LEARNING FOR CHANGE

REVIEW OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

KING’S COLLEGE LONDON

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The Sustainability team works closely with staff, students and external partners on sustainability strategy across the College. Updates on our ongoing projects and new information and resources for ESD will be posted regularly on our blog: http://blogs.kcl.ac.uk/sustainability. The team can be contacted at sustainability@kcl.ac.uk.

LIST OF ABBREVIATIONS

BITC  Business in the Community
DEFRA  Department of Environment, Food, and Rural Affairs
ESD  Education for Sustainable Development
HE  Higher Education
HEA  Higher Education Academy
HEFCE  Higher Education Funding Council for England
HEI  Higher Education Institution
MOOC  Massive Open Online Course
NUS  National Union of Students
QAA  The Quality Assurance Agency for Higher Education
SD  Sustainable Development
VSO  Voluntary Service Overseas
EXECUTIVE SUMMARY

This is a baseline review of Education for Sustainable Development at King’s. Education for sustainable development “prepares people to cope with, manage and shape social, economic and ecological conditions characterised by change, uncertainty, risk and complexity”¹. The objective is to strengthen the College’s commitment to the advancement of knowledge, learning and understanding in the service of society.

EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

Sustainable development in the context of education is understood as “enabling students to develop the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations.” ²

ESD will flourish when:

- Part of university culture and strategy;
- Embedded in learning and teaching;
- Linked to other agendas such as employability, internationalisation and enterprise;
- Connected to learning in the wider community.

ESD is not:

- A separate subject, discipline or higher education agenda;
- Just about ‘the environment’;
- A passing fad.³

CONTEXT AND RATIONALE

- Changes in context: enabling students and staff to respond to challenges of the 21st century and uncertainties in social/political, economic, and environmental context
- Student interest: sustainable development should be incorporated by HEI’s;
- Employability: business interest in graduates with ESD skills;
- Policy incentive: ESD strategy and policy on national and international level.

KEY TOUCH POINTS⁴ AND ESD THEMES

- Students: employability, enterprise, co-design and active role as learner;
- Staff: resources, knowledge sharing across disciplines and student input.

This report outlines a clear need for an institutional approach to ESD. ESD finds implementation in some departments more than others. Good practice from within and outside the College will be highlighted, as well as a need for staff and student enablers for ESD.

Four central ESD themes were identified through qualitative interviews with 21 departments. These themes were mostly implicit in teaching or stood out as important elements that seemed to be missing. They are interlinked; therefore a holistic understanding of sustainable development will involve all four themes:

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¹ Sterling (2012), Future Fit Framework, p. 9
² QAA (2013), Education for sustainable development , p. 2
³ Sterling (2012), Future Fit Framework, p. 7
⁴ Touch Points are those points where students currently engage, or could engage with sustainability
THEME 1: NEW SYSTEMS THINKING

The ability to see ‘the bigger picture’, think outside discipline boundaries, analyse whole systems and use analytical and creative thinking.

Opportunities formal curriculum: offering funding for interdisciplinary, innovative ESD projects, guidance for staff on embedding ESD across the curriculum, students as active learners.

Opportunities informal curriculum: curriculum/education and policy think tanks, ‘hackathons’, start-up weekends, involvement of alumni and external partners.

THEME 2: SOCIAL IMPACT & ETHICS

Reflexivity and a critical consideration of discipline ethics, impact on society and links with direct/immediate context, real-life learning.

Opportunities formal curriculum: courses on social impact and ethics, person-centred learning.

Opportunities informal/subliminal curriculum: volunteering, social enterprise, spaces on campuses and residences for ‘social learning’, improved connections with local context.

THEME 3: ENVIRONMENTAL SUSTAINABILITY

Appreciation of resource depletion, climate change and the linkages between the natural, economic, social and cultural dimensions of sustainability.

Opportunities formal curriculum: provide students with practical experience and employability skills through internal audits and projects at the university or practical placements with local businesses.


THEME 4: CULTURE & GLOBAL CITIZENSHIP

Respecting the intellectual value of interaction with other cultures and the value of original culture, critical consideration of one’s own viewpoints, sharing cultural knowledge and resources.

Opportunities informal & formal curriculum: increase spaces and opportunities for collaboration, sharing of cultural knowledge from the College’s language and cultural departments; fostering a sense of ‘common citizenship’.
I. INTRODUCTION

This report is a starting point to identify opportunities to incorporate Education for Sustainable Development (ESD) in the formal or informal curriculum at King’s to strengthen the College’s commitment to the advancement of knowledge, learning and understanding in the service of society. This review results from conversations between Karen O’Brien and the Sustainability team on incorporating ESD in the curriculum at King’s. The report covers interviews with 21 departments at King’s within each School and is therefore not representative of all teaching at the College.

This report will:

- Explain what ESD means in the context of HE and King’s specifically
- Illustrate how ESD is currently understood across the College and how it relates to various disciplines within each School
- Highlight central themes in ESD at the College and best practice within these themes
- Identify opportunities for ESD in the formal, informal and subliminal curriculum

Four broad themes have been identified from conversations with departments. These four themes each have distinct opportunities to be expressed more explicitly in the formal, informal or subliminal curriculum. The formal curriculum is understood as ‘classroom teaching’, and the informal curriculum comprises all activities taking place at the College outside of classroom teaching (extracurricular activities, jobs, events). The subliminal or ‘hidden’ curriculum refers to the College’s estate: its campuses and residences, or more broadly: the environment in which students learn. Opportunities and good practice at other universities are offered, as appropriate to the theme. The following section outlines the need for ESD and places it in its wider policy and academic context.

I.1 WHAT IS ESD?

Education for Sustainable Development or Education for Sustainability is a relatively new educational paradigm that applies to curriculum at all levels of education. Currently this strand of thinking has informed some disciplines to a greater extent than others, and the relevant skills and content may have more immediate relevance to certain subject areas. ESD connects to fundamental assumptions about the role of educators and the purpose of an educational system. It relates to developments within the educational sector towards more participatory and active methods of learning, as well as a wider debate on the need for new ways of thinking to respond to global developments and uncertain futures. (HEFCE, 2014)

A definition of sustainable development put forward by the United Nations World Summit in 2005 encompasses three ‘pillars’ of sustainability - economic development, social development and environmental protection. As the The Quality Assurance Agency for Higher Education (QAA) states, these are increasingly perceived as “interconnected, overlapping and interdependent” and seen as part of a cultural context. The present QAA guidance defines education for sustainable development as follows:

"Education for sustainable development means enabling students to develop the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations." (QAA, 2013, p. 2)

The UNESCO definition further stresses the cultural context of sustainability:
“Education for sustainable development (ESD) is a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the earth’s natural resources.” (UNESCO)

While the HEA definition focuses on the need for building resilience:

“Sustainability education prepares people to cope with, manage and shape social, economic and ecological conditions characterised by change, uncertainty, risk and complexity.” (HEA Future Fit framework, 2012)

The above mentioned definitions have been used as a starting point for our conversations about ESD content in existing courses. With regards to ESD teaching methods the typology developed by Scott and Gough has been used. They distinguish three types of approaches: the first concentrates on environmental problems and solutions offered by technology or environmental actions. The second approach is that problems we face are inherently socio-political, and can be understood through social science research. Environmental problems in this regard are a result of these deeper social or political issues. The last and perhaps more nuanced type suggests that present knowledge is not adequate and learning must be open-ended.

In conversations with department the focus has been mainly on the last approach as it focuses the least on teaching a particular problem, or a particular solution. The first and second assume that pro-environmental or sustainable behaviour can be specified by focusing on either environmental or social phenomena. The third type says this type of behaviour cannot be specified as reality is uncertain and complex, and stresses the need for students to critically consider what sustainable development is. Type 3 thinking is therefore crucial to encourage ‘reflective social learning’ (Vare and Scott, 2007). Importantly, there is a difference between learning about sustainability issues in its broadest sense and learning ‘for’ sustainable development, as various authors have pointed out. ESD in essence comprises both aspects: educating students about sustainability issues and challenges, and giving them the tools to be able to contribute to solutions (QAA, 2013).

A concern with ESD is that because of its broad nature and its continued redefinition it has turned into a meaningless term or a concept difficult to distinguish from education in general. Although this is certainly a justified concern, it is precisely this ‘strategic’ ambiguity which makes ESD interesting to many disciplines (Jenny Elliot, 2008). The broad and open nature of the concept offers possibility to engage and debate with a multiplicity of agendas. During our conversations some departments expressed a concern about teaching ESD as part of a particular political agenda. It is therefore important to note that ESD is about opening up the floor for debates about global and national issues rather than prescribing certain conversations or standpoints.

