Evaluation of the Comparability of the Advanced Certificate and Higher Certificate Qualifications

July 2021

Ecctis

Acknowledgements

QQI and Ecctis would like to thank the members of the Steering Group established by QQI to support and steer this piece of research right from the initial agreement of the parameters of the research and Terms of Reference for the tendering process to ensuring that selected providers were encouraged to supply the evidence which was critical to enabling Ecctis to carry out the research. Many thanks to the providers that supplied the programme and course documentation to Ecctis for this research project. Members of the Steering Group are set out in Appendix 3.

A special thanks to SOLAS and the HEA for encouraging QQI to commission the research and for supporting this project from start to finish.

Introduction by QQI Chief Executive

The Irish National Framework of Qualifications (NFQ) was established in 2003. The NFQ is a single framework, covering school, further and higher education and professional awards. Over the past two decades, the 10-level Framework has become part of the national lexicon and is frequently referenced by students, guidance counsellors, education and training providers, Government and employers.

Although the NFQ has been referenced against the two main European qualifications frameworks twice since its establishment, most recently in 2020, the placement of major awards in the framework has never been reviewed or revised. It should also be noted that when the NFQ was established, there were separate national awards councils for further and higher education. Additionally, further education and training was overseen by separate bodies in the form of Vocational Education Committees (VECs) and the Training and Employment Authority (FAS).

In 2012, the further and higher education and training councils were merged into a national qualifications and quality assurance body, Quality and Qualifications Ireland (QQI) which was also given responsibility for the maintenance and further development of the NFQ. In 2013, FAS was disbanded. The funding and oversight of further education and training passed to a new body, SOLAS, and the former FAS training function was merged into 16 newly established regional Education and Training Boards which incorporated the 33 former VECs.

Since the establishment of the NFQ, there has been frequent discussion and some degree of tension about the placement of separate further and higher education awards at Level 6, in the form of the Advanced Certificate (AC) and Higher Certificates (HC) respectively. The parity of esteem of further and higher education has been challenged by the perception that those in possession of a higher education award at Level 6 have greater chances of progression to higher education awards at Levels 7 and beyond than their counterparts with a Level 6 further education qualification.

Over the past decade since the publication in 2011 of the *National Strategy for Higher Education to 2030*, the Institutes of Technology have increasingly sought to merge into new Technological Universities, and the level of offering of higher certificates by the institutes and the subsequent take-up of these programmes by learners has waned. In 2010, there were 21,000 more applications to Level 8 Honours Bachelor degree programmes through the Central Applications Office than to programmes at Level 6/7. By 2020, this gap in applications had increased to over 33,000.

In light of the above, in 2019 QQI believed it was appropriate to commission research to evaluate the effectiveness of the two Level 6 certificates in differentiating further education from higher education outcomes as per their original purpose, to look at the parity of esteem issues between the two qualifications and to identify opportunities for integrated learning pathways to awards at NFQ Levels 5-7.

The scope of the current report (produced by Ecctis, the operators of the UK National Information Centre for the recognition and evaluation of international qualifications and skills, who were commissioned by QQI to undertake the study) focuses on the first of these areas,

to review the comparability of the AC and HC qualifications and whether there is significant differentiation between the two awards as implemented in terms of their design, delivery, assessment and outcomes. The further two research areas will be the specific focus of a second follow-up phase.

We believe that the findings and recommendation contained within this report will be of interest to government, funding authorities, education and training providers and learners.

QQI
Dearbhú Cáilíochta agus Cáilíochtaí Éireann
Quality and Qualifications Ireland

Acronyms

AC	Advanced Certificate
ECTS	European Credit Transfer and Accumulation System
ETBs	Education and Training Boards
FET	Further Education and Training
HC	Higher Certificate
HE	Higher Education
IoTs	Institutes of Technology
ISCED	International Standard Classification of Education
MIPLOs	Minimum intended programme learning outcomes
NFQ	National Framework of Qualifications of Ireland
PLC	Post-Leaving Certificate
TUs	Technological Universities

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Published by:
Ecctis Ltd
Suffolk House, 68-70 Suffolk Road
Cheltenham, Gloucestershire
United Kingdom
GL50 2ED

Email: projects@ecctis.com

1. Introduction

1.1 Context and Scope

QQI has commissioned Ecctis to undertake an independent review and evaluation of the programmes leading to the Advanced Certificate (AC) and Higher Certificate (HC) qualifications, both recognised at Level 6 of the National Framework of Qualifications (NFQ) of Ireland.

The AC is offered within the further education and training (FET) sector and the HC in the higher education (HE) sector. Over the past 18 years since the inception of these awards, it is understood that the FET and HE sectors in the Irish education system have evolved and it is in this context that QQI, SOLAS, the HEA and the many FET and HE providers identified a need to examine NFQ awards at Level 6 in order to:

- "Evaluate their effectiveness in differentiating further education from higher education outcomes as was their original purpose
- Look at the parity of esteem issues between the two qualifications
- Identify opportunities for integrated learning pathways to awards at NFQ Levels 5-7."[1]

The scope of this current project focuses on the first bullet point outlined above, that is to review the comparability of the AC and HC qualifications and to identify whether there is significant differentiation between the two awards as implemented in terms of their design, delivery, assessment and outcomes. The further two bullet points will be the specific focus of a second follow-up phase.

At the outset of this project it was understood that although the award-type descriptors for the HC and AC vary, the overall NFQ level is the same for both qualifications (i.e. Level 6). The AC and HC award-type descriptors contain a combination of NFQ sub-strand level indicators ranging from NFQ Levels 5 and 6 to Level 7. Although there is a clear difference between the NFQ award-type descriptors, it is unclear whether the same level of differentiation is evident in the outcomes of the AC and HC qualifications as they are implemented in practice. Therefore, one of the key objectives of this evaluation was to better understand the similarities and differences between these two award types as implemented by engaging directly with providers of AC and HC qualifications.

Acknowledging that the Post-Leaving Certificate (PLC) route to an AC includes two academic years post-Leaving Certificate, with a Level 5 Certificate achieved in the first year and an AC in the second, this study will consider both the Level 5 Certificate and AC together for this evaluation. Therefore, where this study refers to the AC award it is often referring to the pair of one-year FET PLC programmes leading to Level 5 Certificates followed by Advanced Certificates. Alongside this, apprenticeship programmes leading to an AC will also be considered.

[1] QQI Tender Document: Evaluating the comparability of the Advanced Certificate and Higher Certificate qualifications.

An evaluation based on a sample of subjects and programmes has been undertaken, including an ensemble of subjects for both the Level 5 Certificate, AC and HC, with each ensemble matched in terms of the distribution of subjects included in International Standard Classification of Education (ISCED) fields of learning.[2] For each of the eight selected ISCED fields, programmes leading to AC and HC qualifications from a number of providers have been selected, providing an overall initial sample size of 47 programmes.

Throughout the lifespan of the project, regular meetings were coordinated with QQI and the Stakeholder Steering Group, comprising key representatives from the Irish FET and HE sectors. The sample of programmes selected was agreed with the Stakeholder Steering Group as was the methodological approach. Meetings were also scheduled to discuss progress and to quality assure the principal outcomes of the work.

There is one overarching research question proposed for this study and two follow-up questions as follows:

Research Question: Is there is a (statistically) significant difference between the achieved learning outcomes associated with ACs (based on programmes leading to Level 5 Certificates followed by ACs and apprenticeship programmes) and HCs as implemented?

- If there is an overall significant difference, what may be the reasons for this difference relating to AC and HC programme design, delivery and assessment in practice?
- If there is no statistically significant difference in relation to the NFQ, are there any other observations regarding the implementation of the AC and HC qualifications in practice that may be important to consider for phase 2 of the project?

In relation to the research question, the following (null) hypothesis was to be tested:

Hypothesis: There is no statistically significant difference between the AC and HC qualification achieved outcomes.[3]

In order to answer these overarching questions and to test the above hypothesis, a mixed methods approach was used, including qualitative evaluation of collated AC and HC materials to determine the key similarities and differences between them in terms of design. Subsequently a qualitative best-fit comparison exercise was conducted to determine comparability to the eight sub-strands of the NFQ for the sample of programmes. Quantitative methods were then employed to test whether there was a significant difference between the sub-strand levels established for programmes leading to the AC and HC awards across the sample.

[2] The ISCED fields of learning include Education, Business, Administration and Law, Engineering, ICT 1: Computer Systems, ICT 2: Software Engineering, Agriculture, Fisheries and Veterinary, Services and Health Services.
[3] This proposition can either be rejected or not rejected. The formulation of the proposition does not imply a preference for one outcome over the other.

When interpreting the results of this study it is important to clarify what could be considered a significant difference; primarily this was interpreted as statistical difference within the context of the quantitative analysis. It means there is a measurable difference between the two groups of qualifications (the Level 5 Certificate + AC and HC groups) and that, statistically, the probability of obtaining that difference by chance is very small (less than 5% when using a 0.05 confidence interval).

The findings of the quantitative analysis and qualitative review of programme documentation were complemented by focus groups with key stakeholders, including graduates, employers and key representatives of AC, HC and HE providers. The discussions in the focus groups centred on exploring participants' perceptions about the key similarities and differences between the HC and AC qualifications. The discussions were also informed by lines of enquiry emerging from the comparative review of the sets of qualifications. However, focus groups were not aimed at informing the comparative review, but were carried out as a way to complement the comparative review by identifying stakeholders' perceptions which could inform further reflection by QQI and the broader FET and HE sectors going forward.

1.2 Overview of the Irish Education System

It was firstly important to place the Level 5, AC and HC qualifications in context by conducting a review of the NFQ, AC and HC awards, and the awarding bodies and providers of these awards.

1.2.1 NFQ and Award-Type Descriptors

The NFQ is a system of levels for qualifications. It assumes that the learning required for any educational or training qualification can be described in terms of knowledge, skill or competence and that these can be represented by statements. The NFQ includes 10 levels, which are defined by the NFQ Grid of Level Indicators for each of three strands (knowledge, skill and competence). These strands are further divided into a total of eight sub-strands.[4]

The NFQ is referenced to the European Qualifications Framework (EQF) and aligned with the Framework for Qualifications in the European Higher Education Area (FQ-EHEA).

There are five classes of NFQ awards. The four original ones include Major, Minor, Special Purpose, and Supplemental and the more recently established one is the Professional class of awards. Each of the NFQ classes also includes a range of award types. For example, major awards include the Level 5 Certificate, the AC and the Honours Bachelor Degree; each of these has a descriptor. Minor awards may be achieved by completion of constituent modules of programmes that lead to these major awards.

Each of these awards have a NFQ award-type descriptor that functions as the most general expression of standards for these qualifications. The original major award-type descriptors for

[4] Quality and Qualifications Ireland (QQI), 2003. *National Framework of Qualifications*. [pdf] Published by: National Qualifications Authority of Ireland. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

FET and HE were built using elements from the grid of level indicators. Some of these descriptors combine learning outcome indicators drawn from a mixture of NFQ Levels. The learning outcome indicators included in the AC award-type descriptor contain a mixture of NFQ sub-strand level indicators drawn from NFQ Levels 5, 6 and 7. The learning outcome indicators included in the HC award-type descriptor also contain a mixture of NFQ level indicators drawn from Levels 5, 6 and 7 but the mixture is different from the AC award-type.[5]

The AC award-type descriptor is frequently used within the PLC sub-sector of the FET sector, where programmes leading to the AC are often accessed by people with a PLC Level 5. It is also frequently used for the terminal qualification following a four-year craft apprenticeship. The Level 5 and AC awards are offered by FET colleges that are part of the 16 Education and Training Boards (ETBs) as well as other types of providers. The craft apprenticeship is managed by the statutory body SOLAS, with the taught elements overseen by the ETBs and the technological sector higher education institutions, i.e. Technological Universities (TUs) and Institutes of Technology (IoTs).

