



ZEST! Essentials:

Principles of Module Design

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ZEST! Essentials: Principles of Module Design

1 Who is this guide for?

This guide is likely to be most useful to the following groups of staff:

- New lecturers seeking to gain an understanding of the principles involved in good module design
- Lecturers relatively inexperienced in reviewing modules or writing new modules
- Students on the PgC LTHE who may wish to include these activities in their Learning Goal B portfolios
- Supervisors and mentors for students on the PgC LTHE

There is a guide to completing the university's module descriptor form which is Appendix 7(e) in the Quality Assurance and Enhancement Handbook so this guide is not intended to replicate this information. Instead it will focus on those aspects of module design which require lecturers to exercise academic judgement on what the students will be expected to learn from studying the module, how they will learn this and how they will be required to demonstrate that learning. Thus the purpose of this guide is to encourage new lecturers to engage with the academic concepts which underpin good module design.

2 Why do new lecturers need to know about module design?

New lecturers are often confronted with preparing learning and teaching materials very early on in their careers. To be able to do this they need not only an in-depth subject knowledge in their discipline but also an understanding of the academic concepts and principles which underlie good module design. These latter concepts and principles are applied in interpreting the module descriptor into a coherent and meaningful learning, teaching and assessment strategy for that module in the context of the programme(s) it forms part of. The approach taken shapes the students' learning experiences and may influence the extent to which they engage with the module.

In the interests of fairness and transparency, it is very important that both lecturers and students understand precisely the requirements of a module. Module handbooks must be prepared for all modules and circulated to students registered on the module.

As new lecturers gain experience and confidence they will become increasingly involved in activities like module review, which may be undertaken because of changes in the context of the module (either internally within the university or externally) or in response to student feedback. Changes to module design may be sufficiently minor that they do not require a re-approval of the module descriptor or they may be extensive, requiring a re-approval process. Sometimes it may be necessary to replace an existing module with a new one better suited to its purpose, in which case the new module will need to go through the module approval process. Additional information can be found in the ZEST! Essentials guides on

- Academic Quality and Standards
- Monitoring and Evaluation.

2.1 Activity

Read through the module descriptor(s) for the module(s) you teach on. How easy is it to interpret the descriptor(s) into a series of activities, (including learning, teaching and assessment) which will provide the students with useful and meaningful learning experiences?

3 What do new lecturers need to know about module design?

Most of this university's programmes are modular ie they are made up of units of study, or modules, of standard duration which are credit rated against published Scottish Credit and Qualifications Framework (SCQF) levels.

Each module descriptor must go through the approval process, as described in the Quality Assurance and Enhancement Handbook (refer to the ZEST! Essentials guide on Quality and Standards to see how this process works), to ensure that it conforms to university policies and standards before being included in the university module catalogue. Only then can the module be made available to students.

3.1 Learning, teaching and assessment strategy

A key strategic goal of the university's 2010 Vision is stated as:

"enabling all our students to achieve their full potential (including life skills for the labour market and lifelong learning)".

A major strand of this goal is concerned with flexible and responsive modes of delivery. Thus the Learning, Teaching and Assessment Strategy (LTAS) is a vital component of the 2010 Vision. The LTAS operates as a rolling programme of developmental activities to achieve the vision. It contains details of the high level outcomes to be achieved by academic schools and professional/support departments and an action plan for their implementation. Each school is required to interpret these outcomes in a manner suitable for their own disciplines, student characteristics and vocational contexts.

The LTAS for 2003 to 2006 also recognises the importance of responding to outcomes from the national enhancement themes¹. A new LTAS strategy is in preparation which will cover the period from 2006-2010.

For the purposes of this guide, the most important outcomes given in the 2003 – 2006 LTAS are employability and personal development planning (PDP). These are significant issues which need to be addressed at programme level. Nevertheless, modules are the building blocks that make up programmes and good module design should address some aspects of these issues in the context of the programme(s) of which it will form part.

¹ The enhancement themes are a key element of the enhancement-led and student-centred approach to quality and standards, developed in Scotland jointly by the Scottish Higher Education Funding Council (now amalgamated into the Scottish Funding Council or SFC), the National Union of Students in Scotland (NUS Scotland) and the Quality Assurance Agency for higher education (QAA) Scotland.

3.2 Constructive alignment

New lecturers are usually employed on the basis of their subject expertise rather than their teaching experience. It can be tempting therefore to concentrate on the familiar subject (content, syllabus, pre-requisites and co-requisites, indicative reading) in module design at the expense of developing a module LTAS appropriate to the context of the subject. For the learning and teaching experiences to be meaningful to both lecturers and students it is necessary to think through not only what the students will be expected to know and be able to do on completion of the module, but also how they will learn and how they will be able to demonstrate that learning. Many academics advocate a systems approach to module and programme design to deal with this issue.