1.11 WHY ESD?

The QAA regards the role of higher education institutions to equip graduates with the skills to face challenges of the twenty-first century. In a changing society this may mean developing knowledge and skills outside of one particular discipline. Interdisciplinarity and connecting various perspectives are encouraged, as well as fostering active and independent learning. Learning between and across disciplines is seen as beneficial for developing the ideas to positively engage with a changing economic, social and environmental context. The following paragraph will outline some of the key drivers behind ESD. (QAA, 2013)

STUDENT EXPECTATIONS

A three-year longitudinal study conducted by the HEA and NUS, Student attitudes towards and skills for sustainable development, found that over eight in every ten participating students believe sustainable
development (SD) should be actively promoted and incorporated by UK universities. Over two thirds think SD should be covered in university courses. Both these beliefs strengthen over the course of respondent’s studies. Students further expressed a preference for reframing the curriculum to encompass sustainable development rather than adding extra content or additional courses. The majority of respondents explain SD as environmental sustainability and less so as a social or economic issue. They expressed a “desire for teaching to include extra-curricular activities within the range of learning opportunities for sustainable development”. (Bone and Agombar, 2013)

The NUS also conducts a yearly sustainability skills survey, which previously has shown that:
- 42% of students think sustainability will help them get their first job
- 75% want to see more attention to sustainability in the curriculum
- 70% of first years think sustainability will have a bearing on future working life and career choices

POLICY CONTEXT

Policy is an increasingly important driver for the development of an ESD strategy at King’s. The Higher Education Funding Council for England (HEFCE) expressed a vision for the sector in 2005 which was revised in 2009. It states that HE can contribute to new ways of life to improve human health and wellbeing. The role of HE in this is to give students the necessary skills set and knowledge to make a difference.

“Within the next 10 years, the higher education sector in this country will be recognised as a major contributor to society’s efforts to achieve sustainability – through the skills and knowledge that its graduates learn and put into practice, its research and exchange of knowledge through business, community and public policy engagement, and through its own strategies and operations.” (HEFCE 2009)

HEFCE funded a project on “Leading curriculum change for sustainability: strategic approaches to quality enhancement” a strategic guidance document on ESD for managers in higher education institutions. A £5 million budget was offered to the NUS Student’s Green Fund to fund 25 sustainability projects led by Student Unions.

The UN has taken a leading role on ESD through the UN Decade of Education for Sustainable Development which seeks to integrate sustainable development into all aspects of education to prepare students for the “social, economic, cultural and environmental problems we face in the 21st century”. (UN, 2014)

The QAA/HEA has developed and is currently in the stage of further developing a guidance document on implementing ESD in higher education institutions. HEA developed guidelines for embedding ESD into various disciplines and courses. The QAA initiated the Green Academy Change Programme in 2011 and launched a second round in 2013. A total of eighteen higher education institutions took part in this programme on institutional change with a focus on embedding ESD in the formal and informal curriculum. QAA is also exploring the possibilities of including ESD into the UK Quality Code for Higher Education.

ESD forms part of the People and Planet Green League, currently the most prominent measure of sustainability performance of UK universities. King’s ranked 91st in 2013, (from the 45th place in 2012) with a score of zero for education for sustainability. From meetings with People and Planet, it is clear that the education criteria is likely to receive more weighting in the future, to recognise initiatives by universities who are reviewing their ‘core businesses’ of teaching and learning. ESD will therefore become a primary criterion of the ranking.
GRADUATE ATTRIBUTES AND EMPLOYABILITY

As the QAA guidance outlines, graduates have a statistically higher chances of entering leadership roles compared to other demographics. They are likely to end up in management positions and thus have an impact on social, economic and environmental aspects of their work. ESD skills and knowledge are therefore important graduate attributes in times of economic and social transitions:

“[…] higher education institutions are the focal points for imparting what is known, interrogating what is not, producing new knowledge, shaping critical thinkers, problem solvers and doers so that we have the intellectual muscle needed to tackle societal challenges at every level necessary and advance European civilisation” (European Commission High Level Group on the Modernisation of Higher Education, 2013).

As the HEA and QAA outline, ESD is a key agenda item in higher education nationally and internationally. The UK Government and the Department of Environment, Food, and Rural Affairs (DEFRA) specifically have formed a vision for a low carbon economy, as expressed in the ‘Carbon reduction target and strategy for higher education in England’ (2010).

A study commissioned by Business in the Community (BITC) shows that 90% of businesses recognise sustainability skills and the ability to cope with change and uncertainty as a ‘critical business issue’, while 80% believe developing these skills is a priority: “Developing the leadership skills we need for the transition to a sustainable economy is both urgent and critical to our future economic success – as well as to our social and environmental well-being” (BITC 2010).

Likewise, other UK studies have suggested that graduates expect employers to be environmentally and socially responsible. Studentforce research for the HEA found that the “the graduate employment agenda is becoming more closely linked to the employer sustainability agenda” (Cade, 2008). The HEA-NUS report found that students are willing to get paid £1000 less a year if they can work for a responsible employer.

HEA’s Future Fit Framework stresses the importance for sustainability education to help build graduate attributes by introducing relevant information from the immediate context into the curriculum: “local, regional, global and ‘in the news’” (Sterling, 2012). As this report will show from examples within and outside King’s, ESD is eminently suitable for pursuing an employability agenda in HEI’s. Internships, placements and volunteering can be part of the formal curriculum and strengthen connections between the university and its local (business) community.

NHS SUSTAINABILITY AGENDA

The NHS Sustainability strategy is relevant to many of the medical departments/divisions at the College. The Sustainable Development Unit is funded by NHS England and Public Health England. It operates across the NHS, public health and social care system. The three main goals expressed in the Sustainable Development Strategy are:

– A healthier environment (reducing environmental impact, improving and valuing natural resources);
– Communities and services are ready and resilient for changing times and climates;
– Every opportunity contributes to healthy lives, healthy communities and healthy environments
I. III REPORT METHODOLOGY

The primary method of research used was expert interviews with Heads of Departments or people who were nominated by the Heads of Departments. Since the objective was to discover current schools of thought and ESD practice across various departments, all Heads of Departments were approached to better understand teaching practices. However, given the limited timeframe of the project and the limited availability of interviewees, the report does not claim to be representative of every department in every School. Views included here belong to the respective interviewees and not necessarily that of the entire department per se. Staff from other universities who have already designed and developed similar ESD research programs were also interviewed.

An initial set of questions was developed based on preliminary discussions with staff from other universities. As the College does not yet have an overarching strategy for sustainability, the theme was not readily grasped. During the interviews the questions were therefore further tailored to the context of King’s. A sample list of questions asked is provided in the appendix. In order to flesh out the context to the primary research, the team attended HEA Green Academy events pertaining to ESD to learn from other universities undertaking similar journeys in ESD.

THEMES & OPPORTUNITIES

The interviews as part of this review show that many departments do indeed teach skills or topics related to the broader theme of sustainability but do not classify it as such. Sustainability and education for sustainability is not widely discussed and engaged with, and very rarely it is made explicit within staff meetings and/or teaching at the department. Often, sustainability appears to be understood in a more narrow environmental sense. In this view it is often difficult to point to links with ESD. This review highlights some of the departments where the connection with ESD is present, either explicitly or implicitly. It also identifies opportunities for further strengthening these connections around four recurring themes which stood out from across the interviews. These themes were mostly implicit in teaching or stood out as important elements that seemed to be missing. The next chapters will elaborate on each of the themes and showcase best practice and opportunities at King’s.

New systems thinking

The ability to see ‘the bigger picture’, think outside discipline boundaries, analyse whole systems and use analytical and creative thinking.

Social impact & ethics

Reflexivity and a critical consideration of discipline ethics, impact on society and links with direct/immediate context, real-life learning.

Environmental sustainability

Appreciation of resource depletion, climate change and the linkages between the natural, economic, social and cultural dimensions of sustainability.

Culture & global citizenship

Respecting the intellectual value of interaction with other cultures and the value of original culture, critical consideration of one’s own viewpoints, sharing cultural knowledge and resources.
The aim of sustainability cannot be achieved by a single domain/discipline alone irrespective of noble intentions and/or capability. If sustainability is to extend beyond the normative, cross-sector collaboration is critical. The capacity to appreciate deeper structures and forces at play, the ability to not limit one’s thinking based on traditional boundaries (social, cultural, organisational or disciplinary), the ability to make strategic choices that recognise natural and social limits and create self-reinforcing cycles of innovation are all aspects of systems thinking (Senge et al., 2010). New systems thinking when applied to problem solving underscores the thought that a system can be understood and adapted by examining the influence and the dynamics between different components of a system rather than the individual components in isolation. Within King’s one sees that teaching that actively encourages cooperation between previously unrelated disciplines is rapidly growing and many of our interview results reflected this phenomenon, although it is currently not explicitly labelled as ESD. Certain degrees have inherently less room for interdisciplinarity or multi-method teaching because they are highly specialised or accredited degrees, which leaves less opportunity to consider the ‘bigger picture’ in the immediate context.

1.1 CASE STUDY: DEPARTMENT OF SOCIAL SCIENCE, HEALTH AND MEDICINE

Teaching in the Department of Social Science, Health and Medicine focuses on responsible innovation that is socially robust and sustainable. Health innovation can be organised in a way that respects cultures and natural resources. Sustainable development is not explicitly used as a concept but finds expression as an underlying theme of teaching and is included in learning outcomes. Issues taught include distribution of scarce health resources and decisions on what types of policy will have the best effect. Critical global health means no prescriptive or simple solutions are offered. Real-life pedagogies are applied and there is room for innovative teaching through existing initiatives such as the Global Health Hackathon. Decisions about (defensible) healthcare investments are explained through real life cases, and ethics are central to teaching.