The duration of study from the PLC (in ETBs) to the AC is two academic years, with the Level 5 Certificate achieved in Year 1 and the AC in Year 2. For apprenticeships it is two to four years. In further education one academic year is expected to involve 1200 notional hours of learner effort (i.e. 120 FET credits).

The HC offered by IoTs, TUs, and other providers, including private HE providers, replaced the National Certificate award – previously awarded by the Higher Education and Training Awards Council (HETAC) and the National Council for Educational Awards (NCEA). The HC is a short-cycle post-secondary qualification within the European Higher Education Area (EHEA) three-cycle system of the Bologna Process; the short-cycle award consists of 120 European Credit Transfer and Accumulation System (ECTS) credits and sits within the first (undergraduate) cycle which consists of 180-240 ECTS credits.[6] The duration of the higher education pathway to the HC is two academic years (post-Leaving Certificate). In higher education one academic year (60 ECTS credits) is expected to involve 1,500-1,800 notional hours of learner effort.

Typically, short-cycle awards within the Bologna Process can either lead to an undergraduate (first cycle) programme or be integrated within the programme; from 2018 they also became standalone qualifications within the overarching framework of qualifications of the EHEA (QF-EHEA).[7] Nowadays, within the Irish system there are fewer dedicated HC programmes, and the Higher Certificates are often available as exit awards for those who successfully complete the first two years of a programme designed principally to lead to an Ordinary Bachelor degree or Honours Bachelor degree.

[5] Quality and Qualifications Ireland (QQI), 2003. *National Framework of Qualifications*. [pdf] Published by: National Qualifications Authority of Ireland. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

[6] Bologna Working Group, 2005. *A Framework for Qualifications of the European Higher Education Area. Bologna Working Group Report on Qualifications Frameworks*. [pdf]. Published by: Danish Ministry of Science, Technology and Innovation, Copenhagen. Available at: <http://ecahe.eu/w/images/7/76/A_Framework_for_Qualifications_for_the_European_Higher_Education_Area.pdf>.

[7] European Higher Education Area and Bologna Process, (n.d.). *Three Cycle System*. Available at: <http://www.ehea.info/page-three-cycle-system>.

1.2.2 Awarding Bodies and Providers of the AC and HC

Designated awarding bodies (exclusively IoTs and TUs in this context) determine the awards standards for their own awards subject to the NFQ and the relevant designation. The requirement to comply with the NFQ is due to section 43 of the Qualifications and Quality Assurance (Education and Training) Act 2012[8] as amended by the Qualifications and Quality Assurance (Education and Training) (Amendment) Act 2019.[9] The NFQ's award-type descriptors in effect function as generalised awards standards for the corresponding awards of designated awarding bodies.

QQI is an awarding body and certifies the qualifications awarded on successful completion of programmes that are developed and delivered by providers; it approves these programmes prior to delivery by a process that is referred to as validation. QQI validates the provider-developed minimum intended programme learning outcomes (MIPLOs) for these programmes. The MIPLOs must be consistent with awards standards for awards maintained by QQI. The specificity of awards standards varies.[10] Therefore the programmes of education and training that lead to major awards are the responsibility of the providers. According to QQI, a programme is the learning package designed, developed and delivered by the provider. The programme describes the processes that enable the MIPLOs to be achieved by learners. It provides an insight into the learning experiences on offer that will enable the learner profiled to reach the standards of knowledge, skill and competence required to achieve the award. Programmes can be tailored to suit specific groups of learners or particular local needs. In practice a range of different programmes may lead to the same award. [11]

As part of this validation process, providers are required to submit a 'Programme Descriptor' for programmes leading to major awards which must include specified areas of the qualification design, including programme objectives, entry criteria, duration and programme structure. Similarly, programme modules leading to minor awards must also be validated and thus the provider must set information on the aims and objectives, outcomes, assessment and how the indicative content is mapped to the learning outcome. Therefore, it is expected that programme documentation with these components is developed by these providers.

Providers of NFQ Level 5 and/or 6 awards that currently require validation include:

- SOLAS: craft apprenticeship programmes
- ETBs: FET programmes
- Teagasc: agriculture related programmes
- BIM: fisheries related programmes
- Other providers of FET (300) or HE (30) programmes who seek and gain access to QQI validation services.

[8] Government of Ireland, 2012. *Qualifications and Quality Assurance (Education and Training) Act 2012.* Available at: <http://www.irishstatutebook.ie/eli/2012/act/28/enacted/en/html>.
[9] Government of Ireland, 2019. *Qualifications and Quality Assurance (Education and Training) (Amendment) Act 2019.* Available at: <http://www.irishstatutebook.ie/eli/2019/act/32/enacted/en/html>.
[10] Quality and Qualifications Ireland (QQI), 2003. *Policy for Determining Awards Standards.* Available at: <https://www.qqi.ie/Publications/Publications/Policy%20for%20Determining%20Award%20Standards.pdf>.
[11] Quality and Qualifications Ireland (QQI), 2017. *Policies and criteria for the validation of programmes of education and training*. Available at: <https://www.qqi.ie/Publications/Publications/Initial_Validation_policy_7_10_13.pdf>.

Alongside this process, IoTs are Designated Awarding Bodies that make their own awards and validate their own programmes. In recent years several IoTs have merged and been upgraded to Technological University status. TU Dublin was Ireland's first technological university, whilst Munster University of Technology is Ireland's newest technological university, established in January 2021 with the merger of Cork Institute of Technology and Institute of Technology Tralee.[12] The Technological University of the Shannon will also be established in October 2021 with the merger of Limerick IT and Athlone IT.

An education provider is an NFQ awarding body if it is a designated awarding body or has delegated authority. Currently, QQI is the only NFQ awarding body making FET awards.

Providers without awarding powers to make NFQ awards can enter into arrangements with awarding bodies whose awards are included in the NFQ. They can also, and in certain cases are required to, apply to QQI for validation of their programmes. QQI does not develop[13] or provide any programmes and does not assess candidates for its awards.

To summarise the difference between the award standards set by QQI and the programmes set and delivered by providers:

- The award standard states what the learner should know and/or be able to do on attainment of the award i.e. it is the knowledge, skill and competence associated with the award
- The programme is about the learning experience in which the learner will participate in order to gain that knowledge, skill and competence
- The MIPLOs are the most detailed expression of the standard that must be achieved to earn an award.

1.3 Structure of the Report

This report consists of six sections. Section 2 contains the detailed methodology used to complete this study. Section 3 includes overviews of the Level 5 Certificate, AC and HC qualifications based on award-type descriptors and the overall key findings of the comparative reviews by core component. This section includes a detailed overall analysis of entry requirements, duration including the number of hours required and associated outcomes including the progression routes for holders of Level 5, AC and HC qualifications sampled. Section 3.2 also includes general observations on the comparability of learning outcomes, content coverage and assessment.

Section 4 includes the NFQ analysis findings, first in Section 4.1 by sub-strand with tables including the established best-fit levels for AC and HC qualifications analysed in each ISCED field. Section 4.2 then provides the overall descriptive statistics and in Section 4.2.2 the chi-squared statistical analysis determining whether significant differences exist between them.

[12] TU Dublin was Ireland's first technological university.
[13] QQI establishes and publishes programme validation policies and criteria that constrain the development of programmes leading to QQI awards and they evaluate whether proposed programmes meet those criteria.

Section 5 includes the findings from the focus groups with key stakeholders, which included graduates, AC and HC providers, universities and employers of graduates of both award types.

Section 6 includes the conclusions from this study in relation to the research question and the hypothesis as set out in Section 1.1 Context and scope.

There are two main appendices. Appendix 1 includes a comparative review of NFQ descriptors by level, highlighting key similarities and differences. Appendix 2 includes the key sources used to complete this study.

2. Methodology

2.1 General Overview of the Methodological Process

The methodological approach combines qualitative and quantitative methods to address the principal research question as highlighted in Section 1 and evaluate the hypothesis that there is no (statistically) significant difference between the achieved learning outcomes associated with programmes leading to the AC and HC awards as implemented that technically warrant differentiated award descriptors.

To achieve the objectives of this study, Ecctis has conducted the following project stages as follows:

- Stage 1: Project Inception and Establishing a Sample of Qualifications
- Stage 2: Data Gathering
- Stage 3: Qualification Profile Development
- Stage 4: Comparative Review of Core Components
- Stage 5: Qualitative Analysis of Achieved Learning Outcomes to the NFQ
- Stage 6: Quantitative Analysis
- Stage 7: Focus Groups
- Stage 8: Evaluation, Synthesis and Recommendations.

2.2 Project Inception – Establishing a Sample of Qualifications

The project inception stage involved two key elements:

- Initial consultation with QQI and the Steering Group
- Establishing the sample of AC and HC qualifications.

2.2.1 Initial Consultation with QQI and the Steering Group

Consultation was a critical first step, intended to ensure a thorough understanding of the QQI objectives for the study and to agree reporting and progress update requirements. It also facilitated the project team's familiarisation with the placement of both awards (the AC and HC) within the NFQ, the awarding institutions, subjects offered and patterns of provision, including the available qualification routes at the project's inception.

The first two meetings with the Steering Group were crucial in helping to identify the appropriate sample of qualifications to inform the study. Particular consideration was given to the selection of as representative a sample as possible in terms of subject areas, types of institution, and geographical locations across Ireland.

2.2.2 Establishing a Sample of Qualifications

Following consultation with the Steering Group the following sample of programmes leading toward Level 5 Certificates, AC and HC qualifications was agreed to form the basis of the data gathering and subsequent analysis:

Table 1: Sample of Level 5, AC and HC Qualification by ISCED Field

ISCED Fields of Education and Training[14]	Level 5 Certificates	Advanced Certificates	Two-year Higher Certificates
Education	Certificate in Early Childhood Studies (Cork College of Commerce) Certificate in Early Childhood Care & Education (Limerick College of Further Education)	Advanced Certificate in Early Childhood Care & Education (Cork College of Commerce) Advanced Certificate in Early Childhood and Education with Special Needs (Limerick College of Further Education)	Higher Certificate in Early Childhood Education and Care (Letterkenny Institute of Technology)
Business, Administration and Law	Certificate in Business Administration (Mallow College of FE Cork) Certificate in Business Administration (Limerick College of FE) Certificate in Business and Finance (Rathmines College)	Advanced Certificate in Business and Administration (Mallow College of FE Cork) Advanced Certificate in Business (Rathmines College) Advanced Certificate in Administration (Limerick College of FE)	Higher Certificate in Business (Galway-Mayo IT) Higher Certificate in Office Administration (Sligo IT) Higher Certificate in Business for Mature Students / part-time (Cork IT)
Engineering		Apprenticeship in Electrical Instrumentation (SOLAS) leading toward Level 6 Advanced Certificate Craft Qualification from QQI	Higher Certificate in Industrial Measurement & Control (Cork IT)
ICT 1: Computer Systems	Certificate in Computer Systems and Networks (Limerick College of FE) Certificate in Systems and Networks (Whitehall College)	Advanced Certificate in Computer Systems & Networks (Limerick College of FE) Advanced Certificate in Computer Systems & Networks (Whitehall College)	Higher Certificate in Computer Systems and Networking (Tralee IT) Higher Certificate in Science in Computer Systems Management (TU Dublin)
ICT 2: Software Engineering	Certificate in Software Development (Cork College of Commerce)	Advanced Certificate in Software Development (Cork College of Commerce)	Higher Certificate in Engineering (Software Design) (Athlone IT)

[14] UNESCO, 2013. *International Standard Classification of Education: Fields of Education and Training*. [pdf] Published by: UNESCO. Available at: <http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-fields-of-education-and-training-2013-detailed-field-descriptions-2015-en.pdf>.

