Generic Attributes Project Background Paper to the Generic Graduate Attributes Discussion Paper
Scoping Study, 2007

The Brief

1. To undertake a scoping study to identify the requirements to enable the establishment of a common set of graduate attributes/capabilities that Flinders University students can reasonably be expected to have attained by graduation (the Project).
2. Identify possible graduate attributes/capabilities.
3. Identify the full cost of the project including input from the Library with respect to its proposed project entitled Aligning Student Library Assignment with Generic Skills (VCC Doc 08/02/07).
4. To provide initial support to the Steering Committee which has been established to oversee the above Project.
5. To undertake any related activity consistent with the brief that is required by the Project sponsor.

Introduction

Flinders University has a strong teaching and learning reputation. The most public recognition of this can be seen in the University’s success in national teaching awards. Since national teaching awards were introduced in 1977, Flinders staff members have been finalists on 15 occasions (Annual Report, 2006: 12). Employers generally respond positively to Flinders graduates and surveys tell us that those graduates usually make desirable and effective employees. KAMs data suggest that the majority of Flinders courses compare favourably with their equivalents elsewhere and meet student needs and there is evidence that the University, through its Faculties, moves over time to address inadequacies when the data suggest the necessity. This brief summary indicates that Flinders, and its graduates, have been judged worthy of the following assessments by those whose judgement is itself worthy of attention:

- the teaching staff is capable of producing excellence and is formally encouraged and rewarded;
- most students who seek employment are recognised as responsive to employer’s requirements (with certain limitations) and are recognised as valuable employees;
- the institution, through its Faculties, is generally open to/capable of considered change and is recognised for those characteristics.

Each of these is an attribute - demonstrated teaching excellence, responsiveness to demand and openness to/capacity for change. The Attributes Project needs to consider, draw from and elaborate on these three realities.

The undertaking that guides this Project requires, inter alia, a ‘planned development of a cohesive approach to identifying and implementing generic graduate outcomes (attributes) that will assist in preparing graduates for employment and define the
characteristics of a Flinders graduate in the labour market’ (AUQA Report, 2006, p.30). This involves embedding the language of graduate attributes in the multiple layers of teaching and learning policy and practice – from course approvals to web-based mapping tools – and the encouragement of staff and students to use that language creatively and effectively. The challenge this offers can be represented as a sequence of interrelated micro-operations. It can also be recognised as an invitation to revisit some ‘big questions’:

- how do teaching and learning accommodate change;
- what is a graduate;
- how does an attributes-oriented approach to education build on a course- and degree-defined approach;
- what does the building do to the ‘idea’ of a university and its translation into the ‘reality’ of a university in the lives of staff, students, community and larger social formations?

This Background Paper will begin to address these and other questions. In truth, the challenge and the invitation are interrelated and layered and have to be dealt with at one and the same time. They can be described as a process involving a:

i) student awareness and translation phase, which is part of…
ii) staff endorsement and ideas adjustment phase, which is part of…
iii) deep and gradually transforming movement and changing teaching and learning process over time.

Based on discussion with representatives of all cost centres and a select group of students and taking into consideration a range of views external to the university, this Background Paper outlines Scoping/Planning/Rollout/Review stages of a rollout in four stages, five layers and seven steps as follows:

1. Scoping Stage/Information and Goal Setting: 2007
   Step one: test the foundations and find common ground within the University.
   Step two: find a common language, from masthead to topic objectives and assessment rationales; identify an acceptable set of overarching attributes with sufficient specificity to distinguish a Flinders University approach to education; identify an acceptable set of overarching attributes with sufficient flexibility to allow difference of expression and pathways within that approach.

2. Planning and Preparation: 2007
   Step three: identify university staff with a special and abiding academic/research interest in the subject and encourage that group of staff to continue to feed their findings into the process. At this stage an instrument or instruments of measurement and assessment/self-assessment for staff and students must be identified and the groundwork must be done to establish reliable feedback loops. It will, in all likelihood, involve keeping abreast of good practice in other institutions nationally and globally and establishing ways to disseminate information about developments throughout phases two and three.
   Step four: recognise the need for vertical and horizontal integration of a research-justified and appropriately monitored rollout. Graduated impacts will need to be considered at all levels. Goals will need to be set for each cost centre against overall
objectives and management, administrative and support/development systems will need to be clearly identified and sourced, via the Office of the DVC (Academic) and the Cost Centres. Funding and resourcing implications and expectations will need to be clearly identified.


Step five: check the teaching and learning processes of implementation and articulation - from transition to postgrad graduation - to identify the most suitable and effective points and trigger experiences for embedding/highlighting the language, practice and evaluation of attribution. The attributes process should sit well with other monitoring and checking processes already in operation: SET, Academic Integrity, Student Satisfaction Survey, etc. This is also likely to be a combined and articulated pedagogical and administrative exercise. It is likely to involve staff/student development programs.

Step six: refine language and encourage an informed exchange of practices, instruments and processes within and between faculties, given that the objective is to equip students with an incremental understanding of the value of the course or courses that they are undertaking, in context. Recognition of student pathways within and beyond disciplinary and faculty boundaries is part of this process.


Step seven: undertake informal and formal reviews of staff, student and employer responses in relation to discreet as well as integrated processes identified in phases one and two. Instruments of evaluation, opportunities for staff development, research findings, feedback loops are likely to be tested and adjusted during this phase. The University would be justified in looking for optimal, tangible staff and employment results for its investment by 2010, and for benefits to all stakeholders by the end of 2008.

This introduction and rollout strategy does not herald a revolutionary approach to what appears in the Discussion Paper but it does recognise the currency of ‘transformation’ in and through university education and the current weight placed on attributes in educational transactions. The willingness of all players to consider a change in form and the extent of that change, stimulated by the undertaking to ‘embed attributes in all layers of teaching and learning’, remains to be seen. Suffice it to say, advocates of attributes-driven teaching and learning see the shift in primacy from course and content to graduate and attributes as revolutionary. Sceptics see it as a familiar creature dressed in new attire. In discussions with Flinders staff so far, there has been some sign of revolutionary enthusiasm, little evidence of scepticism and a fair degree of cautious encouragement – and one constant response… followed quickly by another:

This is more complex than we thought. Keep it simple.

It is a predictable response and sensible place to start.

If the exercise is to be undertaken thoroughly, consistently and effectively it will not be simple but its complexity can be clarified and simplified via good process and maintenance. The essence of simplification is in: the clear statement of what is to be
done; defining the terms in a way that suits the university community and its complex cultures; mapping, staging, stepping and checking the process; identifying and articulating trigger experiences for staff and students and building them into a university-wide map of experiences and outcomes; devising appropriate assessment and evaluation criteria; and taking the time to stage the roll out to keep participants interested and to generate and sustain momentum. If students are better able to understand their education and its benefits and potentials there will be no waste of time and resources.

Research and the evidence of discussions so far indicate that Flinders is well on the way to using such an approach in any event. This means that there is already something positive (but not yet coordinated) in the exercise for everyone. The task is to first recognise, then formalise and extend the benefits of current practice and finally to open up new possibilities. To do this is to put the existing aims and outcomes approach to teaching and learning to macro-operational use. That makes good sense in the service and business of contemporary education.

1.ii. General Process and Progress
The following matters have been completed/addressed in accordance with the scoping study timetable, stage one, agreed with the DVC Academic:

- consultation with Faculty representatives: academic, management and administration;
- consultation with other interested cost centres: Library, Yunggorendi;
- consultation with other interested areas, individuals, units: VC, DVC (International and Community), DVC (Research), SDTU, Student Services;
- consultation with students;
- participation in attributes-related symposia, focus group discussion: WIL/LIW; SACE;
- consultation with specialist researchers: Carrick/ALTC, SU;
- consultation with academic staff with special academic interest and/or publication record in the fields of: attributes; assessment; professional placement;
- background research on the Attributes Movement;
- background research on approaches to attributes/results of implementation in other Australian universities;
- regular reporting to DVC Academic and Attributes Steering Committee;
- preliminary investigation of implementation costs via Library proposal as identified in the Brief.

1.iii. The undertaking
In its determination to implement a successful Graduate Attributes strategy the University needs to consider over time:

- *implementation* [of a response to attributes] across all teaching and learning practices;
- *tracking* individual student goals and attributes;
- *developing* graduate outcomes…using the University’s mission as a framework;
- *developing* a methodology and terminology that will be used across the university;
embedding the attributes process in all layers of teaching and learning policy and practice, from course approvals to web-based mapping tools.

The AUQA Report (AUQA, 2006) acknowledges by way of a formal Affirmation:

Flinders’ planned development of a cohesive approach to identifying and implementing generic graduate outcomes (attributes) that will assist in preparing graduates for employment and define the characteristics of a Flinders graduate in the labour market (p.30).

Flinders has yet to formalise its response to the AUQA Report. Commissioning the Graduate Attributes Project however signals its intention to make advances in this matter.

This scoping study therefore set itself the tasks of:
1. identifying possible attributes/capabilities;
2. suggesting ways of developing a cohesive approach to identification and implementation of generic graduate outcomes;
3. suggesting timeframes and methodologies;
4. suggesting ways of integrating these attributes/capabilities into the process of preparing graduates for employment;
5. suggesting ways of defining the characteristics of a Flinders graduate in the labour market, whilst recognising ‘different disciplinary cultures’.

This process takes into account Flinders Strategic Priorities and Future Directions 2006-2010, Mark II, goals of ‘leadership’, ‘relevance’ and ‘student-focussed approaches to education’ (p.25). It also responds to the broader context of Education policy implementation expressed as: student demand; student progress; student satisfaction; as well as graduate outcomes. The underlying assumption is of a beneficial cyclic relationship between progress and satisfaction, intimately connected to the stimulation of constructive and positive student outcomes, which in turn translate to micro- and macro-demand: for places; for the kind of generic education Flinders offers; for particular courses and topics that sustain and power the cycle and for Flinders graduates in the labour market; as well as in broader civil society.

1.iv. Snapshots
The AUQA Report has offered an anecdotal impression of employers’ responses to Flinders graduates. It identifies them by the following characteristics:

- outward-looking;
- thoughtful;
- able to apply knowledge;
- caring;
- bright.

This combination of positive characteristics can be read in a number of ways but it suggests that the scoping study should reinforce already positive responses and expectations and test and built on them. It should also seek to identify other desirable characteristics. The snapshot offers a glimpse of applied intelligence, sound knowledge base and knowledge gathering capabilities, critical/analytical competence, contextual
awareness and openness, social responsibility and developed interpersonal skills. This is already a useful template against which to measure:

- qualitative responses from those interviewed during this study, and
- aims and objectives of existing collections of ‘attributes’ in use in the University, in other universities or proposed in the wider literature on the subject.

It also tallies with at least two of the FSPDF goals – relevance and student-focus – and promises a translation into certain generic approaches to leadership.

Student Satisfaction Surveys and CEQs have regularly defined the desired characteristics of degrees. For the past seven years or so we have been informed that Bachelor Degree education should feature something like the following (AQF Guidelines, 2000):

- acquisition of systematic and coherent bodies of knowledge
- development of skills, comprehension, use of sources
- development of ability to review, consolidate, extend and apply knowledge
- a capacity for self-directed learning
- interpersonal and teamwork skills.

The snapshot of Flinders graduate attributes offered above tallies reasonably well with the versions of generic undergraduate degree characteristics listed. The graduate attributes exercise should at least raise students’ awareness of the relationship between what they are offered in a Flinders education and how they are perceived to be using that education. This may require a contextualised (and preferably triangulated) response to attributes, rather than reliance on what graduates think they have gained several months after graduation. It suggests a greater need for undergraduates and graduates to consider how they are perceived as well as what they think of their education and their achievements. These are matters of perspective, focus, field, discipline, context and awareness and any measurement of attributes needs to take all of them into consideration. The task then is to monitor and measure/record responses to each of these levels of attainment with such conditions in mind.

If the Attributes project is to be meaningful and beneficial, the approach to implementation adopted by the University should recognise the need for vertical and horizontal integration so that attributes/outcomes are seen by all participants as part of the educational and administrative mix at all levels of the university’s operation in:

- transition and first year entry to final year exit;
- undergraduate and postgraduate study;
- staff development and training;
- course/curriculum development and topic approval;
- teaching and learning policy development;
- research practice and application of research;
- local and international contexts;
- university-to-community dealings;
- dealigngs with generic and professional graduate associations;
- placements and professional experience;
• dealing with professions and employer bodies;
• in publicity material about the university;
• analysis of CEQ and KAMs data; etc.