The overall approach embeds systems thinking and puts these real-life, complex cases at the centre of learning. An interdisciplinary UG degree will be introduced for the next academic year, with courses from the Biomedical School and the remaining courses in social science. This is the only degree of this kind in the UK, and will cover key issues in global health and social medicine. The department offers thematic courses with other departments such as Geography, Women’s Health and the Institute of Psychiatry. Students and staff engage with ESD themes in teaching, internships and through extracurricular activities — not always under the ‘sustainable development’ umbrella. Sustainability as an implicit (nuanced) concept is understood widely and engaged with critically.

**ESD pedagogies: interdisciplinarity, systems thinking, problem-based learning, oriented to real world issues**

1.2 OPPORTUNITIES

1.2.1 FORMAL CURRICULUM: EMBEDDING ‘THE BIGGER PICTURE’

At other universities working on embedding ESD in the formal curriculum, interdisciplinarity and systems thinking are often mentioned as central concepts.

The University of Canterbury under the Canterbury Futures Initiative gives staff the resources to develop educational projects that cut across discipline boundaries and embed ESD content or pedagogies. The initiative has now successfully funded nearly 50 educational projects with the aim to bring ESD elements into the curriculum. The initiative is seen as a positive way of offering the support and resources for staff to embed
‘futures thinking’ into their current teaching rather than adding extra workload. The funding has been used for practical sustainability projects, introducing new modules, organising events and offering resources to students and staff. A report of the results of the first projects is available online.

The University of Bristol has started embedding ESD by mapping current ESD provision and assisting Schools in identifying useful resources and course specific strategies. The team has developed a mapping tool document for Schools and teaching staff to help identify existing ESD courses and find new opportunities for ESD in the curriculum. Their ESD wiki offers information for each discipline to inspire discussions about ESD in each School. The whole-institution approach serves to embed sustainability in a way that is relevant to each academic discipline rather than offering separate sustainability modules. The Green Apple Scheme offers grants of up to £5000 for projects grounded in a discipline that relate to ESD.

1.2.2 INFORMAL CURRICULUM: CREATIVITY & COLLABORATION

Through the Sustainability Forum at the College students have expressed an interest in sustainability education that stretches beyond discipline boundaries. Examples mentioned were a sustainability skills module, a student policy think tank and an involvement of diverse departments to offer students different skills. There are great examples of combining systems thinking and new educational experiences throughout the HE sector. The following events are examples of embedding systems thinking in outside the formal curriculum:

- ‘Hackathon’: technology-driven event focusing on solving (sustainability) problems through coding/programming and quick prototyping. Often in collaboration with industry partners. (Tech Society, SSHM Global Health Hackaton)
- **Sustainability jam**: start-up weekends focusing on broad sustainability themes to foster creative thinking processes without clearly defined problems. This leads to often very innovative, out-of-the-box ideas and often business start-up ideas. (The Sustainability Jam and Circular Jam are yearly events taking place at Somerset House and Makerversity)
- **Curriculum think tank**: organising brainstorm days or focused think tanks with students, staff and alumni to think about the future of education and giving space for input and co-design in the education strategy. (The Dutch university of Twente organised a similar ‘UT of Tomorrow’ day)
- **Policy think tank**: involve students, staff and alumni in creating bottom-up sustainability strategy for the university, giving students essential policy research skills whilst strengthening ties with alumni/business community (Sustainability Forum)

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5 The Sustainability Forum is a regular seminar organised by the Sustainability team, open to students and staff at King’s.
"ESD is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come ... ESD enables people to develop the knowledge, values and skills to participate in decisions about the way we do things individually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future."

(Sustainable Development Education Panel Report 1998)

From conversations with medical departments, as well as those in Social Science & Public Policy and others, social impact and ethics emerged as central themes. Personal development, making learning meaningful at a personal level and critical reflexivity are underlying ESD pedagogies. While the majority of departments regarded this as either an implicit or a small part of teaching, in some departments these themes were made explicit and considered critically. Departments have enormous social impact through teaching, research and student’s activities, which means there is a big opportunity for having conversations with students about their contribution to society. A large number of students are involved in social and medical charities through for instance KCLSU Volunteering, which is something they can receive recognition for. Within teaching however there appears to be room for greater recognition of the impact of teaching and research on society.

2.1 CASE STUDY: FLORENCE NIGHTINGALE SCHOOL OF NURSING AND MIDWIFERY

ESD ethos and pedagogies are central to the teaching at the School, especially when understood as improving our quality of life and that of the next generation. Sustainable development revolves around the human condition and the value of the individual in society. Diversity of backgrounds and beliefs, person-centred learning, and professional development are central to teaching at the School. Learning is self-directed and aimed at developing reflectivity and self-awareness. Where possible, students are encouraged to participate in teaching and organisation of modules and feedback is handled in real-time rather than at the end of each module. Concepts such as ‘caring’ and ‘ethics’ are unpacked, as well as legal issues, ethics and politics. Other important themes are healthy lifestyles, public health nursing and preventive health care. Students take part in many different voluntary placements, not as part of their studies, with organisations such as VSO and Oxfam. They often also have previous work experience in the charity sector. A very explicit sustainability agenda is put forward by the various trusts working with the School as part of the wider NHS Sustainability Strategy.

ESD pedagogies: person-centred learning, problem-based learning, participatory learning, ethics, critical reflexivity

2.2 OPPORTUNITIES

2.2.1 FORMAL CURRICULUM: TEACHING SOCIAL IMPACT

A great example of more formal curriculum teaching that relates sustainability to society and personal contribution is the Sustainability, Society and You online course on by the University of Nottingham, launched on 16 June 2014. The course covers social, environmental, political and technological sustainability and consists of modules relevant to many disciplines. Topics include economic, political, social and cultural, historical, arts, engineering, business, learning, geography and personal perspectives. In addition free e-books on sustainable development are offered. This type of course could foster ESD skills such as participatory and change-focused learning, transformative learning, experiential learning, and empower the learner. It could also
help thinking critically about the ethical dimension of subjects thought and offer extracurricular opportunities for students in accredited degrees with less room for electives.

## 2.2.2 INFORMAL CURRICULUM: VOLUNTEERING AND SOCIAL ENTREPRISE AT KING’S

A clear institutional vision on ESD can give informal learning such as volunteering, campus activities and placements greater recognition and perhaps focus efforts or even add to the offer. The College currently offers social enterprise opportunities through King’s Innovation (e.g. Unltd., Enterprise Connect, Lion’s Den), volunteering opportunities through KCLSU volunteering, and employability opportunities King’s Careers and King’s STEP internships. Having a clear strategy on ESD in the informal curriculum could help evaluate the social impact of King’s as an institution. Currently this is done through the Higher Education Academic Record (HEAR) and impact reporting by KCLSU Volunteering⁶. The KCLSU impact report keeps track of volunteering initiatives of KCLSU societies and external partnerships such as Back to School Week. The KCLSU Awards recognise this through the Social Impact Award, the Social Impact Project Award, and the Environmental Impact Award. An ESD ‘philosophy’ on informal learning could improve the presence of such activities and add to a sense of ownership of students and staff over King’s contribution to society.

ESD initiatives could link in with the Education Strategy to offer intensive and extensive study opportunities such as summer schools for credit and a “King’s Questions” summer term programme. The UCL Global Citizenship programme, launching in the summer of 2014, is an example of informal learning integrated into the formal curriculum. This two-week summer programme was developed through the HEA Green Academy. It offers first year undergraduates the opportunity to partake in courses on UCL grand challenges, for instance on global health, human wellbeing and sustainable cities. Second and third year UG students can choose from three programmes: Employability, Volunteering and Enterprise. As part of this they take part in practical projects, placements or workshops. These are developed by UCL’s centre for entrepreneurship and business interaction, volunteering services and careers service.

## 2.2.2 SUBLIMINAL CURRICULUM: SOCIAL LEARNING

Embedding a critical understanding of ethics and a sense of ownership in disciplines seems critical to ESD. Part of this could be a greater recognition of the social impact and contribution to society made by King’s departments. Strong links between teaching and initiatives such as the Science Gallery could contribute to this and foster a sense of ownership. Part of the College’s impact is directly through its estate in central London. The next chapter on environmental sustainability will elaborate on the campus-as-curriculum approach, which could not only improve the environmental impact of the college but also help strengthen local community ties.

An example of connecting the university directly to its surroundings and strengthening learning in the informal or subliminal (estates) curriculum is the public university library by the University of Worcester. As part of its commitment to be ‘open and inclusive’ and involve the local community in future plans, the university opened ‘The Hive’ in 2012, a shared university-community learning centre and library. The Hive is run by the University of Worcester and Worcestershire County Council and is open to students and the general public. The centre welcomed one million visitors within 13 months of its opening in July 2012. It runs a public programme and works closely with local Schools.

