Graduates for the 21st Century:
Integrating the Enhancement Themes

Institutional activities

Professor Dai Hounsell
Vice-Principal, Academic Enhancement
University of Edinburgh
Preface

The approach to quality and standards in higher education in Scotland is enhancement-led and learner centred. It was developed through a partnership of the Scottish Funding Council (SFC), Universities Scotland, the National Union of Students in Scotland (NUS Scotland), the Higher Education Academy (HEA), and the Quality Assurance Agency for Higher Education (QAA) Scotland.

The Enhancement Themes are a key element of a five-part Quality Enhancement Framework (QEF), which has been designed to provide an integrated approach to quality assurance and enhancement. The Enhancement Themes support learners and staff at all levels in further improving higher education in Scotland; they draw on developing innovative practice within the UK and internationally. Further information about the QEF can be found at: www.qaa.ac.uk/pages/scotland-qef.aspx.

The topics for the Enhancement Themes are identified through consultation with the sector and each is implemented by a steering committee with members drawn from the sector and the student body. The steering committee has the task of establishing a programme of development activities, which draw on national and international good practice. Publications and other outcomes from each Theme are intended to provide important reference points for higher education institutions in the ongoing strategic enhancement of their teaching and learning provision. Full details of each Theme, its steering committee, the range of research and development activities as well as the outcomes and resources are all published on the Enhancement Themes website (www.enhancementthemes.ac.uk).

The Scottish Higher Education Enhancement Committee (SHEEC) supports the implementation and embedding of a quality enhancement culture within the sector - including taking forward the outcomes of the Enhancement Themes. This overarching committee, chaired by Professor Andrea Nolan, Senior Vice-Principal, University of Glasgow, has the important dual role of supporting the overall approach of the Enhancement Themes, as well as institutional enhancement strategies and management of quality. SHEEC, working with the individual Enhancement Themes’ steering committees, continues to provide a powerful vehicle for taking forward the enhancement-led approach to quality and standards in Scottish higher education.

Bill Harvey
Director, QAA Scotland
Introduction and overview

The Graduates for the 21st Century (G21C) Enhancement Theme (Theme) has had two principal goals. First, it asked: what should be the attributes of a graduate from Scottish higher education in the 21st century, and how can the achievement of these attributes best be supported? Second, it has explored how the pursuit of these can be informed and enriched by the outcomes of the preceding Enhancement Themes.

Taking place within institutions and across the sector, the consideration of 'graduate attributes' has aimed not just to encompass long-established (but not always clearly formulated) attributes such as critical thinking. It has also sought to examine the values that inform the work of higher education institutions (HEIs), their contribution to culture, citizenship and intellectual growth in Scotland, and their capacity to educate students to have the flexible competencies needed for a knowledge economy. At the same time, there has been a focus on how outcomes could be practically and effectively achieved, by sharing information about new initiatives and building on the work of previous Themes.

This report focuses on the achievements of the G21C Theme as a whole. The report has two aims: (i) to synthesise what has been learnt from the work of the Theme and (ii) to consider how its outcomes could fruitfully be built upon and further pursued under the aegis of the new Theme, Developing and Supporting the Curriculum.

There are reports on the institutional activities strand from throughout the Theme. [1] The present report does not reproduce material appearing in those earlier reports, but instead it is designed to complement that area of work.

Outcomes and achievements

G21C Theme outcomes and achievements are of three broad kinds:

- shared understanding of graduate attributes and qualities
- developed strategies for enhancement
- a rich array of resources, tools and activities.

Graduate attributes and qualities

Across the Scottish higher education sector, the most prominent outcome of the work of the G21C Theme is a robust and well-articulated collaborative grasp - or understanding - of the attributes and qualities which are needed by the twenty-first century graduate.

