td>48.0%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Undertake vocational training</td>
<td>32.4%</td>
<td>31.7%</td>
</tr>
<tr>
<td>Complete an apprenticeship</td>
<td>14.9%</td>
<td>14.5%</td>
</tr>
<tr>
<td>I will be able to put all these skills into action in my future workplace</td>
<td>14.5%</td>
<td>12.8%</td>
</tr>
<tr>
<td></td>
<td>12.4%</td>
<td></td>
</tr>
</tbody>
</table>

6.2 2012 cohort

Reflecting the existing findings, the majority of 2014 third year respondents (90.4%) are confident that they will be able to put into action the skills that employers are looking for upon entering the workplace.

The main methods through which respondents who are not confident they will have the skills employers are looking for on graduation see as a means of securing these skills are internships and work placements (70.3% 2014 third years, n=100).

The emphasis placed on the importance of work placements and internships by 2013 second years has significantly decreased amongst 2014 third years (80.6%, n=138 compared with 70.8%, n=100).

6.3 Other observations

Given the findings highlighted in the previous two sections of this report, it is worth ensuring students and HEIs have an accurate understanding of the skills needed and valued by employers. Research elsewhere has also highlighted a disparity between graduate evaluations of their own skills and employers\(^2\).

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\(^2\) HEA and the National Co-Ordinating Centre for Public Engagement. (2012)
7. Do employers believe their organisations have the skills needed to participate in a sustainable economy?

The employer-facing research asked participants to assess their confidence in skills held within their organisation in order to participate in a sustainable economy.

Figure 7.1 | How confident are you that your organisation has the skills to compete in a sustainable economy? [EMPLOYER-FACING RESEARCH].

7.2 Key findings

A small proportion of respondents are totally confident in the skills present within their organisation to enable them to compete in a sustainable economy. Over half believe there are at least some gaps.

Approximately one in five senior leaders believes there to be significant skills gaps preventing their organisations participation in a sustainable economy.
8. What preferences exist for learning for employability or learning for their chosen subject?

Respondents were asked to consider their choices when presented with sets of two optional modules encompassing either employability skills or skills based on their chosen subject areas.

8.2 Key findings

Over half of third year respondents in 2014 show a preference for learning specific employability skills compared to furthering their subject knowledge when considering optional modules.

8.3 2012 cohort

Respondents demonstrate a shift in focus as they progress through their university career. Preference for an optional module which teaches specific skills for employability significantly increases compared to both second year and first year respondents in the same cohort.

This finding seems likely to fit with a hypothesis of the reality of graduation hitting and emphasising a need to think about options beyond higher education that seem fairly distant to first year respondents.

8.4 First Year Tracker

No significant changes are seen across all five years of first year respondents, with just over half in each year of the research expressing a preference for furthering their subject knowledge over learning employability skills when considering optional modules.
8.6 Key findings

Approximately one-third of respondents would opt for learning transferable employability skills, such as increasing their understanding of environmental and social issues, over specific employability skills in their subject areas.

8.7 2012 cohort

There is a significant increase in respondents preference for learning transferable employability skills, when compared with learning employability skills specifically within their subject area (for example 31.9%, n=1,275 of first years compared with 36.2%, n=633 third years).

8.8 First Year Tracker

Preference for learning transferable environmental and social skills has also increased amongst first year respondents since the question was introduced to the research in 2012.

2013 and 2014 first years are significantly more likely than 2012 first years to opt for transferable employability skills over skills in their chosen subject area (for example 35.7% 2014 first years, n=1,319 compared with 31.9% 2012 first years, n=1,275).

8.9 Other observations

Along with respondents studying earth sciences, humanities respondents are also significantly more likely to opt for a module that develops transferable employability skills over employability skills in their chosen subject area (e.g. 41.7%, n=162 of 2014 third years studying humanities compared with 34.6%, n=204 2014 third years studying science and mathematics subjects would opt for transferable employability skills).
9. Do students want to work for organisations with positive social and environmental records?

Respondents were presented with future-facing options and asked to consider the extent to which they would be willing to make salary sacrifices from a graduate starting salary of £20,000 in order to work for a company with a positive environmental and social record.

Figure 9.1 | We are interested in your prioritisation of social and environmental aspects in the future. Please select which option you would choose. [FIRST YEARS TRACKER]

9.2 Key findings

Two-thirds of first year respondents continue to be willing to make a salary sacrifice of £1,000 from an average graduate starting salary in order to work for a company with a strong environmental and social record.

9.3 First Year Tracker

First year respondents taking part in the research after the introduction of increased tuition fees are significantly more likely to state a willingness to accept a salary sacrifice of £1,000 from a graduate starting salary of £20,000 to work in a company with a strong environmental and social record.

9.4 2012 cohort

There is no significant difference in the willingness of respondents in the 2012 cohort to make a salary sacrifice to work for a socially and environmentally responsible company as they progress through their university careers.

9.5 Other observations

Further research could consider the extent to which this finding is part of a wider trend that recognises that salary can be part of a wider reward including contribution ethical and environmental issues.

Another avenue of investigation would be to ascertain the influence of careers advisory services within higher education institutions in highlighting the opportunity for sustainability skills across a range of employers and roles.
9.7 Key findings

Two-fifths of first year respondents continue to be willing to make a salary sacrifice of £3,000 from an average graduate starting salary in order to work for a company with a strong environmental and social record.

