‘Writing Module Outcomes/Assessment Alignment’
Wednesday 10th October 2012, 12.30-2.00pm

Tony Turjansky
Head of Academic Quality & University Learning and Teaching Fellow
Session aims

• To define the relationships between:
  – National design benchmarks (level descriptors and subject benchmarks) and programme aims and learning outcomes
  – Programme and module learning outcomes
  – Module learning outcomes and assessment strategies
  – Learning outcomes, level descriptors and module assessment criteria (‘constructive alignment’, Biggs 1996)

• To identify sources of guidance for the writing of learning outcomes

• To identify best practice in the writing of assessment (marking) criteria
Part One

National benchmarks
National design benchmarks

- UK Quality Code for Higher Education
  http://www.qaa.ac.uk/AssuringStandardsAndQuality/quality-code/Pages/default.aspx
- Part A = ‘Setting and maintaining threshold academic standards’
  - Threshold standards = ‘the level of achievement that a student has to reach to gain an academic award” (this should be the same across the UK)
  - Threshold standards are defined at validation through programme aims and learning outcomes
  - They must be at least consistent with the Framework for Higher Education Qualifications (A.1) and take account of the relevant national (subject) benchmark statements (A.2)
<table>
<thead>
<tr>
<th>Certificate (C) level</th>
<th>Level 4</th>
<th>Certificates of higher education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate (I) level</td>
<td>Level 5</td>
<td>Foundation degrees, ordinary (bachelor) degrees, diplomas of higher education, HNC/Ds and other higher diplomas</td>
</tr>
<tr>
<td>Honours (H) level</td>
<td>Level 6</td>
<td>Bachelor's degrees with honours, graduate certificates and graduate diplomas</td>
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<tr>
<td>Master's (M) level</td>
<td>Level 7</td>
<td>Master's degrees, postgraduate certificates and postgraduate diplomas</td>
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<td>Doctoral (D) level</td>
<td>Level 8</td>
<td>MPhil, PhD including professional doctorates</td>
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</table>
Descriptor for a higher education qualification at Level 4

Students should demonstrate:

• Knowledge of the underlying concepts and principles associated with their area(s) of study, and an ability to evaluate and interpret these within the context of that area of study

• Ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of their subject(s) of study

• Ability to evaluate the appropriateness of different approaches to solving problems related to their area(s) of study and/or work
Descriptor for a higher education qualification at Level 4 (contd)

Students should demonstrate:

• Ability to communicate the results of their study/work accurately and reliably, and with structured and coherent arguments

• Ability to undertake further training and develop new skills within a structured and managed environment

• Qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.
Descriptor for a higher education qualification at Level 5

Students should demonstrate:

• Knowledge and critical understanding of the well established principles of their area(s) of study, and of the way in which those principles have developed

• Ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context

• Knowledge of the main methods of enquiry in the subject(s) relevant to the named award, and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study
Students should demonstrate:

• An understanding of the limits of their knowledge, and how this influences analyses and interpretations based on that knowledge

• Ability to use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis

• Ability to effectively communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences, and deploy key techniques of the discipline effectively

• Ability to undertake further training, develop existing skills and acquire new competences that will enable them to assume significant responsibility within organisations

• Qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and decision-making
Descriptor for a higher education qualification at Level 6

Students should demonstrate:

• Systematic understanding of key aspects of their field of study, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline

• An ability to deploy accurately established techniques of analysis and enquiry within a discipline

• Ability to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline

• Ability to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline
Descriptor for a higher education qualification at Level 6 (contd)

Students should demonstrate:

• Appreciation of the uncertainty, ambiguity and limits of knowledge

• Ability to manage their own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to the discipline)

• Ability to apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects

• Ability to evaluate critically arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem
Descriptor for a higher education qualification at Level 6 (contd)

Students should demonstrate:

• Ability to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences

• Qualities and transferable skills necessary for employment requiring:
  – the exercise of initiative and personal responsibility
  – decision-making in complex and unpredictable contexts
  – the learning ability needed to undertake appropriate further training of a professional or equivalent nature
Descriptor for a higher education qualification at Level 7

Students should demonstrate:

• Systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice

• Comprehensive understanding of techniques applicable to their own research or advanced scholarship

• Originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline
Descriptor for a higher education qualification at Level 7 (contd)

Students should demonstrate:

• Ability to evaluate critically current research and advanced scholarship in the discipline
• Ability to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses
• Ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences
• Ability to demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level
• Ability to continue to advance their knowledge and understanding, and to develop new skills to a high level
Summary level descriptors (‘NICATS’)

Level 4

• Develop a rigorous approach to the acquisition of a broad knowledge base; employ a range of specialised skills; evaluate information, using it to plan and develop investigative strategies and to determine solutions to a variety of unpredictable problems; and operate in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs.

Level 5

• Generate ideas through the analysis of concepts at an abstract level with a command of specialised skills and the formulation of responses to well-defined and abstract problems; analyse and evaluate information; exercise significant judgement across a broad range of functions; and accept responsibility for determining and achieving personal and/or group outcomes.
Summary NICATS descriptors (contd)

Level 6
• Critically review, consolidate and extend a systematic and coherent body of knowledge, utilising specialised skills across an area of study; critically evaluate concepts and evidence from a range of sources; transfer and apply diagnostic and creative skills and exercise significant judgement in a range of situations; and accept accountability for determining and achieving personal and/or group outcomes

Level 7
• Display mastery of a complex and specialised area of knowledge and skills, employing advanced skills to conduct research, or advanced technical or professional activity, accepting accountability for related decision making, including use of supervision
Alternate descriptors (SEEC)

The Southern England Consortium for Credit Accumulation and Transfer (SEEC) descriptors take the NICATS summary descriptors and unpack them into skills subsets, for example:

**Level 6**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational context</td>
<td>Operates in complex and unpredictable contexts, requiring selection and application from a range of largely standard techniques and information sources.</td>
</tr>
<tr>
<td>Autonomy and responsibility for actions</td>
<td>Acts with minimal supervision or direction, within agreed guidelines taking responsibility for accessing support and accepts accountability for determining and achieving personal and/or group outcomes.</td>
</tr>
<tr>
<td>Knowledge and Understanding</td>
<td>Has a systematic understanding of the knowledge base and its inter-relationship with other fields of study. Demonstrates current understanding of some specialist areas in depth.</td>
</tr>
</tbody>
</table>
Level 6

<table>
<thead>
<tr>
<th>Cognitive skills</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptualisation and Critical Thinking</td>
<td>Works with ideas at a level of abstraction, arguing from competing perspectives. Identifies the possibility of new concepts within existing knowledge frameworks and approaches.</td>
</tr>
<tr>
<td>Problem Solving, Research &amp; Enquiry</td>
<td>Demonstrates confidence and flexibility in identifying and defining complex problems. Identifies, selects and uses investigative strategies and techniques to undertake a critical analysis, evaluating the outcomes.</td>
</tr>
<tr>
<td>Synthesis and Creativity</td>
<td>Applies knowledge in unfamiliar contexts, synthesising ideas or information to generate novel solutions. Achieves a body of work or practice that is coherent and resolved.</td>
</tr>
<tr>
<td>Analysis and evaluation</td>
<td>Analyses new, novel and/or abstract data using an appropriate range of established subject-specific techniques. Judges the reliability, validity and significance of evidence to support conclusions and/or recommendations suggests reasons for contradictory data/results.</td>
</tr>
</tbody>
</table>