ISCED Fields of Education and Training[14]	Level 5 Certificates	Advanced Certificates	Two-year Higher Certificates
	Level 5 Certificate in Software Development (Rathmines College FE)	Advanced Certificate in Software Development (Rathmines College FE)	Higher Certificate in Software Development (part-time) (Cork IT)
Agriculture, Fisheries and Veterinary	Certificate in Agriculture (Teagasc College)	Advanced Certificate in Agriculture (Mechanisation) (Teagasc College)	Higher Certificate in Agricultural Mechanisation (Limerick IT)
Services	Certificate in Sports, Exercise and Recreation (Coláiste Íde College of Further Education) Certificate in Sports and Recreation Exercise (Central College Limerick) Certificate in Sport, Recreation and Exercise (Drogheda Institute FE)	Advanced Certificate in Physical Education and Coaching (Coláiste Íde College of Further Education) Advanced Certificate in Sport and Recreation Central College (Limerick) Advanced Certificate in Sport, Recreation and Exercise (Drogheda Institute of FE)	Higher Certificate in Business in Sport and Recreation (Athlone IT) Higher Certificate in Sports Studies (Letterkenny IT) Higher Certificate in Sports Development and Coaching (Limerick IT)
Health Services	Certificate in Community and Health Services (Ballyfermot College FE) Certificate in Applied Social Studies (Waterford College FE)	Advanced Certificate in Social and Vocational Integration (Ballyfermot College FE) Advanced Certificate in Social Care (Waterford College FE)	Higher Certificate in Health and Social Care (Letterkenny IT)

Acknowledging the structure of the PLC route to AC awards, Level 5 Certificates are also included within the sample for the selected ACs that are one year in duration. For engineering, the selected Level 6 qualification comprises a craft apprenticeship programme in electrical instrumentation leading to AC. The HC awards selected are, in the most part, dedicated two-year awards offered by HEIs as distinct from embedded exit award programmes.

2.3 Data Gathering

Having selected the sample of qualifications to inform the comparative study, Ecctis worked closely with QQI, THEA and ETBI to identify the relevant key staff within the institutions offering the selected qualifications. These included the following:

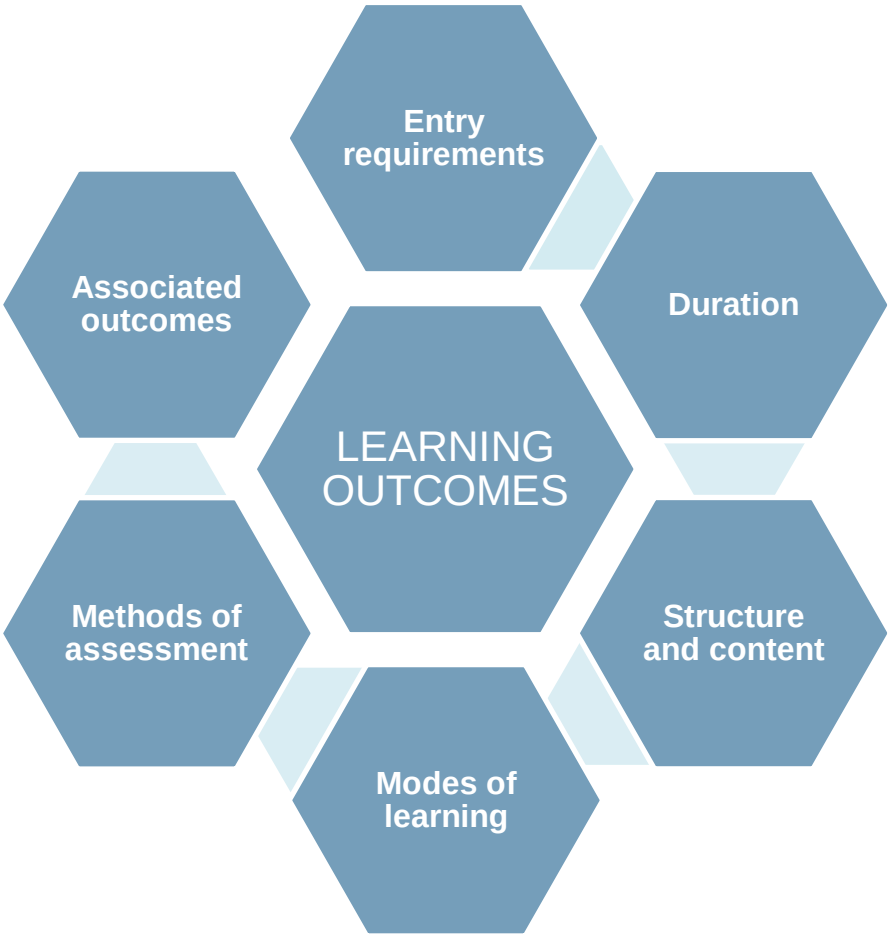
- Registrars (or equivalent) from higher education institutions providing HC programmes
- FET Directors of Education and Training Boards
- SOLAS (State Organisation with responsibility for funding, planning and co-ordinating FET in Ireland and a provider of apprenticeship programmes).

The identified key staff were contacted to source the required documentation for each selected qualification, including:

- Programme or curriculum handbook, or similar document(s), that included information on the programme and modules
- Samples of assessment materials and accompanying assessment criteria for two modules within the programme
- Data on the number of students enrolled on the programmes, and where available, data on the number or percentage of graduates progressing onto higher education or employment after their studies, including the specific programmes and/or employer or type of employment where possible
- Information on any academic progression routes in place, where applicable.

Through the above documentation, information on each qualification's core components were sourced. The core qualification components relate to credential evaluation criteria used by Ecctis in evaluating the comparability of international qualifications and reflect those specified in the Lisbon Recognition agreement (1997). These core components include the following:

Figure 1: Core Qualification Components for Benchmarking



Ecctis uses the following definitions for core components:

- ***Entry requirements***
  Entry requirements are used as a general indicator when evaluating qualifications given that they indicate the typical level of students at the beginning of a programme.

- ***Duration***
  Duration is also a consideration in evaluating qualifications. Whilst not an overriding indicator of academic level, when considered in conjunction with the qualification's entry requirements, it can nevertheless provide an indication of the volume of study that can be completed within the specified timeframe of the programme.

- ***Structure and content***
  Consideration of the overall structure as well as different pathways or routes to qualification where applicable, along with the breadth and depth of content relative to the identified reference points, helps to establish the overall comparability.

- ***Learning outcomes***
  The term 'learning outcome' is used to identify the key knowledge, skills and competencies that candidates are expected to be able to demonstrate upon successful completion of the qualification.

- ***Modes of learning and assessment***
  Considering the modes through which a qualification is delivered supports understanding of the qualification and identification of suitable reference points in the benchmark education system.

  The review of assessment centres on summative assessment and seeks to identify the following:
  - The method(s) used to test students, whether these are internal and/or externally set and how these contribute to the overall qualification
  - Whether the methods of assessment provide an adequate evaluation of the key skills outlined in the learning outcomes
  - Whether the methods of assessment require all candidates to demonstrate the knowledge and skills required to meet the learning outcomes at the appropriate educational level of each qualification.

- ***Associated outcomes***
  The term 'associated outcomes' is used to encompass any academic (e.g. progression) or professional rights attached to a qualification.

2.4 Qualification Profile Development

Based on the collated information on each programme's core components, qualification profiles have been compiled using the tabular format overleaf.

Table 2: Format for Qualification Profiles for AC and HC Qualification Ensembles

Core Components – Evaluation Criteria	Level 5 / Advanced Certificate	Higher Certificate
Aims / Purpose	*Overall rationale and objective of the qualification.*	
Entry requirements	*Minimum entry levels including any specific subjects required for entry.*	
Duration	*Number of hours to complete the qualification.*	
Structure and content	*Breakdown of the qualification modules and underpinning content.*	
Learning outcomes	*List of intended learning outcomes on a qualification level.*	
Mode of learning	*Apprenticeship based or campus based.* *Delivery methods, for example, lectures, laboratory, studio, workshop based learning, e-learning, self-directed learning.*	
Assessment methods	*Assessment tasks and type by module.*	
Assessment criteria	*Sample assessment criteria used for typical assessment tasks.*	
Associated outcomes	*Graduate destinations, and academic progression routes[15] where applicable, informed by the stakeholder engagement.*	

Any gaps in the documentation received by providers were identified during an initial review of the documentation and during the compilation of the qualification profiles. In these cases, follow-up requests for missing information were made with the key staff from the selected programmes. Once completed, each qualification profile was shared with the respective key staff from the programmes to check for any factual inaccuracies.

2.5 Comparative Review of Core Components

This stage included a comparative review of the pair of Level 5 and AC qualification core components against the HC core components identified in the qualification profiles. Out of the original sample of 47 programmes, one pair of Level 5 and AC programmes and one HC programme for each ISCED field were selected as the main focus for the comparative review, with the additional programmes used to supplement the comparative reviews to examine and identify any differences between providers within each ISCED field.

[15] Exemptions to academic programmes were noted, although caution was exercised in inferring any contrasts between the AC and HC programmes.

The purpose of the comparative reviews was to identify key similarities and differences between the core components of the AC (based on the combined Level 5 and AC programmes) and the HC programmes. Further, this review informed the subsequent stage of establishing the best-fit level of the achieved learning outcomes to the NFQ, which was based on a holistic understanding of the AC and HC programmes.

The comparative review included consideration of entry standards and learner effort indicated by the duration (guided and notional learning hours, where defined and available, otherwise years were reported), alongside a high level comparison of the structure and content, learning outcomes, assessment methods and associated outcomes of the awards. The focus was on comparatively reviewing these core components for the whole qualification, while also considering the content, learning outcomes and in particular the assessment materials for a small sample of modules (typically two modules per qualification).

2.6 Qualitative Analysis – Establishing NFQ Level of Achieved Learning Outcomes for Each Award

This stage consisted of the core analysis of the AC (based on the Level 5 and AC programmes) and HC to the NFQ to address the key research question of this study. Based on the holistic review and analysis of the pairs of Level 5 and AC programmes and HC programmes, a qualitative analysis was conducted to establish best-fit levels for each NFQ sub-strand. The most appropriate NFQ level for each qualification has been established based on a holistic review of the aims of the qualification, the stated intended learning outcomes, curricula content, the overarching assessment methods used for the programme in addition to the actual assessment materials, tasks and assessment criteria for two sample modules and associated outcomes. Therefore, the decision on best-fit levels is based not only on programme level prescribed learning outcomes, but also on achieved learning outcomes as evidenced from the review of assessment samples and modular level outcomes. This reflects Ecctis' standard approach to benchmarking which is outcomes-based; whilst being overall holistic, the emphasis is on what the qualification holder should know and be able to do upon successful completion of the qualification.

Given the nature of their development and design as highlighted in the NFQ document[16], AC and HC qualifications contain a mixture of NFQ level indicators drawn from Levels 5, 6 and 7. In this context, Ecctis conducted the analysis anticipating a spread of NFQ levels across NFQ sub-strands.