¹⁶ The report is available on www.kclsu.org/volunteering/wideningparticipation/vision
While there is much focus at King’s on academic research on environmental themes in an international context, there needs to be greater focus on the impact of university operations and a better connection with practical environmental education/themes/outcomes. In the 2013 Green League ranking by People and Planet, King’s was ranked 91st among 143 participating institutions. Some of the relevant criteria where we scored very poorly include items such as integration of sustainability in the teaching and learning strategy, training for staff to help them integrate sustainability into the curriculum, availability of coursework linked to sustainability projects within the university/Estates Department, review and reporting process to monitor the integration of sustainability into the curriculum. More information is available on the Green League website.

There is much to be learned by juxtaposing these results with the world class, often cutting-edge environmental research that is conducted at King’s. It appears that not much is offered as practical environmental education in terms of ‘campus as curriculum’. Many of the interviews reflected this. Some departments admitted to doing the odd bit to save paper, but we found little evidence of other significant practices connected to environmental education. Given the urgent context of climate change, a suitable narrative connected with the environment needs to be woven into the fabric of every department for the university to achieve meaningful change. As might be expected, the Geography department shows an example of taking an active role in sensitising students to the sustainability theme.

3.1 CASE STUDY: GEOGRAPHY

Sustainability makes up for a large part of the Geography curriculum. This starts with a ‘foundations’ course taught in the first year, E&D courses in the second year themed pathway (environment and society) through to specialised master’s programmes. There are three major themes present in teaching at the department, the first being resource use and limitation, under which fall food security, energy and sustainability, and nexus studies. A second ‘grand theme’ is unequal consumption, wealth inequality and globalisation. Under this umbrella issues around development are discussed. Governance, risk and resilience form the last theme, covering risk (master’s level), disasters, and development, with a focus on mitigating risk. Skills are summarised as GES: global, environmental and social. These are instilled from the first to third year UG programmes. Students also receive extensive research training as the degrees are very method-focused. Courses largely focus on ‘real life’ issues and practical topics.

The department links with many others at the College as well as the Cultural Institute. Staff members also have an ‘Impact, Innovation and Outreach’ section on the website indicating their contribution to various organisations. The department welcomes new forms of teaching such as technology enhanced learning, offering online courses and ‘smart teaching’; short courses for professionals. In the future the department sees a greater role for co-design, more public-private partnerships, innovation in funding for UG degrees, focusing on London as a ‘unique selling point’ (also for environmental monitoring/GIS) and more interdisciplinary programmes. Sustainability is understood critically and as a subject comprises a large part of teaching (about two-thirds of courses) at the department. The Department of Geography offers an Environmental Internship module. It offers placements with over 60 organisations and encourages students to critically consider the impact or influence of social and political organisations in the sustainability field.

**ESD pedagogies: experiential learning / real life issues, questioning knowledge, critical evaluation of sustainable development**
3.2 OPPORTUNITIES

3.2.1 FORMAL CURRICULUM: STAND-ALONE SUSTAINABILITY COURSE

An example of a more hands-on sustainability course is the ‘Greening Business’ course offered by Keele University. The module covers a theoretical background to sustainability and provides students with practical experience through internal audits and projects at the university or practical placements with local businesses. In a sense this relates to the campus-as-curriculum approach, but makes his explicit through an elective module in which students have a choice to work with the Estates Department or a local business. The module aims to make students aware of their social and environmental impact and offers participating businesses an insight into more sustainable practices. Students take away critical ESD skills that they can apply in their future employment and become more aware of careers possibilities in the field of sustainability. One of the benefits of this approach is that “the topic can also encourage the usually non-environmentally-concerned student to take an interest in environment and sustainability issues.” (Keele, 2014)

3.2.2 INFORMAL CURRICULUM: CAMPUS-AS-CURRICULUM

“The learning environment and the support available for staff and students have an important role to play in education for sustainable development. Facilitating students’ learning in this context relates not only to the formal curriculum but also to the campus environment, the local community and the culture of the institution. Links between these different areas should be encouraged.” (QAA)

The central London location of the College offers unique opportunities for ground-breaking research of environmental technologies and monitoring, which is demonstrated by College initiatives such as London Air. The campus-as-curriculum approach suggests university campuses and residences are perfectly suited to demonstrate and research exceptional sustainability performance. This could extend beyond environmental impact through for instance community gardens projects, strengthening ties with the College’s surroundings. From conversations with students and staff it seems an understanding of sustainability in teaching is often associated directly with the environmental performance of the campuses. Using the campuses and residences as ‘living labs’ could therefore contribute to academic teaching on sustainability. Numerous suggestions for research projects have flooded in over the past year from students and staff, such as the Urban Gardens Project7, a beehive project and sustainability champions in residences. Academic departments such as Informatics and Geography have also expressed an interest in research projects to improve environmental sustainability on campus.

King’s spends over 8 million per year on energy bills and therefore has a strong economic incentive to reduce its carbon footprint. Progress against the College’s targets is measured by the Estate Management Record, which all HEIs submit to HEFCE. For more information, please see King’s Carbon Management Plan. A significant portion of the energy we use is consumed by heavy duty equipment in laboratories. Reducing energy consumption is not always easy considering the short-term nature of funding grants, the sensitive nature of work undertaken at King’s and the high turnover of research staff in various projects. By working towards making all laboratories at King’s more sustainable through the S-Labs project, King’s could make a notable reduction in energy bills/carbon emissions.

7 For more information, visit blogs.kcl.ac.uk/sustainability/urban-gardens-project
“Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future” (UNESCO)

The concepts of global citizenship and sustainable development can be seen as interlinked, or even interdependent. In relation to cultural and language degrees, but also more widely across the College, ideas of ‘common’ and ‘global citizenship’ where expressed as key learning concepts. UNESCO’s ESD strategy defines a need for “respect for cultural diversity and a commitment to build locally and globally a culture of tolerance, non-violence and peace” (Martin et al., 2009, p. 3). Creating awareness of the value of cultural difference forms part of this.

The conversation with the Middle East & Mediterranean Studies (MEMS) programme highlighted another element of ESD, namely teaching students the vocabulary to launch dialogue and have conversations in every context. MEMS Students are made aware of their own value systems and assumptions about the world and the courses are multi-method and participatory.

The Government of Wales has identified global citizenship as a key element of sustainable development and adds to this the following elements8:

- Interdependence (seeing sustainability as a holistic concept and understanding local and global relationships)
- Citizenship (individual and collective responsibility to make the world a better place)
- Needs and rights (understanding our own needs and rights and implications for the needs of future generations)
- Diversity (valuing human and ecological diversity)

4.1 CASE STUDY: DEPARTMENT OF GERMAN

Two key concepts are central to ESD within the Department of German; connections (or connectivity) and citizenship. Connectivity is understood as developing an appreciation of connections between history and culture, as well as encouraging cross-cultural understanding and communication. This is seen as key to achieving sustainable development. This fits into a wider development towards ‘global’ rather than ‘comparative’ literature and an increased awareness of the role of traditional language disciplines in a global context. A general ethos in the department is to educate students towards an idea of common citizenship, to encourage critical thinking and to reflect on social/political structures. Inherent in the degree is an understanding of German history and politics and a reflection on the political past. This overall ethos is implicit in teaching and understood generally across the department but there is opportunity to better communicate this ethos. The year abroad is an important part of the degree and gives students essential intercultural and personal skills. Further, the department is very multidisciplinary, both within the own discipline (culture/history/political science) as well as in its nine degree combinations. The department has a widening participation programme, and works with many internal and external partners. As with other modern language degrees, a concern is the shrinking of the department and the challenge to draw in a broader constituency for German

ESD pedagogies: understanding of local and global context, real-world issues, participatory learning

8 Curriculum and Qualification Guidance on ESD and Global Citizenship, ACCAC/DFID/Estyn/WAG, 2002
4.2 OPPORTUNITIES

4.2.1 INFORMAL & FORMAL CURRICULUM

The Department of German is seen as a great reserve of culture and history within the College. This could be explored further in partnerships with other departments or schools, for instance around sustainable development. King’s has many spaces and opportunities for collaboration such as the Cultural Institute and King’s Libraries. This idea also links in closely with an increased focus on mobile technology and reconfigured spaces as expressed in the Education Strategy.

Charney (2014) has conducted interviews with librarians on their role in ESD and found the following:

“Librarians, already accustomed to communicating across disciplines, are uniquely positioned to build bridges and forge partnerships between the seemingly disparate array of departments offering sustainability courses and programs. The trans-disciplinary nature of these studies gives librarians rich opportunities for contributing education, outreach, research and new initiatives as well as fund-raising for such innovations. These activities promote the library as a neutral space for collaboration and crosspollination.” (Charney, 2014)

A close collaboration of various departments and internal and external partners could contribute to a greater general awareness of culture and global citizenship at King’s. Other departments such as French also expressed an interest in working together more with other departments and sharing knowledge. There is great potential for developing something that is unique to King’s and that could be aligned with internationalisation at King’s and focus on service to society.
5. IMPLEMENTING ESD AT KING’S

The interviews showed that currently ESD is found in many separate initiatives by students and staff, but not implemented or measured consistently. Some key elements needed for developing ESD further are development of an overarching ESD strategy supplemented by provision of staff resources and information. Training programs and calibration exercises may be useful to develop an ethos of ESD right across the College. Some interviewees suggested knowledge sharing and working across departments as a priority for progressing ESD at King’s. Student input and co-design are further key elements of this process.