This outcomes-driven approach, when integrated with the established and effective process-oriented education for which Flinders is recognised, should have impacts on KAMs measurements of success that have (historically) recognised Flinders qualitative achievements as high and quantitative outcomes as needing improvement.

This draws attention to the need for reliable, interoperable and user-friendly instruments of evaluation and measurement. Consideration of models and prototypes will form a central part of this scoping study.

2: Preliminary statement of Graduate Attributes and a rationale
2.i. A work in progress
Participants in the study have suggested that more than one way of expressing generic attributes may be necessary to meet the different needs of users. This is an indication of what is likely to happen ‘on the ground’. The study therefore suggests a prototype statement, as well as variations that shift the size and scope or focus of the prototype. Style is important as well as methodology, structure and content. The principal statement should therefore be adaptable, academically sound and accessible as well as marketable.

Discussion and background research suggest three complementary and connected ‘kinds’ of attributes statements. They are identified here, respectively, as: reciprocity, confirmative and affirmative and applied to examples in the Discussion Paper. A complete response to an attributes ‘package’ needs to incorporate them all, so that:

- reciprocity recognises University and graduate interests;
- confirmation endorses undergraduate educational processes and graduate achievements;
- affirmation captures the aspirational aspects of graduate outcomes.

The Draft Statement on Graduate Attributes Mark II below, synthesizes the work done in the scoping study so far to emphasize reciprocity between university and graduate. The words in bold form a narrative. They will not necessarily appear that way in the final version. A decision must be made on whether this is a representative and acceptable narrative. The draft prototype below is overcrowded but most of the necessary components are there – based on what has been learned from discussions and keeping in mind how other universities present their attributes. The statement will need to be cut and crafted to form the centrepiece of a University-wide teaching and learning mapping and tracking exercise. It may need to appear in different guises – same message, different style.

Discussions and research undertaken indicate that Flinders graduates should recognise the need for graduates to be:

- knowledgeable;
- creative;
constructive;
productive;
self- and other-aware;
socially and culturally responsible;
professionally credible;
intellectually disciplined, assured and adaptable;
self-motivated;
work-ready;
team or group responsive;
open to local-global needs and possibilities;
anti-racist;
community sensitive;
equity conscious;
technology and information literate;
research capable;
risk conscious;
innovative and edgy;
ethical.

The emphasis in this position falls on ‘recognition’ of the ‘need to be’ and ‘understanding’ the reasons for that ‘need’ rather than on lock-step achievement in all these areas – some of which are quantitative, measurable and assessable, others of which are qualitative and require evaluation. The underpinning principle is that universities add ‘higher orders’ of understanding to a continuing and complex educational process marked by and celebrated - but not completed - upon graduation.

The complex conceptual entity is ‘an education’. The process is shaped by ‘a course’ or combination of ‘courses’. The definitive outcome for those undertaking courses is ‘graduation’. The substantive and overarching attribute is ‘graduate’. The challenge is to generate understanding (not agreement) at all levels of staff and student engagement of the relationship between entity, process, outcome, substantive attribute and its meanings and context – and the personal and collective expectations that attend that relationship. The contemporary requirement of a university is that it make known to participants, communities and a larger ‘world’ how and why it goes about its business to meet those expectations, what that means and who are the beneficiaries. This approach to attributes must do the same.

2.ii. Draft Graduate Generic Attributes Statements, Mark II and Mark IV

*Flinders University seeks to inspire achievement in its undergraduates and postgraduates by contributing to their understanding of the personal and public relevance of a university education. It wants them to think, learn, lead and link. In its pursuit and demonstration of excellence in teaching, learning and research, the university encourages graduates to engage with diverse communities and contribute to effective workplaces. It enables them to value:*
• knowledge acquisition, appreciation and application
• critical, analytical, creative and complex thinking
• information and technology literacy and numeracy
• clear and informed communication

and pursue:
• intellectual and professional integrity and leadership
• social and cultural responsibility and
• ethical, equitable practice.

These high-order, generic attributes connect with other more specific attributes, dispositions, capabilities and skills that flow from particular courses and their specialist or disciplinary orientations. They contribute to a life of learning and enrich the relationship between education, personal fulfilment, social and cultural engagement and meaningful employment.

This (deliberately inclusive and still awkward) version adheres to the reciprocal approach to attributes identified in the Graduate Generic Attributes Discussion Paper in its emphasis on the enabling aspects of university education, the value of that education and its active transmission and translation.

A shorter Mark IV alternative reflects a more concise representation but retains the reciprocal emphasis: students learn to value and chose to act. This is a sustaining relationship.

In pursuit of excellence through teaching, learning and research at Flinders University, graduates learn to value:

Complex knowledge
Critical and analytical thinking
Creativity and
Clear communication

and recognise:
Integrity in leadership
Social and cultural responsibility and
Ethical and equitable practice.

These generic attributes and associated skills and capabilities inspire achievement, enhance scholarship and inform personal, work and civic life. They sustain Flinders’ approaches to local and global education, shape communities and professions and underpin the University’s mission.

Both versions invite the question ‘how?’ and (especially in the Mark iv example) the answers fall into place: through individual initiative, teamwork, good time and resource management, initiative and applied imagination. And so on.
2.iii. Diagram
A diagram in the Graduate Generic Attributes Discussion Paper (p. 6) shows the relationship between dispositions, attributes, contexts, domains, skills, masthead and mission and positions graduates at the centre of this matrix. The reasoning behind such positioning is detailed in 2.iv.below.

There are four objectives to be achieved using the proposed methodology, as the draft statement and diagram are tidied, improved and included in the final Statement of Attributes.

1. Make the narrative absolutely clear.
2. Establish and sustain a strong relationship between tag, mission, dispositions, attributes, skills, contexts/domains and policy outcomes.
3. Make sure that Flinders University defines and uses its approach to and the language of attributes to suit its broad vision and actual practice.
4. Ensure that the final Graduate Attributes model is firm where it needs to be and flexible and accommodating elsewhere.

2.iv. Rationale
According to current thinking on and modelling of approaches to attributes (including work by Barrie \textit{et al}), the following flow of ideas has been used to rationalise the approach to a Draft Statement:

Undergraduates acquire and display \textit{dispositions} as part of the processes of education – dispositions relate to and are recognised in \textit{generic attributes} – generic attributes are supported by \textit{specific attributes} which are variously identified as characteristics, capabilities and capacities \textit{and} recognised in the expression of competencies and \textit{generic skills}. This flow of ideas is influenced by social and cultural constructs and \textit{contexts}. The parts are dynamic and reciprocal. The process can be learned. Graduates should be aware of and responsive to its benefits.

The (current) Flinders Mission Statement – Think, Learn, Lead, Link – can also be represented as a set of dispositions: to think analytically, to learn with integrity, to lead productively, to link equitably and so on. Should that statement change, the expression of its replacement might be thought of as attribute-friendly (to ensure continued vertical integration and compatibility of language) so that mission and attributes continue to complement each other. Considered in this way the mission, translated from aspirations and imperatives to a desirable cluster of dispositions, leads to the expression of Flinders generic attributes. Tag, mission, dispositions, generic attributes, specific attributes and skills can then be seen as a succession of necessary translations in a changing (and potentially \textit{transformative}) process at this university.

The flow of influences and associations shapes and is shaped by the interaction of substantive domains and shifts/changes in \textit{context}: scholarly \textit{education}; formal/informal \textit{employment}; personal/public involvement; communal/global engagement.
Together they affect responses to matters of policy at all levels: integrity and ethics, equity and anti-racist education for example.

3. Theoretical and External Approaches

In ‘Developing generalisable measures of knowledge and skill outcomes in higher education’, a paper presented at the AUQF conference in Hobart, in 2007, Coates offered the following ‘short list of the most common …generic skills’ to be found in university self-characterisations:

- critical and evaluative thinking;
- analytical problem solving;
- innovative and creative thinking;
- written and verbal communication;
- collaborative work;
- numeracy;
- technology literacy;
- independence and initiative;
- planning and management;
- citizenship;
- social and political awareness.

When this list is compared with its equivalent drawn from discussion with Flinders staff and other ‘stakeholders’, it becomes evident that there is a close fit.

Coates points out:

While much knowledge will be specific to various courses and disciplines, individuals are also expected to acquire general knowledge through study. This may be knowledge about ethical standards and processes, of social contexts and systems, or of how best to manage personal learning. It is these more general kinds of knowledge that are often used to characterise ‘higher-order’ or ‘value-added’ outcomes of university study. (Coates, 2)

The generic list might reasonable acquire three further skills as a result, relating to:

- ethical standards and processes;
- contextual, historical awareness; and
- personal learning and positioning.

In discussions with Faculty representatives and academic specialists in the field every one of these ‘typical’ attributes was mentioned as characteristic of approaches taken to attributes at Flinders and all discussions accentuated ‘higher-order’ and ‘value added’ outcomes. Two other generic expressions also emerged:

- global competency;
- complex thinking.

3.i. Terminology
The process to which the university is committed will need to be able to address each of these approaches and their attendant questions. This means giving staff and students the opportunity to identify, consider and deal with them at a number of levels. A first step is to get the terminology straight. Participants had different responses – many of them intuited - to the term ‘attributes’. Here is a simple working definition:

Attributes are: ‘qualities ascribed’; ‘objects recognised as appropriate’; ‘characteristic qualities’.

This generic (Macquarie Dictionary) definition draws attention to four things. The first is that ‘others’ bestow attributes. This depends on who is constructed as the educated subject and who the arbiter: student; staff member; discipline; profession; employer; etc. The second is, therefore, that attributes and attributors must be recognisable to others to be recognised by them. The third is that the qualities attributed to people, entities and objects must be characteristic – that is, distinctive even idiosyncratic, intellectually and morally sound and highly reputable. The fourth is that there is a reciprocal element at work that confirms and perpetuates the process. A fifth and implied component can be added: attribution carries a combination of informed judgement and necessary measurement. This means that the University has to judge its graduates fairly and carefully and to respond to its judges fairly and carefully. To do this it must develop and depend upon credible instruments of internal and external evaluation and assessment.

A more specific and limited definition (and potential educational and political minefield) reads as follows:

Graduate Attributes: These are the qualities, skills and understandings that a university community agrees its students should develop during their time with the institution and consequently shape the contribution they are able to make to their profession and society…They are qualities that also prepare graduates as agents of social good in an unknown future. (Bowen et al, 2000 cited in Barrie, below)

This second definition hints at the ideological and even moral backgrounds to debates and issues inherent in the process to which the University is committed and foregrounds many of the questions asked above.

In the Flinders case – and given local, specific and varied uses of attributes or attribute-like constructions in the assessment and evaluations of courses, teaching and student achievements – it might be sensible to consider a three-level or layered process involving the recognition of:

• generic attributes for the university as a whole;
• sub-generic attributes and particular skills, drawing on the generic, relevant to broad fields and cross-over or clustered fields of teaching and learning in the university;
• specific attributes and skills drawing on the generic and sub-generic required by professions or used in specialist fields of teaching and learning in the university.
This must be read against what staff have identified as conscious and unconscious, basic and higher-order personal attributes acquired before and beyond as well as within university life and against other published orders of competencies in operation in other sectors (Meyer Competencies or Employer Competencies, for example).

These layered representations can then be incorporated into university literature and practice as and where appropriate: generic attributes; then typical and specific attributes; and skills. The layering also draws attention to other terminology that qualifies and specifies attributes in context, eg:

- dispositions;
- competencies;
- capabilities;
- capacities;
- characteristics;
- qualities.