That grasp is collaborative in a vitally important sense, because it represents a shared understanding across the Scottish sector that has emerged by institutions learning from and with one another - but it has not been constructed in a form that overrides or submerges each HEI’s institutional identity. On the contrary, and integral to the goals of enhancement, each HEI has been encouraged to develop a vision of graduate attributes for the twenty-first century that best reflects its own distinctive mission, ethos and strategic priorities. Those institutional visions are therefore also a key outcome of the G21C Theme.
Although each HEI’s articulation of graduate attributes is distinctively its own, a broad set of common threads can be identified, each of which is found in several (but not necessarily all) HEIs’ formal statements of graduate attributes. They are shown in full in Figure 1, and can be summarised as follows:

- **lifelong learning**
  equipping students with the ability and interest to continue to enlarge their knowledge, understanding and skills throughout their working lives

- **research, scholarship and enquiry**
  providing students with a sound grasp of how new understanding is generated in a given field or subject area through experiment and empirical investigation, and the ability to apply a systematic and critical assessment of complex problems and issues

- **employability and career development**
  developing students’ knowledge, skills and qualities relevant to chosen career paths and to those paths which may open up in the future, enabling each to succeed in a rapidly changing workplace

- **global citizenship**
  encouraging a capacity to thrive in a globalised society and economy, and an awareness of cultures beyond and different to one’s own

- **communication and information literacy**
  cultivating students’ abilities to communicate effectively their knowledge, understanding and skills, in a range of settings, and using a variety of media; and formulating, evaluating and applying evidence-based solutions and arguments

- **ethical, social and professional understanding**
  nurturing a reflective awareness of ethical dimensions, and responsibilities to others, in work and everyday life
Graduates for the 21st Century

- **personal and intellectual autonomy**
  developing a capacity to think independently, exercise personal judgment and take initiatives

- **collaboration, teamwork and leadership**
  cultivate skills for working in teams and groups, and leading where appropriate.

A considerable strength of these eight graduate attribute domains is that they have evolved not just from extensive reflection and discussion within and across the Scottish HEIs, but are also evidence-informed:

- they have been enriched by inputs from an appropriately wide range of stakeholders representing private and public sector employers, professional bodies, and student organisations, in addition to the institutions’ own staff and students
- they have been refined through interchange between colleagues from across and outwith the Scottish sector, in annual conferences, symposia, workshops and network meetings
- they have drawn on leading-edge practices internationally as well as nationally, with particular contributions from the Nordic countries, North America, and Australia.

### Strategies for enhancement

The second principal outcome of the G21C Theme is perhaps less visible, but deserves full recognition. It takes the form of the robust toolbox of strategies that Scotland’s HEIs have developed throughout G21C, individually and collaboratively, to advance and embed within institutional practice their enhancement of the student learning experience.

Scotland’s higher education sector is recognised as the global pioneer of the pursuit of quality enhancement in parallel with quality assurance. Nonetheless, the development of these strategies for embedding enhancement represents a considerable achievement.

Rising to that challenge of advancing and embedding enhancement has meant testing and refining strategies for pursuing enhancement that go beyond rhetoric and aspiration to make enhancement a ‘lived reality’ - and as with graduate attributes themselves, a one-size-fits-all approach would be neither appropriate nor productive. Nonetheless, institutions have been successful at learning from and with one another while crafting strategies tailored to their own needs and internal structures.

They have done so by actively exchanging information about their activities and initiatives, initially in workshops and conference presentations and subsequently distilled through a rich array of case studies, in which each higher education institution systematically documented examples of its G21C activities that others might learn from.

Reviewing these case studies, seven main types of institutional strategies were adopted to take forward the G21C Theme, as summarised in Figure 2.

A range of examples from across the sector of how these various strategies have been pursued within institutions is shown in Table 1, which is based on an analysis of the 60 case studies which HEIs submitted in June 2011.¹

¹ [www.enhancementthemes.ac.uk/resources/case-studies/graduates-for-the-21st-century](http://www.enhancementthemes.ac.uk/resources/case-studies/graduates-for-the-21st-century)
INSTITUTIONS’ STRATEGIES FOR TAKING FORWARD THE ENHANCEMENT THEME

- a. knowledge exchange and professional development activities
- b. evidence-gathering and enquiry
- c. policy refinement and strategic development
- d. advances in learning-teaching and student engagement
- e. employer interaction and engagement
- f. surfacing and sharing good practices
- g. seedcorn projects and award schemes