2.6.1 Familiarisation of the NFQ and NFQ Sub-Strands

Prior to conducting the qualitative analysis to the NFQ, the NFQ sub-strands level descriptors were reviewed for Levels 5-7 to determine the scope and content of each level (see Appendix 1). Based on this review, key considerations were identified for each sub-strand to support the later qualitative analysis. The table overleaf includes these key considerations:

[16] Quality and Qualifications Ireland (QQI), 2003. *National Framework of Qualifications*. [pdf] Published by: National Qualifications Authority of Ireland. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

Table 3: Summary of NFQ Sub-Strands and Key Considerations for Evaluation

NFQ Sub-Strand[17]	Key Considerations for Evaluation in Reference to NFQ Level Descriptors
Knowledge, Breadth	A key concern was determining the level of specialisation of the knowledge requirements, differentiating Levels 5, 6 and 7.
Knowledge, Kind	The analysis considered the extent to which theoretical knowledge and abstract thinking are expected as well as the depth of knowledge indicated by the learning outcomes, curriculum and the assessment.
Know-How and Skill, Range	This focuses on the degree of specialisation in terms of skills and tools and how they are applied.
Know-How and Skill, Selectivity	This component examined the type of problem solving expected, in particular the level of abstraction, familiarity and predictability in the problems as well as the level of definition.
Competence, Context	This component considers the context, in particular the variety and range of contexts and the proportion of routine/non-routine aspects to applying knowledge and skills across different contexts.
Competence, Role	Focusing on the range of roles indicated by learning outcomes and associated outcomes, the level of autonomy and responsibility were considered in terms of a typical qualification holder.
Competence, Learning to Learn	Considering the metacognitive skills of the qualification holder, the extent to which the individual's ability to learn independently and the nature of the environment where learning takes place.
Competence, Insight	Level of self-understanding attained by the typical qualification holder and the level of engagement expected with others.

2.6.2 Consideration of Award-Type Descriptors as Reference Points

Whilst the main focus of the referencing exercise was on comparing the sample of qualifications to NFQ sub-strand descriptors in an independent evaluation, award-type descriptors and the way in which sub-strand descriptors vary across award-types at the qualification design level were also considered. It is acknowledged that NFQ sub-strands selected as the basis for qualification design vary by qualification type. Appendix 1 also includes a review of the award-type descriptors.

2.6.3 Determining Best-Fit NFQ Levels by Sub-Strand

Best-fit decisions made during the qualitative analysis to the NFQ were recorded using the table format below. Alongside the judgment on the level, the supporting rationale was also recorded, including the specific evidence identified of the achieved learning outcomes for the qualification analysed.

[17] Quality and Qualifications Ireland (QQI), 2003. *National Framework of Qualifications*. [pdf] Published by: National Qualifications Authority of Ireland. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

It is important to note that in order to inform a fair comparison with the HC, the Level 5 and AC qualifications were considered in parallel, resulting in one overall NFQ level for each sub-strand for both awards, based on achieved learning outcomes on completion of the two years (i.e. the AC). Both the Level 5 and AC qualifications were considered in full in order to establish comparable NFQ sub-strand levels.

Table 4: Example Table for Recording Best-Fit Decisions by Sub-Strand

Qualification Title	
NFQ Sub-Strand	**Best-Fit NFQ Level of Achieved Learning Outcomes**
Knowledge, Breadth	*[5, 6 or 7]*
Knowledge, Kind	
Know-How and Skill, Range	
Know-How and Skill, Selectivity	
Competence, Context	
Competence, Role	
Competence, Learning to Learn	
Competence, Insight	

When conducting the qualitative analysis, the full range of core components reviewed in the previous stage were considered, as per the holistic outcomes-based approach, whilst acknowledging that for some sub-strands there may be a particular focus on specific core components. For example, the four competence sub-strands required more emphasis to be placed on associated outcomes in addition to intended learning outcomes[18] and assessments, as these sub-strands relate specifically to the level of autonomy and responsibility practiced by the qualification holder. The analysis to the knowledge breadth and kind sub-strands naturally drew heavily on the review of the curriculum content as well as the intended learning outcomes and assessment. Moreover, the know-how and skills sub-strands in particular involved a close review of the prescribed programme level learning outcomes and the relation with assessment tasks (for two selected modules per qualification) and associated assessment criteria to determine the skills assessed in practice.

2.6.4 Consideration of Volume of Learning

General consideration was given to the volume of learning in each programme, including how many FET credits are awarded as part of Level 5 and AC qualifications and ECTS credits in the HC qualifications, the NFQ level at which these credits are awarded and the notional hours associated with these credits.

In the qualitative analysis against NFQ level descriptors, the focus was primarily on evaluating the accumulated achieved outcomes demonstrated by graduates on completion of the full PLC

[18] Predominantly focused on MIPLOs for each qualification.

programmes, including the Level 5 Certificate and AC together, in relation to those graduating with the HC awards.

Whilst acknowledging that volume and duration of learning are important core components, they are not considered to be overriding factors in determining comparability of NFQ levels. This is in line with best practice for credential evaluation set out in the Lisbon Convention for Recognition[19] which advocates a holistic evaluation of qualification core components when establishing framework level comparability, a process which is informed by, but must not be predominantly based on, volume of learning or number of study hours inferred from pre-assigned credit level values. In line with well-established evaluation approaches, the analysis is predominantly based on achieved learning outcomes on completion of the respective awards in relation to NFQ sub-strands, which although influenced by outcomes achieved at a modular level, is primarily concerned with outcomes students can demonstrate at the completion of the whole award.

2.7 Quantitative Analysis

The quantitative analysis was firstly conducted on a subject level, to determine the average level of the achieved learning outcomes across the eight sub-strands, enabling comparisons between the level of the outcomes of the HC and AC qualifications in individual subjects. This approach assumed equal weighting of the sub-strands, recognising that each sub-strand is applied equally in the articulation of the framework and as intended in the design and delivery of qualifications. The table below demonstrates how this initial quantitative analysis is presented for each sub-strand, using the knowledge, breadth sub-strand as an example:

Table 5: Example of Sub-Strand Analysis

	Knowledge, Breadth NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education		
Business, Administration & Law		
ICT (Computer systems)		
ICT 2 (Software)		
Engineering, Manufacturing & Construction		
Health & Welfare		
Services		
Agriculture, Forestry, Fisheries & Veterinary		
Average NFQ Level (Mean)		
Average NFQ Level (Mode)		

[19] Council of Europe, 2014. *The Lisbon Recognition Convention*. Available at: <https://www.coe.int/t/dg4/highereducation/Recognition/LRC_en.asp>.

After determining the average best-fit NFQ level per each sub-strand, a second quantitative analysis was conducted to determine the mean NFQ level based on the total number of best-fit decisions at Level 5, Level 6 and Level 7 for all of the eight ISCED fields. The table below demonstrates an example of this analysis to determine the mean NFQ Level for the PLC programme (Level 5 and AC) and the HC:

Table 6: Example of Total Sub-Strand Best-Fit Decisions

Level of Achieved Learning Outcomes	Average NFQ Levels	
NFQ Level	**Level 5 and Advanced Certificate Overall**	**Higher Certificate Overall**
Knowledge, Breadth	*For example: 6.125*	*For example: 6.75*
Knowledge, Kind		
Know-How and Skill, Range		
Know-How and Skill, Selectivity		
Competence, Context		
Competence, Role		
Competence, Learning to Learn		
Competence, Insight		
Average NFQ Level for all qualification sub-strands (Mean)		
Average NFQ Level for all qualification sub-strands (Mode)		

In order to test the original hypothesis that there is no significant difference in level between the AC and HC qualifications, a separate analysis of the total number of NFQ sub-strand level judgements at Level 5, 6 and 7 for each qualification was conducted. Using a chi-square test, this analysis compared two categorical variables of qualification type and NFQ level of the achieved outcomes to evaluate whether there is any significant difference in the distribution of the level of the learning outcomes achieved through the different types of award across subjects. The table below provides an example breakdown based on the total number of sub-strands across the sample evaluated at Levels 5-7, with a total number of sub-strands of 64 based on a sample of eight HC and eight levels for Level 5+AC qualifications combined. The total sample size is therefore 128 sub-strand levels.

Table 7: Example Table of Total Number of Sub-Strands across Sample Qualifications

	Total number of sub-strands across sample of qualifications assessed at specified NFQ Levels	
NFQ Level	**Level 5 Certificate and Advanced Certificate Overall**	**Higher Certificate Overall**
Level 5	*Total number at Level 5*	
Level 6	*Total number at Level 6*	

	Total number of sub-strands across sample of qualifications assessed at specified NFQ Levels	
NFQ Level	**Level 5 Certificate and Advanced Certificate Overall**	**Higher Certificate Overall**
Level 7	*Total number at Level 7*	
Total	64	64

It is important to clarify what could be considered a significant statistical difference. This means there is a measurable difference between the two groups of qualifications (the Level 5 Certificate + AC and HC groups) and that, statistically, in the case of a positive result (i.e. when the p value is less than 0.05)[20] the probability of obtaining that difference by chance is very small (less than 5% when using a significance level or p value of 0.05). A significance level of 0.05 is the most commonly used and is appropriate for tests where the sample size is comparable to the number of sub-strand levels examined in this study (128).

In addition to conducting a chi-square analysis, a Mann-Whitney U test can also be undertaken to evaluate whether there is a significant difference in the average NFQ Levels determined for the AC and the HC sample of qualifications. Using NFQ Level as the dependent variable, and the AC and HC qualifications as the independent variables, the Mann-Whitney U test can be applied to ordinal data such as NFQ Level[21] to establish the comparability of the mean and median NFQ levels.

2.8 Evaluation, Synthesis and Recommendations

The statistical tests (in particular chi-square) were used to determine on an overall level whether the null hypothesis that there is no difference in the level of the achieved learning outcomes between the HC and AC can or cannot be rejected.

Further to the statistical analysis, any subject specific or sub-strand specific differences identified were explored further, to evaluate, qualitatively, whether these are reflective of differences relating to one or more of the evaluation criteria (e.g. content or intended learning outcomes/assessment).

Following data analysis, the preliminary findings were communicated with the Stakeholder Steering Group chaired by QQI to facilitate understanding of the results in context and inform the interpretation and evaluation in conjunction with qualitative research findings.

[20] It is important to note that while establishing best-fit NFQ levels for each sub-strand follows a well-established objective process, there is naturally an in-built margin for error indicative of the qualitative approach required for qualification analysis. The findings nevertheless can be used to inform the quantitative analysis which requires the application of statistical methods, the use of significance levels and hence a degree of accuracy of two to three decimal places as appropriate.

[21] NFQ Level can be interpreted as either a categorical or an ordinal variable, hence it is appropriate to carry out alternative tests.

2.9 Focus Groups

In order to complement the comparative analysis of the selected qualifications a number of focus groups with key groups of stakeholders were conducted, including employers, AC and HC providers, technological universities and institutes of technology, and graduates of AC and HC qualifications. Questions were tailored to each group, designed to identify similarities and differences between the HC and AC qualifications, as perceived by the stakeholder groups. The comparative reviews helped inform the lines of enquiry explored in the focus groups.

The discussions that have taken place in the focus groups are reported in Section 5. We have adopted a descriptive approach to reporting the key issues discussed in the focus groups. The focus groups were not aimed at informing the analysis outlined above, but were carried out to identify key stakeholders' perceptions of the research question and to inform both a better understanding of how the two awards are implemented in practice and further reflection by QQI and the broader FET and HE sectors in the next phase of the project.

2.10 Reflecting on the Key Challenges

2.10.1 Data Gathering and Comparative Review: Timeframe and Logistical Challenges in Data Collation

The main challenges concerning logistics and timeframe were primarily due to the Covid-19 pandemic, where institutions and contacts may not have been on-campus to provide curriculum and assessment information within the intended timeframe of the data-gathering phase. Delays in the completion of this phase therefore impacted on the timeframe of the subsequent review and analysis stages and the further stakeholder engagement including focus groups.

There were inevitably some variations in the level of the information received, particularly in regard to assessment materials for the sample of two modules. Some gaps were evident in the assessment criteria and, for some modules, incomplete or limited guidance on marking practices was submitted. Other gaps were also evident on progression and employment rates, where institutions identified that they do not actively engage in collating such data or where they may have only collated data for one or two cohorts leading to a partial or incomplete dataset.