Each of these terms brings its baggage. Each refers to underlying ‘skills’. The implication is that attributes and skills must be considered together and glossed according to context in order to match (wherever possible) qualitative with quantitative/verifiable/assessable approaches. In the Flinders literature on attributes and accompanying the Statement and its Diagram, a form of words such as the following would allow readers to know the how and why of Flinders usage:

Flinders University distinguishes between **generic attributes, specific attributes, dispositions and skills**. They support each other but they are not quite the same thing. Attributes, dispositions and skills may also be expressed, according to **context** and the usages of particular disciplines or professions as: competencies, capabilities, capacities or qualities and characteristics. This **order of expression and association** is connected to aims, objectives, standards and expectations of university disciplines, cultures as well as professions. Undergraduates should become aware of the subtleties and nuances of meaning and application of terminology as they progress through their courses and should be able to **recognise, contextualise and use the terms with ease and accuracy** by the time they graduate:

- **attributes**: these are qualities ascribed or objects recognised as appropriate; characteristic qualities
- **disposition**: refers to a turn of mind; mental inclination; willingness
- **competency**: reflects professional adequacy and due qualification; a sufficient level of achievement in quality and quantity
- **capability**: is a quality or ability that can be developed and used
- **capacity**: means the power, ability or possibility of doing something
- **characteristic**: refers to a distinguishing feature or quality; something distinctive
- **quality**: is a distinguishing feature or an expression of excellence and accomplishment
- **skill**: is the ability that comes from knowledge, practice and aptitude; expertness and excellence in performance.
These general terms take on special meaning when applied to the particular ways of a discipline, department, profession or institution.

3.ii. A bigger picture
It is important to be able to identify student attributes in a general sense as well as against the particular requirements of a single-institution audit, though the practices are related in their response to reasonable societal expectations of a return on ‘investment’. If the nation’s economic prospects and concepts of the public good are yoked together in education, taxpayers and fee-paying investors alike need to have some idea of how to describe and value their investment in personal as well as institutional terms. The Questions arise for each institution:

- How do we position the identification of attributes?
- How much weight do we give the positioning?
- Are attributes time and culture specific?

Some universities have been involved in the attributes-defining process for at least a decade (eg. Queensland, Griffith, Sydney). Some have inscribed each level of graduate progress with desirable outcomes expressed as attributes: eg. level one BA students will be expected to demonstrate the following attributes; honours Arts students will be expected to exhibit the following attributes; etc.. This is intended to demonstrate rigour in educational planning and outcomes. Others have attempted to write generic attributes into most if not every layer of description, evaluation and promotional material (Deakin, UniSA). This is intended to demonstrate consistency of purpose and ‘message’. Histories, missions, managements and cultures – as well as government policies and their funding implications - influence different approaches. Some universities have chosen attributes to mark the ‘centring’ of student-focussed practice in their mission (CQU, LaTrobe). They begin with the question: What is a graduate? Other universities concentrate on consistency of aims and outcomes at all levels believing that the ‘making’ of a graduate is iterative, process-driven not ends-determined (Melbourne, Monash). There are national as well as international examples of both (overlapping) approaches (Alverno, Princeton, Leeds Metropolitan, etc.) and international examples of general frameworks are useful (Biggs, Perry, Florida Taxonomy, etc.).

There is now something that might be described as an international attributes 'movement' and something that might be called a local 'tendency' in the sector. The movement looks for ‘transformation’. The tendency seeks to reform and to translate already-defined graduate outcomes into the language of recognisable/distinctive 'attributes'. The former sees itself as a driver of and contributor to broad, sectoral structural change. The latter locates graduates and their institutions in a recognisable, bona fide and wide-ranging (even global) tertiary intellectual culture and connects students to a particular, institution-specific expression of those attributes - thereby distinguishing the 'brand' and their capacity to represent and enhance the status of that brand. Some universities therefore see the attributes movement as an agent of trans-formation. Other universities see it as a practice of re-formation.
Movement and tendency together have generated sufficient momentum across education sectors to produce, for example: a proto-set of SACE Attributes in SA; various expressions of postgraduate attributes at universities around the country; and attributes-driven, deep structural changes in teaching and learning as foundational activity in tertiary education – activity that affects staff, students, research, community networks, employer perception and behaviour, marketability and so on.

An increasing amount of research on the subject of attributes and attributes-related education is being generated and its outcomes are being tested in Australia and overseas. Some of this research is by Flinders academic and general staff. Griffith cites its GCCCEQ approach and the Griffith Graduate Project and links distinctive mission to, distinctive processes and graduate attributes; La Trobe has its Graduate Attributes Project; Deakin promotes the ‘Deakin Advantage’ as the apogee of attributes; Monash trades on it Graduate Pathways approach; QUT has Student Portfolios; Melbourne University builds on its Nine Principles Guiding Teaching and Learning; UTS has its Bell Project; Adelaide University uses a Graduate Attributes Continuum conceptual framework; Curtin endorses its eValuate instrument for measuring student satisfaction; and so on. A Carrick/ALTC Graduate Attributes Survey will be conducted by a consortium of Universities including CQU, RMIT, UNSW and Murdoch University to gain responses to approaches to attributes in teaching and learning. The Carrick Institute commissioned research on the subject from Dr Simon Barrie, Associate Director of the Institute for Teaching and Learning at the University of Sydney. He recently presented some of his findings at LaTrobe University (30 July, 2007). He proposed, *inter alia*, that graduate attributes:

- have the potential to articulate newer forms of knowledge espoused by the academic community;
- have rarely gone beyond a limited articulation of knowledge and skills;
- have had limited impact on the sorts of educational experiences students engage in.

In his attempt to position the attributes debate he offered the following hierarchical model of Conceptions of Generic Attributes (CoGA) template to explain current levels of academic understanding:

- precursor attributes;
- complementary attributes;
- translating attributes;
- enabling attributes;

with ‘enabling strategies subsuming and being supported by translating strategies which in turn are supported by complementary and precursory strategies’. This approach has implications for teaching policy and practice and cultural change in its two-tiered, mutually reinforcing approach to policy and practical outcomes in which:

- information literacy, research and inquiry, ethical, social and professional understanding, communications, personal and intellectual autonomy
are contextualised and focussed by the dispositions of:

- scholarship, lifelong learning and global citizenship.

This kind of approach is useful in that it acknowledges the potential complexity of the exercise that Flinders has agreed to undertake whilst at the same time proposing strategies for dealing with and translating that complexity into good outcomes for students, staff and institution. It is also useful in that it supports Flinders staff in their careful consideration of the potential of the exercise and its capacity to bring about:

- improvement in teaching and learning understanding and practice;
- raised awareness among students of the knowledge value of their education;
- the necessary layering of approaches to attributes and identification of the different cognitive, social and emotional functions performed within and between those layers;
- the combination of and relationship between attributes and skills;
- the strategic recognition of attributes, their provenance and influence beyond the academy.

It also adds a note of challenge:

- the approach to attributes so far has been limited and limiting.

Some senior managers and staff may ignore this challenge because it invites more adventurous approaches to change than they are prepared to adopt. It also serves as a reminder of the role played by history. Words gain and lose currency with increasing rapidity. What ‘buzzword’ or conceptual shift will replace ‘attributes’ in the next iteration of policy? In the processes of change, flow and flexibility are important, as is the capacity to define and influence current terminology. Any decision to address attributes is as connected to institutional strategy and tactics as it is to sound, contemporary pedagogy.

4: Flinders position, background, commentary
4.i. Potential approaches to attributes
If the challenge is accepted and the job is carefully conceived, defined and implemented, a flow chart of undergraduate and postgraduate generic attributes, specific attributes, dispositions and generic/specific skills across the university, within and between boundaries could be constructed to demonstrate relationships and continuities in learning processes – from transition to graduation, discipline to discipline, course to course. Flow is important. This becomes increasingly necessary as students combine degrees, or take topics ‘outside’ their principal areas of study. There is more potential in this exercise than meets the eye. In addition to its specific value to staff, students and other learning/employing/user communities, it could begin to ‘map’ teaching and learning methodological similarities as well as differences at work in areas occupying ‘apparently’ different points on the compass (and campus) and unite them via the attributes they engender: the value of ‘good science’ to aspects of the Humanities and Humanities-influenced professions like Law; the qualitative/quantitative approaches of the Social Sciences and their relevance to the Humanities and Sciences and the qualitative-interpretative, Humanities-derived and prized approaches to aspects of the Sciences,
composite sites like Medicine. This having been achieved it could then track current policy references - integrity; equity; anti-racist; gender; disability; internationalisation – to create not just a web of cross-reference but a theoretical and methodological approach to connections, tied to ‘readiness’ and expressed as attributes. (A preliminary sketch of methodological pathways can be found at Appendix 2, p 48, below.)

This approach might have further implications for understanding the positioning of the University as part of the Innovative Research Universities group. This association does not mean that Flinders is not an innovative teaching and learning (as well as researching) university. An important aspect of the Attributes Project may well be to re-emphasise and demonstrate the teaching and learning underpinnings of whole-of-university education and graduate-in-community education in which a respect for and valuing of knowledge research and exchange are equal partners – a University attribute, in fact.

It would not be hard to select from these various examples and approaches a list of attributes that reflects Flinders’ history; mission; organisational structure; distribution of courses; target areas for recruitment; demographics; Faculty dispositions; priorities and values. The selection does not have to be deliberately or self-consciously different from the attributes identified by other institutions but the choices have to be expressed in a way and in an arrangement that reflects the University’s realities if the Project is to respected. It has to consider the question: What is a graduate? In order to answer the question: What can be said about our graduates, that identifies them closely with what we do and the successful ways in which we go about our business? These questions propose a mutually constitutive relationship between institution, graduate and community and can be usefully answered in the negative as well as positive. Flinders is not a:

- technical university;
- research-only university;
- university with a majority of international students;
- university with a C19th tradition;
- university with staff and student populations which sustain all academic disciplines.

Flinders is a university with:

- a strong liberal Arts and Sciences history;
- a proud record in teaching and learning excellence;
- a strong research record in certain areas;
- respected professional schools;
- increasing outreach – in Australia and overseas;
- particular demographic characteristics: urban-regional-international;
- a commitment to Indigenous education.

Flinders has:

- changed over time and is keen to demonstrate its responsiveness to change;
and so on. The University’s position relative to graduate attributes has to be read according to these historical, spatio-temporal and cultural contexts. Then the emphases and nuances have even more particular meaning.

The task, when presented this way, is not to ‘introduce’ a ‘foreign’ concept to Flinders but to make the most of what is already there, understood and in use and add value to it. It is certainly not to find a generic catchall, and have done with the exercise. The task is to shape the information to suit time, place and the changing layered academic cultures in operation. This involves:

- getting the language right;
- getting the methodology right;
- defining Flinders’ approach to both;
- translating this generic language and methodology into discipline-, faculty-, profession-specific usage where necessary;
- connecting language and methodology to structures and cultures;
- incorporating the generic language and methodology into all teaching and learning documents (from mission statement to topic brochures), SAMs and other guides and documents of explanation and requirement used by students;
- preparing relevant background and research materials which explain the thinking behind the use of language and methodology, their generic importance and specific applications;
- constructing accessible feedback loops between students, staff, course coordinators, boards, advisory bodies, etc;
- addressing the quality of feedback from outside the university against the university’s stated, researched and defined aims with regard to attributes and their meaning;
- comparing KAMs data with other feedback and survey on understanding attributes and their relation to satisfaction with courses and the university’s teaching and learning cultures;
- monitoring and responding to research, implementation and feedback;
- keeping abreast of the uses of attributes and influencing or changing the cultures in which they have currency;
- recognising that other sectors use versions of the attributes and competencies approaches adopted by universities and positioning the university accordingly;
- identifying and supporting the staff that continue to make all this happen.

Each of these ‘needs’ will be addressed in more detail in Section 9: Methodologies and Methods for the Rollout (below).

5: Cost Centre and student sketches
The following sketches are drawn from fuller accounts of cost centre and student responses to be found in Appendix 2.

i. EHLT staff: position their responses by asking a number of questions: What skills/attributes do students bring to university and what do we do to recognise these skills/attributes? To what extent can we claim to ‘give’ students attributes? Should we be talking about ‘value adding’ in this context? What does ‘life-long learning’ mean? Are
we really just ‘credentialing’ students and should we simply be leaving it at that? How do we assess attributes? How do we avoid a mechanistic (tick the box) approach to the process?

ii. Health Sciences staff: stress the importance of ‘choice’ and the application of ‘higher order adult learning skills’ in preparing students for the attributions – ‘skilled practitioner’ and ‘professional’; as well as the role of external professional bodies in setting curriculum aims, objectives, outcomes and standards.

iii. Science and Engineering staff: recognize ‘intimacy’ of relationships between subject, student and teaching and learning approaches; contextual influence of a single campus learning environment; relevance of multi-disciplinary choices in course building, objectives and outcomes; mentoring; a generic skills matrixed e-monitoring instrument and process; and opportunities for creative self-assessment – within the parameters of ‘good science’.

iv. Social Sciences staff: acknowledge and identify ‘formal and informal’, ‘generic and higher orders’ of attribution as well as ‘institutional and disciplinary’ cultures of socialization; and the complexities of undertaking a meaningful and Flinders-specific attribution process when applied to generic awards.

v. Yunggorendi staff: emphasize strategic contact with students; clear articulation of teaching philosophy related to socio-cultural and employment outcomes; team-approach to teaching and learning; community responsibility; on and off-campus opportunities to test learning skills and responses to philosophy, methodology and practice.

vi. Library staff: demonstrate familiarity with the relationship between attributes, skills, competencies, evidence-based practice and systematic review. They emphasise research-based enhancement, encompassing assignments, tested pathways and hands-on approaches to capability (definition, analysis, evidence, searching ability, interactivity, on-line assistance, flexible access, reliable and consistent instruments) that ought to be/to become familiar to all students.

vii. Students: emphasize learning how to rationalize and integrate personal and professional attributes; recognition of the standing of the University in the sector and their education within it; valuing cross-cultural contacts; building personal confidence in quality education; appreciating secure teaching and learning foundations; valuing scope and challenge of a choice of offerings; recognizing liberal and diverse approaches to educational and social issues.