<table>
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<th>Performance and practice</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation to Context</td>
<td>Locates own role within poorly defined and/or flexible contexts requiring a level of autonomy.</td>
</tr>
<tr>
<td>Performance</td>
<td>Seeks and applies new techniques and processes to own performance and identifies how these might be evaluated.</td>
</tr>
<tr>
<td>Team and organisational working</td>
<td>Works effectively within a team, supports or is proactive in leadership, negotiates in a professional context and manages conflict. Proactively seeks to resolve conflict.</td>
</tr>
<tr>
<td>Ethical awareness &amp; application</td>
<td>Is aware of personal responsibility and professional codes of conduct and incorporates this into their practice.</td>
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</tbody>
</table>
### Level 6

<table>
<thead>
<tr>
<th>Personal and enabling skills</th>
<th></th>
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<tbody>
<tr>
<td><strong>Personal evaluation and development</strong></td>
<td>Takes responsibility for own learning and development using reflection and feedback to analyse own capabilities, appraises alternatives and plans and implements actions.</td>
</tr>
<tr>
<td><strong>Interpersonal and communication skills</strong></td>
<td>Sets criteria for, and is effective in, professional and interpersonal communication in a wide range of situations.</td>
</tr>
</tbody>
</table>
Some key level characteristics/differentiators

**Level 4:** Interpretation and evaluation of knowledge; structured communication and coherent argument

**Level 5:** Critical understanding, analysis and evaluation of knowledge; application of knowledge outside its original context; communication and argument in a variety of forms

**Level 6:** Systematic and critical understanding, analysis and evaluation of detailed knowledge, some of it leading; ability to make and sustain arguments, make judgements and propose solutions; self-managed learning

**Level 7:** Systematic understanding of knowledge, critical awareness and evaluation of current and complex issues and developments; comprehensive understanding of research techniques; original application of knowledge, making sound judgements and proposing new hypotheses; self-direction and autonomous working
Subject Benchmark Statements
UK Quality Code Chapter A.2

- Set out the academic (and, in some cases, professional) standards of different subjects at degree level and the attributes, skills and capabilities that a graduate may be expected to have achieved on successful completion
- Derived from, and updated through, consultation with subject experts within the sector
  - Honours degree benchmark statements (x 57)
  - Masters degree benchmark statements (x 13)
- Benchmark statements provide the subject specificity that the generic level descriptors do not
Part Two

Programme design
Programme aims

• “General statements of educational intent, seen from the student’s point of view” (Ramsden, 1992) – tested at EHU validation

• The statements should outline the broad purpose of the programme in, for example, enabling students to learn; meeting local, national and international needs, including widening participation; development of graduate attributes and preparing students for employment by promoting key and transferable skills; and preparing students for further (postgraduate) study
11. Programme Aims

<table>
<thead>
<tr>
<th>Business and Management Degree</th>
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</thead>
<tbody>
<tr>
<td>1.   To provide students with the opportunity to progressively develop knowledge and understanding of a number of key areas of business and management and the external and internal environment in which managers operate.</td>
</tr>
<tr>
<td>2.   To produce graduates with the knowledge, practical experience and skills to be able to operate effectively in business and management settings.</td>
</tr>
<tr>
<td>3.   To develop the ability of students to analyse and evaluate major principles, theories and concepts that inform and underpin current business management practice.</td>
</tr>
<tr>
<td>4.   To enable students to achieve progression through the operational, tactical and strategic application of business and management concepts and applications.</td>
</tr>
<tr>
<td>5.   To enable students to develop knowledge and a range of interpersonal, transferable and employability skills to enhance their capacity to find employment in a range of contexts.</td>
</tr>
<tr>
<td>6.   To equip students with research skills to be able to build on the knowledge and experience gained from the programme.</td>
</tr>
<tr>
<td>7.   To encourage and enable students to become reflective and autonomous learners and to develop the ability for learning to learn.</td>
</tr>
<tr>
<td>8.   To provide students with a platform from which they may enter post-graduate study in related areas.</td>
</tr>
</tbody>
</table>
Programme learning outcomes