Every effort was made to verify the veracity of information contained in the qualification profiles directly with providers. Nearly all were able to confirm, and the majority added additional information where appropriate.

Notwithstanding these issues in data collation, the data received during this initial data gathering stage was deemed satisfactory overall to conduct with confidence an evaluation to the NFQ for the selected sample of qualifications.

2.10.2 Analysis to the NFQ: Understanding and Interpreting the Terminology of the NFQ

The reliability and validity of comparisons to the NFQ largely depended on accurate and consistent interpretation of the relevant descriptors and their terminology. Careful consideration was made prior to the qualitative analysis stage of the NFQ terminology, the nuances between levels and the progression in terms of skills and knowledge from one level to the next. This analysis of NFQ descriptors is contained within Appendix 1.

Nevertheless, some level of subjectivity is necessary when interpreting and applying level descriptors, particularly those that are broadly worded in order to evaluate whole qualifications to sub-strands. It was also noted that not all qualifications were designed to be closely aligned with the NFQ, with variations observed in the use of NFQ level descriptors in the expression and articulation of learning outcomes. Modular learning outcomes and assessments (a sample from two modules) were used in tandem with overarching outcomes to orient the best-fit NFQ level per sub-strand.

As will be discussed in later sections, programme level mapping to NFQ sub-strands revealed that some providers interpret the NFQ sub-strands somewhat differently. This was observed to be the case with competence insight descriptors in particular. On the basis of the review undertaken, a number of suggestions are provided in Section 6.4 with regard to the formulation of NFQ descriptors.

3. Comparative Review of the Level 5 Certificate and the Advanced Certificate in Relation to the Higher Certificate

This section provides overall findings of the comparative review of the Level 5 Certificate and AC programmes in relation to the HC programmes. It includes an overarching discussion of the main similarities and differences in regard to core qualification components, as defined in the methodology.

3.1 Overview of Level 5 Certificate, Advanced Certificate and Higher Certificate

The table overleaf summarises the core components, based on a high-level review of award-type descriptors.

In reference to the table overleaf, there are some initial observations that are pertinent following review of the award descriptors and in particular, the proposed learning outcomes for each award. The award descriptors predominantly include NFQ sub-strands at the target level of the qualification, although there are variations, where some NFQ sub-strands are drawn from either one level above or one level below the overall intended level of the qualification. This is particularly the case when comparing the award-type descriptors for the AC and HC qualifications. For example, for knowledge (kind) the HC descriptor specifies the Level 6 NFQ sub-strand whereas the AC descriptor specifies the Level 5 sub-strand. A further variation concerns competence (context) where, interestingly, the AC descriptor indicates the Level 7 NFQ sub-strand “Utilise diagnostic and creative skills in a range of functions in a wide variety of contexts” whereas the HC descriptor specifies the Level 6 sub-strand “Act in a range of varied and specific contexts involving creative and non-routine activities; transfer and apply theoretical concepts and/or technical or creative skills to a range of contexts”.

Table 8: High Level Overview of Level 5, AC and HC Qualifications[22]

	Level 5 Certificate	Advanced Certificate	Higher Certificate
Aims and purpose (based on the award-type descriptors)	This is a multi-purpose award type. The knowledge, skills and competence acquired are relevant to personal development, participation in society and community employment and access to additional education and training.	This is a multi-purpose award type. The knowledge, skills and competence acquired are relevant to personal development, participation in society and community employment and access to additional education and training. Apprenticeship: This programme is intended to prepare learners to enter the workforce as highly skilled workers with the knowledge, skills and competences relevant to their craft.	This is a multi-purpose award type. The knowledge, skills and competence acquired are relevant to personal development, participation in society and community employment and access to additional education and training.
Duration	1 year full-time	1 year full-time Apprenticeship: 4 years full-time	2 years (4 semesters) full-time
Credits and total notional learning hours	120 FET credits; typically 1,200 notional hours	120 FET credits; typically 1,200 notional hours Apprenticeship: 1,777 training and assessment hours and a minimum of 76 weeks “on-the-job” with an employer	120 ECTS[23] (which equates to roughly at least 3,000 notional hours)
Minimum entry requirements	Leaving Certificate	Leaving Certificate / Level 5 Certificate in related area Apprenticeship: Junior Certificate Examination or successful completion of an approved Pre-apprenticeship course	Leaving Certificate

[22] Quality and Qualifications Ireland (QQI), 2003. National Framework of Qualifications. [pdf] Published by: National Qualifications Authority of Ireland. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.
[23] 1 ECTS credit is equal to 25-30 notional learning hours. (https://ec.europa.eu/assets/eac/education/ects/users-guide/key-features_en.htm#ectsTop)

	Level 5 Certificate	Advanced Certificate	Higher Certificate
Structure and content	Students complete mandatory modules and electives chosen from a selection of specialist topic areas. There are typically 8 modules in total (15 FET credits each).	Students complete mandatory modules and electives chosen from a selection of specialist topic areas. There are typically 8 modules in total (15 FET credits each). Apprenticeship: Three off-the-job taught phases at an ETB training centre or an Institute of Technology or Technological University and four on-the-job practical phases with an employer.	Split into two stages, Stage 1 and Stage 2, each comprising two semesters. A number of mandatory modules, combining theoretical study with practical training and soft skills coverage. The number of modules varies depending the ECTS credits per module (which vary between 5-10 ECTS credits with practical placements typically worth 25 or 30 ECTS).
Learning outcomes (based on award-type descriptors)	• Broad range of knowledge. • Some theoretical concepts and abstract thinking, with significant depth in some areas. • Demonstrate a broad range of specialised skills and tools. • Evaluate and use information to plan and develop investigative strategies and determine solutions to varied unfamiliar problems. • Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts. • Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups. • Learn to take responsibility for own learning within a managed environment. • Assume full responsibility for consistency of self-understanding and behaviour.	• Specialised knowledge of a broad area. • Some theoretical concepts and abstract thinking, with significant depth in some areas. • Demonstrate a comprehensive range of specialised skills and tools. • Formulate responses to well-defined abstract problems. • Utilise diagnostic and creative skills in a range of functions in a wide variety of contexts. • Exercise substantial personal autonomy and often take responsibility for the work of others and/or for allocation of resources; form, and function within, multiple complex and heterogeneous groups. • Learn to take responsibility for own learning within a managed environment. • Express an internalised, personal world view, reflecting engagement with others.	• Specialised knowledge of a broad area. • Some theoretical concepts and abstract thinking, with significant underpinning theory. • Demonstrate a comprehensive range of specialised skills and tools. • Formulate responses to well-defined abstract problems. • Act in a range of varied and specific contexts involving creative and non-routine activities; transfer and apply theoretical concepts and/or technical or creative skills to a range of contexts. • Exercise substantial personal autonomy and often take responsibility for the work of others and/or for allocation of resources; form, and function within, multiple complex and heterogeneous groups. • Take initiative to identify and address learning needs and interact effectively in a learning group. • Express an internalised, personal world view, reflecting engagement with others.

	Level 5 Certificate	Advanced Certificate	Higher Certificate
Mode of Learning	Includes a variety of delivery methods, including self-directed learning, classroom based learning, e-learning, practical labs and field trips.	Includes a variety of delivery methods, including self-directed learning, classroom based learning, e-learning, practical labs and field trips. Apprenticeship: Taught off-the-job phases and on-the-job training phase.	Combines self-directed learning with directed learning, including lectures, tutorials, seminars, practical skills session, active learning and site visits.
Assessment	Mixed methods, including written exams, skills demonstrations, projects, portfolio of work, assignments and work based assessment.	Mixed methods, including written exams, skills demonstrations, projects, portfolio of work, assignments and work based assessment. Apprenticeship: In addition to the above, the on-the-job phases are assessed with competence assessments.	Mixed methods, including written examinations, projects, assignments, work based assessment and portfolio based assessment.
Associated Outcomes (based on award-type descriptors)	Progression to a programme leading to an Advanced Certificate or a higher education and training award at Level 6, 7 or 8.	Transfer to a Higher Certificate. Progression to a programme leading to an Ordinary Bachelor degree or to an Honours Bachelor degree or employment. Progression routes may be available from some institutions, such as entry onto the second year of a Bachelor degree programme in a similarly focused subject.	Progression onto an Ordinary or Honours Bachelor degree or employment. Progression routes may be available from some institutions, such as entry onto the second or third year of a Bachelor degree programme in a similarly focused subject.

3.2 Comparative Review - Key Findings

This section is primarily based on comparative reviews conducted to compare the programmes leading to Level 5 and AC awards with selected HC programmes leading to HC awards in each of the eight ISCED fields included in this study.

3.2.1 Aims and Purpose

All of the Level 5, AC and HC awards sampled include a section in the programme handbooks which defines the key aims and purpose of the awards, adapted to the specific subjects. The Level 5 Certificates make general reference to the intention to develop knowledge, skills and competence to work in a specific field under supervision whilst in the AC programmes, the intention is generally to enable the graduate to be able to work autonomously in his/her field. A similar goal to facilitate independent learning is expressed throughout the HC qualification aims. Overall, it appears that the Level 5, AC and HC are intended to be multi-purpose awards and in view of this, aim to develop a broad range of skills and knowledge required both for progression purposes and also further study. The intention to develop skills for further higher level academic study is more prominent in the HC qualification aims across the qualification sample reviewed.

The format of the programme level aims also show more variation between FET providers. Some providers list objectives in lieu of learning outcomes on a programme level, which are nonetheless broadly linked to the NFQ sub-strands in terms of skills and knowledge coverage. The HC aims also vary in terms of their format, although they invariably prescribe programme level outcomes as well as general programme objectives in a separate section of the handbooks.

3.2.2 Entry Requirements

The following table summarises the minimum entry requirements set by providers for the selected qualifications in the sample by ISCED field. It is noted that the Leaving Certificate is placed between Levels 4 and 5 on the NFQ (not to a single level).

Table 9: Summary of Minimum Entrance Requirements

ISCED Field	Level 5 Certificate	Advanced Certificate	Higher Certificate
Education	Leaving Certificate / QQI Level 4 qualification / LCA or equivalent.	Level 5 Certificate in a related subject or demonstration of skills / knowledge at NFQ Level 5.	Leaving Certificate Grade F2/O6/H7 in maths, O6/H7 in English or Irish and three other subjects at a minimum of O6/H7.
Business, Administration and Law	Leaving Certificate (no grades mentioned) / QQI Level 4 Certificate.	Level 5 Certificate (Major award) in a related subject plus an interview.	Leaving Certificate Grades O6/H7 in English or Irish and maths and three other subjects / Foundation Certificate / Level 5 or 6 AC Certificate.

ISCED Field	Level 5 Certificate	Advanced Certificate	Higher Certificate
Engineering	N/A	Apprenticeship: Grade D in five subjects in the Junior Certificate Examination or approved equivalent, OR The successful completion of an approved Pre-apprenticeship course (4 modules - including 3 core modules in maths, Science, Technical Drawing - Junior Certificate Level).	Grade O6/H7 (pre. 2017, D3 Ordinary or Higher Level) in five subjects to include maths, and either English or Irish.
ICT 1: Computer Systems	Leaving Certificate or other equivalent Level 4 qualification.	A Level 5 Certificate or equivalent in a relevant subject (computer systems).	Leaving Certificate with O6/H7 in English or Gaeilge, O6/H7 in maths or a minimum grade of F2 in foundation level maths (in specified courses) and O6/H7 in three other subjects.
ICT 2: Software Engineering	Level 4 programme or alternatively demonstration of knowledge, skill or competence associated with Level 4.	Level 5 Certificate in software, proficiency in programming and mathematics equivalent to NFQ Level 5. Bridging programmes may be available.	Leaving Certificate in five subjects, Grade 06/H7 at Ordinary level including maths and a language OR QQI Level 5 Certificate in any discipline including maths.
Agriculture, Fisheries and Veterinary	Leaving Certificate or equivalent.	Level 5 Certificate in Agriculture or equivalent programme.	A minimum of 5 O6/H7 grades in Leaving Certificate subjects, including maths and English or Irish.
Services	Leaving Certificate with five passes at Ordinary Level or the Leaving Certificate Applied/QQI Level 4 Certificate.	Leaving Certificate with five passes and a Level 5 Certificate in a relevant subject area.	A minimum of 5 O6/H7 grades in Leaving Certificate subjects, including maths and English or Irish, A Level 5/6 QQI/FETAC qualification is also acceptable.
Health Services	Provider 1: 5 O6/H7 grades in Leaving Certificate or a Merit in the Leaving Certificate.	Same as for Level 5 OR a Level 5 Certificate in a related subject OR work references and interview for mature candidates.	Leaving Certificate/QQI or FETAC Certificate.