6: Budgets and the Library Generic Skills proposal
6.i. Costs and Budgets

Item 7 of the Brief of the Graduate Attributes Project states:

Identify the full cost of the project including input from the Library with respect to its proposed project entitled Aligning Student Library Assignment with Generic Skills (VCC Doc 08/02/07)

That objective will be deferred until the publication of the Discussion Paper, in due course. At this stage there is a need to establish a funding rationale and some criteria against which funds might be allocated. Two approaches to funding will however be
offered for consideration, based on real-life Library experience at Flinders and the roll out of the approach to Graduate Attributes, by way of comparison, at Sydney University.

6.ii. Cost-benefit relationships and time
The cost-benefit relationship in this exercise is relatively easy to hypothesize but not so easy to calculate. That is because the ‘costs’ of quality measures are first of all values-driven rather than quantitatively expressed and calculated. There is no doubt that an improvement in the level of graduate understanding of educational attributes will benefit the individual and that such benefits will return to the University in formal as well as informal ways. Formal, quantified, improved recognition in CEQ-type surveys carries with it the promise of federal funding. Informal recognition results in community confidence in the institution and an increased desire to preference that institution when tertiary education choices are made. When combined, the responses can be estimated and (perhaps) measured in terms of desirability and competitiveness. They may also be recognised in improved academic results, staff satisfaction, successful applications for teaching and learning related research grants and awards, increased interest in staff development, and so on.

How much these outcomes are worth in terms of resource investment is another question. Whether that investment comes from a new source of funding or from existing budget lines is likely to sharpen the cost-benefit debate considerably and this will undoubtedly influence the reception of the Project in some quarters. How the funding for roll out and maintenance of attributes-enhancing teaching and learning strategies is shared across the cost centres (and if so for how long) is a further matter for consideration. One response is to fund cost centres, equitably, on a university-wide needs basis; another is to base-fund the cost centres and then pursue a needs strategy; yet another is to ask cost centres to compete for funds from the outset.

To the extent that this background paper inclines to a view on the matter at this point, funding should be equitably distributed and then topped-up on a needs basis, to ensure uniformity of outcome. A whole-of-university approach is of paramount importance. Cost centres which are somewhat advanced in their approach to attributes should be encouraged to continue to lead the way and share their work with the rest of the university: to scope the next phase as it were. This approach responds to and accommodates the Library in particular. More of that below. Cost centres which need to consider their position and begin to formulate approaches and strategies should, in the first instance, be funded according to their needs to ensure that catch-up is possible where necessary. An internal audit needs to be done – beyond the scope of this Project - to establish these levels and their cost implications but on the evidence to hand, the Library, Science and Engineering and Health Sciences may be some steps/in parts ahead of EHILT and Social Sciences in their approaches to uniformity of recognition and expression of attributes.

There are historical and structural reasons for this – relating to the complexities presented by combinations of generic Arts and specialised degrees - expressed elsewhere in this paper. Whatever the approach, the important and constant determinants of progress
should be defined as: targets to be met and timelines observed. Funding and resources should then accommodate the targets/timetables according to the pathways negotiated by the cost centres to meet and working back from university-wide deadlines: the next AUQA Audit being one; the CEQ for the generation of 2008 being another and so on. There is a clear cost-benefit relationship to be postulated in being able to sign off on a satisfactory development-implementation-unification phase within, say, one to one and a half (?) university generations or by 2012. It may take that amount of time for cultural change to be recognised and for students and staff to begin to respond routinely to the objectives of attribution using a chosen, tailored and Flinders-preferred terminology. Interim, incremental improvements can be expected and a first generation audit can be done in 2010.

6.iii. The Library: ‘Aligning Student Library Assignment with graduate Generic Skills’

The Library has an important - and possibly central - part to play in the rollout of Graduate Attributes. The key to that role lies in the title of its submission to the Learning and Teaching Fund, 2007. In its service to the whole of the university it has developed ways of creating and delivering on-line aids (Library assignment, academic integrity assignment) to scholarship that ‘align’ with each other. Alignment and flow go together. The location, focus and management of these exercises suggests that:

- the Library is already equipped to deal with on-line surveys and exercises;
- students are used to looking for such services at the Library site;
- staff are increasingly willing to direct students to the services and the site;
- the Library has a whole of university responsibility to deliver creative and critical responses to information literacy and fluency.

This combination of usages, familiarities and benefits further suggests that:

- the Library is an effective information hub of the University;
- addition of a Generic Skills exercise and a Generic Attributes exercise to the existing services would create a suite of self-administered aids and evaluations which could be packaged and used to great advantage by the whole university community.

The consolidation of information in this place/space, in the suggested forms, backed by existing expertise and marketed accordingly could have academic and cost benefits of some magnitude. It would also have advantages for Planning Services in the management and distribution of ‘aligned’ user/success statistics.

The application for support to the Learning and Teaching Fund demonstrates familiarity with the relationship between attributes, skills, competencies, evidence-based practice and systematic review. It emphasises research-based enhancement, encompassing assignments, tested pathways and hands-on approaches to capability (definition, analysis, evidence, searching ability, interactivity, on-line assistance, flexible access, reliable and consistent instruments) that ought to be/to become familiar to all students. It also offers an adaptable methodology: establish questions; identify layers of evidence; guide resource gathering; test processes; exemplify best practice. This is a sound foundation for
thinking about the instrument(s) of analysis and reflection required for the successful implementation of an Attributes approach to teaching and learning.

In addition the submission provides a ‘ball-park’ measure of set-up costs, viz:

1. Project design (HEO 7 for 3 months)  $20,000  
2. Web design (HEO 7 for 3 months)     $20,000  
3. Time-release/consultation (HEO 7 for 6 months)   $40,000  
4. Testing                                   $10,000  
Total                                      $90,000

This figure might apply to a six or a nine-month time frame, but an average of $10,000/month for nine months gives some indication of initial cost based on prior Library experience. To this must be added the costs incurred by faculties, other cost centres and specialist units in coordinating and unifying approaches to attributes. What might those costs be?

At this point an outside-Flinders example is useful. Sydney University is managing its rollout with the following core of staff, drawing on the services of its Institute for Teaching and Learning:

1. A specialist coordinator for 1 day per week for a year.  
2. One HEO 5 for 2 days per week for a year.  
3. One ‘senior leadership’ person for 1 day per month from the Faculties and cost centres for a year.  
4. Faculty commitment of resources (unidentified) to adjust strategic plans to meet the rollout.  
5. A sum of money (unspecified) subject to competitive bids from the Faculties to generate initiatives, research projects and specific implementation strategies.

These approaches in combination should give some indication of ways to approach costing the roll out. They also make it clear that it cannot be done effectively and thoroughly without:

- across the board support;  
- strategically located senior academic leadership;  
- specialist/dedicated project coordination;  
- specialist unit expertise;  
- faculty-specific initiative and investment;  
- a university-wide tracking instrument  
- hub-centred delivery  
- adequate administrative/management support.

The time-dollar ratios in Flinders Library and Sydney University approaches seem consistent and roughly commensurate.
7: Architecture: mapping, structures, measurement and feedback
7.1. Surveying the space
Several approaches to the way that attributes can be employed, monitored and measured have been advanced in discussion. So far, they include:

- an electronic questionnaire accessible to all students, promoted by all staff and attached to all courses managed by the Library;
- a self-assessment test, geared to chosen fields of employment, to be taken by students before graduation;
- course capstone topics of review and reflection;
- faculty-specific matrices of attributes and skills;
- extensions of the Student Satisfaction Survey;
- extensions of graduate skills instruments;
- SET evaluations to include compulsory questions on attributes;
- Trial/mock CEQ exercises;
- blogs and chatspaces;
- e-Portfolios;
- an Attributes Flo site;
- an on-line omnibus attributes 3 Unit topic (attributes questionnaire, personal portfolio, course evaluations) available to all students free of charge – NGP result for inclusion on testamur.

At this stage, no clear preference for one approach has made itself evident, however cost centres or sub-sets of cost centres are already using versions of some of these approaches to good effect: matrices; surveys; capstones; skills exercises; check-lists; employer generated skills templates; and so on.

In every consideration of such instruments and approaches, so far, the following issues have also been raised:

- voluntary participation or compulsion;
- student survey overload;
- staff resistance to unsupervised and potentially unflattering comment;
- access and equity;
- incentive;
- value to employers;
- cost of maintenance;
- time spent on topic evaluation/ lost to topic content;
- value of feedback to students as well as staff;
- education self-management advantages;
- marketing implications;
- duplication of testing and information exchange; and
- assessment.

Of these responses, the first and last are perhaps the most problematic when connected to matters of cost-benefit and long-term effect. Voluntary participation may result in insufficient student involvement and less than committed endorsement by staff.
Compulsion might result in resistance and counter-productive responses over time from both staff and students. Both represent a challenge for approaches to university-wide assessment and evaluation.

7.ii. Hub, House and Contents
At this point the experience of the Library in dealing with on-line instruments becomes important as a hub or central e-site, as does the potential housing and ‘packaging’ of a suite of self-assistance measures: called, say, the e-SIIA (Skills, Information, Integrity, Attributes) Pack, linked to Student Services and Work-ready sites. Statistics to June, 2007 show that over 2,800 students enrolled in over 50 topics had undertaken (compulsorily and non-compulsorily) the Library Assignment in 2007. If an attributes instrument drew an equivalent compulsory/non-compulsory response, would that be a sufficient return? If an attributes instrument was designed to link with the Library assignment, a generic skills assignment and the academic integrity exercise – all four to be recommended at all levels of student involvement, with compulsion as an option for certain topics and courses (as in the case of the Library exercise) – the results over time could be very useful indeed. Curtin University experience may show how and even why.

7.iii. One Big Room – a web environment
Perhaps the most expansive attempt to engage with students electronically has been undertaken via Curtin’s eValuate project (Curtin University of Technology, 2005) – an on line unit evaluation system designed to provide ‘transparent feedback on units and courses’. Its success so far has been detailed by den Hollander, Oliver and Jones in their paper ‘Managing Change as Part of Improving Teaching and Learning: Transparent Evaluation and Comprehensive Course Review’ (2007, 1-5). In addition to the feedback and review advantages claimed by Curtin, the system is said to have yielded data to assist in producing a ‘more rapid improvement in the quality of the student experience, chiefly thorough intense work on mapping and refining course curricula’ (1). As part of a Flinders review of the SET process, eValuate is already being investigated. The findings may therefore prove to be of benefit to more than one Flinders teaching and learning project.

The ‘lessons learnt – guiding principles for whole of institution change management’ from the Curtin project are worthy of attention:
- It is essential to have an idea which is intellectually defensible and which is focussed on an issue that is of practical benefit to hard working staff
- Clear and unequivocal support for the idea is essential from the leaders of the institution
- Appropriate project funding is required so staff can be taken off line to develop the ideas and the process
- Communication of all aspects of the project, including the issues around change must be continuous and sufficiently detailed to the level at which it is directed
- Stamina and capacity to manage the natural resistance of the human condition to any form of change
- Continuous reference back to the original intent so that the project is kept honest and on track
• Celebration of the achievements as these arrive
• Evaluation of the project in a transparent and open manner. (4)

Wollongong University has also addressed the single environment approach. A synthesis of its findings is to be found in the work of Hoban et al, in the *Journal of University Teaching and Learning Practice*, Vol III, 2004.