The systems approach to curriculum design is an outcomes or objectives based model which takes into account teaching and learning activities and includes a feedback loop from assessment of students' learning to revision of the teaching and learning activities. D'Andrea (2003) explains a version of the systems approach to module or programme design and demonstrates how it works in a flow diagram. Moon (2002) gives a more complex model which she calls a basic map of module development, which also makes use of a flow diagram.

In Biggs' (2003: 27) terminology the systems approach represents alignment of the curriculum, the teaching methods and the assessment procedures, but he takes it a stage further to constructive alignment which he terms "a marriage between a constructivist understanding of the nature of learning, and an aligned design for teaching".

3.3 Flexible delivery

Flexible delivery was one of the 2004/5 enhancement themes. The overview of the scope of this theme says:

"Institutions in the HE sector face a growing challenge to develop and adapt their provision to support mass higher education in the 21st century, and to allow greater flexibility for today's large and diverse student body. Moreover, we struggle to cope with the fast pace of change - technological, political, social and economic - which impacts on higher education from the external environment." This enhancement theme takes in both institutional issues and module issues about pace, place, content and timing of learning.

Flexible delivery relates to university structures and procedures eg Recognition of Prior Learning (RPL), distance learning, e-learning, work-based learning (WBL) or different modes of attendance, all of which may or may not be relevant in the context of your module(s).

3.4 Flexible learning

The term flexible learning can be applied in the context of what the student will be expected to know and be able to do on completion of a module. Thus it can include learning opportunities like project work, group activities, research, fieldwork and flexible assessment methods.

It is important that these learning opportunities are considered in modules, as well as programmes, at the design stage. It is also worth noting here that formal class contact between lecturer and students may account for only a small proportion of the notional student effort for a given module eg if the student studying a standard 20 credit university module is required to attend one 1-hour lecture and two 1-hour tutorials per week for 12 weeks, that accounts for 36 hours out of a notional student effort of 200 hours. There should be scope therefore to explore a range of independent activities which the student would undertake as flexible learning.

3.5 Key academic elements in GCU's module descriptor form

The key academic elements of module design are incorporated into the university's module descriptor form on pages 4, 5 and 6. In the order in which they appear, these are:

- pre-requisite knowledge
- co-requisite knowldege
- prohibited combinations
- module hours (including independent learning)
- summary of content
- learning outcomes
- teaching and learning strategy
- syllabus
- indicative reading
- transferable skills
- assessment methods.

These elements will be addressed in section 4 of this guide.

3.6 Module handbooks

The module descriptor form becomes the basis of the module handbook which students will receive. Appendix (d) of Section 7 of the Quality Assurance and Enhancement Handbook itemises the information to be included in the module handbook which must be provided to students at the start of the semester. Module handbooks may also be made available electronically eg using BlackBoard. It may be necessary to supplement the module handbook with additional information as required by the University Assessment Regulations and their Appendices.

3.7 Activities

- 1 Look up the LTAS 2003-2006. What are the six areas for enhancement actions and how will the success of their implementation be measured?
- 2 How does Biggs (2003) differentiate between spoon-feeding and constructive alignment?
- 3 Look up the SCQF level(s) for the programme(s) you teach on. Given that it is not anticipated that a single module will meet all the requirements of the level descriptor, how well do the learning, teaching and assessment activities practised in your module(s) prepare students to achieve these levels.
- 4 How does the Flexible Delivery enhancement theme interpret its remit? How can you use these ideas to create greater flexibility into your modules?
- 5 From the module descriptor proforma (Appendix e to Section 7 of the Quality Assurance and Enhancement Handbook), how do you specify the learning activities that students are required to engage in to fulfill the notional student effort?
- 6 How could you specify independent learning activities to enhance the students' learning experience in one of the modules you teach?

3.8 Sources of information

Biggs, J (2003) Teaching for Quality Learning at University, 2nd ed SRHE and Open University Press (chapter 3)

Enhancement Themes

GCU Learning, Teaching and Assessment Strategy

GCU Quality Assurance and Enhancement Handbook

Scottish Credit and Qualifications Framework

4 How can lecturers ensure that their module design is based on good practice?

Good module design conforms to QAA and University policies and Codes of Practice on one hand, and on the other takes account of published literature on good practice in learning, teaching and assessment in higher education. A well designed module will complement related modules in the context(s) of the programme(s) it contributes to and will reflect the priorities of the School LTAS. Above all, it should promote development of high level cognitive skills and deep learning in students, as well as furnishing opportunities for students to demonstrate their learning and achievements.