• “Specific and concrete statements of what students are expected to learn” (Ramsden, 1992) – and what teachers should be helping them to achieve
• Derived from the Programme Aims and tested at EHU validation
• Differentiated by level and presented under the headings of:
  – Knowledge and Understanding (subject-specific);
  – Intellectual Skills (generic cognitive skills including conceptualisation and critical thinking, problem solving, research and enquiry, synthesis and creativity, analysis and evaluation);
  – Practical Skills (subject-specific and including professional skills and attributes with an employability focus);
  – Transferable Skills (key generic skills of personal evaluation and development and interpersonal and communication skills, also with an employability focus).
### Level 6

<table>
<thead>
<tr>
<th>Knowledge and Understanding</th>
<th>Link to Modules:</th>
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</thead>
<tbody>
<tr>
<td>Apply concepts of strategic management in complex situations</td>
<td>BUS3000, BUS3003, BUS3004, BUS3007</td>
</tr>
<tr>
<td>Demonstrate an holistic approach to the analysis of business problems</td>
<td>BUS3000, BUS3001, BUS3005, BUS3006</td>
</tr>
<tr>
<td>Evaluate different approaches to decision making</td>
<td>BUS3000, BUS3005, BUS3008</td>
</tr>
<tr>
<td>Analyse complex situations and develop conclusions based on theoretical concepts</td>
<td>BUS3000, BUS3001, BUS3002, BUS3007, BUS3008, BUS3010</td>
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<td>Develop a critical approach to the evaluation of argument</td>
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<tr>
<td>Analyse, evaluate and interpret complex quantitative and qualitative data</td>
<td>BUS3000, BUS3004, BUS3005</td>
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<td>Design and implement a research project</td>
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<td>Undertake an individual research project</td>
<td>BUS3001, BUS3010</td>
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<tr>
<td>Design and implement a data collection strategy</td>
<td>BUS3001, BUS3004, BUS3005</td>
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<tr>
<td>Analyse, synthesise and summarise data using appropriate methods and develop appropriate conclusions</td>
<td>BUS3002, BUS3004, BUS3006, BUS3007, BUS3008, BUS3008, BUS3010</td>
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<td>Learn independently in the spirit of critical enquiry</td>
<td>BUS3001</td>
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<tr>
<td>Demonstrate a critically reflective approach to work</td>
<td>BUS3001</td>
</tr>
<tr>
<td>Utilise project management skills in undertaking a piece of business or management research</td>
<td>BUS3000, BUS3001</td>
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Programme learning outcomes, contd

• Mapping of modules to programme learning outcomes at validation ensures that all PLOs can be met by every student – “*Higher education providers ensure that students have appropriate opportunities to show they have achieved the intended learning outcomes for the award of a qualification or credit*” (UK Quality Code Chapter B6)

• Each PLO should ideally be achievable through completion of more than one module – this provides some safeguard against individual module failure

• Mapping of optional modules (‘electives’) to PLOs requires particular care
Module learning outcomes

• Like PLOs, Module learning outcomes (MLOs) should reflect the national descriptors (tested at validation)

Some typical questions from course developers:
– What is the optimum number of MLOs?
– Should they be differentiated between ‘knowledge’ and ‘skills’?
– Should practical (PSRB) competencies be reflected within or outwith the MLOs?

Some typical issues raised by validation panels:
– Too many MLOs (for the ‘credit value’ of the module where 1 credit = 10 notional learning hours)
– MLOs may not be capable of being tested, e.g. ‘Students will know and understand’ is less helpful than ‘Students will demonstrate knowledge and understanding’ (action verb)
– MLOs are not expressed at the appropriate level, e.g. use of the word ‘describe’ is not usually appropriate beyond Level 4
Bloom’s Taxonomy

• Bloom’s ‘Taxonomy of Educational Objectives’ (1956, but since updated by several scholars) – describes different levels of *cognitive learning*:
  – Knowledge *(basic)*
  – Comprehension
  – Application
  – Analysis
  – Synthesis
  – Evaluation *(advanced)*