7.iv. Modular construction
Earlier mention of an audit of matrices, surveys, capstones, skills exercises, check-lists, employer generated skills templates in use at Flinders serves as a reminder of the number of yet-to-be identified and coordinated, attributes-related instruments already in use within the institution. This scoping study has generated sufficient anecdotal evidence to suggest that a second suite of semi-transferable, modular instruments can be assembled from within. This modular suite could be shaped to follow the methodological flow across discipline and administrative/organisational boundaries outlined earlier in this study.

8: Thinkers and doers
8.i. A team of scholars
If the Project is to have ‘deep’ as well as immediate impact, it will rely on quality of thinking as well as administrative efficiency and effective marketing. There are teaching and learning thinkers and researchers in each of the Faculties who already have much to contribute to the roll out. Twenty or so scholars are publishing/researching on attributes-related matters in the various academic, administrative and information managing cost centres already. Several of them have expressed interest in meeting to discuss the approach adopted by the University when that decision is made. These scholars and (others who are interested to become involved) should be brought together as a resource, to share ideas, methodologies and critical/evaluative responses with a view to further dissemination of the latest thinking and practice on the subject. This should occur on a regular basis for at least the first twelve months of the project and perhaps for two to three years - or until a review process indicates that embedding has been achieved. This suggestion has implications for staff development relating to attributes approaches. It has implications for teaching awards and Carrick/ALTC grants. It is a source of mentoring potential. The view has been strongly put that if staff are not encouraged to see this as an intellectually persuasive, career enhancing and practically beneficial way to approach teaching and learning, then students will not benefit either - and neither will the University. The Project needs drive and momentum from as many internal sources as it can reasonably mobilize, resource and reward. There is already a Flinders group thinking in terms of an IRUA approach to teaching excellence.

8.ii. Specialist input: assessment
In an attempt to start this process of collegial, specialist input, the Discussion Paper has been read by a small number of colleagues in fields likely to be of importance to the Project’s credibility and successful implementation (e.g. assessment and curriculum design, so far). Important questions have already been asked which draw attention to
issues beyond the immediate scope of the study or touched on/alluded to in the study – especially in matters of:

- professional development;
- ‘back wash and ‘forward wash’ of Flinders approaches in relation to SACE Capabilities, including recognition by Flinders of assessment of capabilities at secondary level; and
- attributes as signifiers of ‘time in history’.

Colleagues H. Askell-Williams, D. Curtis, M. Lawson and R. Murray-Harvey from the School of Education have published in this area (2005, 2006) and their work for DECs and the Queensland Studies Authority is of considerable relevance here. It gives rise (in this context) to the Askell-Williams question:

How will student’s success at achieving the attributes be assessed (other than by self-assessment) and given formal recognition and therefore value?

The Discussion Paper is deliberately silent on the extensive literature and specific matters of assessment – beyond foregrounding (for reasons identified) the apparently successful, adaptable quasi self-assessment model undertaken in the Faculty of Science and Engineering – in the absence of a clear or majority expression of preference across the university. It assumes that a ‘decision in principle’ will be made on the kind of approach to be taken to attributes before specific mechanisms and are canvassed and decided upon. This may be a false or misguided assumption: one attuned to inclinations expressed or intuited rather than the art and science of specific assessment models and methodologies. That said, the research undertaken by Curtis, Lawson et al offers broad models to be considered when a decision in principle is made and ratified. Relevant models are identified as:

- **Non-assessment:**
  - curriculum mapping;
  - implicit assertion of capability;
  - capabilities portfolio;
  - university-based assessment (portfolio assessment; performance assessment; consensus teacher judgement; authentic performance-based assessment).

- **Systemic assessment:**
  - Graduate Skills assessment (GSA).

These several approaches are discussed in Lawson et al. ‘The representation of attributes of the lifelong learner in documents of the Queensland Studies Authority. A discussion and review of related research. Report prepared for the Queensland Studies Authority’ (2005), and Curtis et al.’ Interim examination of indicative Case Studies that incorporate Capabilities in Curriculum, Assessment and Reporting. Report to the SACE Review secretariat, South Australian Department of Education’ (2006).

The Discussion Paper also recognises other Flinders scholars working in related areas, including Staff Development, and attempts will be made to pool these research resources and approaches as the preferred position, whatever that may be, is rolled out.
9: Methodologies and methods for the Flinders rollout
The methodologies and methods required for the successful delivery and maintenance of a graduate attributes approach to teaching and learning appear relatively straightforward but they involve three types of methodological interaction and coordination (academic, administrative and organisational) in three dimensions (time, space and content). In each case the underpinning procedures are similar: identify student and staff needs; identify points of articulation of need and consolidation of response; test responses; review tests and responses; effect and respond to change. Some general principles underpin these procedures.

9.i. General Principles
1. Build on what is there: bottom up and top down.
2. Recognise the interests of all stakeholders.
3. Allow all stakeholders to contribute.
4. Stage, step, monitor, mentor and review the process.
5. Recognise the necessity of common goals and language.
6. Recognise the need for commensurate and consistent, university-wide implementation, assessment and administration of the Project.
7. Recognise the relative value/benefit to different academic cultures, contexts and objectives.
8. Make use of Flinders research/expertise in the area.
10. Link to other quality exercises, evaluations and surveys.

9.ii. Methodology
This methodological approach applies to academic, administrative and organisational domains:
1. Locate the Attributes Project in a tried and tested educational framework and process.
2. Contextualise the Project.
3. Recognise, employ and contribute to attributes pedagogy and research.
4. Pursue respected qualitative learning feedback, assessment and analysis strategies.
5. Apply quantitative analysis where necessary.
6. Triangulate qualitative and quantitative findings.
7. Contextualise data statistically, culturally, pedagogically.
8. Review data regularly.
9. Recognise mutually constitutive relationships between stakeholders.

9.iii. Methods, Strategies and Tactics
Underlying principles and methodology, based on the ideas and research outlined in this paper, produce the following approaches to scoping the Project and its roll out:
Scoping Study
1. Interview a range of stakeholders.
2. Position and contextualise the study according to policy: intellectually; administratively; procedurally.
3. Identify each Cost Centres’ states of readiness to receive and act on the Project.
4. Background the study in contemporary research and gather a resource bank of literature and surveys of national and international experience.
5. Build a ‘layered’ Flinders Generic Attributes prototype based on the first three approaches ensuring systemic compatibility and consistency of aims, objectives and outcomes.
6. Compare the prototype with models in other institutions.
7. Identify possible instruments of measurement.
8. Circulate prototype and plan for staged roll out for comment.
9. Allow for a substantial feedback period.
10. Rework model and roll out proposal.

**Roll out**
1. Identify key players and lines of reporting/engagement: management; academic; student reps; administration.
2. Appoint an independent coordinator to promote and sustain the Project.
3. Get definitions and terminology straight and define their use at Flinders.
4. Engage Faculties and AOU’s in the process of identifying course-specific attributes and connect to generic attributes template and rationale.
5. Engage students with the process from transition to graduation through the identification and management of ‘trigger moments’.
6. Unify Teaching and Learning administrative procedures with regard to the Project across the university through coordinated plan conceived and endorsed by Faculty Managers/ Assistant Managers (Academic).
7. Begin the roll out with seminars/symposia, briefings, background papers, publications and internal/external expert advice. Involve all internal and external stakeholders.
8. Identify short, medium and long-term objectives and targets according to stages, steps and the relative states of faculty readiness.
9. Trial instruments of assessment/measurement then select the best and widen its/their use/s.
10. Monitor and mentor the process.
12. Encourage feedback.
14. Promote the process at every opportunity.

**Conclusion**
This background paper has begun to outline and rationalise a putative set of requirements for:

the establishment of a common set of graduate attributes/capabilities that Flinders University students can reasonably be expected to have attained by graduation (the Project)

These requirements are:
- a statement of generic graduate attributes and a clear vocabulary of attributes derived from Flinders University experience;
• recognition of and positive response to Flinders reputation as a teaching and learning institution;
• a staged, layered and stepped approach based on sound curriculum, pedagogical and administrative methodologies;
• a student-centred approach to conceptualisation and rollout;
• a flexible and responsive instrument of evaluation and measurement of responses to attributes;
• a university-wide coordinated and consistent approach to rollout;
• recognition of innovative practice in the university sector and in other sectors in Australia and overseas;
• recognition of the range of impacts and benefits involved in the project;
• acknowledgement of the importance of an IT hub in the delivery of the project;
• careful monitoring and review of the project;
• encouragement of staff and student involvement in the project;
• sound and creative project management.

This Paper should read in conjunction with the cost centre and interest group summaries to be found in Appendix 2 (below) and the Generic Graduate Attributes Discussion Paper, 2007.

GW, 3.9.07 with additional material 14.7.08
Appendix 1

Bibliography of works related to Graduate Attributes – courtesy Dr. Simon Barrie, Institute for Teaching and Learning, Sydney University.

PDF (details from A. Hails, Policy and Secretariat)
Appendix 2

Cost centres and students focus group: contextualising summaries based on notes taken at meetings and follow-up meetings, 2007.

1. Faculty of Health Sciences

Introduction

This scoping study is as much a search for a common vocabulary and agreed usage of terminology as it is an exercise in tasking. The brief uses the term ‘graduate attributes’ – following the AUQA Audit Report - but studies elsewhere also refer to: generic skills; outcomes, capabilities, characteristics, domains, competencies and capacities. Each of these terms is used at Flinders, sometimes interchangeably and sometimes with quite local-specific intent and effect. For the purpose of this part of the scoping study the preferred term will be ‘attributes’ and other terms will be tested against it.

Summary

The Faculty of Heath Sciences was the first to be consulted in the interview and fact gathering stage of the study. Responses to the five questions asked in the meeting with representatives of the Health Sciences seem to fall into roughly five overlapping categories: institutional/organisational; professional; personal; contextual; and methodological. These categories offer perspectives and positions on attributes and their relationship to educational processes and outcomes. These five categories and their associated perspectives will be matched with responses from other faculties to see whether they might then be fashioned into a ‘Flinders way’ of understanding and dealing with the process of attribution. This ‘way’ should make sense in wider (national, international, global) educational discourse and speak to the particulars of things done here and now.

This discussion suggests that it is possible to hold (and operate with) a number of positions at once and to use them effectively as long as there is awareness of the subtleties implicit in their combination and permutation and as long as there is an order and understanding of priority according to their institutional, professional/disciplinary, personal, contextual, methodological application.

A whole-of-university response

It was agreed that a ‘clean and easy’, whole-of-organization approach to identifying graduate attributes is both necessary and desirable. It was also agreed that demonstration, verification/certification precede attribution. Attributes are therefore recognised and acknowledged as a result of what is in one way or another ‘done’ or achieved (not what is said) and result from cumulative educational exposure and experience. Graduate attributes are an extension of undergraduate attributes – verified or certified by progress through levels or stages of a degree and beyond.

There was recognition that all who work in universities are in the generic education profession and business and that there are certain principles, aims and outcomes common to sound, effective and responsible education in the university sector. This commonalty is
connected to course aims and outcomes, staff and student accountability, competence, adult principles of learning, maintenance, monitoring, ethics and governance at all levels. Commonalty is also one of the underpinnings of institutional individuality and corporate identity: it links the institution to its sector and it forms the foundation of its difference.

**Professional attributes**

It was also demonstrated that there are profession-specific ways of responding to the question of graduate attributes within a whole of institution/organisational paradigm. A way of recognising the specific in the general is to think of higher order competencies or generic skills with specific professional applications: one name with context-specific meanings. This approach differs somewhat from the attributes/sub-attributes paradigm used in other places. The desired Health Sciences graduate ‘attribution’, conferred and recognised incrementally by academic and clinical staff, institution, professional accrediting body, work colleagues and members of the wider (global) community, is something like: ‘skilled practitioner’. Any generic approach should be open to and accommodate this specific representation.

**Personal attributes**

Personal attributes derived from education were deemed as important as professional attributes – indeed they were considered intrinsic to professionalism. A symbiotic relationship was suggested between personal and professional domains, encouraged by certain Flinders’ Health Sciences approaches to course aims and objectives, teaching and learning practices, evaluation exercises and clinical experience. Discussion also suggested a relative-reflexive relationship between the personal, professional and institutional in that ‘mature’ or ‘informed’ choice-making is attributable to Flinders Health Sciences students when they begin their courses and this remains an enhanced feature of graduates of these allied disciplines and professions. Good choice making was seen as what might be called a significant ‘competence marker’. It was further suggested that this reflected:

- sound personal and professional judgement;
- critical-analytical capability;
- creativity;
- good communication skills;
- willingness to look for work at the progressive ‘edges’ of the professions; and
- enhanced and sustaining sense of community.