9.8 2012 cohort

Unlike the 2010 cohort, there is no significant difference in the willingness of respondents in the 2012 cohort to make a salary sacrifice to work for a socially and environmentally responsible company as they progress through their university careers.

9.9 First Year Tracker

The first year intake in 2014 continue to exhibit a willingness to accept a position in company with strong environmental and social performance with nearly a half of respondents opting for a salary sacrifice of £3,000 (46.9%, n=1,723).

This is a small but significant increase in the willingness to make a salary sacrifice of this level compared to most of the previous years of research (2010, 2011, 2013).

9.10 Other observations

Respondents studying science and mathematics report being significantly less likely to accept a £1,000 salary sacrifice than other subject areas, for example 2014 third years 41.4% (n=243) compared with 55% (n=61) studying material arts.
10. Do students want to work in a role that achieves positive environmental and social change?

In 2013 and 2014, respondents were also asked to consider making the same salary sacrifice of £3,000, but specifically for a role that contributes to positive environmental and social change rather than a company as a whole that has a strong record in this area.

**Figure 10.1 | We are interested in your prioritisation of social and environmental aspects in the future. Please select which option you would choose. [FIRST YEARS TRACKER]**

![Graph showing the percentage of respondents willing to make a £3,000 salary sacrifice for a role that contributes to positive environmental and social change.]

1. Assuming all other factors are equal, a graduate position with a starting salary of £3000 higher than average (£20,000) in a role that does not contribute to positive environmental and social change

2. Assuming all other factors are equal, a graduate position with a starting salary of £3000 lower than average (£20,000) in a role that contributes to positive environmental and social change

10.2 Key findings

Approximately half of respondents in 2014 reported that they would be willing to make this sacrifice (for example, 51.5% 2014 first years, n=1,895).

Respondents are also significantly more likely to say that they would be willing to make a £3,000 sacrifice for a role that contributes to positive environmental and social change rather than a company that has achieved in this area on the whole.

As highlighted in the 2013 research, further investigation could consider the extent to which personal rather than organisational contribution influences motivation. Additionally unpicking the influence of the language used in the questioning, for example the influence of the word “change” and “positive” rather than “strong” and “record”.

Looking in further detail, third year respondents in 2014 studying science and mathematics subjects are significantly less likely to accept a salary sacrifice of £3,000 than most other subject areas, for example 44.5% (n=262) compared with 59.7% (n=66).
11. Are employers engaged in sustainable development?

Figure 11.1 | Has your organisation identified the specific skills and values needed to participate in a sustainable economy? [EMPLOYERS RESEARCH]

11.2 Key findings

A total of 36 out of 45 respondents who held senior leadership positions within their organisation indicated that they had engaged with sustainability either as a standalone policy/strategy, or that the concept was integrated or included in other policies held by their organisation.

Further questioning revealed that engagement with the values that are defined under sustainable development have been more of a focus for employers than the skills they would need to deliver against these values.

These findings suggest that for most, there has been some movement on engaging with sustainability, but also that it is still very much a work in progress, with clear leadership needed to ensure the business case for a sustainable economy is communicated and understood.

The distinction between values and skills highlights a potential value-action gap but also raises questions around the process of change within organisations. For example, when changing the culture within a workplace, do values or skills come first? Similarly, which are the most important aspects to define? Future research could consider examples of how change has been achieved within “earlier adopter” organisations.
12. What attributes are students looking for in their future employers?

Figure 12.1 | Which of the following attributes will you be looking for in your future employer? Please select the three most important attributes (asked in 2012-2014 research) [FIRST YEARS TRACKER]

![Bar chart showing attributes and their popularity among students.]

12.2 Key findings

The majority of respondents agree that their institutions are preparing them to work for an employer with the attributes identified within the research.

Significantly, fewer second year and third year respondents “strongly agree” that their university/college is increasing their potential to work for a company that meets these attributes (27.1%, n=1,086 2013 first years, compared with 14.3%, n=235 2,103 second years and 15.6%, n=274 2014 third years).

12.3 First Year Tracker

2013 and 2014 first years are significantly more likely to rank “has considered the environmental and social impacts of its products and/or service” as one of their top three attributes for future employers than first years responding to the survey in 2012 (27.1%, n=1,092 2012 first years compared to 30.6%, n=1,132, 2014 first years).
13. How do employers secure recent graduates with sustainability skills and values?

Figure 13.1 | Within your organisation, are sustainability skills or values... [EMPLOYERS RESEARCH]

13.2 Key findings

Respondents outlined a variety of means by which they ensure recent graduates have or develop sustainability values and skills in line with their organisation. Most commonly, these are identified through the selection process. However further research would be needed to ascertain the extent to which this is achieved through formal testing, or through more subjective assessment.
14. This summary forms part of a series of short reports. Further detail on different aspects of the research can be found at:

Executive summary: Student attitudes towards, and skills needs for, sustainable development
Executive summary: Employer attitudes towards, and skills needs for, sustainable development
Summary 1: Existing skills – the influence of further education
Summary 2: Understanding attitudes and behaviours for sustainable development during higher education
Summary 3: Learning and using skills for sustainable development during higher education

Appendix 1: Methodology
Appendix 2: Desk review – student attitudes towards, and skills for sustainable development
Appendix 3: Desk review – employer attitudes towards, and skills needs for sustainable development
Appendix 4: Student surveys
Appendix 5: Employer survey
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