From the analysis of the four themes at King’s it follows that certain departments make ESD more explicit in learning outcomes than others. Crucial elements of ESD such as transferable skills or social impact are often assumed or not made explicit in these outcomes. As a result, teaching appears to be ‘un-sustainable’ as Arjen Wals puts it:

"At present most of our universities are still leading the way in advancing the kind of thinking, teaching and research that [...] accelerates un-sustainability"

(Wals, 2008, p. 31)

ESD learning occurs through the formal, informal, and subliminal curriculum. The four central themes of this report represent opportunities for each domain. HEI’s do not operate in a vacuum and external or public engagement is key to helping students achieve a degree of sustainability literacy. For ESD to find truly successful implementation, a reconceptualisation of knowledge and skills is necessary. If implemented well, it can strongly contribute to other agendas at the College, such as the strategies related to internationalisation, employability and widening participation.

5.1. FORMAL CURRICULUM

The four ESD themes discussed here are often only implicit in teaching and learning. Pedagogical approaches central to ESD include aspects such as integration with local context, critical reflexivity/ethics, and a holistic understanding of sustainability. Interdisciplinary teaching was another central concept that emerged from interviews, especially with regards to combining resources around ESD and sharing knowledge. This presents an important opportunity for adding to students’ ability to ‘think outside the box’. Increased use of distance learning, open learning through MOOC’s and using technology for learning as suggested in the Education Strategy can further contribute to educating ‘future thinkers’.

From our conversations with staff as well as discussions with other universities piloting ESD projects we found that staff awareness is a key challenge. Sustainability is mostly understood as ‘the environment’ and not as a holistic concept. ESD pedagogies have not previously received much attention at King’s. This can lead to some concern as people might feel this is an ‘add-on’ to regular teaching. As one interviewee expressed this: “I’m not sure how our discipline relates to sustainability. Quite frankly, we teach people how to read books.”

This quote illustrates that a critical discussion on ESD and a definition of the concept are crucial if this agenda is to be progressed at King’s in one way or another. For most departments covered in this review, ESD is not an underlying element of learning and teaching. In most interviews there was not much prior knowledge about what ESD means. Initiatives at other universities have therefore focused on offering staff resources and information on ESD. Time and money are the most important constraints, and as other universities have experienced, there is some resistance to adding additional workload. Funding is a key enabler, but even more so knowledge sharing and cross-departmental collaboration were mentioned as priorities by King’s staff members.
Further, student input and co-creation are central. Currently students can input through feedback and student-staff liaison committees, but feedback is not real-time. Some of the departments interviewed expressed an interest in engaging students more actively as co-designers of learning. This ties in with the Education Strategy on greater student involvement in the enhancement of their own education. Reconfiguring spaces and courses to allow for cross-pollination, interdisciplinarity and systems thinking are further opportunities here.

5.2 INFORMAL CURRICULUM

In order to educate students to be holistic thinkers, any ESD strategy in itself must be holistic too. As this report has shown, ESD is not merely an ‘add-on’ or ‘extracurricular’. Instead, ESD represents the entire curriculum of being a student at King’s and relates to the various disciplines and educational approaches in multiple ways. In this view, education at King’s per se becomes education for sustainable development.

ESD captures many transferable and employability skills such as cultural sensitivity, reflexivity, an understanding of environmental sustainability and systems thinking. All of these skills contribute to general ‘sustainability literacy’. As examples from King’s and other universities have shown, offering employment and enterprise opportunities can help engage students who might not identify with terms such as ‘sustainability’ or ‘environment’.

As discussed in this report, there are opportunities for linking the ESD agenda to existing Education Strategy on internationalisation, enterprise, and employability. Potential partners are King’s Careers, the KCLSU and KCLSU Volunteering, King’s Alumni, King’s Innovation as well as academic departments with existing employability opportunities such as Geography. A great example of this is that Green Impact at KCLSU was led by a fulltime student who found the experience invaluable from an employability perspective. Similar opportunities could be made available to a broader cross-section of students.

Adding to the informal curriculum of students could also include to a greater extent involvement of King’s Alumni. Various ideas have been discussed informally between the Sustainability team and King’s Alumni, such as a ‘buddy system’ to link up students with alumni, organising career events and showcasing the work (and impact on society) of alumni. The latter idea was successfully trialled at the second Sustainability Forum on Social Entrepreneurship and Sustainable Food. MSc Sustainable Cities alumnus Tom Webster talked about his GrowUp urban farming enterprise and inspired students to share ideas on sustainable food at King’s.

The first Sustainability Forum on 31 October 2013. Left: Kat Thorne (standing), Head of Sustainability, with Felix Spira, founder of the Maastricht University Green Office. Right: some ideas from the brainstorm session.

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5.3 SUBLIMINAL CURRICULUM

Opportunities for using the College’s estate as ‘Living labs’ could be explored, as has been expressed by departments such as Informatics and Geography. The College’s central location in London could be used as a means to establish ground-breaking environmental research and exemplary sustainability practice. From interviews it also became clear that many staff members perceive sustainability in a practical environmental sense, identifying opportunities for increasing recycling rates, but also for researching sustainability on campus (for e.g., monitoring energy use, behaviour change).

During various events organised by the Sustainability team (Sustainability Fora, Green Week), students expressed an interest in many aspects of ESD in the informal curriculum: sustainable catering, food growing, energy reduction initiatives, community investment and green space on campus. Wider sustainability issues of interest were (amongst others) social enterprise, sustainability policy at the College (sustainable procurement/investment, sustainable food policy) and employability. Students have expressed interest in collaborating on more long-term, interdisciplinary projects, and have already started various sustainability projects on campus themselves. A challenge and opportunity here would be to channel this enthusiasm into impactful sustainability projects that integrate with their context and improve student experience.

Sustainability research and practice could be showcased throughout the College’s estate and residences. Greater collaboration between academia and professional services could also help offering space for sustainability research projects within the estate or as integrated in new capital projects. This could strengthen the College’s commitment to increase the presence of London as the object of learning and teaching and contribute to a stronger connection between the campuses and their local context.
### CONCLUSIONS & RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Conclusions</th>
<th>Recommendations</th>
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<tr>
<td>Various initiatives in the formal and informal curriculum currently touch upon ESD themes. It would be beneficial to develop a clear institutional statement on ESD to give these initiatives recognition and inspire more ESD thinking.</td>
<td>– Develop an institutional approach to ESD, especially with regards to sustainability as a holistic concept and “future-proof” education, focusing on risk and resilience.</td>
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<tr>
<td>Outside of these initiatives ESD is not an underlying element of learning and teaching. In most interviews there was not much prior knowledge about what ESD means.</td>
<td>– Empower students and staff to engage with sustainable development and offer resources and training</td>
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| Feedback mechanisms are mostly ‘passive’, although some departments expressed an interest in engaging students more actively as co-designers. | – Give students a central role in developing ESD and general education strategy at King’s.   
|                                                                           | – Increase the role of students as active learners and co-designers of the curriculum, focusing on positive contributions. |
| Links to the local and business community are currently not made explicit, initiatives such as KCLSU volunteering, outreach and widening participation programmes are not brought together under a ‘social impact’ umbrella. | – Strengthen links between initiatives so that studying at King’s becomes synonym for having a great social impact.   
|                                                                           | – Strengthen ties with local communities and business community and enhance overall impact on informal curriculum   
|                                                                           | – Increase ownership of students and staff over impact on society |
| Several departments expressed an interest in interdisciplinary projects focused on sustainable development and a more interdisciplinary/knowledge sharing approach. | – Develop or strengthen links between departments with overlapping ESD themes.   
|                                                                           | – Explore ‘general’ sustainability modules, MOOC’s, open modules and business courses. |
| People often perceive teaching for sustainability and sustainable ‘daily life’ behaviours as interlinked. | – Showcase great examples of sustainable design and operations/behaviours on campuses and in residences   
|                                                                           | – Offer opportunities with Estates for ground-breaking sustainability research and projects on campus. |
ACKNOWLEDGEMENTS

Many thanks to Elona Hoover, Aisling Tiesley, Hannah Twedell, Angelika Salmen, Simon Kemp and others who shared their experience for contributing ideas to this research. The HEA ESD seminars at the University of Southampton and Canterbury Christ Church University and the RCE ESD conference have also helped shape thoughts for this report.

ESD RESOURCES

Business in the Community (BITC) 2010. Leadership Skills for a Sustainable Economy [www.bitc.org.uk/resources/publications/leadership_skills.html]

HEA Academy on ESD [www.heacademy.ac.uk/education-for-sustainable-development]

HEA Future Fit Framework [www.heacademy.ac.uk/assets/documents/esd/Future_Fit_270412_1435.pdf]

HEA-NUS Study: Student attitudes towards and skills for sustainable development [http://www.heacademy.ac.uk/resources/detail/sustainability/2013_student_skills_final_report]

Hefce Guide to Quality and Education for Sustainability in Higher Education [efsandquality.glos.ac.uk]

QAA ESD consultation [www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/ESD-guidance-consultation.pdf]


UN Decade for ESD [http://www.desd.org]


These questions were used as a guideline/starting point to conversations with departments. As these were qualitative interviews we tried to minimise bias and not use too many guiding questions. We started with the first question and used the interviewee’s input for follow-up questions where possible.