ISCED Field	Level 5 Certificate	Advanced Certificate	Higher Certificate
	Applied or a QQI Level 4 Certificate Provider 2: Leaving Certificate.		

As can be seen in the table above, the minimum entry requirements for Level 5 programmes are fairly uniform across providers and fields of study included in the qualification sample. It is generally stipulated that passes in the Leaving Certificate are required for entry onto the Level 5 programme, while the majority of Level 5 programmes do not specify grades or number of subjects required for entry. A Level 4 Applied Leaving Certificate (or QQI Level 4 Certificate) is also accepted by a number of FET providers. The AC generally requires completion of a Level 5 award in a related subject area for entry. Some providers offering AC programmes, such as those offering early years education and care may alternatively offer an assessment of prior learning to demonstrate skills and knowledge equivalent to NFQ Level 5. The main exception is the Apprenticeship reviewed, which requires, at a minimum, an NFQ Level 3 Junior Certificate for entry (Grade D in five subjects) or successful completion of a pre-apprenticeship course and therefore has a lower NFQ entry level than other AC programmes.

The providers offering the HC programmes similarly require the Leaving Certificate for entry, although more frequently stipulate that particular grades need to be achieved in order to gain entry (typically O6/H7), reflecting a more competitive admissions process than that for the Level 5 Certificate. For entry into technical subjects that include advanced maths modules, such as Software Engineering, maths is typically required at O6/H7 while proof of mathematical study at Level 5 is also required for entry onto the AC in Software Engineering.

In terms of entry requirements for those completing Level 5 qualifications onto the HC awards, it appears that most IoTs may accept Level 5 Certificates in relevant subjects alongside the Leaving Certificate grades for direct entry. For example, in some subjects such as software, completion of some study of maths and knowledge of computer programming at Level 5 is required for entry.

In summary, despite some variations in terms of subjects and specified grades, no significant differences are observed in the overall educational level of prior study expected in terms of entrance requirements to gain admittance to the Level 5 and HC qualifications included in the sample. The main entry requirement is the Leaving Certificate for Level 5 and HC awards, and a prerequisite Level 5 required for entry onto the AC, in line with the award-type descriptors. There is more explicit flexibility for entry onto the Level 5 and AC than the HC in terms of being able to demonstrate skills and knowledge at Level 4 and 5 respectively via recognition of prior learning or alternative vocational awards at Level 4. The scope for the accreditation of prior learning or advanced standing for entry onto Year 1 or direct entry into Year 2 of the HC qualifications is generally not explicitly mentioned in the HC entrance requirements.

3.2.3 Duration and Credit

All of the Level 5, AC and HC programmes and programme modules have set credit allocations, with the exception of the apprenticeship programme. The credit allocations are

the same for every programme across providers and fields of study for each qualification type. It is important to note differences in the credit systems between that used in FET (FET credits) for the delivery of the Level 5 Certificates and AC awards which is based on 1 credit being equal to 10 notional learning hours, and that of the HE system being based on 1 ECTS credit being equal to 25-30 notional learning hours.[24] The following table shows the breakdown of the number of credits and how these correspond to learning hours in brackets.

Table 10: Comparison of Credit and Volume

No. of Credits	Level 5 Certificate	Advanced Certificate	Higher Certificate
Year 1	120 FET credits (1200 hours) at Level 5	120 FET credits (1200 hours) at Level 6	60 ECTS credits at Level 6
Year 2			60 ECTS credits at Level 6
Total	120 FET credits (1,200 hours) at Level 5	120 FET credits (1200 hours) at Level 6	120 ECTS credits (3,000-3,600 hours) at Level 6

As can be seen above, purely based on credit allocations, the HC may comprise a greater number of notional learning hours (up to 3,600 for the full two academic years given the range of 25-30 hours per ECTS[25] credit) than the Level 5 and AC combined programmes. It is also important to highlight that HC providers assign all their ECTS credits at Level 6 for Stages 1 and 2 whereas students taking the Level 5 plus AC route will acquire 120 FET credits at Level 5 and 120 FET credits at Level 6, as per the credits allocated by the providers.

Some AC and Level 5 Certificate providers indicate a total number of hours (including self-directed and directed learning) that deviate somewhat from the credit allocations which would technically indicate 2,400 for the Level 5 and AC combined across all subjects. The total number of hours reported are generally within 200-400 hours of the specified number of hours reflected by the credit allocation. In a number of programmes, no data have been provided regarding self-study hours particularly in the case of the HC awards, making direct comparisons problematic.

The table overleaf highlights the actual number of hours reported by selected providers per ISCED field:

[24] European Commission, 2015. ECTS User Guide. [pdf] Published by: Luxembourg: Publications Office of the European Union. Available at: <https://ec.europa.eu/assets/eac/education/ects/users-guide/docs/ects-users-guide_en.pdf>.
[25] European Commission, 2015. ECTS User Guide. [pdf] Published by: Luxembourg: Publications Office of the European Union. Available at: <https://ec.europa.eu/assets/eac/education/ects/users-guide/docs/ects-users-guide_en.pdf>.

Table 11: Total Number of Learning Hours Reported by Providers

ISCED Field	Level 5 Certificate	Advanced Certificate	Higher Certificate
Education	1,200 total learning hours	1,200 total learning hours	Hours not specified (120 ECTS)
Business, Administration and Law	1,200 total learning hours	1,200 total hours	3,600 notional hours (including 22 contact hours in year 1 and 23 contact hours in year 2)
Engineering	N/A	Apprenticeship: Off the job (including assessment): 1,777.25 hours On the job: 58 weeks (total hours not specified)	Hours not specified (120 ECTS)
ICT 1: Computer Systems	1,200 total learning hours	1,200 total learning hours	1,420 total contact hours (920 contact hours plus a 500 hour work placement)
ICT 2: Software Engineering	1,200 hours	1,200 hours	Hours not specified (120 ECTS)
Agriculture, Fisheries and Veterinary	650 directed learning hours and 780 self-directed learning	550 directed learning, 550 hours self-directed learning	1,946 total hours
Services	1,200 hours (all providers), 18 hours per week	1,200 hours (all providers), 19 hours per week	1,440 workload hours for each year, 2880 in total for the full programme (no differentiation between contact hours and independent hours)
Health Services	Provider 1: 416 directed learning hours and 784 recommended self-directed learning hours Provider 2: 1,200 hours	Provider 1: 416 directed learning hours and 784 recommended self-directed learning hours Provider 2: 1,200 hours	1,800 hours (15 weeks of study including 12 weeks of teaching)

The work placement modules (typically referred to as the 'Work Experience' module) in the Level 5 and AC qualifications typically comprise 15 credits (150 learning hours) which is typically the same credit allocation as the other mandatory and elective modules. For the HC award, the ECTS credit allocation for work placement can range from 5 to 30 ECTS, which equates to approximately 125-900 hours (the range of possible hours based on 1 ECTS being equivalent to a workload ranging from 25 to 30 hours as per the ECTS User Guide[26]). In a few

[26] European Commission, 2015. ECTS User Guide. [pdf] Published by: Luxembourg: Publications Office of the European Union. Available at: <https://ec.europa.eu/assets/eac/education/ects/users-guide/docs/ects-users-guide_en.pdf>.

HC programmes a longer work experience module is included lasting 12 weeks and comprising up to 30 ECTS credits (which equates to 900 plus hours). Two of the reviewed HC programmes in business, software development and software design (ICT 2) did not have a work experience or practical placement module.

The information provided on total duration, including any differentiation between contact and independent learning hours varied across the AC and HC providers. In particular, for many HC providers the emphasis is on the number of ECTS credits (120) rather than the total duration in hours. Based on a review of the actual number of hours indicated by providers across the qualification sample, the HC may involve a somewhat greater number of hours (in particular when considering the number of independent study hours which are not always specified and ECTS hours can equal up to 30 per credit) overall than the AC and Level 5 combined as the credit allocations would suggest (2,400 vs 3,000-3,600).

If purely viewed in terms of credit allocation and the levels pre-assigned by awarding institutions, those students studying the Level 5 and AC complete broadly half their learning hours at Level 5 and the other half at Level 6, whereas HC students would complete all learning hours at Level 6. However, while inferred learning hours inform the consideration of NFQ levels for the comparability exercise, the referencing in Section 4 is conducted independently, and focused predominantly on establishing the comparability of achieved learning outcomes on completion of the respective awards.

3.2.4 Structure and Content

The following table summarises some of the similarities and differences in structure in terms of the number of mandatory and elective modules, the inclusion of specialisation routes and work experience modules in the Level 5, AC and HC awards:

Table 12: Summary of the Structure and Content of Level 5, AC and HC Programmes

	Level 5 Certificate	Advanced Certificate	Higher Certificate
Number of mandatory modules	Typically, 2-6 mandatory 15 FET credit modules (Health has no mandatory modules).	Typically, 3-7 mandatory 15 FET credit modules (Sport and Recreation only has one) Apprenticeship: Off the job: 19 modules On the job: mandatory work placements.	Typically, 10-15 mandatory modules, 5-8 at each Stage, credit values per module range from 5 to 10 ECTS. HC in Industrial Measurement and control: 19 modules. HC in ICT (Computer Systems and Networking) has 20 modules.
Number of elective modules	Up to 25 elective modules, the number	Up to 25 elective modules, the number	Only two of the reviewed awards (in business and software development)

	Level 5 Certificate	Advanced Certificate	Higher Certificate
	students take varies by subject.	students take varies by subject Apprenticeship: No electives.	offer electives, 5 modules from which 3 modules are taken. In business, students have a choice of one yearlong (10 ECTS) module in academic writing or language (5 choices) and two 5 ECTS modules out of a choice of 12 subject related or language modules
Number of skills-based modules	6-7 modules (from which students may select 1-2).	6-7 modules (from which students may select 1-2) except for the apprenticeship programme.	Typically, 1-3 modules worth 5 ECTS credits each, usually all mandatory. Some exceptions – ICT (Computer systems and networking) and Early Childhood Care, Health and Education do not have these modules.
Specialisation Routes or Tracks Available	Yes, in agriculture.	Yes, in agriculture.	The majority of modules are mandatory with only two programmes including elective modules (software and business).
Work Experience Modules	Typically, one 15 credit module.	Typically, one 15 credit elective module (in sports work practice is mandatory).	Typically, one or two 5-15 ECTS credit module(s), one 25 credit module in ICT (Computer Systems and Networking), and one 30 credit module in Early Childhood care, Health and Education Work experience modules are not included in: -Business -Software Design (ICT 2).
Research skills modules	-	-	✓

In terms of similarities, the Level 5, AC and HC programmes aim to cover a broad range of modules, some of which may be focused on general foundational knowledge relevant to the field of study, while others aim to cover more specialised subjects. Most of the programmes also include modules that are more skills-focused enabling the development of core and transferrable skills, which may include communication, team working, professional development at Level 5 and at Level 6 (AC) and Year 1 of the HC, also leadership and in some awards, entrepreneurship and business related skills.