Figure 2: main types of institutional strategies adopted to take forward G21C Theme
<table>
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<tr>
<th>Type of strategy</th>
<th>Forms typically taken</th>
<th>Illustrative examples from HEI case studies</th>
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| a. knowledge exchange and professional development activities | website, resource materials, audio clips from students, online discussion forum, videoconferencing; reports, policy discussions; workshops, seminars, conferences | • Education for Sustainable Development project focusing on professionally accredited degrees, and devising events and resources to raise awareness and share good practices (University of Dundee)  
• externally facilitated Beyond Boundaries event for students and alumni to explore what graduate attributes would be appropriate for the University and how their achievement could best be supported (Edinburgh Napier University) |
| b. evidence-gathering and enquiry | in-house research, student-led enquiry; student and other stakeholder consultations; a cross-section of case studies, alumni survey, evaluations | • Learning Journeys/Working Journeys: large-scale enquiry surveying students and staff on graduate attributes and employability for the University’s in-work, part-time students (Open University in Scotland)  
• an institutional research project to consult a range of stakeholders (students, staff, alumni) about the desirable graduate attributes of the 21st-century. Glasgow University graduate (University of Glasgow) |
| c. policy refinement and strategic development | statements of graduate attributes; models and frameworks for engaging with and implementing graduate attributes; integration of graduate attributes into institutional curriculum validation and review procedures/alignment with Scottish Credit and Qualifications Framework levels | • a University 'Learning Manifesto', including pedagogical principles and expectations of students and of staff (University of the West of Scotland)  
• Moving Forward Initiative, a University-wide strategic approach to enhance the student experience, combining a transition and progression framework, partnership agreements and mini communities of practice (Glasgow Caledonian University)  
• a bricolage change-management approach to graduate attribute-focused enhancement, including an FAQs database and a longitudinal student induction toolbox (Queen Margaret University) |
### Institutional strategies adopted to take forward G21C Theme

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| d. advances in learning-teaching and student engagement | pre-entry and transition-to-university schemes; curriculum design and development to embed graduate attributes; blended learning approaches, skill development initiatives, peer assisted learning and peer assisted study schemes; student guidance and support projects (eg to enhance engagement, retention and progression); assessment practices; student representation and engagement | • development of a computer game for international students to help them prepare for university study *(University of Abertay Dundee)*  
• set of integrated projects to embed graduate attributes + level descriptors + guiding principles into curricula *(Royal Conservatoire of Scotland)*  
• highly accessible (24/7) online curricular and learning-teaching resources *(University of the Highlands and Islands)*  
• adoption of mentored study groups in first-year Built Environment courses to promote scholarship skills *(Heriot-Watt University)*  
• interdisciplinary, cross-schools group projects in first year to develop students’ ethical imagination *(Glasgow School of Art)*  
• a web-based interactive learning resource for nursing and midwifery students, Making feedback work for you - including videos, activities and a link to e-portfolios *(Robert Gordon University)*  
• student-led initiative to develop a cross-university elective module on volunteering and community engagement *(University of Strathclyde)* |
| e. career preparation, employer and community interaction and engagement | student interaction with consultants/researchers/employer mentors; global volunteering and mobility programmes; work-related learning opportunities; co-curriculum experiences website; personal development planning, including use of e-portfolios and web-based personal learning environments | • a workplace-focused team project in Sustainable Environmental Management, in partnership with an employer *(Scottish Agricultural College)*  
• a Sports Studies coaching programme, in collaboration with Active Stirling local authority *(University of Stirling)* |
| f. surfacing and sharing good practices                | surveying the published literature; visits elsewhere and external contributors; interchange/collaboration with other HEIs; documenting and disseminating local good practices                                                                 | • websites and wikis to spread examples of good practices in enhancing feedback peer assessment, and e-learning *(University of Edinburgh)*  
• a set of case studies in book/website form (for internal and external use) that capture a variety of approaches to the graduate attributes that project design and development skills call for *(Edinburgh College of Art)* |
| g. seedcorn projects and award schemes                | for student/staff; achievement/performance for development, as seedcorn/pump-priming; funding graduate attribute evaluation projects                                                                                                                                     | • STAR (Students Taking Active Roles) scheme to foster and recognise students’ co-curricular activities *(University of Aberdeen)*  
• The St Andrews Award (integrated into HEAR) to recognise students’ achievement in extra-curricular and work-related learning activities *(University of St Andrews)* |

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2 Formerly Royal Scottish Academy of Music and Drama.  
3 Now part of the University of Edinburgh.  
4 The Higher Education Achievement Report: www.hefce.ac.uk/learning/diversity/achieve.  
Resources, tools and activities

A third major outcome of the G21C Theme has been the rich repository of resource tools generated and the wide range of activities which have taken place. These outputs have not only focused on the core topic of graduate qualities and attributes, but have also been moulded in synergy with earlier Enhancement Themes on Research-Teaching Linkages, Employability, the First Year, Assessment, and Responding to Student Needs. The outputs span a range of media. They include the Enhancement Theme website, which has downloadable publications and reports, briefings and newsletters, and videos and slide presentations from Enhancement Theme workshops, symposia and the Enhancement Theme annual conference.³ (See also the list of G21C publications on page 9.)