1. Can you describe your department and how it differentiates itself from similar departments at other universities?

2. How do you understand Education for Sustainable Development (ESD) in relation to your work?

3. What are the most important academic / transferable skills students in your programmes develop? How is this measured?

4. Can you give examples of ESD in teaching? (implicit/explicit)

5. Do courses have a clearly articulated ethos? Are students made aware of this ethos?

6. Is sustainable development discussed formally or informally amongst staff?

7. Are there any relevant extra-curricular activities students and staff are involved in?

8. Can students participate in teaching/input into the curriculum?

9. If you were to see something change in two years’ time, what would it be?
Below is an overview of all interviews conducted as part of this research and an indication of themes that were discussed at the meeting, or that came up as a result of the meeting.

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<tr>
<th>DEPARTMENT/DIVISION</th>
<th>THEMES</th>
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<td>1. Philosophy</td>
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<td>2. European and International Studies</td>
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<td>3. Physiology</td>
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<td>5. Dickson Poon School of Law</td>
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<td>6. Political Economy</td>
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<td>11. Management</td>
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<td>13. Informatics</td>
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<td>14. School of Natural and Mathematical Sciences</td>
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<td>15. Middle East &amp; Mediterranean studies</td>
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<td>16. Florence Nightingale School of Nursing and Midwifery</td>
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<td>17. Film Studies</td>
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<td>18. Geography</td>
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<td>19. Division of Women’s Health</td>
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<td>20. Psychology</td>
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<td>21. Dental Institute</td>
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APPENDIX III – REPORTS OF INTERVIEWS WITH DEPARTMENTS

The summaries of interviews below are based on impressions of interviewers and may therefore not represent the official views on ESD of each department. The themes indicate which ESD topics emerged from the discussions.

MARIA ANTONGNAZZA - HEAD OF DEPARTMENT OF PHILOSOPHY [16.04.2014]

Sustainability education is implicit in various modules offered by the department across various levels. The subjects lend themselves to a reflexive approach quite naturally. Teaching methods such as problem solving discussions, probing of arguments with objections help students analyse problems and apply independent reasoning. This prepares them to tackle situations where there is no set formula. Students actively participate in the review process and student-staff liaison committees too. ESD is not yet made explicit to students or within staff meetings. However, the department offers several interdisciplinary modules that encourage collaborative learning and co-inquiry such as Philosophy of Science, Philosophy of Psychology, Philosophy of Religion, Gender and Philosophy, Political Philosophy, Philosophy of Medicine, Philosophy of Mental Disorders, Philosophy of Neuroscience, History of Philosophy. With such a wide range of courses, the department is only second to University of Oxford in terms of its size and the scope of its work. It also runs an independent outreach program on widening access to Universities that reaches out to underprivileged schools in the community.

THEMES: 🌱

CHRISTOPH MEYER - HEAD OF DEPARTMENT OF EUROPEAN AND INTERNATIONAL STUDIES [22.04.2014]

Roughly one-third of the content currently offered can be deemed to be related to ESD although it is not made explicit to students. Some modules such as Political Economy of Oil and Gas, Political Economy of the Financial Crisis, Political Economy of International Migration are directly relevant to ESD. Others include pertinent topics such as risk, resilience, social justice, anticipating future stress due to high impact - low probability events, political sustainability. The department offers several inter-disciplinary courses that encourage students to develop knowledge and understanding from across ‘traditional’ disciplinary boundaries. Some examples of such courses are those offered in conjunction with the Department of War Studies and Department of Geography. The department currently has one of the best student-teacher ratios in King’s. This facilitates beneficial pedagogical approaches such as use of real life issues / case studies, role play and e-learning. One of the main concerns expressed was the availability of resources for teaching in the future due to external pressure to do more with less. The department might have to resort to more traditional teaching approaches and less on participatory and experiential learning techniques.

THEMES: 🌱

JEREMY WARD - HEAD OF DEPARTMENT OF PHYSIOLOGY [24.04.2014]

In terms of content ESD is not considered a central issue. However, physiology encompasses many ethical aspects and consideration on testing on animals and humans. These ethical concerns mainly focus on medical issues within the discipline. Important skills students take away from studying physiology are critical thinking and academic research. The pedagogical approaches are varied and include many types of experiential learning and independent research. Especially towards the end of the BA studies modules become increasingly
student-led. Students have a choice from all modules within the school and can choose optional modules from any other school – often these are used for language modules. One module that explicitly focuses on (social) sustainability is the social impact of the biomedical sciences module. Further, even though these issues are more of a consideration in an analysis, many sustainability factors are linked to research. Examples are the influence of environment and development (e.g. ‘the hygiene thesis’), as well as medical ethical issues such as abortion, availability of drugs, etc. A main concern expressed for the next two years was the availability of resources for teaching.

**THEMES:** 🌍

**PATRICK FFRENCH - HEAD OF DEPARTMENT OF FRENCH [29.04.2014]**

The undergraduate degrees are about one-third language teaching and the remaining credits are courses on culture, literature, philosophy and history (medieval to 21st century culture/history/cinema). A large percentage (60-70%) of students takes a combined degree with another language. This means they have fewer options to take courses outside their own discipline. Sustainability is understood in a cultural sense, especially with regard to the preservation of original culture. Students take away analytic, interpretative and linguistic skills, but also wider skills such as understanding meaning in another language, critical objectivity, the ability to construct arguments and interpreting original culture in its own context and language. Especially the latter aspect relates to ESD in that it helps students understand language in relation to its global context and its (cultural) history. This is seen as a shared ethos across the department but not necessarily made explicit to students. Some courses relate to sustainability in content, such as feminist and women’s writing, or comparative trans-historical modules. Students are encouraged to go abroad for a year to immerse themselves in a different cultural and linguistic environment. In the future it is expected that the department will work more strongly with other modern language department and increase technology-enhanced learning.

**THEMES:** 🌍

**ELOISE SCOTFORD - PROFESSOR AT DICKSON POON SCHOOL OF LAW [30.04.2014]**

The UG law programme has one course on environmental law and on a postgraduate level some EU environmental law courses are offered that are taught by external barristers. The theme may also be touched upon in other courses as a by-product of studying different types of law (such as planning laws). Courses do not have an explicit (ESD) ethos other than offering students the tools for their discipline – embedding ‘policy’ in teaching is considered “putting the cart before the horse”. Instead the focus should be on educating people to “be a good lawyer”. The UG course is a qualifying degree which leaves little room for multidisciplinary (although Dr Scotford is sometimes asked to teach environmental law in other departments). With limited room for electives the question is how to make students aware of possible career paths in the direction of ESD or offer this for instance through extracurricular work such as pro bono work or internships. Dr Scotford did express an interest in more deliberate ESD teaching, again mostly for LLM students. PhD students also have options to do internships, this could potentially be with sustainability organisations. A major change in the department will be the introduction of a transnational law programme with more comparative courses and perhaps possibilities to introduce more environmental law, as well as an introduction of more TEL learning resources.

**THEMES:** 🌍

**MARK PENNINGTON - PROFESSOR AT DEPARTMENT OF POLITICAL ECONOMY [30.04.2014]**
Professor Pennington’s course on ethics, economics and environmental protection focuses on questions of environmental sustainability, which is understood as a very contested notion. Perspectives covered range from a ‘deep-green’ to ‘light-green’ including approaches such as utilitarianism, economics and natural capital valuation. Several other courses are offered on energy politics, governance, disaster management and development economics. Many of these courses touch on sustainability as a by-product of studying issues such as access to water. Sustainability is therefore inherently political, which is why students gain a critical understanding of the different perspectives. This also means a central ethos is deliberately avoided for courses to encourage open mindedness, critical thinking and other skills which are often considered ESD skills. Most modules are taken within the department itself, although students also take geography modules, for instance. Some political economy students take part in social entrepreneurship programmes. Currently preliminary conversations are being held to start up a Politics, Philosophy and Economics programme which would be at the intersection of many sustainability themes. The goal of such a programme would be to increase interdisciplinarity of the degree.

THEMES:

ERICA CARTER - HEAD OF DEPARTMENT OF GERMAN [02.05.2014]

Two key concepts were mentioned that link to ESD within the Department of German; connections (or connectivity) and citizenship. Connectivity is understood as developing an appreciation of connections between history and culture, as well as encouraging cross-cultural understanding and communication. This is seen as key to achieving sustainable development. This fits into a wider development towards ‘global’ rather than ‘comparative’ literature and an increased awareness of the role of traditional language disciplines in a global context.

A general ethos in the department is to educate students towards an idea of common citizenship (again global rather than national), to encourage critical thinking and to reflect on social/political structures. Inherent in the degree is an understanding of German history and politics and a reflection on the political past. The German strand of European Studies also has courses on contemporary politics. Preserving heritage is covered in the more historically focused courses. This overall ethos is implicit in teaching and understood generally across the department but is not necessarily communicated as a learning outcome to students. The year abroad is an important part of the degree and gives students essential intercultural and personal skills (‘resilience’). Further, the department is very multidisciplinary, both within the own discipline (culture/history/political science) as well as in its nine different degree combinations.