The main structural differences between the Level 5 and AC awards and the HC qualifications relate to the number of mandatory and optional modules and the degree of optionality and specialisation available to students. Whilst the Level 5 and in particular the AC affords students the opportunity to pursue different routes in some subjects, and optional modules where they take 5-7 options out of a list of up to 20 electives, in the majority of the HC programmes reviewed, all modules tend to be mandatory and form part of the programme of study undertaken by all students. Only a few of the HC programmes in the sample reviewed included optional modules, and of those that do, relatively few options are provided in comparison to the corresponding AC programmes. These general differences in structure seen across all fields is illustrated when comparing for instance the AC in Computer Systems with Stage 1 and 2 of the HC in Computer Systems and Networking qualification as shown in the table below. Note that for the Level 5 and AC awards, electives are numerous (ranging from 10-25 subjects) so are not listed.

Table 13: Comparing the Structure of Level 5, AC and HC in Computer Systems

Level 5 and AC awards in Computer Systems and Networks	Higher Certificate in Science in Computer Systems and Networking (Tralee IT)
Level 5: broadly eight 15 credit modules from the below list. Mandatory modules (for QQI major award): • Computer Systems Hardware • Operating Systems • Networking Essentials Elective modules (as per Whitehall College FE's suggested module outline[27]): • Communications • Maths for I.T. • Mobile Technologies • Programming & Design Principles • Work Experience **Level 6:** broadly eight 15 credit modules from the below list Mandatory modules (for QQI major award): • Physical and Logical Networking • Systems Software	**Semester 1** (each module is worth 5 credits) • Structured Programming 1 • Rapid Application Development • Computer Architecture • Web Development 1 • User Interfaces • Network Fundamentals **Semester 2** (each module is worth 5 credits) • Computer Hardware • LAN Switching and Wireless • Database Concepts • Mathematics • Operating Systems 1 • Web Development 2 **Semester 3** (each module is worth 5 credits) • Professional Development • Server Side Development • Routing Concepts and Protocols • Operating Systems 2 • IT Service Support • Scripting

[27] Whitehall College of Further Education, (n.d.). *Computer Systems & Networks - Level 5*. Available at: <https://whitehallcollege.com/courses/information-technology/computer-systems-networks-level-5>.

Level 5 and AC awards in Computer Systems and Networks	Higher Certificate in Science in Computer Systems and Networking (Tralee IT)
• Information Technology Administration • Network Infrastructure Elective modules (as per Whitehall College FE's suggested module outline[28]): • Communications • Work Experience • Mathematics • Mobile Technologies.	**Semester 4** • Work placement (25 credits) • Work placement review (5 credits).

A comparison of the content taught across the programmes also identified a difference in the coverage of theoretical content in some of the more technical subject areas such as ICT and engineering. It was observed that in subjects such as software development, advanced maths and engineering modules are mandatory in the HC. In the AC, coverage of mathematical principles within some of the modules is included, although there are no mandatory modules where topics in advanced maths are covered in comparable depth to the HC. The maths included in Stage 2 of the software design HC programme covers principles that go beyond that covered in the AC qualifications reviewed in terms of breadth and complexity.

HC programmes also may include at least one module on research methods, which covers qualitative and quantitative methods considered essential for conducting research at a higher level of academic study. Whilst these modules are typically introductory in nature in the HC, there are no standalone modules and little coverage of academic research skills observed in the Level 5 and indeed the AC awards offered in the same subject areas. The absence of research skills coverage may present a skills gap in the AC graduates when progressing onto Higher Education programmes.

A further important difference relates to the inclusion of work experience placements. In the AC programmes, although it was observed that many of the providers set the work experience or work practice module as being mandatory at their institution, as per the QQI specification a professional development module can be offered instead of a work placement. However, at Level 5 work experience modules are more frequently mandatory so the majority of graduates with the AC and Level 5 awards would have completed some work experience, although the scope of work experience taken at Level 5 is generally less demanding than that expected at AC in terms of the number and complexity of tasks assigned. Furthermore, in the Level 5 and AC programmes included in this study, there is an alternative work practice module offered alongside the options of work experience and/or a professional development module. However, where a work experience module is included in the HC (in all but two of the reviewed programmes this is the case), the work experience module is typically mandatory; therefore, most HC graduates complete work experience, typically in Stage (Year) 2 of the programme. As already mentioned, work experience placements are also invariably longer in terms of notional learning hours in the HC when compared to selected AC counterpart awards.

[28] Whitehall College of Further Education, (2020). *Computer Systems and Networks QQI Level 6 Specification.* Internal document.

The degree of coherence and progression between Level 5 and AC programmes, and that of the Stages 1 and 2 of the HC is also important to consider in relation to structure and content. Generally, the modules from Level 5 are clearly differentiated from those in similar subjects in the AC, by an increase in the complexity of topics covered and breadth of skills coverage, while acknowledging that there is the potential for duplication of some content from that covered at Level 5. Generally speaking, across the HC programmes reviewed, Stage 2 modules in the same subject area are clearly differentiated in terms of content coverage and complexity with very little duplication or overlap of study from the coverage at Stage 1 and clearly deeper and more advanced subject coverage than that covered previously.

In summary, students following Level 5 and AC do not typically achieve the same breadth of study as those taking the HC programmes, this applies across the different fields. Nonetheless, students taking the Level 5 and AC may cover proportionally more content in particular topics in which they choose to specialise, particularly if they choose the same subject modules in the AC as previously in the Level 5. It should also be noted that there is a greater possibility of repetition of study in the AC from that also studied in the Level 5 Certificate. Nevertheless, there may be scope for greater variety of coverage from Level 5 to AC depending on the student's selection. AC students also have access to a broader range of specialist topics, some of which may be taken from other subjects/fields than are typically available for those studying the HC. It would however be fair to conclude that the level of theoretical content and depth in certain topic areas is greater in the HC than that covered across the Level 5 and AC programme modules in the same subject area.

3.2.5 Learning Outcomes

There are variations in terms of the expression of learning outcomes by subject and provider. All Level 5 and AC programmes lead to a QQI major award; the specification for this major award includes 'Statements of Knowledge, Skill and Competence' that are set by QQI. These statements are aligned to the NFQ sub-strands. The individual modules (also known as QQI minor awards) include learning outcomes set by QQI. Programme specifications set by the FET boards and/or providers may reiterate the programme level QQI statements and/or include further outcomes or objectives set by the provider; the modules typically reiterate the QQI outcomes. Some of the Level 5 and AC providers and boards do not specify outcomes by NFQ sub-strand within their own programme specifications and instead articulate overarching intended competencies via programme objectives in the form "this programme will facilitate the learner to…".

Programme design also varies by provider in the HE sector in that some Institutes of Technology align HC programme level outcomes to NFQ sub-strand titles while other providers have developed their own outcomes which may not directly be aligned to the wording of the NFQ or the sub-strands.

It is also important to highlight that the SOLAS Advanced Craft Certificate apprenticeship programme also does not include learning outcomes based on the NFQ sub-strands and its outcomes are not closely aligned with the wording of the NFQ. This may be due to the fact that it was developed from a legacy Craft Certificate apprenticeship award prior to the introduction of the existing NFQ so has followed a different set of design principles intended for apprenticeships.

The following table summarises the key skills and competencies included in the learning outcomes at a programme level. The list of core skills and competencies has been identified from a review of the AC and HC learning outcomes rather than NFQ sub-strands, to highlight any general similarities and differences in core skill coverage between awards.

A tick generally reflects explicit integration across subjects in the sample, 'partial' indicates less explicit or consistent integration whereas a blank indicates no or limited evidence of integration.

Table 14: Comparative Review of Learning Outcomes – Core skills and Competency Coverage at a Programme Level

Skill / competency area	Level 5 Certificate	Advanced Certificate	Higher Certificate
Knowledge and understanding	✓	✓	✓
Practical skills	✓	✓	. ✓
Problem solving	✓	✓	✓
Teamworking and collaborative skills	✓	✓	✓
Autonomous working	Partial (frequent reference to being under supervision, within structured environments)	✓	✓
Supervisory skills	-	✓ (with the main exception being the apprenticeship which does not include supervisory skills coverage)	Partial
Academic research skills	-	Partial (implicit in some modules but not explicitly related to academic contexts)	✓ (explicit primarily at modular level but consistent across awards)
Self-reflection and evaluation skills	Partial	✓	✓

Skill / competency area	Level 5 Certificate	Advanced Certificate	Higher Certificate
Ethical awareness	-	Partial (mainly in the context of law and regulation)	✓

Despite the differences in the format of learning outcomes, there is general reference on a programme level to developing knowledge and understanding of theories and principles integral to the field/subject of study. Practical skills coverage is apparent across the programme sample, including the ability to apply knowledge and understanding to non-routine situations in the AC and HC programmes. The level of autonomy typically varies between the Level 5 and the AC, with less direct reference to being able to work autonomously as an outcome of the Level 5 Certificates and more to working under supervision whereas the AC awards make more explicit reference in their outcomes to developing independence in their practical work. The HC outcomes indicate an increasing focus on autonomous working and independent practice throughout, albeit under some level of supervision within structured environments.

The development of supervisory skills is notably absent from many of the HC programme level learning outcomes, whereas the AC awards offered in a number of subject areas with the notable exception of the Advanced Craft Certificate apprenticeship indicate that the development of supervisory skills is a key overarching outcome. This contrast is highlighted in the following table which compares the overarching outcomes highlighting level of responsibility side-by-side for three selected sets of awards. The Apprenticeship programme by contrast indicates that it aims to develop individuals who can practice autonomously within structured environments with the potential to develop into supervisory roles.

Table 15: Comparing Levels of Autonomy and Responsibility Specified in Programme Level Outcomes Across AC and HC Programmes Offered in Three Selected Fields

ISCED Field	Advanced Certificate	Higher Certificate
Software Design and Engineering	To facilitate the learner to work independently or as a team member, often taking responsibility for the work of others, while taking responsibility for the finished product.	To apply knowledge in a practical setting under supervision. To interact effectively with others, including non-computing staff.
Health Care	Implement best practice as a rehabilitation practitioner, working independently in a range of rehabilitation contexts and/or taking responsibility for the work of others and the allocation and management of resources.	The skills to formulate responses to well-defined abstract problems under the direction of a social care professional. The ability to plan and organise work and interact effectively as part of a team.

ISCED Field	Advanced Certificate	Higher Certificate
Agriculture	Work effectively and safely in a supervisory capacity including delegating work and interacting with external third parties.	Work autonomously, in small groups, or as part of a larger team. Develop students' communication skills. Be pro-active for the overall continuous improvement of practices and procedures in the workplace.

The development of academic research skills is not included in the outcomes of any of the AC programmes in the sample, however it may be implicit in some individual modular level outcomes. The HCs by contrast typically have a stronger focus on the development of independent research capability which, while not always present in programme level outcomes, is included more explicitly at a modular level than in the AC programmes, reflecting as mentioned above the inclusion of standalone modules in research methodologies.

Figure 2: HC in Health and Social Care Modular Level Outcomes – Research Skills[29]

- Critique methodology as the design process (philosophical and theoretical assumptions) when undertaking research.
- Contrast the key features, strengths and limitations of research methods including the appropriateness of populations, samples and sampling frames for different methodologies.
- Compare the rationale and strategies for reviewing literature and writing research proposals (HC in Health and Social Care, module in Research Process and Methods).