This range of resources, tools and activities underpins and advances the work of the Theme in various vital respect by:

• enlarging the audiences for Theme meetings and activities far beyond those able to attend in person
• providing a cumulative record of experiences, reflections and insights that can continue to be drawn upon across the Scottish sector
• ensuring that good practices are documented and more widely shared
• helping to promote dialogue and interchange outwith the sector, with those engaged with similar challenges in other countries and continents.

Taking G21C outcomes into the DSC Theme

In building upon and further pursuing the three main G21C outcomes (graduate attributes and qualities; strategies for enhancement; and activities and resources) within the new Developing and Supporting the Curriculum Enhancement Theme (DSC), a significant challenge is likely to be finding ways of integrating, embedding and assessing relevant graduate attributes into the diverse range of degree programmes.

For two of those outcomes, activities and resources together with strategies for enhancement, a significant component of that challenge will not only be targeting of subject and disciplinary communities, but also fine-tuning approaches and outputs to subject-specific purposes and practices.

The third outcome, graduate attributes and qualities, merits more sustained consideration, because the main task will be to harvest and then distil insights, experiences and frameworks that can aid subject-focused reviewing and enhancing of practices. What has emerged thus far from G21C and previous Enhancement Themes has been an invaluable contribution. Nonetheless, further development work may be needed to facilitate curriculum embedding of key graduate attributes across a range of specific subject and degree programme settings.

To illustrate this last point, three examples of graduate attributes can be briefly considered:

• ethical, social and professional understanding
• global citizenship
• communication and information literacy.
Enhancement Themes

Embedding ethical, social and professional understanding

Here, some initial stocktaking may be needed to identify instances of current good practices, which are likely to be found particularly in vocational degree programmes in areas such as medicine and health, law and business studies. Established instances of ethical development may well be harder to find outwith vocational programmes, but are also essential, especially in tandem with models or frameworks that can guide course teams in authentically embedding ethics and social awareness in curricula where there are no direct vocational links and where graduates can go on to a wide variety of careers.

It will also be helpful to adopt an evidence-informed approach to identify recent sources of thinking that can also support enhancement efforts on this topic. [2]

Embedding global citizenship

Linking into up-to-date instances of good practices is also likely to be productive in the case of global citizenship and global awareness. But no less crucial will be to assist developments across the curriculum range by steering a path through the varying and often rather hazy byways of this graduate attribute. Some promising possibilities lie in curricular application of models of intercultural competence [3] and in emerging insights about cross-cultural learning and intercultural adaptation. [4]

Thought-provoking illustrations can also be found of how Melbourne and Deakin Universities - to take two examples - have developed guidelines for internationally inclusive and culturally sensitive curricula and teaching approaches. [5]

Embedding communication and information literacy

As far as communication and information literacy is concerned, there is also a need to develop ways of translating what is a very widely espoused but broad-brush goal into curriculum content and learning-teaching activities that will be both relevant to specific subject areas and stand students in good stead beyond graduation. This is especially necessary because, in developing students' communicative capabilities, undergraduate curricula have traditionally relied on a quite limited pool of communicative tasks that do not necessarily have direct counterparts outside of universities. (The essay is the most obvious example that comes to mind.)

Equally importantly, the recent revolution in information and communication technologies has dramatically opened up - within and outwith academe - the variety of means by which knowledge and understanding are exchanged by and across individuals and groups.