4.1 Developing a module LTAS

The module descriptor proforma only requires a teaching and learning strategy, but it is good academic practice to include the assessment strategy at the same time. As noted in section 3.1 above, implementation of the university LTAS is devolved to schools. Each school is required to produce an action plan every year including its interpretation of the University LTAS priorities. Like the University LTAS, the school statement may be expressed in terms of high level outcomes which can prove difficult to implement at module level. Nevertheless, a coherent module LTAS does take into account school priorities.

There are other university policies which have to be implemented at module level and these are found in the:

- Quality Assurance and Enhancement Handbook which gives information on University structures and procedures
- University Assessment Regulations and their Appendices which provide information and guidance on University policies and procedures
- Module descriptor proforma which gives guidance on the information which should be provided on the module for quality assurance and enhancement purposes.

4.2 Module content

Module content should be considered in the context of the programme(s) of which it forms part. This will determine, for example, any pre-requisite or co-requisite modules or any prohibited module combinations, ensuring coherence of the students' programme of study. Specifically in the module descriptor content, syllabus and indicative reading are required. These will provide evidence that the module is appropriate and of the right standard for the level of the programme(s) it contributes to. Many of the University's programmes are vocational and the relevant professional body may have stringent requirements on content.

4.3 Writing learning outcomes

In writing learning outcomes, Biggs (2003) says it is first necessary to specify the desired **levels** of understanding of the subject content that students should achieve. This is done by using appropriate verbs in the learning outcomes. These verbs then become the target activities that students need to perform and which the assessment tasks need to address.

Moon (2002: 56) defines a learning outcome as follows:

“a statement of what a learner is expected to know, understand and be able to do at the end of a period of learning and of how that learning is to be demonstrated. Learning outcomes are linked to the relevant level and since they should generally be assessable they should be written in terms of how the learning is represented.”

Since the mid 20th century Bloom’s taxonomy of learning objectives (or outcomes) has been used very extensively to define levels. See D’Andrea (2003) for an explanation of how the choice of verb can be used to specify level in a number of hierarchies. Biggs (2003) advocates the use of the Structure of the Observed Learning Outcome (SOLO) model to specify different levels in learning. Moon (2002) gives a good selection of outcomes specified for different levels in a range of subject disciplines.

In Scotland we have SCQF level descriptors which illustrate how we can differentiate between levels of student attainment. They also demonstrate that not all outcomes in higher education are in the cognitive domain so students are required to develop a range of skills and capabilities which may also involve the affective domain.

Students on the PgC LTHE will also be aware that the outcomes for this programme are concerned with the development of professional values as well as knowledge and practical skills in teaching and learning. Other professional bodies may also have an interest in the inculcation of their professional values as part of a programme.

4.4 Transferable skills

This section of the module descriptor proforma is concerned with development of a range of skills including communication, teamworking, using ICT and taking responsibility for personal learning and development. It has now become closely linked with the 2004/05 Employability enhancement theme.

In 2004 the Learning and Teaching Support Network Generic Centre (now part of HEA) published a series of booklets entitled ‘Learning and Employability’ which was produced by the Enhancing Student

Employability Co-ordination Team (esect). A second series was published in 2005. These booklets are aimed at lecturers interested in enhancing student employability as well as those seeking to broaden their understanding of the topic.

Development of students' employability skills is also linked to PDP for students, as part of the HE Progress File. According to the QAA Guidelines introduced in 2000, the two parts of the Progress File are the transcript for which there are UK national standards and the PDP for which there is no prescriptive approach. This has made implementation of PDP difficult and patchy across the UK. Nevertheless, the Centre for Recording Achievement (CRA) website has many case studies outlining different approaches adopted.

In Scotland a working group was set up to look into producing guidelines for PDP and this became the Effective Learning Framework (ELF) group. The ELF is now also explicitly linked to the Employability enhancement theme. The approach the ELF adopts to the implementation of PDP and Employability is to provide a framework of Focused Learner Questions (FLQs) which students can use as a basis for reflection on their learning and transferable skills development. The HEA is also active in this area. For example Edwards (2005) has updated his paper on connecting PDP to employer needs and the world of work.

GCU policy and priorities for action on PDP are contained in the LTAS 2003 – 2006 and implementation of the priorities is devolved to schools.