• Includes a list of useful verbs to accompany each level...
Bloom’s Taxonomy

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Module assessment strategy

• Module assessment strategy should be mapped to the MLOs, e.g. Task 1 tests MLOs 1 & 2 etc.
• Assessment tasks are expressed under the three Key Information Set (KIS) headings of:
  • **Coursework** - Written assignment, including essay; report; dissertation; portfolio; output from project work (often of a practical nature which could be a performance, piece of artwork, new product or poster); set exercises and class tests *(except* exercises conducted under exam conditions and practical skills tests)*
  • **Written examination** - Including ‘seen’, ‘unseen’ and ‘open-book’ exams
  • **Practical** - Oral assessment and presentation including vivas; practical skills assessment e.g. clinical skills, laboratory techniques, identification of/ commentary on artwork, surveying skills, language translation or listening comprehension, etc.
Module assessment strategy (contd)

• Module assessment tasks must be weighted as a proportion of the summative assessment of the module e.g. ‘Task 1 = 60%, Task 2 = 40%’

• However, some assessment will be purely formative while other tasks may carry a requirement to pass but do not contribute to the summative grade, e.g. ‘Task 3 = Pass/fail only, 0%’

• Under EHU’s Academic Regulations students are permitted to fail one or more assessment tasks within a module as long as they achieve an aggregate pass mark of 40 from the remaining assessment tasks (although course teams may stipulate a pass requirement for all module assessment tasks at validation, e.g. to meet specific PSRB requirements)
Module assessment strategy (contd)

- **Typical questions arising from validation:**
  - Can/should a MLO be tested more than once within a module?
  - Should there be word equivalence between modules and is there a set University assessment tariff, e.g. 2,500 words at Level 4?
Assessment (marking) criteria

• Module learning outcomes only describe student achievement at **threshold (pass) level** – to enable grading, we use separate **assessment (marking) criteria**

• There is no requirement (currently) to provide these at validation – however, they must be published to students at the start of every module and:
  – Be transparent and easily understood by students (for their development)
  – Be at the correct level, i.e. benchmarked to the national level descriptors - for example, students should not be penalised for failing to undertake critical analysis at Level 4 (although they may be rewarded for doing so)
  – Be tailored to the particular type of assessment task, e.g. an essay will require a different set of marking criteria to a presentation
Marking criteria (cont)

• Differentiate between ‘knowledge’ and ‘skills’
• Differentiation within the First Class Band, i.e. separate criteria for 70-79%, 80-89% and 90-100% are now generally regarded as good practice

• Questions asked by course developers:
  – Should a percentage of marks be reserved for different criteria, e.g. demonstration of knowledge = 50%, use of sources = 20%, structured argument = 20%, referencing and syntax = 10%?
‘Constructive alignment’

National level descriptors (generic)

Subject Benchmark Statements

Programme Aims

Programme Learning Outcomes

MODULES

Module Learning Outcomes

Assessment tasks

Marking criteria
Questions for course developers

• Are the PLOs and MLOs aligned with the national level descriptors and subject benchmarks?
• Are the MLOs mapped to the PLOs such that every student will achieve the latter?
• Are the MLOs capable of being tested through the module assessment strategies?
• Do we want students to pass every element of assessment in a module (requires justification at validation)?
• Do the marking criteria have cognizance of the general level of assessment and the specific MLOs?
• Framework for Higher Education Qualifications, QAA
http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/quality-code-A1.aspx

• NICATS level descriptors:
  – Summary: http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/creditframework.pdf
  – Full: http://www.nicats.ac.uk/about/prn_tlevel_descriptors.pdf

• SEEC level descriptors (revised 2010)

• Subject benchmark statements, QAA

• EHU Undergraduate & Postgraduate Taught Degree Frameworks, s2 ‘The student learning experience: 'High Order Questions and Challenges”
www.edgehill.ac.uk/aqdu
References (contd)