The department has a widening participation programme, and works with many internal and external partners. As with other modern language degrees, a concern is the shrinking of the department and the challenge to draw in a broader constituency for German. A beginner’s German course will be introduced to help overcome this. The department is seen as a great reserve of culture and history within the College. This could be explored further in partnerships with other departments or schools, for instance around sustainable development.

THEMES:

MARK PARKIN - LECTURER AT ANALYTICAL & ENVIRONMENTAL SCIENCES DIVISION [06.05.2014]

The vast majority of AES Division associated teaching (3 taught MSc courses) is through the Department of Forensic and Analytical Science. ‘Sustainability’ is currently not taught either explicitly or implicitly. However, teaching on ‘critical thinking’ underpins all three taught programs. Contrary to undergraduate courses that
often can be quite dogmatic, courses at higher levels especially those involving research require students to question/challenge current thinking/theories. This is taught through special workshops on critical thinking where the relationship between scientific peer review and criticality is examined. The department is largely industry-focused but values student input received during the review process at the end of the year. Student feedback from job interviews is also taken on board while considering course structure and modules. The course on analytical toxicology includes modules with regard to `drugs and their role in society’. Topics such as `ethics concerning drugs and society’, `ethics of animal testing’, `analysing the risk of private sector funding versus government funding’, `the risk of research with a view to producing a drug that can be sold’, `the risk of consolidation (i.e. mergers & acquisitions) of the pharmaceutical industry’ are currently not taught, however, they might potentially be sustainability themes that are closely linked to the science behind the course.

THEMES: 🌐

VERITY BIRCH - TEACHING MANAGER IMAGING SCIENCES AND BIOMEDICAL ENGINEERING [06.05.2014]

The department has adopted various practices that are intrinsically related to sustainability (campus as curriculum) although it is not explicitly labelled as such. For instance, they purchase and promote the use of recycled paper as far as possible. They conduct various divisional seminars to teach students practical/business skills such as project management skills that are crucial to their work outside university. The department also promotes gender sensitivity and has a formal mentoring programme in place. They intend to apply for an ATHENA Swan Silver Award this year (2014). The academic courses offered are fairly specialised and sustainability is not taught as part of these courses. There is however, a degree of interdisciplinarity that is inherent in the discipline.

THEMES: 🌐

BARBARA PRAINSACK & BRONWYN PARRY - DEPARTMENT OF SOCIAL SCIENCE, HEALTH AND MEDICINE [07.07.2014]

The main aim of teaching in the department is to create responsible innovation that is socially robust and indeed sustainable. Health innovation can be organised in a way that respects cultures and natural resources. Sustainable development is not explicitly used as a term but is expressed throughout teaching at the department, through sensibility for different cultures, respect for cultural traditions and this is included in teaching outcomes. Other issues include distribution of scarce health resources, and decisions on what types of policy will have the best effect. Critical global health means no prescriptive or simple solutions, and decisions about (defensible) investments through real life cases. Ethics are therefore central to teaching. An interdisciplinary UG degree will be introduced for the next academic year, with 25% of courses from the Biomedical School and the remaining courses in social science. This is the only degree of this kind in the UK, and will cover key issues in global health and social medicine. The department offers thematic courses with other departments such as Geography, Women’s Health and the Institute of Psychiatry. Students and staff engage with ESD themes in teaching, internships and through extracurricular activities - even if not deliberately under the `sustainable development’ umbrella. Sustainability as a (nuanced) concept is understood widely and engaged with critically.

THEMES: 🌐 🌿 🍃
The department encompasses many courses that are explicitly or implicitly ESD, such as Corporate Social Responsibility and International Business. Especially in the UG degree sustainable development is implicit in teaching and teaching methods. Organisational culture and diversity are important topics, as well as managing human resources in a responsible manner. Students take part in extracurricular activities such as Ideabox and Lion’s Den which offer opportunity for social enterprise. Throughout the degree students develop strong interpersonal skills and can assess and appraise business change. There is an interest in embedding more participatory learning in the curriculum, although possibilities are limited by large student numbers (200+ students). The degree is perceived as quite ‘instrumental’, and there is a wish to make students more involved and engaged with what they learn - an optional UG dissertation is part of this. Careers are strongly involved with the programme and want to become more involved in offering internships and work placements. Students are very interested in obtaining work experience which would be an opportunity of ESD extracurricular activities.

THEMES:

PETER PARKER - HEAD OF THE DIVISION OF CANCER STUDIES [12.05.2014]

Current pedagogy includes clinical teaching in medical schools and lectures and tutorials in other programs. There is facility for students to gather international experience through ‘global outreach’ and exchange programs with institutions in India, Singapore and China. In this context, the department is also exploring e-learning options to make learning more accessible to international students. Future directions for sustainability topics related to the discipline might be to teach students to better handle public communication of risks. Another relevant topic might be with regard to the ethical dimensions of commercially oriented research that includes patients vis-a-vis research that does not include humans. Sustainability is currently not explicitly taught within the department. The social and ethical dimension of the sustainable development is communicated informally with postgraduate researchers and doctoral candidates but not with students at the undergraduate levels. Time is a constraint as there is already far too much ground to be covered in the limited time available for teaching. Students currently are able to pick modules from a large selection of modules. However, it has been observed that their choice of modules does not necessarily equip them for a future in the field. It is likely that the large choice will be reduced to offer them a more rational choice of courses that not only speaks to their inspiration but also prepares them for a future career.

THEMES:

PETER MCBURREY - HEAD OF DEPARTMENT OF INFORMATICS [13.05.2014]

ESD is not inherent in the very theoretical teachings of the informatics department. The theory itself is very focused and leaves little room for multidisciplinary teaching - partly because this is an accredited degree. The UG degree has some courses on privacy issues and confidentiality of information, but these make up only a small part of teaching. The master’s degrees offer more flexibility and mix with other disciplines such as law. Students and research staff are generally quite interested in applied informatics - which can be used for various sustainability purposes - and take part in activities such as hackathons. Professor McBurney feels that the department does not place enough emphasis on transferable skills as much as core programming skills and the theory behind it. However, they do teach students to think computationally, in other words to ‘think in abstract’. Those who succeed often exhibit strong orientation to details. Team working skills is an essential part of what is taught. Students have to complete a compulsory yearlong project in three different kinds of teams. Best teams receive an award from an industry partner. Hence there is often stiff
competition. Applications increased by 45% in 2013-2014. This trend appears to be contrary to other departments and other universities. There is strong involvement from the private sector in the form of an industrial advisory board. There is great demand for King’s graduates of the department in the Banking and Financial Sector. Students often secure an internship within the first month of their undergraduate degree and often a written guarantee for a job after they graduate. The department engages with social media quite a lot. Sustainability discussions in the department are limited to only staff with a strong research interest and their students. For e.g. teams working on systems for efficient use of energy.

THEMES:

MIKE CLODE, DIRECTOR OF EDUCATION, SCHOOL OF NATURAL AND MATHEMATICAL SCIENCES [13.05.2014]

ESD is not woven into the fabric of teaching at the department. Some aspects of (especially environmental) sustainability are found in research and students do projects with researchers which gives them the opportunity to work on ESD topics. In addition many students engage with the theme through their extracurricular activities - there appears to be a strong interest in both ‘campus as curriculum’-type ESD topics (such as recycling and reducing paper consumption) as well as more academic/applied sustainability activities such as design competitions and the engineers without borders society. Many students also take part in internships during their studies and the School successfully takes part in the widening participation programme. Because degrees are very theoretical and have to comply with (industry) standards, there is not much room for embedding ESD in teaching. Initiatives are welcomed to focus the efforts of departments within the School and encourage collaboration on sustainability issues. It appears that the Department of Engineering used to be engaged in some research relevant to sustainability such as materials research (toxic solders and it’s relation to WEEE). However, this has now stopped as the department has been disbanded.

THEMES:

MICHAEL KERR AND CHARIS BOUTIERI – PROGRAMME DIRECTOR AND LECTURER – MIDDLE EAST & MEDITERRANEAN STUDIES [14.05.2014]

Sustainable development feeds into teaching at the division in many ways. The approach is very critical and a balancing of different worldviews is found in both the pedagogy and content as well as the international student population. Students are made aware of their own value systems and assumptions about the world and the courses are multi-method and participatory. Fieldwork and immersion in the subject of studies are highly encouraged. The degree has a strong focus on real world issues and students are taught the vocabulary to launch dialogue and have conversations in every environment. Much of the teaching is based on postmodern principles of deconstruction (of a Eurocentric paradigm) and includes courses on ethics and cultural relativism. This also leads to a consideration of historical and political configurations, for instance in conflict studies. At the moment (environmental) sustainability is not explicitly taught or researched as such, but it is found in a broader sense in the ethos of course outcomes (which is indeed made explicit to students) and in teaching itself.