**Context**

There was agreement that certain terms had preferred status in the Health Sciences. For example:

- ‘high order’ competency was a verifiable result of skills training in a multi-disciplinary or inter-disciplinary university context, as opposed to a profession-only training/education context.

Contextuality was therefore seen as an influence on practice and the use of a language shaped largely (though not exclusively) by practical priorities. For example:

- competencies, capabilities and capacities have specific clinical meaning;
- generic skills have profession-specific relevance and application;
• attributes have professional definition, desirability and recognition.

By contrast the idea of attributes ascribed to socio-cultural domains is more remote, but not irrelevant, in this context. This recognition of contextual relevance has extrinsic and intrinsic implications and recognises the influences of internal and external interests (or ‘stakeholders’ to use the jargon of the moment):

• individuals;
• disciplines;
• the institution;
• professions;
• communities;
• employers;
• governments.

**Methodology**

It appears that there is a degree of methodological consistency in operation in the Faculty in that close attention is given to the way course aims and objectives are expressed and outcomes are articulated. Again, this results from (and is a benefit of) external accreditation for many - but not all – of the courses in the Faculty. Further investigation is necessary to see the extent of consistency of approach in the flow of aims, objectives and outcomes from accreditation, through course and topic approvals, to assessment, SET evaluations, in-house surveys, peer evaluations, etc. The idea of ‘flow’ might be developed here to the point of constructing a relatively flexible attributes template which identifies points of articulation and sites for the use of particular kinds of language/definition - not only within Faculties and between courses but across the university and beyond, to employers and others whose feedback contributes to the recognition of courses and graduate attributes. This would include reference to the kinds of questions used in CEQ questionnaires.

**Conclusion**

A cyclic model might be constructed from the five categories and six perspectives identified above. Flinders might look at a recurring and enriching pattern of intellectual resources represented as:

- skills/competencies/capabilities acquisition - institutional attribution and endorsement – contextual/professional application – skills enhancement – professional/community attribution and endorsement

This suggests a life-long learning trajectory, harnessed and developed by tertiary education and extended to the community to be adopted by community for community to be returned to the university via attribution of qualities and verification of skills.

This approach might be turned into a Flinders Paradigm built around its aspirations for its students. The University wants to ‘inspire achievement’ and to be seen by its students, graduates, employers and the community as an ‘inspiring achievement’ in its own right as well as a foundation for further learning. Achievement – the thing done – brings together attribution, aspiration and recognition. The combination should ‘inspire’ confidence in the institution, its staff and its graduates.
If this line of thinking is followed (and without being too cute) a way of connecting the masthead or marquee banner to the attributes process begins to emerge. After consideration and at this stage, the keywords that suggest ‘difference’ built on sound foundations are:

community, creativity, edge, openness, egalitarianism and choice.

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2. Faculty of Education, Humanities, Law and Theology

Introduction

Responses to the five questions asked in the meeting with representatives of the Faculty of Education, Humanities, Law and Theology will be allocated to five overlapping categories which emerged from discussions: institutional/organisational; professional; personal; contextual; and methodological. These categories offer perspectives and positions on attributes and their relationship to educational processes and outcomes.

This allocation will test the relevance and usefulness of the proposed categories and perspectives to see whether they can be fashioned into a ‘Flinders way’ of understanding and dealing with the process of attribution. This ‘way’ should make sense in wider (national, international, global) educational discourse and speak to the particulars of things done here and now.

Summary

There was recognition of difference in the Faculty and therefore of some of the limitations of the exercise. There were also questions on the purpose of the exercise and its driving force. It was seen, on the one hand, as a marketing and compliance exercise and a response to movements in this direction in the sector. On the other hand it represented part of a necessary response to vertically and horizontally integrated, inter-sector learning and an important opportunity for further staff development. Some questions were raised in discussion:

• What skills/attributes do students bring to university and what do we do to recognise these skills/attributes?
• To what extent can we claim to ‘give’ students attributes? Should we be talking about ‘value adding’ in this context? What does ‘life-long learning’ mean?
• Are we really just ‘credentiaising’ students and should we simply be leaving it at that? [Credential: a certification of credibility and a sign that the credulity of others will not be abused?]
• How do we assess attributes?
• How do we avoid a mechanistic (tick the box) approach to the process?

On the strength of these questions the scoping study must recognise that the attributes concept is ‘contested’ and look to ideas of attributes that are ‘core to all graduates’. Beware of making grand claims whilst aiming for consistent objectives from top to bottom of the teaching and learning process.
A whole-of-university response
Overall discussion drew attention to two different approaches - aspirational and descriptive – and the need to make room for both. One was described as a top down approach and the other bottom up. There was agreement that, if the exercise is to be effective and successful, a common group of attributes must be found that is acceptable to all. Then additional attributes of relevance to different awards and contexts can be added. One contributor suggested that we should be looking for ‘distinctiveness’ of Flinders graduates. It was suggested that there needs to be a point from which to generate enthusiasm and that this requires a base-up, and stepped approach, to be built on over time. Similarities based on professional accreditation (eg. ‘8 key learning areas’ in Education and the ‘priestly 11’ in Law) should be noted but not overstated. In all cases we should build on what students bring to the university and not claim all improvements or gains. There are many external influences as well. We need to look closely at employer surveys as well as our own practices.

Professional attributes: Working in the Humanities/Arts
If, for example, the ‘Professional Humanities’ approach is to be recognised as a contributor to the overall graduate attributes Project then the ‘higher order’ core skills in need of recognition are:

• critical reasoning, reading and writing.

The transferable skills are:

• analysis, argumentation and communication.

These can be built on in various ways according to context and demand via:

• content knowledge; problem solving; student directed study and independent learning; team approaches; and professional specifics.

The missing component here is an appreciation of the ‘value of knowledge’ above and beyond its information component, and this may be a common starting and finishing point for the Project.

The value of Arts and Sciences education and research may be in the knowledgeable enhancement of an existing range of:

• skills;
• modes, genres and media of communication;
• interpersonal/relational understanding;
• time and resource management;
• ethical understanding and practice;
• capability for employment; adaptability in employment;
• responsibility to and for employment;
• civic competency; social awareness and reliability;
• independence in thought and action; and
• capacity to read and respond to change in contexts.
The Faculty through DASH is involved in a Carrick/ALTC Project on scoping BAs. This study will have relevance to the Graduate Generic Attributes Project and its roll out. The project might also tackle some of the implications of the exercise for EHLT by thinking in terms of identity (and identity overlap) – a BA identity for example – which may relate to the clusters of topics, sequences, awards that students undertake and by incorporating aspects of the Professional Studies minor sequence including the development of generic writing skills (cf US examples); ‘critical reasoning’ and critical theory and IP. Industry placement features as a test place for skills acquisition in many EHLT courses.

**Personal attributes**

There needs to be an encouragement of a ‘self-sense’. This involves a shift from a client/customer relationship between students, AOUs, courses and the university to a sense of participation in education with others in which an understanding of expectation, process and problems is encouraged by/within a community with a vision. But how? There needs to be a holistic (i.e. not haphazard) approach which accommodates a range of student groupings: professional; generalist; specialist; cross-disciplined; disciplined.

One response to these questions and approaches comes as follows:

- recognise the ‘power of learning’;
- demonstrate commitment to students;
- show enthusiasm for learning;
- encourage a capacity for critical reflection and application to practice
- support difference
- demonstrate reflective, ethical, responsible accountable decision making;
- encourage negotiated relationships with students and others;
- be culturally responsive and attentive to social justice matters;
- act ‘powerfully’;
- demonstrate critical awareness.

Flinders students may be found on the cutting ‘edge’ but in this generic exercise stick to ‘the overarching’ attributes and leave specific contexts to others. There needs to be recognition of standards, knowledge, qualities, skills (professional and institutional). These need to accommodate such ‘basics’ as: data analysis; numeracy; literacy; ‘oracy’; interpersonal communication; deep communication; interpretation; etc. They also present issues of ‘assessment’ of content in context.

**Context**

There is a need to look closely at existing forms to see where a focus on attributes can be included – especially in aims, outcomes and assessment sections. Schools are using different language in their course proposals. Each has its style but there is also need for uniformity and consistency of style in administration. This would enable a quicker response time to evaluate course proposals and might help to emphasise the need for a longer lead-time in the proposal stage to ensure that language and approach in course and topic developments are consistent across the Faculty. The Attributes process could/should be built into the informal and formal review of courses. General staff, who see students at
crucial times, have an important role to play in reviewing and monitoring the language of 
attributes and in reminding students of their relevance to the generic benefits of their 
awards. The benefits of access may be undermined somewhat by ‘one stop shop’ 
approach and electronic enrolment and other fast tracked procedures. Students need 
‘meeting places – virtual and actual’. Use attributes as a way of checking the ‘at risk’ 
students (as well as grades).

The BA Board has also done work on banding, clustering and matching of students and 
topics/awards. This may contribute to an understanding of how attributes might be 
worked into the representation of generic degrees and in encouraging a sense of Arts 
identity. Identity is an issue for professional and generic awards alike. Some approaches 
consciously engender the development of:

- a ‘social position’; and
- ‘guide educational practice’ rather than ‘assess students’; as well as
- encourage leadership and management in context, especially where leadership 
  and management are in conflict.

**Methodology**
It was suggested that the Project might tackle some of these general implications by 
foocussing on the:

- relationship between assessment and outcomes and the way forms are worded 
  and designed and in the processing of them;
- need to distinguish between assessable and non-assessable outcomes and work on 
  the relationship between: assessment of pieces of work; outcomes of topics; and 
  awards and graduates.

**Conclusion**
- Remember these key words: context, standards, knowledge, qualities, skills 
  (professional and institutional).
- Recognise flow from SACE to Uni to PG and beyond.
- See Science and Maths School’s attributes and draw on them.
- Reconcile the juxtaposition of ‘doing’ education and ‘learning awareness’.
- Don’t move in and multiply the implications and evaluations already in place as a 
  result of this exercise.
- Think in terms of: attributes; competencies; standards; enactments.
- Connect scholarship to employability and long-term endurance.
- Attributes should connect to the history of the place as well as to the future of our 
  students.
- Flinders has a tradition and responds to that tradition.
- Have a clear idea of who are we trying to please.

**Bibliographic references**
See: Candy, Curtis, Coster and Garmston, UNESCO, Delors and Delors etc. and Lawson 
et al. ‘The representation of attributes of the lifelong learner in documents of the 
Queensland Studies Authority. A discussion and review of related research. Report 
prepared for the Queensland Studies Authority’ (2005), and Curtis et al.’ Interim

3. Faculty of Science and Engineering

Introduction

The meeting with Science and Engineering representatives revealed a considerable amount of thinking about how the Faculty and its sub-sets are approaching the business of data gathering and matching course outcomes with student achievements and perceptions. This is, in many ways, the most coordinated and conscious approach on offer in the University at present. It connects to the structural idea of conscious and self-conscious ‘degree building’ at a number of levels:

- course design;
- inter-disciplinarity;
- relationship of basic science to the needs and specialisations of niche awards;
- need to track and map student progress and test the teaching and learning objectives of courses against student outcomes as well as professional judgements;
- advantages of intellectual community building for/between academic and general staff and students through intimacy and interactivity (using PASS, for example);
- accentuating the teaching and learning/research nexus;
- employing pragmatically constructed surveys and checking matrix/monitoring instruments; and exploring/exploiting current technologies as aids in all processes to gain feedback from and access to students.

Considerable strides have been taken in converting this collection of relationships and associations into a mapped flow of information, academic progress and comprehension and critical evaluation of the positioning of ‘science’, methodology and practice in academic and employment contexts – and of students’ responses to this flow. The relationship between Science and Engineering awards and employer feedback varies.