One possible way forward, especially where a subject interconnects directly with specific vocational pathways, may lie in trying to clarify the various forms through which practitioners in a given profession communicate with one another and what ‘being literate’ in that field is likely to entail. [6] Efforts to surface these expectations in fields such as medicine, education and health sciences serve as models and frameworks which other vocational fields may be able to emulate and adapt. [7]

In less vocationally specific areas, considerable (but as yet largely untapped) potential lies in applying insights from fields such as linguistics. Claire Hughes' recent work [8] provides one example of how such perspectives can be used to map the different forms of written and oral communication which students practise in their assignments and assessments. Another example may be found in the notion of 'genres' [9] - that in any field of activity there are characteristic types of written and verbal communication that differ in their purposes and audiences, yet follow ground-rules that are well-understood if rarely made explicit. Trying to map out the key genres within their subject area may therefore be helpful to course teams in rethinking how they can best help their students to become skilled communicators.
Whichever of these approaches bears most fruit, the need to make headway and the magnitude of the challenge are increasingly highlighted. In our contemporary world, Robin Goodfellow [10] has recently suggested, the situations in which we communicate with one another are extremely varied, and how we do so typically relies on more than one mode of communication. In consequence, viewing literacy education as a matter of developing 'generic competences' that can be readily transferred from one setting to another is no longer appropriate. Instead, he argues:

'Education needs to fit people for apprenticeship to multiple meaning-making communities, wherein texts are mediated in different ways, requiring them to apply a variety of specific competences to a variety of communicative purposes.'

Active student engagement

Finally, it is crucial to recognise that active student engagement with the development and embedding of graduate attributes is indispensable. To a considerable extent, achieving engagement will necessitate well-focused curriculum design, teaching-learning approaches, and assessment and feedback. But whatever forms these take, the glue which binds them together is made up of rich opportunities for students to internalise graduate attributes, make them their own and, most importantly, be able to articulate them. Put another way, graduate attributes (however well taught they may be) will have limited significance for students if they (the students) are removed from the process and graduate attributes are seen chiefly as something that has been designed for students by others. Instead, graduate attributes need to be seen by students as helping them to shape and support their individual futures.

Conclusion

This report has reviewed the institutional work of the G21C Enhancement Theme, highlighting its many achievements on three broad fronts: developing a shared understanding of graduate attributes and qualities; devising and refining an array of strategies to enhance the quality of students' learning; and generating a wealth of resources and tools to assist individuals and teams to rethink practices. The report has also explored how these achievements can be used to inform the work of the new Theme, Developing and Supporting the Curriculum, where one of the critical challenges will be to embed graduate attributes into degree programmes across the Scottish higher education sector.

G21C publications

*The First Year: Back to the future*, Dr James Moir, University of Abertay Dundee, 2010

*First and foremost: Learner autonomy in the first year*, Dr James Moir, University of Abertay Dundee, 2011

*First things first: the first year in Scottish higher education*, Dr James Moir, University of Abertay Dundee, 2010

*What is topical/emergent in Employability?* Dr Vicky Gunn, Mr Klaus Kafmann and Ms Sheena Bell, 2010

*Employability and the austerity decade*, Dr Vicky Gunn and Mr Klaus Kafmann, University of Glasgow, 2010
Thinking strategically about employability and graduate attributes: Universities and enhancing learning for beyond university, Dr Vicky Gunn, Ms Sheena Bell and Mr Klaus Kafmann, 2010


What is topical/emergent in Research-Teaching Linkages? Dr Vicky Gunn, University of Glasgow, 2010
www.enhancementthemes.ac.uk/docs/publications/what-is-topical-emergent-in-research-teaching-linkages.pdf

Maintaining research-mindedness in Scotland’s universities, Dr Vicky Gunn, University of Glasgow 2011
www.enhancementthemes.ac.uk/docs/publications/maintaining-research-mindedness-in-scotland.pdf

Four recent papers on assessment and feedback with significant implications for practice, Prof David Nicol, University of Strathclyde, 2010

The foundation for graduate attributes: developing self-regulation through self and peer-assessment, Prof David Nicol, University of Strathclyde, 2010

Developing students’ ability to construct feedback, Prof David Nicol, University of Strathclyde 2011
www.enhancementthemes.ac.uk/docs/publications/developing-students-ability-to-construct-feedback.pdf

Classroom-based response to student needs, Dr Margaret Harris, 2010
www.enhancementthemes.ac.uk/docs/publications/classroom-based-response-to-student-needs.pdf

Responding to student needs: Emerging and continuing issues, Dr Margaret Harris, 2010

References


See for example:

See for example:
ITL (nd) Literature Review: Intercultural Understanding and Competencies, Geelong, Victoria: Deakin University, Institute of Teaching and Learning
www.deakin.edu.au/itl/assets/resources/pd/internationalisation/iuc-lit-review.doc

See for example:


For a wider discussion of this issue, see:

See for example:
