

University awards and the National Framework of  
Qualifications (NFQ):  
Issues around the Design of Programmes and the  
Use and Assessment of Learning Outcomes



**FIN**

*The University Sector  
Framework  
Implementation  
Network (FIN)*

University awards and the National Framework of Qualifications (NFQ):  
Issues around the Design of Programmes and the Use and Assessment of Learning Outcomes

December, 2009

## P R E F A C E

The National Framework of Qualifications (NFQ) was launched in October 2003. It is designed to accommodate Irish school, further and higher education and training awards across its ten levels, and to provide a central point of reference, nationally and internationally, for the comparison, contrast and recognition of qualifications. Its ultimate purpose is to place the learner at the centre of education and training.

The implementation of the NFQ provides a series of challenges for, among others, programme designers, lecturers, education providers, and awarding bodies. The university sector Framework Implementation Network (FIN) was established so that practitioners in the universities and their linked colleges could discuss and propose some approaches to these challenges, and communicate these to their colleagues across higher education for consideration. The following report represents the initial outcomes from this collaborative exercise, focused around the issue of designing programmes and awards for inclusion in the NFQ, and the design and assessment of learning outcomes linked to these awards.

The Irish Universities Association (IUA) and the National Qualifications Authority of Ireland (NQAI) would like to take this opportunity to thank the members of FIN, nominated by the universities and their linked colleges, for their contribution to this project and their commitment to the purpose and activities of FIN. It is hoped that they, and their colleagues, will continue to meet through this forum and collectively to address matters arising from the ongoing full implementation of the NFQ.

On behalf of the network, we would also like to acknowledge the support of Professor John Scattergood, who has chaired and guided FIN since its establishment in December 2007. In this capacity, Professor Scattergood has lent the network not only the weight of his formidable academic career, but also that of his balanced, critical and informed voice. For this, we thank him most sincerely.

Details on the membership of FIN, further information on the network's activities, and a dynamic version of this publication, are all available at [www.nfqnetwork.ie](http://www.nfqnetwork.ie)





## C O N T E N T S

Introduction		6
Part 1:	TECHNICAL ASPECTS OF DESIGNING AND REDESIGNING PROGRAMMES / AWARDS FOR INCLUSION IN THE NATIONAL FRAMEWORK OF QUALIFICATIONS (NFQ)	11
Part 2:	DISCIPLINE-SPECIFIC LEARNING OUTCOMES: SOME CASE STUDIES, REFERENCE POINTS, ISSUES AND INSIGHTS	47
Part 3:	THE ASSESSMENT OF LEARNING OUTCOMES	81

# INTRODUCTION

In the last decade the Bologna Process has brought about a quiet but irreversible revolution in the higher educational systems of Europe. To date 46 countries have chosen formally to be associated with it and to implement its protocols, which are at once radical and innovative as well as spacious and enabling. Its agenda is political and social as well as educational: it seeks to create a European Higher Education Area which provides the best possible third-level education that it can, creating a population and workforce which is not only highly skilled but also culturally aware and internationally mobile. Its attention has, understandably, been focussed mainly on that cohort of students who transfer directly from second-level schooling to third-level, but not exclusively so, as the latest ministerial communiqué makes plain.<sup>1</sup> It adverts to the aspiration to ‘a Europe of knowledge that is highly creative and innovative’ and continues:

“Faced with the challenge of an ageing population, Europe can only succeed in this endeavour if it maximises the talents and capacities of all its citizens and fully engages in lifelong learning as well as widening participation in higher education”.

Third-level education is available for everybody and potentially for the whole of life. And it is not only economically advantageous, but also socially enhancing. Again in the words of the ministerial communiqué: “Student-centred learning and mobility will help students develop the competences they need in a changing labour market and will empower them to become active and responsible citizens”.

The aspirations and ideals of the Bologna Process are, of necessity, stated in general and high-level terms, but it is recognised that their achievement demands a grounding in practical reality and in enabling organisational and administrative structures and practices; it is that part of the third-level spectrum in which the university sector Framework Implementation Network (FIN) has chosen to locate itself. The original protocols of the Bologna Process recognised the need for strong administrative instruments to give tangible meaning and shape to the ideals – the Diploma Supplement and ECTS were mentioned – and as the process developed the need for firm qualifications frameworks, explicit learning outcomes and transparent assessment procedures became apparent. It is in these three areas that FIN makes its modest proposals and its contribution.

Basic to this enterprise is a qualifications framework, which is precise, transparent and internationally acceptable. This was recognised by the Berlin ministerial communiqué of 2003:

“Ministers encourage the member states to elaborate a framework of comparable and compatible qualifications for their higher education systems, which should seek to describe qualifications in terms of workload, level, learning outcomes, competences and profile. They also undertake to elaborate an overarching framework of qualification for the European Higher Education Area”.<sup>2</sup>

In Ireland this, in a sense, was preaching to the converted – or, better, validating something that had already been developed.

Discussions around the need for a more coherent and effective system of qualifications began in Ireland in the early 1990s. The Qualifications (Education and Training) Act 1999 established the legislative context for the development of the National Framework of Qualifications (NFQ). The Act also established the National Qualifications Authority of Ireland (NQAI), which was tasked with developing and implementing a national framework of qualifications based on standards of knowledge, skills and competence. Universities, like other

<sup>1</sup> European Ministers Responsible for Higher Education (2009) *Communiqué of the Conference of European Ministers Responsible for Higher Education, Leuven and Louvain-la-Neuve, 28-29 April 2009*. Brussels: European Commission. Available from: [http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/Leuven\\_Louvain-la-Neuve\\_Communique%C3%A9\\_April\\_2009.pdf](http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/Leuven_Louvain-la-Neuve_Communique%C3%A9_April_2009.pdf)

<sup>2</sup> European Ministers Responsible for Higher Education (2003) *Communiqué of the Conference of Ministers responsible for Higher Education in Berlin on 19 September 2003*. Brussels: European Commission. Available from: [http://www.bologna-bergen2005.no/Docs/00-Main\\_doc/030919Berlin\\_Communique.pdf](http://www.bologna-bergen2005.no/Docs/00-Main_doc/030919Berlin_Communique.pdf)

academic institutions, have agreed to map their awards on to a ten-point scale established by the NQAI, levels 7-10 on the National Framework of Qualifications (NFQ) being particularly relevant for universities.<sup>3</sup> The Bologna Process requires that each country develop national qualifications frameworks compatible with the three cycles of the Bologna meta-framework, which is effectively a translation device for national frameworks. Countries self-certify the compatibility of their national frameworks with the Bologna Framework. The compatibility of the Irish NFQ with the Bologna Framework was formally verified in 2006.<sup>4</sup> In April 2008 a lifelong learning meta-framework, the European Qualifications Framework (EQF) was introduced by the European Commission. Ireland referenced its NFQ levels to the eight levels of the EQF in the summer of 2009.<sup>5</sup>

One of the most striking features of Ireland's third-level system is the abundance and variety of the courses available at all levels. This is a testimony at once to the commitment of the population to education as a means of professional development and personal enhancement and to the readiness and flexibility of third-level providers to put these courses on. Sometimes their development is in response to national needs, but often – particularly in relation to diplomas and certificates – local factors are crucial. The process is dynamic: courses appear and disappear as their relevance changes. There appears often to be little central direction and, in a sense, this is all to the good because swift and geographically uneven responsiveness is essential if public needs are to be met. Amidst this breadth and diversity of course choice lies potential confusion for learners attempting to navigate the qualifications framework. But with the development of the NFQ and its explicit relationship to the European meta-frameworks it is now possible for those possessing qualifications and those seeking them to position their appropriate awards onto an authoritative map, to see academically where they stand.

It is with this area that the first of the FIN working groups has concerned itself. It has undertaken to explain, in some detail, the relationship of the NFQ to the European meta-frameworks, to set out the awards available – degrees, diplomas, certificates – and to position them in terms of the national and European frameworks, and to define them in terms of level and ECTS workloads. In short, it has provided a brief technical guide, primarily aimed at programme designers, to the characteristics of programmes that are recognised through the NFQ. As such, the function of this – as with the function of all the working groups – is practical and utilitarian.

The *Berlin Communiqué* (2003), quoted above, associated learning outcomes with the development of qualifications frameworks and since then they have assumed considerable importance in the reorganisation of European third-level education which is taking place. Learning outcomes in themselves are limited, modest and prosaic devices for describing achievement but they have attained importance because they are an essential part, one of the basic building blocks, of a larger movement from the traditional 'input-based' description of educational entities (which concentrates on access requirements, course length, aims and objectives, methods of instruction, curricula, methods of examination etc.) to an 'output-based' system which concentrates on what the student has learned at the end of a period of instruction.<sup>6</sup>

There are many definitions of learning outcomes, but that in the ECTS Users' Guide for 2004 is as good as any and has achieved wide currency:

"Learning outcomes are statements of what a learner is expected to know, understand and / or be able to demonstrate after completion of a process of learning".<sup>7</sup>

Learning outcomes may be large enough to account for a course or small enough to account for a module or unit. They seek to describe the progress of the student's learning in terms of the knowledge which has been acquired, the comprehension of that knowledge, and the capacity, in relation to that body of knowledge, to apply it, to analyse it, to synthesize it, and to evaluate it. Learning outcomes define what is learned in two

<sup>3</sup> See National Qualifications Authority of Ireland (2006) Towards the completion of Framework implementation in the universities – a discussion paper. [Internet]. Available from: [http://www.nfqnetwork.ie/\\_fileupload/Image/Towards%20the%20completion%20of%20Framework%20Implementation%20in%20the%20Universities.doc](http://www.nfqnetwork.ie/_fileupload/Image/Towards%20the%20completion%20of%20Framework%20Implementation%20in%20the%20Universities.doc)

<sup>4</sup> See <http://www.nqai.ie/docs/publications/31.doc>

<sup>5</sup> <http://www.nqai.ie/documents/EQFReferencingReportfinalJune2009.pdf>

<sup>6</sup> See Adam, S. (2004) *Using learning outcomes. A consideration of the nature, role, application and implications for European educational of employing learning outcomes at the local, national and international levels*. UK Bologna seminar 1-2 July, Heriott-Wyatt University, Edinburgh. P. 5

<sup>7</sup> European Union (EU) (2004) *ECTS Users' Guide – European Credit Transfer and Accumulation System for Lifelong Learning*, European Commission p. 44

broad areas. Subject-specific outcomes relate narrowly to a defined body of often very precise or technical knowledge. This type of learning outcome may be dominant at module or unit level. Generic outcomes describe transferable skills relating to any discipline – problem-solving skills, written or oral communication skills, team-working skills, IT skills and so on. But whether specific or generic, what the student has learned has to be at the centre of the definition.<sup>8</sup>

In 2008 the Higher Education Authority (HEA) proposed<sup>9</sup> that third-level institutions, in furtherance of the implementation of the NFQ, should establish a set of written learning outcomes not just at the generic levels of degree, diploma and certificate, but for all programmes, courses, modules and units, and since then the sector has increased its engagement with this. Teaching and learning, especially at third-level, are holistic processes – things relate to other things, the boundaries of subjects are porous – so it has required considerable intellectual adjustment across the sector to fashion taxonomies of learning such as are required by an outcomes-based approach. It is the difficulties inherent in satisfying these challenges that are addressed by the second FIN working group.

Writing learning outcomes at a programme level is difficult, but in some areas it is more difficult than in others. In some subjects, mainly professional or vocational, particularly those which are validated by bodies external to the third-level providers, the range of knowledge to be acquired and the skills and the competences are often broadly accepted across a number of institutions, sometimes across a number of countries – as is the case in some areas of medicine, dentistry and certain therapies. In some cases, as with Engineers Ireland and the Schools of Engineering in the State, a professional body will make common cause with the third-level providers to produce an impressive set of learning outcomes which frame the subject overall, while allowing for individual preferences and nuance. A number of European Tuning<sup>10</sup> groups have sought to define the parameters of specific subjects and, in Britain, benchmarking of outcomes<sup>11</sup> for specific disciplines has been put in place.

These all provide useful points of reference and the second working group adverts to them. However, it also seeks to establish an understanding of the process of writing discipline-specific outcomes, and includes a series of prompts for individual teachers to engage with outcomes in their own disciplines in order to guide them in producing their own outcomes which are logical but not over-specific or over-generic. Case studies from a representative but discrete range of subjects – business studies, physics, music and English – are designed to highlight the problems and to help to solve them.

In justifying an outcomes-based approach to learning, it is often said that it aids curriculum design by clarifying the key purposes of courses, how the components of the syllabus cohere and how learning progression is organised. Learning outcomes highlight the relationship between teaching, learning and assessment. Learners benefit from full and clear statements of exactly what they will be able to achieve and do after a specified period of study. Learning outcomes provide learners with clear information which enables them to make more informed choices at programme, module and unit levels. In terms of quality assurance, learning outcomes increase transparency between qualifications and within them. They can play a key role in defining points of reference for the establishment and assessment of standards. Internationally, learning outcomes can promote the mobility of both students and those seeking employment by facilitating credit transfer and the recognition of qualifications. They can provide a common format for different forms of learning – distance learning, work-based learning, non-formal learning – and facilitate lifelong learning. They benefit higher-educational institutions, employers and society at large by articulating the specific achievements associated with various qualifications.<sup>12</sup>

Which is all very well, but this approach – with its explicitness and transparency – demands a commensurately precise and robust set of assessment procedures to give it force and authority, and it is assessment which is

<sup>8</sup> See Gosling, D. & Moon, J. (2001) *How to use learning outcomes and assessment criteria*. London: SEEC

<sup>9</sup> Higher Education Authority (HEA) (2008) *Proposals for the Incorporation of Performance into Institutional Funding*. Dublin: HEA. P. 6

<sup>10</sup> For information on the European Tuning Projects, please see: <http://tuning.unideusto.org/tuningeu/>

<sup>11</sup> For further information on subject benchmarking in Britain, please see: <http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp>

<sup>12</sup> For a fuller discussion, please see Adam, S. (2006) 'An introduction to learning outcomes: a consideration of the nature, function and position of learning outcomes in the creation of the European Higher Education Area'. In: Froment, E.; Kohler, J.; Purser, L. & Wilson, L. eds. *EUA Bologna Handbook – Making Bologna Work*. Berlin: Raabe Verlag. p. 7-8

the theme of the deliberations of the third FIN working group. This is not easy to address for a number of reasons: one is that programme and module or course or unit learning outcomes demand to be treated differently from one another. Jennie Moon explains:

“It is important to note that there are clear differences in the nature of programme outcomes and learning outcomes written for modules. Programme outcomes are written for a typical or average student and they may be aspirational. They are not, therefore, directly testable. For example, programme outcomes may evidence areas of learning that are the outcomes of the student’s experience of engagement in the programme, on the basis that the whole may be greater than the sum of the parts”.<sup>13</sup>

Learning outcomes written at a programme or course level ought not to be a simple digest of module learning outcomes, but should be a generalised version of them with which they are compatible. Programme or course level outcomes should also map onto the appropriate award-type and level descriptors for that award. But learning outcomes at module or unit level need to be directly testable, by whatever means – multiple choice questionnaire, oral presentation, practical, work-book, log-book, written essay or project, dissertation, formal examination and so on. These and other issues are addressed by this working group, who also deal with such pressing topics as the constructive alignment of learning outcomes, whether or not assessment should take place at a threshold level, and how one chooses which outcomes to assess, when and how, what the practical institutional and procedural contingencies are and so on. Again the arguments and recommendations are illustrated by concrete examples. And again there is emphasis on the self-reflexivity which accompanies this process: teachers and administrators are of necessity learners as well. Humility is part of the learning process.

The FIN group was set up by the Irish Universities Association (IUA) and the the NQAI. Its function was not to enunciate new theories or to break new ground. Its more modest task was to respond to ideas which are changing the landscape of higher education in Europe and beyond – one hopes for the better – and to fashion for them a shape and practicality in terms of the contingencies of twenty-first century Irish society and twenty-first century Irish third-level education. Accordingly, the group was not made up of educational theorists – though we all, of necessity became acquainted with education theories for the ‘frail, travelling coincidence’ of this committee – but of teachers and administrators, senior and junior, who would probably have said that they had nothing much in common, at the start of the process, except a desire to see the third-level sector respond creatively and responsibly to what is happening throughout Europe and to maintain the pre-eminent position Ireland has in these wide-ranging reforms.

But transferable knowledge and strategies are part of the larger agenda. And what has happened, it seems to me, as the fortunate chairman of the FIN committee, is that the group has not only fulfilled its narrow brief but gone, perhaps fortuitously but in innovative ways, beyond it, because some of its findings and suggestions, principally because they are grounded in an experiential reality, may be relevant and useful not only within the Irish context, from which they derived, but more widely in the emerging and expanding European Higher Education Area.

### **Professor John Scattergood**

Chair of University Sector  
Framework Implementation Network (FIN)

December 2009

<sup>13</sup> See Moon, J. (2002) *The Module and Programme Development Handbook: A Practical Guide to Linking Levels, Outcomes and Assessment Criteria*. London: Routledge. p 142