Overall, the approach adopted by Science and Engineering suggests a conscious and deliberate attempt at the reconciliation of needs and differences inherent in the Faculty born of - but not determined by - the size and limitations of the Faculty. It acknowledges what colleagues in Social Sciences recognise as ‘formal and informal’ (or as the Humanities might have it, ‘conscious and unconscious’) teaching and learning cultures as well as socialization practices and influences. In the acknowledgement and reliance on ‘basic science’ there is an assumed and understood methodology and recognisable set of primary as well as secondary transferable skills. In this context, ‘primary’ means assessable skills related to knowledge of ways of identifying, gathering, testing and representing data: ‘secondary’ means facility in interpretation and application of data to the business of constructing and challenging hypotheses and ‘solving problems’ in a process of effecting a (suitably sceptical) ‘shift’ from basic science to advanced or applied science. In this paradigm, each successful shift confirms the basics.
It is no surprise that the approach undertaken by Science and Engineering to attributes reflects basic science methodology. This methodological approach would suit or adapt to other faculties – to a point – and is worthy of further consideration as an important part in the construction of a prototype attributes paradigm. (See below.)

Summary

Responses to the five questions asked in the meeting with representatives of the Faculty of Science and Engineering have been allocated to the same five overlapping categories which emerged from other meetings: institutional/organisational; professional; personal; contextual; and methodological.

The Introduction above indicates that there are connections to be made between Health Sciences and Science and Engineering approaches in relation to basic and (some) specialised/niche degrees. There are also connections to be made with the Social Sciences. The terminology used by two of the three faculties – competencies, capabilities, generic/skills – suggests similarities and there is cross-over and therefore potential for further interaction between all faculties in the form of shared degrees, methodology and research.

A whole-of-university approach

There is a clear idea within the Faculty of Science and Engineering of the value of a generic (meaning basic scientific) approach to attributes. Mixed views were presented on whether a set of generic attributes could be identified which would cover all of the university but there was certainly willingness to consider the benefits of the proposition. The idea of a small and basic (but not prescriptive) set of attributes, with sufficiently generalised application and the capacity for modification according to the needs of particular intellectual and pedagogical cultures, proved attractive. The Introduction and Summary above begin to demonstrate ways in which modifications might be viewed and articulated. There are grounds for thinking that crossovers with areas of the Social Sciences are relevant to this aggregation and this could well extend to parts of the School of Education within EHLT as well.

Professional, specialised/separated awards

The Faculty of Science and Engineering has a number of specialised/niche awards as well as a generic science award. To this extent it presents some of the same challenges of definition and approach as other faculties offering generic and niche awards (especially EHLT and Social Sciences). The task ahead involves turning challenge into advantage. In the case of Science and Engineering there are professional and accrediting institutes that influence curriculum on the one hand and professional training and positioning on the other. This also reflects influences in other faculties. Just as the Faculty of Science and Engineering responds to (for example) the Australian Institute of Physics and the Australian Credentials Institute [?] so does EHLT respond to the Teachers’ Registration Board and LPEAC, and Heath Sciences to various Colleges and Registration Boards. Some, though not all, of these organizations have their own requirements for generic skills, competencies, capabilities and attributes. The university will need to take these
into consideration and acknowledge/make room for them when constructing its flexible attributes model.

**Personal benefits of attribution**

There was no specific discussion of the personal benefits of a scientific or science-based education but certain implicit assumptions underpinned discussions: careful attention to detail; a degree of caution when reviewing evidence; scepticism as a habit of mind; belief in tested, fundamental principles and laws; preparedness to accept change, based on proof rather than faith, pragmatics rather than theory; etc. These approaches did not foreground subjective, relative or reflexive approaches to interpersonal or social relations, neither did they prohibit or inhibit them. Interestingly, ‘intimacy’ between teacher and learner was deemed to be a source of inspiration and a crucial component of teamwork. This once again connects to discussions in other places about assessment of conscious and unconscious attributes and the matter of identity and raises the following questions:

- Is there a clear identification with ‘science’ and a less clear ‘arts’ identification among the respective cohorts of university students?
- If so what is the basis of difference?
- Do students carry a clearer idea of discipline and scholarly principles with them from secondary science training/schooling?
- Are there differences between profession-oriented students and basic science students?

In the case of this last question the answer still appears to be ‘yes’, at least in relation to job-readiness.

**Contexts**

There was a strong contextual response underpinning all of the discussion and the approaches taken by Science and Engineering to map awards and student progress within them. In this case it had to do with the size of the faculty and the way that students were required to construct their degrees using multi-disciplinary options. In the case of Engineering, the practicum-work placement component [cooperative work experience, industry focussed and job ready] of the awards shaped ideas of profession, course and the position of students within both. There was some encouragement for the linking of attributes to the Inspiring Achievement tag but also a warning to ‘beware overkill’ and to avoid “SET saturation”.

**Methodology**

There appears to be a substantial degree of methodological consistency within the Faculty. This relates to the basic science approach identified above. It does not extend to capstone or exit topics in all awards though there may be more of these as the faculty moves to 6 unit topics. There is a strong push in the faculty to match micro and macro instruments of measurement without making the process too intrusive. The course design increasingly focuses on ‘exit skills’, reasons for such skilling and the value of each topic in its award. There is a recognition that students need to be ‘engaged’ on these matters – that web sites and manuals are not enough. This flags an interpersonal element. There is a sense that students do have an idea of their value because of their experience of teaching and learning in small groups (see the PASS process) because of ‘intimate teaching and
learning interactions’ with staff. The Faculty already has an Attributes matrix using 5
generic CEQ questions and 2 Science specific questions posted on Flo. Build on this?
These approaches are internally transferable and may even be retained as self-assessment
tools after graduation.

**Conclusion**
The Faculty of Science and Engineering seems to be aware of the necessity for clearly
defined student pathways, mapping tools, skills enhancement and application and
feedback from professions and industries. The summary of keywords that distinguish
practice in the faculty is: degree building; course roadmaps (interactive); exit skills and
values; content and skill relationships; engagement; interaction inspired achievement;
intimacy; ‘know your science’; teaching and research nexus. The cyclic model proposed
to other faculty groups would suit this approach. There was no clear recognition of the
cluster of attributes identified in the Health Sciences discussion as being especially
characteristic of Science and Engineering graduates.

**Bibliographic reference**
See: Smith P. and D. Martin, ‘Engaging staff in strategic planning’ etc. AUQF

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**4. Faculty of Social Sciences**

**Introduction**
The scoping study consultation exercise was conducted in the Faculty of Social Sciences
with the assistance of members of the Faculty’s Teaching and Learning Committee. It
reinforced the view, established in the Health Sciences working party meeting, that this is
as much a search for a common vocabulary and agreed usage of terminology as it is an
exercise in tasking. It extended this view by indicating that faculties of the size and
diversity of Social Sciences exhibit greater variations on the theme of systemic and
structural ‘consistency’ than does Health Sciences. Nevertheless, responses common to
both Faculties became evident – especially in the way professional courses address aims
and outcomes – but also in what was termed by one member of the Committee, ‘minimal’
and ‘higher order’ competencies. This classification was refined and contextualised by
the introduction of notions of ‘formal and informal’ responses to the attributes-
capabilities lexicon and by connecting these notions to ‘socialization’ of staff and
students to Disciplinary and University cultures and discourses.

For the purpose of this part of the scoping study the preferred term will continue to be
‘attributes’ and other terms will be tested against it. It seems that the term is in need of
definition/contextualising in this Faculty as in Health Sciences.

An attribute is defined here as:

> a quality ascribed…recognised as appropriate…characteristic.
It therefore has qualitative significance but can, under certain circumstances, be objectified or materialised in recognition of person or office.

**Summary**
Responses to the five questions asked in the meeting with representatives of the Faculty of Social Sciences will be allocated to the same overlapping categories which emerged from other meetings: *institutional/organisational; professional; personal; contextual; and methodological.*

This allocation will test the relevance and usefulness of the proposed categories and perspectives to see whether they can be fashioned into a ‘Flinders way’ of understanding and dealing with the process of attribution. This ‘way’ should make sense in wider (national, international, global) educational discourse and speak to the particulars of things done here and now.

In the light of the Social Science meeting the attributes Project has to be seen to be:
- effective;
- efficient;
- timesaving;
- productive;
- communal;
- coherent;
- enabling;
- interesting;
- convincing;
- consistent; and
- built on sound educational/pedagogical/methodological principles.

**A whole-of-university response**
It was difficult to draw a clear conclusion on whether there was likely to be common cause in the Social Sciences on a whole-of-university response to implementation, tracking, development and embedding of attributes. It was also difficult to establish a clear view on a whole-of-faculty response. This may reflect the size and diversity of the Faculty of Social Sciences. A summary response indicated that all questions on the questionnaire could be answered in the affirmative, in part, but that there was no faculty-wide or systematic approach in place. It was suggested that attempts at faculty cohesion on this and other issues of representation had been replaced by centre-driven corporate approaches and that there was a greater need for a meeting of top-down and grass roots approaches to ensure consistency of message and language use. There was however, no apparent resistance to the idea of working to identify pathways to integration. Rather, the emphasis was on:
- methodology;
- instruments of measurement; and
- time and resources required to undertake such exercises and process the results.
The Teaching and Learning/Courses and Curriculum Committee approaches in operation in the faculty ensure that attention is given to aims and objectives, via SAMs and topic approvals but it was agreed that there is need for greater attention to verification of outcomes. At present this happens with each five-year course review. The proliferation of courses, the relatively small number of exit or capstone topics in awards, differences between teaching and learning approaches in professional and generic Arts-based courses in the faculty play their part in making systematisation difficult.

**Professional attributes**
There are professional/specialised courses in the faculty that exhibit some of the characteristics of courses in the Health Sciences (viz: Psychology, Social Work, Commerce and Accounting). It should be possible to compare pathways and expected outcomes in these professional courses within and between faculties. In Social Sciences:

- practicum requirements;
- external reporting; and
- certification by external agencies

might contribute to this exercise. Benefits/disadvantages of compulsion were also mentioned. There are also ‘boutique’ or ‘niche’ awards with capstone and exit topics that should be able to be used to promote, identify and monitor the ‘attribution’ process. Professional/niche courses may also be able to maximise the use of related exercises (Library, academic integrity, etc) – as part of the process of horizontal integration.

The possible contribution of SETs was not discussed nor was the complexity of the exercise when applied to offshore courses and courses taught in languages other than English in cultures other than Australo-Western. There is need for a further study here.

**Personal attributes**
To the extent that personal attributes were discussed, the focus was on the levels of competence of different students according to their choice of awards and on the degree to which staff shared ideas on approaches to outcomes with each other and with students - and when this occurred. Topping and tailing approaches to course, topic, student and institutional attributes were not considered adequate - but better than nothing. Questions relating to personal, reflexive/relative teaching and learning engendered observations on:

- ‘minimum’ and ‘higher level’ competencies;
- adult learning principles and expectations;
- formal and informal understanding of attributes and competencies;
- demographic differences in levels of engagement and response (based on age, experience/maturity, educational history, and cultural background);
- peer evaluation and team teaching.

Some members of the committee referred to use of parts of existing methodologies (eg. Hay) based on evaluation of generic skills.

**Context**
There was no clear indication of preference for any of the terms on offer – attribute, competencies, characteristics, etc. Professional courses recognised ‘higher level’
competency as a useful descriptor. Contextuality was seen principally as intrinsic to the Social Sciences and related to structural processes and institutional dynamics rather than to outcomes, applications or particular practices beyond the university. The sub-text of discussion on this aspect seems to relate to the intrinsic diversity of Arts-based education, further fragmented by the proliferation of awards.

Methodology
Whatever the methodology employed, the faculty needs to know more about its graduate outcomes. There may need to be greater emphasis on ‘attributes’ in each stage of the course approvals-to-review process and in monitoring the relationship between assessment methods and outcomes but there is also a need to go beyond current practices. This may involve a synthesis of methodologies to deal with:

- systemic consistency;
- course-specific application and awareness;
- peer support and discussion;
- student self-monitoring;
- external feedback.

It should be possible to use a ‘flow’ approach in all faculties. It may also be possible to make professional/accredited course monitoring compatible throughout the university and find an equivalent pattern for more generic awards and streams using a combination of:

- checking instruments;
- e-portfolios;
- non-award/non-fee topics;
- library and integrity exercises.

Time as well as processing of information is a major issue for already busy staff.

Conclusion
There was a cautious but not negative response to the proposition that a cyclic model might be constructed from the five categories and various perspectives identified above.

Flinders might look at a recurring and enriching pattern of intellectual resources represented as:

- skills/competencies/capabilities acquisition - institutional attribution and endorsement – contextual/professional application – skills enhancement – professional/community attribution and endorsement

This suggests a life-long learning trajectory, harnessed and developed by tertiary education and extended to the community to be adopted by community for community to be returned to the university via attribution of qualities and verification of skills.