THEMES:

HELEN MCCUTCHEON & STEVE TEE - HEAD OF SCHOOL AND DIRECTOR OF EDUCATION FOR FLORENCE NIGHTINGALE SCHOOL OF NURSING AND MIDWIFERY [15.05.2014]
ESD ethos and pedagogies are central to the teaching at the School, especially when understood as improving our quality of life and that of the next generation. Sustainability revolves around the human condition and the value of the individual in society. Diversity of backgrounds and beliefs and person-centred learning and professional development are central to teaching at the School. Teaching is self-directed and aimed at developing reflectivity and self-awareness. Concepts such as ‘caring’ and ‘ethics’ are unpacked, as are legal issues, ethics and politics. Other important themes are healthy lifestyles, public health nursing and preventive health care. As this is an accredited degree all teaching is under the umbrella of the professional code of practice. Students take part in many different voluntary placements, not as part of their studies, such as the VSO and Oxfam. They often also have previous work experience in the charity sector. A very explicit sustainability agenda is also put forward by the various trusts working with the School as part of the wider NUS Sustainability Strategy.

**THEMES:**

SARAH COOPER – HEAD OF DEPARTMENT OF FILM STUDIES [19.05.2014]

The USP of the department is its focus on the theory and history of film studies rather than the practical skills of film making. Both the research and teaching valorises this ethos. Sustainability conversions within the department are usually limited to maintaining intellectual growth and rigour of the department, in other words how to remain on the cutting edge of the discipline and not necessarily the broader dimensions of sustainability. However, there are modules within the Undergraduate, Postgraduate and Doctoral degrees that fall within the remit of ESD. The 3rd year optional module ‘Third Cinema and Beyond’ teaches students to be critical of the western/imperial model of filmmaking. ‘American Underground Cinema’ and other avant-garde modules encourage students to question what it means to be a part of the mainstream. The master’s courses offer a course called ‘Thinking Cinema’ which used to deal with ethics. The module currently does not deal with ethics but this could change. Another module ‘Cinema and the City’ is interdisciplinary in its approach, giving attention to the cinema-city relationship not only from the point of view of film studies but through architecture, urban studies, geography, and critical theory. The mode of teaching is largely through screenings, lectures and seminars. Students are invited to participate in student-staff liaison meetings and departmental meetings where new modules are discussed and they have a chance to voice their opinion. The department has expanded over the last four years and it has been ranked 1st in the UK (Sunday Times University Guide 2013). The department works closely with the King’s Careers to offer seminars on employability skills and employment options. In addition, the department also offers sessions on ‘how to use your BA/MA to find a job’. Students pick up several transferrable skills such as managing deadlines, presenting themselves well, developing their own voice, self-guided learning and critical thinking. Students usually become arts officers, producers and directors, authors, writers and translators, teaching and other educational professionals n.e.c., advertising accounts managers and creative directors.

**THEMES:**

NICK CLIFFORD & KATHERINE SILK - HEAD OF DEPARTMENT AND DEPARTMENTAL MANAGER - GEOGRAPHY [19.05.2014]

Sustainability makes up for a large part of the Geography curriculum. This starts with a ‘foundations’ course taught in the first year, E&D courses in the second year themed pathway (environment and society) through to specialised master’s programmes. There are three major themes present in teaching at the department, the first being resource use and limitation, under which fall food security, energy and sustainability, and nexus studies. A second ‘grand theme’ is unequal consumption, wealth inequality and globalisation. Under this umbrella issues around development are discussed. Governance, risk and resilience form the last theme,
covering risk (master’s level), disasters, development, with a focus on mitigating risk. Skills are summarised as GES: global, environmental and social. These are instilled from the first to third year UG programmes. Students also receive extensive research training as the degrees are very method-focused. Courses also largely focus on ‘real life’ issues and practical topics. The department links with many others at the College as well as the Cultural Institute. Staff members also have an ‘Impact, Innovation and Outreach’ section on the website where is indicated how they contribute to various organisations. The department welcomes new forms of teaching such as technology enhanced learning, offering online courses and offering ‘smart teaching’; short and intense courses for professionals. In the future the department sees a greater role for co-design, more public-private partnerships, innovation in funding for UG degrees, focusing on London as a ‘unique selling point’ (also for environmental monitoring/GIS) and more interdisciplinary programmes. Sustainability is understood critically and as a subject comprises a large part of teaching (about two-thirds of courses) at the department.

THEMES:

LUCILLA POSTON & HELEN BICKERSTAFF - HEAD OF THE DIVISION OF WOMEN’S HEALTH - DIVISION WOMEN’S HEALTH [27.05.2014]

Sustainability is understood as maintenance of status quo. The department leverages technology (Virtual campus) a lot and can be expected to do much more in this regard. The department is in favour of an institution-wide rollout of Webex led courses. The challenge facing the department currently is that 120 staff who were accountable for teaching were made redundant. There is a risk that the current structure might have lasting impact on education and staff goodwill since only teaching/contact hours are accounted for and supervisory hours and marking time are not accounted for in teaching time. Outsourcing education to consultants also involves the risks of a lack of quality checks. Current skills that students don’t seem to be developing include the ability to write good prose. Doctors need to be able to write good prose so that others can understand what is said to patients. However, students do go through simulations with expert patients where they are tested on a variety of scenarios. Students also learn to rate themselves and practice reflective thinking. The department is also trying to set up a mentorship process. Profile of students: Roughly 20% of students are international while the rest are local. A risk facing the department is that research appears to given priority by the College while students are not. For instance, when a patient has to be told that she needs to terminate a significantly advanced pregnancy due to specific concerns, it can be very traumatic for young students. However, they do not have access to a common room where they can talk freely about their experiences with friends/mentors. Concerns about patient confidentiality prevent them from discussing matters in front of patients. The USP of the department is the multidisciplinary approach to teaching and research. Problem based learning and seminars are also used extensively. The department offers a special study component related to global health and the community.

THEMES:

PHONE CONVERSATION RICHARD BROWN – HEAD OF DEPARTMENT OF PSYCHOLOGY [29.04.2014]

The department is currently only postgraduate teaching but will start an UG degree in 2015. Because of the specialised nature of the degree there is not much room for interdisciplinarity or a consideration of wider environmental, social or other sustainability issues. The teaching focus is on professional training and applied skills to enable students to become NHS professionals – these skills and competencies are prescribed. The new undergraduate degree does have more possibility to cover more ‘broad based world issues’ and ‘psychology in context’. Other ESD issues that could be of interest in this context are social development or lifestyle-related modules. Especially the 2nd and 3rd year could offer such possibilities. There is a central ethos around preparing
individuals to work effectively and evidence-based, but ESD is not something that is considered as learning outcome or has been discussed in a formal or informal manner.

THEMES: 🤝

PHONE CONVERSATION MARK WOOLFORD –DIRECTOR OF EDUCATION-DENTAL INSTITUTE
[05.06.2014]

The Dental Institute at Kings is the biggest school in the UK and reaches a critical mass of teachers and students of dentistry in the UK. 97% of students are guaranteed to find a job upon graduation. The transferable skills that students are taught include professional skills, community engagement, business skills. The topic of sustainability and related issues are not subjects that are familiar to the department and it is not discussed either among staff or with students. The USP of the school is a strong clinical focus and students are trained very early on to maintain a strict ethical code and professional practice. Students are given positions of trust early on in their careers. Although it not a part of the curriculum, many students volunteer with charities to gain valuable and diverse work experience. There is a strong focus on ethics from year 1 all the way through. Situational judgement tests are used to test student responses to ethical scenarios through multiple choice questions and they are asked to pick their most likely or least likely response. Much like in other medical disciplines all students go through Objective Structured Clinical Examinations (OSCEs) annually where they are assessed on their clinical and communication skills. In the future, simulations are likely to become the norm where students practice on something that cannot be harmed. The school offers students opportunities to do an intercalated BS which gives them the opportunity to study the subjects of their choice in greater depth. This is particularly useful if they plan a research career in dentistry/medicine. Another useful platform for students to develop diverse (multi-disciplinary in a limited sense) is IPE (Inter-Professional Education). Interprofessional education brings together two or more health care disciplines. King’s offers programmes in dentistry, nursing, medicine, midwifery, pharmacy, dietetics and physiotherapy, which makes the programme unique. During the interview many additional opportunities for ESD were identified. Additional resources on ESD were shared with Mark Woolford.

THEMES: 🤝

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25 international :
- "The dental industry is the single largest contributor of mercury to the water supplies in this country."
- http://www.unsd2012.org/content/documents/593FDI_Dental_SubmissionRio20.pdf - Statement by the FDI WORLD DENTAL FEDERATION to the UN Conference on Sustainable Development

In the UK:
- http://www.medev.ac.uk/ourwork/sustainable_development/medicine_and_dentistry/
- ESD Wiki for Dentistry developed by the University of Bristol:
  https://wikis.bris.ac.uk/download/attachments/55088244/List+of+Publications+ESD+Dentistry+and+Medicine.pdf?version=1&modificationDate=1360587881000
APPENDIX IV – INITIAL MAPPING OF ESD COURSES

This is an initial review of courses found on KEATS that appear to have an ESD focus, used as a starting point for interviews with each department. This is therefore not an exhaustive list of ESD modules at King’s.

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