4.5 Designing assessment tasks

As Biggs (2003: 140) says in his book

“Students learn what they think they will be tested on. This is *backwash*, when the assessment determines what and how students learn more than the curriculum does.”

This can happen in a poorly aligned module. To avoid backwash the assessment tasks should reflect the learning outcomes of the module, especially in the verbs used. Thus the assessment tasks should enable students to demonstrate that they know and can do what has been specified in the learning outcomes. He also compares two distinct approaches to student assessment, the measurement model which is quantitative, and the standards model which is qualitative.

Also included is a discussion on who takes part in the three stages of assessment:

- setting the criteria for assessing the work
- selecting the evidence that would be relevant to submit to judgement against the criteria
- making a judgement about the extent to which these criteria have been met.

Greater student engagement with these issues has a profound effect on the quality of their learning and the learning experience. Moon (2002) provides a detailed discussion on writing and using assessment criteria.

For more information on student assessment refer to the ZEST! Essentials guide on Principles of Student Assessment. One of the major outcomes of the Assessment enhancement theme was a general concern about the quantity of assessment students are required to undertake. In GCU, this has been partially addressed by Appendix 7 of Section 2 of the Appendices to the University Assessment Regulations which gives guidance on assessment loading for students.

4.6 Specifying marking criteria

Moon (2002) deals with marking and grading issues in her discussion on writing and using assessment criteria. Biggs (2003) opens a new chapter on the practicalities of assessment design along with a discussion on marking and grading issues. D'Andrea (2003) gives three interesting case studies on the tendency of examiners to mark in different ways. These effects can be reduced by anonymised, blind double marking and moderation. In GCU Appendix 4 of Section 1 of the Appendices to University Assessment Regulations deals with marking and reporting of marks while Appendix 15 in Section 2 gives guidance on anonymous marking of formal written exams.

GCU has adopted a policy in Appendix 6 of Section 2 of the Appendices to the University Assessment Regulations entitled 'Notes of Guidance to Academic Staff on the Information to be Provided to Students to Assist Their Preparation for Unseen Assessments (Including Assessments Containing an Unseen Component)'. This policy states that "everything which a student needs to know about an assessment should be provided in a written format" and sets out the bounds of acceptable information to be provided. This information becomes the basis of the marking criteria to be applied. Two exemplars are provided in this Appendix. If this guidance has not already been provided in the module handbook, it should be given as additional written information which may also be made available on BlackBoard.

4.7 Feedback

In 2005 GCU adopted a series of policies on feedback to students on their assessed work (the policy is covered in more detail in the ZEST! Essentials guide to Principles of Student Assessment). Each module is required to publish its feedback strategy, provide generic assessment feedback and to set up a bulletin board, including the facility for students to pose questions. This information should appear in student handbooks.

4.8 Activities

- 1 Look up your school LTAS. Which of the school's priorities can you address in your module(s)?
- 2 How could you use or adapt D'Andrea's (2003) systematic approach to course/module planning?
- 3 What does your professional body have to say about programme content and how does this influence your approach to designing your modules?
- 4 How could you use or adapt Biggs' (2003) SOLO model to specify level in your module design?
- 5 What are the main aims of the Employability enhancement theme and what are the implications for your module design?
- 6 What are the core features of the ELF and how could you adapt them for use in your module design?
- 7 Read Biggs' (2003) discussion on "Who takes part in the assessing?". What are the opportunities available in your module design to incorporate some of these ideas?
- 8 Which of Moon's (2002) types of assessment criteria do you use and how?
- 9 What do the Appendices to University Assessment Regulations have to say about marking and moderation of marks?

4.9 Sources of information

Biggs, J (2003) Teaching for Quality Learning at University 2nd ed SRHE and Open University Press (chapters 3, 8 and 9)

Cowan, J (1998) On Becoming an Innovative University Teacher Reflection in Action SRHE and Open University Press

D'Andrea, V (2003) Organising teaching and learning: outcomes-based planning in Fry, H et al (eds) A Handbook for Teaching and Learning in Higher Education 2nd ed RoutledgeFalmer

Effective Learning Framework

Employability enhancement theme

Moon, J (2002) The Module and Programme Development Handbook a practical guide to linking levels, learning outcomes and assessment Kogan Page

5 Professional development

Module design is an area of professional development that most lecturers will continue to refine throughout their careers. There is a constant need to review and revise modules and to prepare new modules in the light of changing circumstances eg advances in subject knowledge and research, in response to student feedback, changing student demographics, new initiatives at national level, developments in educational research, adoption of new technologies.

A systems approach to module and programme design requires reflection to close the feedback loop. You may wish to refer to the PgC LTHE guide on Reflection, Reflective Practice and Experiential Learning for more information on this topic. Many professional bodies, including the HEA, have a requirement for Continuing Professional Development (CPD) which involves reflective practice and adopting professional values. Indeed, Cowan (1998) wrote a whole book about professional development as a university teacher through reflection.

For PgC LTHE students, undertaking the activities in this guide may contribute to attainment of Goal B learning outcomes 2, 3, 5, 6 and 8, and assessment criteria 10, 11 and 14. How this guide might be used to achieve this should be considered in developing the learning activities to be undertaken and may be negotiated with your Goal B supervisor.

5.1 Activities

- 1 For an overview of the principles of module design, read D'Andrea's (2003) chapter on outcomes-based planning. Practise writing learning outcomes for different levels of module in your discipline. How do these learning outcomes reflect the SCQF level descriptors ?
- 2 For a more in-depth approach browse through Moon's (2002) and Biggs' (2003) books. Practise writing module LTAS, learning outcomes and assessment tasks for different levels. Are they aligned and are they practicable?
- 3 Keep checking for developments on the enhancement themes website. How can you incorporate ideas and concepts from these themes into your module design?
- 4 What are the CPD requirements of your professional body and the HEA?
- 5 What does Cowan (1998) have to say about reflecting on dealing effectively with obstacles to your learning? How could you adapt his strategy?

5.2 Sources of information

Biggs, J (2003) Teaching for Quality Learning at University 2nd ed
SRHE and Open University Press

D'Andrea, V (2003) Organising teaching and learning: outcomes-
based planning in Fry, H et al (eds) A Handbook for Teaching and
Learning in Higher Education 2nd ed RoutledgeFalmer

Enhancement Themes

Higher Education Academy

Moon, J (2002) The Module and Programme Development
Handbook a practical guide to linking levels, learning outcomes and
assessment Kogan Page

Scottish Credit and Qualifications Framework

6 Where can I get more information?

Biggs, J (2003) Teaching for Quality Learning at University 2nd ed
SRHE and Open University Press

Centre for Recording Achievement
<http://www.recordingachievement.org/>

Cowan, J (1998) On Becoming an Innovative university Teacher
Reflection in Action SRHE and Open University Press

D'Andrea, V (2003) Organising teaching and learning: outcomes-
based planning in Fry, H et al (eds) A Handbook for Teaching and
Learning in Higher Education 2nd ed RoutledgeFalmer

Edwards, G (2005) Connecting PDP to Employer needs and the
world of work
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=71

Effective Learning Framework
<http://www.enhancementthemes.ac.uk/defaultpage121bc1green.aspx?pageID=218>

Employability enhancement theme
<http://www.enhancementthemes.ac.uk/>

Enhancement Themes
<http://www.enhancementthemes.ac.uk/>

GCU Appendices to the University Regulations
http://academicreg.gcal.ac.uk/Pages/AADocums/regs_appendices.html

GCU Assessment Regulations
http://academicreg.gcal.ac.uk/Pages/AADocums/assessment_regs.html

GCU Learning, Teaching and Assessment Strategy
<http://www.gcal.ac.uk/quality/strategy/ltas.html>

GCU Quality Assurance and Enhancement Handbook
<http://www.gcal.ac.uk/quality/handbook/index.html>

Moon, J (2002) The Module and Programme Development
Handbook a practical guide to linking levels, learning outcomes and
assessment Kogan Page

Scottish Credit and Qualifications Framework
<http://www.scqf.org.uk/>

LTSN Learning and Employability Series 1:

- 1 Yorke, M (2004) Employability in higher education: what it is – what it is not
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=336
- 2 Knight, P & Yorke, M (2004) Employability: judging and communicating achievements
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=337
- 3 Yorke, M & Knight, P (2004) Embedding employability into the curriculum
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=338
- 4 Moon, J (2004) Reflection and employability
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=339
- 5 Layer, G (2004) Widening participation and employability
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=340
- 6 Moreland, N (2004) Entrepreneurship and higher education: an employability perspective
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=341
- 7 Little, B (2004) Employability and work-based learning
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=358
- 8 The Pedagogy for Employability Group (2004) Pedagogy for employability
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=357

LTSN Learning and Employability Series 2:

- 1 Moreland, N (2005) Work-related learning in higher education
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=582
- 2 Metcalfe, J (2005) Employability for research postgraduates
http://www.heacademy.ac.uk/employability/LE_Series2_No2.pdf
- 3 Little, B et al (2005) Part-time students and employability
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=583
- 4 Robinson, S (2005) Ethics and employability
http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=584