The proposition was put to the committee that:

this approach might be turned into a Flinders Paradigm built around its aspirations for its students. The university wants to ‘inspire achievement’ and to be seen by its students, graduates, employers and the community as an ‘inspiring achievement’ in its own right as well as a foundation for further learning.
Achievement – the thing done – brings together attribution, aspiration and recognition. The combination should ‘inspire’ confidence in the institution, its staff and its graduates.

The Social Sciences response stressed that the relationship should not be forced but that making connections between institutional aspirations and staff/student understanding of specific outcomes was desirable.

The Committee was asked to consider the following key words from the Health Sciences meeting and their relevance to the Social Sciences:

- community;
- creativity;
- edge;
- openness;
- egalitarianism; and
- choice.

Discussion offered the following additions to the list:

- enabling;
- efficient;
- comparable;
- systematic;
- diverse;
- reflexive; and
- socialized.

5. Yunggorendi First Nations Centre for Higher Education and Research

Introduction

Discussion produced the following (personal) summary form one member of staff. Yunggorendi looks for ‘critically conscious, agentic, ethical, transformative education in the interests of the Indigenous community.’ These components should be recognisable to all students and translate into attributes. The First Nations Centre has strategic contact with students across the university and strives for:

- a clear articulation of teaching philosophy related to socio-cultural and employment outcomes;
- team-approach to teaching and learning;
- community responsibility; and
- on and off-campus opportunities to test learning skills and responses to philosophy, methodology and practice.

The terms ‘characteristics (qualitative), capacities’ are used to describe attributes of Indigenous students and non-Indigenous students but attributes and competencies are also understood and used in this context.
Summary
Yunggorendi already models its performance on an ‘inspiring achievement’ axiom: for individuals; for communities; for the university. Inspiration/role modelling has a great influence in Indigenous communities and this connects attribution to community policy as well as employment and education policy.

Whole-of-university response
Yunggorendi staff recognise in their teaching, research and support activities:
- the importance of motivation and role modelling in university education;
- value of generic education practices translated into specific policy approaches, eg. anti-racist education;
- CEQs and how prepared Indigenous students are to respond to such surveys;
- skills and how students know and recognise them;
- context and how students recognise and use it;
- Yunggorendi’s role in attributes recognition in the whole process from induction through support and topic delivery to advice to uni on policy and graduation;
- the benefits of web-based, self-assessment on Flo or some other instrument as aids to consciousness raising and social and educational transformation.

Professional attributes
The Centre maintains and monitors professional and community connections in support of its students and the university. It communicates ways of seeing, research, consultancy and agreements to both entities. It receives feedback from government and others with reference to: independent workers; academic standards; higher-level skills; policy directions. This is reflected in support, teaching and research as a result of ‘close working’ with all stakeholders. The Centre promotes ethical awareness, consciousness, understanding social justice issues as essential components of reading and contextualising change. It also models its approaches to learning on examples from other spaces – Alaska, NZ, Canada, etc., and connects outcomes to strategic plans.

Personal attributes
Members of the Centre work within State and National policy guidelines to meet overall targets as well as the personal academic expectations of Indigenous graduates by promoting:
- cadetships;
- workplace experience;
- understanding self, history and identity;
- time management;
- self-sufficiency and independence;
- ‘broad cultural understanding’; and
- personal connections to community, values, elders.

Context
Yunggorendi is disposed to and positioned for an attributes-based approach to education via:

- learning objectives;
- advice to stakeholders if required;
- in the context of embedding Indigenous perspectives in education;
- certification run by Yunggorendi (with DECS);
- membership of reviews committees and input into reviews at committee level;
- development of a Black Alumni site and a chat space or blog space attached to the Yunggorendi site;
- checklist site on ‘reviewing education’ at the end of a course linked to the Yunggorendi website;
- application of the critical pedagogical/anti racist principles in use in Yunggorendi and applied to the preparation of such a website; and
- ethics of practice and integrity approaches.

The Centre and its staff work on the premise of the value of ‘exposure’ and ‘confrontation’ and support symbolic recognition of Indigenous presence on campus as teaching tool and aid to the recognition of graduate attributes. Recognition by the University of Kaurna land and space is seen as a corporate attribute.

**Methodology**

Yunggorendi recognises the relevance of the following questions to general issues for Indigenous communities:

- do we graduate Indigenous students or people who happen to be Indigenous?
- How does this question impact on the notion of ‘projected identity’ for the individual and the institution?

Teaching and learning, through topics devised and controlled by Yunggorendi staff are designed to address such questions. These topics use:

- specific tasks like journaling;
- reflective and dialogic approaches;
- socially sensitive approaches;
- teaching for resistance and Reconciliation pedagogy.
- teaching in situ: Coorong, Elders in Residence, Tjilbruke; Tandanya; Colebrook, etc.;
- positioning self; and
- exemplification.

Teaching underpins the community focussed, attributes-sensitive model, positions students to take action and influences the way in which students conduct themselves professionally and personally; via ethics, profession and citizenship. This approach looks to exert pressure and articulate expectation and to shape a receptive space into which students can grow.

It is positioned to do this via:
• development of a Black Alumni site and a chat space or blog space attached to the Yunggorendi site;
• a checklist site on ‘reviewing education’ at the end of a course linked to the Yunggorendi website;
• quiz and levels of awareness tests;
• application of the critical pedagogical/anti racist principles in use in Yunggorendi and applied to the preparation of topics; websites and feedback instruments; and in research.

Conclusion
Yunggorendi provides an interesting model for the way embedding might be tackled on a larger scale. It contributes to courses in which it has a stake and could make submission to all course reviews, via DVC Academic’s office on the relationships between attributes and Indigenous issues and matters. It could also interrogate measures of success against university criteria for Indigenous education for Indigenous students and non-Indigenous students in support of ‘educational transformation’ and an understanding of the ‘achievement of social purpose’.

6. Flinders University Library
The Library response to the Generic Graduate Attributes Exercise is detailed in both the Discussion Paper, 2007 and the Background Paper (above)

7. Student focus group
Fourteen students from across the University were contacted. A small group of volunteers from this contact group was involved in discussions. They were not representatives of faculties in any sense, but all had some form of involvement with student bodies/advisory bodies in their faculties or the university. They were all Flinders graduates, engaged in postgraduate study and by good fortune, there was someone with experience of each Faculty in the final group. The questions put to them differed somewhat from those put to faculty/cost centre groups and/committees. This summary therefore does not follow the pattern so far adopted. Participants were asked:
• What are the attributes which flow from completing a degree at Flinders?
• What are the attributes which attend completion of the undergraduate course(s) you have undertaken?
• What is your perception of the way others appreciate Flinders graduates (e.g. those who employ or interact with them professionally)?
• What do students need to know to be able to understand and act on the way the university builds on existing attributes, qualities and skills (i.e. those not directly attributable to university education)?
• How/when and in what form might students let the University know their thoughts on the acquisition and appreciation of attributes?

The discussion was described to them as an opportunity for triggering ‘thoughts on the relationship between educational processes, social practice, individual perception and
public response: the way the University and its Faculties and Schools understand their purpose and go about their business; the way that business is understood and appreciated beyond the institution’.

Their responses emphasized: learning how to rationalize and integrate personal and professional attributes; recognition of the standing of the University in the sector and their education within it; valuing cross-cultural contacts; building personal confidence in quality education; appreciating secure teaching and learning foundations; valuing scope and challenge of a choice of offerings; and recognizing liberal and diverse approaches to educational and social issues.

Keywords/concepts: integration; scope; work-readiness; foundations; equity; exposure to ideas; theory/practice nexus; thinking skills; creativity; local relevance; balance; work-readiness; reciprocity; choice; growth; change and transition skills; ethics; supportive environment; diversity, opportunity; enjoyment; context; flexibility; feedback.

It is useful to read these comments in association with graduate responses to various GCA surveys compiled by the Planning Services Unit.

8. Postscript to sketches: mapping ideas and a hypothetical flow of methodologies

The sketched sequences below raise some ideas on ways of thinking about the attributes brief from a preferred methodological point of view and the possibility of an interconnected, three-part approach to a proto-typical, flexible, circular model. This model recognises overlapping methodological approaches used by the various disciplines and discipline groupings at work in the university. The first sequence maps a quantitative/qualitative loop that takes in the sciences, social sciences and humanities.

Scientific/Quantitative/Qualitative – Scientific Social quantitative/qualitative – Social Humanistic Qualitative/Quantitative

Another sequence offers an ‘overlapping’ circular model of professional, discipline and generic attributes:

Professional/Discipline/Generic – Discipline/Generic/Specialist – Generic/Discipline/Professional

Imagine these components as pieces of an attributes kaleidoscope – superimposing, changing and interlocking in various but relatively predictable patterns of usage and cross-reference, yet ‘tolerant’ enough to admit unpredicted and unpredictable combinations:

Quantitative/Scientific - Professional/Discipline/Generic
Discipline/Generic/Specialist – Quantitative/qualitative Social
Qualitative/quantitative Humanistic - Generic/Disciplined/Professional
Qualitative/Scientific – Professional/Generic/Disciplined

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Etc.

Each of these components is ‘cut’ by relative, subjective, inter/cross/trans/disciplinary vectors and arrangements to produce regular as well as irregular (some would say ‘deviant’) patterns, pathways and trajectories of academia and their related conduits to professional, specialist, disciplined, cultural, social engagement with personal, spiritual, civic, economic life. Aberrant (or cross-over sometimes called interdisciplinary) sites may prove to be the most interesting in shaping attributes and eliciting responses to them. These are the sites of change.
Appendix 3

TEMPLATE
Attributes Meeting – Faculty/Cost Centre...
.../7/07

1. Outline and position the Scoping Study and its general objectives.
   Responses:

2. Things to do:
   - *implement* across all teaching and learning practices;
   - *track* individual goals and attributes;
   - *develop* graduate outcomes...using the University’s mission as a framework;
   - *develop* a methodology and terminology that will be used across the university;
   - *embed* the attributes process in all layers of teaching and learning policy and practice,
     from course approvals to web-based mapping tools.
   Responses:

3. What is ...... currently doing to identify and acknowledge attributes in its:
   - Disciplinary cultures
   Responses:
• Positioning of students for employment
  Responses:

• Identification of Faculty/University distinctive graduate characteristics
  Responses:

4. Is an approach to attributes ‘embedded’ in:
   • Course approvals processes
  Responses:

• Course review processes
  Responses:

• Assessment tasks, learning activities, learning outcomes
  Responses:
• Teaching practices
  Responses:

• Evaluation and monitoring processes
  Responses:

• Web-based mapping tools?
  Responses:

5. Is there a preferred terminology: attributes; outcomes; capabilities; characteristics; generic skills; domains; capacities; other?
  Responses:

6. How might the approach taken to attributes connect to the new Flinders masthead ‘Inspiring Achievement’ at any or all of these levels?
  Responses:
7. Who should we now see in the School/Faculty to follow up on more details and to discuss approaches and ideas?

Responses:

GW 14.6.07
Appendix 4

Scoping Study participants and contributors at Background Paper stage and other sources of advice and information:

Vice Chancellor

DVC (Academic)

DVC (Research)

DVC (Community/International)

EMAG

Graduate Attributes Steering Committee

Health Sciences working group

EHLT working group

School of Education working group

Social Sciences Teaching and Learning Committee

Science and Engineering working group

Yunggorendi Staff

Library working group

Student focus group: Takeshi Matsumoto, Amanda Muller, Wendy Abigail, Sam Taylor

David Green: SDTU

Heather Smigiel: STDU

Mandy Price STDU: SET Project

Peter Torjul: Admissions, Careers, Examinations and Graduation

Saleh Kutieleh: Student services
Leonie Hardcastle: Deputy Faculty Manager, Social Sciences

Colleen Bregantic: Deputy Faculty Manager, EHLT

Pam Smith: Quality Assurance Coordinator, Science and Engineering

Jackie Wurm: Policy and Secretariat

Iain Hay: Social Sciences

Deanne Gannaway: EHLT/DASH Carrick BA Project

Ian Ravenscroft: EHLT

Simon Barrie: Institute for Teaching and Learning, Sydney University

Higher and Further Education Focus Group: Future SACE Attributes

Learning to Work and Working to Learn Symposium: ACEN

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Further interviews will be conducted before and after the distribution of the Discussion Paper, 2007.