The ability to monitor and take responsibility for own learning is reflected across the programme level outcomes of the qualifications reviewed. The Level 5 Certificate outcomes reflect a focus on building this sense of responsibility for own learning while the AC outcomes make more explicit reference to evaluating learning progress and future needs. The HC programmes vary in relation to how they express outcomes relating to self-evaluation, with some more explicit than others regarding the need to evaluate own learning. The aim for students to engage in professional development is nevertheless a theme shared across the awards in various subject fields.

As an overarching observation, understanding the ethical, social and cultural context of a field of work is typically more explicitly at the forefront of a number of HC awards, as reflected in the programme level outcomes than in the AC awards. Notwithstanding this observation, the AC and Level 5 Certificate learning outcomes nevertheless include reference to understanding and compliance with regulations, including health and safety laws, although with less emphasis on understanding the interrelationship between industry practice and ethics, values and general moral development on a personal and human level, an outcome specified in a number of the HC programmes.

Trends regarding comparability specifically to NFQ descriptors can be found in Section 4.

[29] Letterkenny Institute of Technology, 2020. Information Requested by Ecctis. Internal document.

Modular Level Outcomes

Similarities are observed among AC and Level 5 module specifications in the format and level of detail adopted in the modular level outcomes. The range and type of skills varies between the Level 5 and AC awards, as AC programmes generally place greater emphasis on skills such as evaluation and analysis within their learning outcomes.

HC modular level outcomes similarly reference a range of skills and, in a number of programmes, have been mapped by the provider to NFQ descriptors. Commonly used command words reflecting development of knowledge and understanding similarly include “describe” and “explain” in relation to processes, theories and principles. Application skills are invoked by use of a range of command words including “apply”, “calculate”, “implement”, “plan” and “solve”. The ability to “appraise” a particular theory or process is a key skill that is used at a modular level, reflecting the intention of the HC to develop critical thinking and evaluation skills for further progression to Bachelor degree studies at Level 7.

Generally, the HC module outcomes in Stage 2 modules tend to reflect a similar range of cognitive skills to those included in Stage 1 modules, a range that includes some lower order skills of knowledge and understanding, application skills of medium level demand as well as higher order thinking skills of evaluation and analysis. Therefore, Stage 2 HC module outcomes do not necessarily reflect progression in terms of overall cognitive level from those in Stage 1 modules, in contrast to the difference observed between the Level 5 Certificate and AC module outcomes. Nonetheless, an increase in the complexity of the content covered in, particularly, subjects covered at Stage 2 from that at Stage 1 can be observed in the HC programmes. For example, the HC reviewed in software design includes modules in mathematics at Stages 1 and 2, with the latter providing greater depth of coverage in more complex topics such as 3D geometry, graph theory and modelling the dynamic behaviour of complex systems.

3.2.6 Mode of Learning

Similarities are apparent in the modes of learning across Level 5, AC and HC programmes. All the AC and Level 5 programmes and most of the HC programmes reviewed are delivered on-campus and are full-time awards. Some of the HC programmes reviewed are part-time but still incorporate the same amount of on-campus delivery overall albeit spread across four years instead of two.

The Level 5, AC and HC programmes combine campus-based learning with practical skills demonstrations, workplace training, site visits and technology enhanced learning. Work experience often involves completing a work journal, providing opportunity to self-reflect on the development of practical and occupationally relevant skills and general progress throughout the placements.

The AC Apprenticeship programme is different to the other AC awards in that it includes a large proportion of on-the-job delivery, accounting for over half of the programme. Nonetheless, classroom based instruction, or off-the-job training is similarly included as it is for other AC programmes.

3.2.7 Assessment Methods and Criteria

The following table summarises the key similarities and differences in assessment methods and weighting on an overarching level. Approximate weightings are given in brackets, these represent averages from across the sample of reviewed programmes to the nearest 10%.

Table 16: Summary of the Assessment Methods used by the Level 5, AC and HC Qualifications (Approximate Weightings)

Assessment method	Level 5 Certificate	Advanced Certificate	Higher Certificate
Written examinations	✓ (20%)	✓ (20-30%)	✓ (30-50%, varies by field)
Assignments	✓ (10%)	✓ (10-15%)	✓ (20-30%)
Project-based assessment	✓ (10-15%)	✓ (10-15%)	✓ (10-15%)
Portfolio of works / learner record	✓ (10%)	✓ (10%)	–
Skills demonstration	✓ (30-40%)	✓ (30-40%)	–
Practical examinations	-	-	✓ (varies by field, typically 10-15% in more practical fields)
Work experience assessment	✓ (around 12%)	✓ (12% but as part of an optional module, the Craft Apprenticeship comprises 40% on-the-job assessment)	✓ (varies, 10-15%)

As can be seen in the table above, a key difference which emerged from the subject-level reviews was the greater inclusion of skills-based demonstrations in the Level 5 Certificate and AC programmes. These are practical-based assessments where the student's ability to demonstrate practical skill(s) are assessed using checklists. The HC awards tend not to include this type of assessments, using instead practical or lab tests in subjects such as engineering and computing, which cover a broad range of practical skills rather than focus on a more specialised area as per skills demonstrations included in the AC and Level 5 programmes. Skills demonstrations are typically given a higher weighting than practical tests in the HC programmes, reflecting the more practical focus of the Level 5 and AC programmes.

Overall, whilst the Level 5 and AC include written examinations, the HC awards generally place greater weighting on written examinations in determining the final grade (with a few

exceptions, for example in the HC in Agriculture examinations had a somewhat lower weighting of around 30%). The written examinations tend therefore to be longer than those set in either the Level 5 or the AC programmes. For instance, the average time for exams set in the AC is around one and a half to two hours, whereas in the HC examinations, particularly those reviewed at Stage 2, it is three hours.

Written examinations vary depending on the subject module and subject. It was found that, generally speaking, HC written examinations in subjects such as business, health care and education require more extended essay writing than those in the AC and in particular the Level 5 exams. Examinations in the AC and Stage 2 of the HC are generally longer in duration and include more open-ended questions than those in the Level 5 / Stage 1 of the HC which have a greater focus on assessing foundational knowledge and understanding of the subject matter. Projects and portfolio-based assessments are also used across the Level 5, AC and HC assessment frameworks. Projects are typically based around practical problems and involve students working independently or in a group to propose suitable solutions and make a final presentation. The work experience modules in the Level 5, AC and HC programmes are typically assessed via skills demonstrations, collection of work and verification of skills and aptitudes demonstrated during the work placement by a supervisor.

The apprenticeship programme has a different assessment framework to that used for the AC/Level 5 awards. The off-the-job assessments include knowledge tests, practical tests and coursework assignments whereas the on-the-job assessments are competence based. These workplace assessments are carried out by the workplace supervisor/assessor based on an assessment specification and detailed workplace assessment checklist. Work-based assessment therefore comprises a significantly higher proportion of the assessment (approx. 50%) than is seen in other AC and HC programmes.

Assessment Criteria

Assessment criteria for selected samples of assessments were reviewed across the subjects in the Level 5, AC and HC programmes included in this study. For problem solving tasks such as those included in technical subjects and modules, similarities were observed between the AC and HC in the use of points-based mark schemes and the awarding of marks for strategy and method as well as correct final answers. Similarly, in assessments and particularly written exams that include structured questions, assessing conceptual understanding, the use of model responses and points per correct response are also evident.

For extended essays and assignments, some variations were not only evident across AC and HC programmes but also between providers. For open-ended tasks, some AC and HC providers use descriptors to differentiate levels of performance with mark ranges indicated in brackets whilst others may use checklists of points or expected skills to be covered in the response to the assessment task. In the HC in Health and Social Care for example, essay-based assessment, including those set in exams and as coursework assignments, use assessment criteria with 40% representing the pass mark and mark ranges representing classes of performance (First, Second and Third class). In the example overleaf, students are awarded credit for the quality of argument, level of critical analysis and depth of reference:

Figure 3: Example of Marking Criteria for HC Open-Ended Discussion-Based Essay Questions[30]

- Extensive critical evaluation and synthesis of issues and material which includes original and reflective thinking (80-100)
- Some critical evaluation and synthesis of issues and material which includes some originality (70-79)
- Evaluation and synthesis of main issues and material (60-69)
- Accurate description of main issues and material with some evaluation (50-59)
- Description of main issues and material only (40-49).

Whilst the above example is indicative of the approach taken by the selected programme in health and social care and is also evident in some of other modules of programmes which set open-ended assessment tasks, it is acknowledged that other programmes reviewed may use more detailed descriptors or tailor their assessment criteria to the requirements of the individual task (task-specific criteria).

An alternative marking approach (alternative to the levels of performance based criteria used above), used for example by the AC in Health and Social Care, assesses students on the extent to which they address points related to the task. Whilst some are skills-based with mark ranges specified for particular types of skill (i.e. knowledge, understanding, application, etc.), it is not always clear from such mark schemes what level of performance would be expected in order to pass or to attain a distinction on a particular task (see example below from the AC in Early Childhood Education and Care). Levels of performance descriptors do not appear to be widely used in the Level 5 and the AC, and variations are also evident in the use of pass descriptors in the HC awards. The degree of variation in marking approaches reflects the autonomy providers possess in relation to setting and marking assessments, considering the specific requirements of individual tasks, although reliability of assessment may benefit from performance descriptors (such as those listed in the below figure) particularly at the pass/distinction levels.

Figure 4: Example of Marking Criteria for AC Open-Ended Project-Based Task (AC in Early Years Education and Care)[31]

- Logic Rationale
- Comprehensive Planning
- Effective Implementation
- Detailed Evaluation of the Learning Outcomes from the Activity for the Children
- Personal Reflection and Conclusion to include additional activities.

3.2.8 Associated Outcomes

The following table summarises some of the progression routes reported for the AC graduates and HC graduates, based on data supplied by selected FET and HE providers from the sample.

[30] HC in Health and Social Care - Examination Essay Assessment Criteria.
[31] Level 5 Module Assessment Criteria in Education and Play.

Table 17: Associated Outcomes for Level 5, AC and HC Qualifications by ISCED Field

ISCED Field	Level 5 Certificate	Advanced Certificate	Higher Certificate
Education	No progression data available.	52% of graduates went on to pursue higher education (BA Early Years degree) while 27% gained employment. Graduates may apply for entry into Year 2 of Bachelor studies.	71% of graduates progressed directly onto the third year of a Bachelor degree in Early Years Education, 12% gained employment in the sector.
Business, Administration and Law	In 2020, 55% graduates were planning on continuing in FE (level 6 or professional accounting), 32% on progressing to higher education and 9% to employment.	86% graduates of full awards have applied to level 8 programmes at a college; 27% have applied to a technological university – (5 of the 6 have also applied to a college); 5% working – offered full time work in a commercial bank.	Higher Certificate students can progress to the Ordinary degree (Level 7) add-on in Business and later on to the Bachelor of Business (Hons) Level 8; Add-on degree at an institute of technology or in other Higher Education Institutions. Destination data was not provided for latest cohorts.
Engineering	N/A	Apprenticeship: The combined proportion of qualified apprentices in 2014 in employment or education is 81.9%, No figures were available for the specific programme reviewed.	60% of graduates progress onto the Level 7 part time instrumentation programme (BSc Applied Physics and Instrumentation).
ICT 1: Computer Systems	Students have the option to apply for the Computer Systems & Networks Level 6 course.	Level 6 graduates can apply for advanced entry route to: a technological university's Year 2 degree in Network Technologies, a technological university's Year 2 Bachelor of Science in Computing in Information Technology.	Transfer to the NFQ level 7 Computer Systems and Networking can be considered after Semester 1.
ICT 2: Software Engineering	73% of those graduating in 2019 progressed to higher education to study software related programmes.	59% graduates in May 2019 progressed on to higher education (computing degrees) while 18% progressed into employment in roles including customer support advisor and IT Support Technician.	90% of those graduating in 2019 progressed onto Level 7 programmes.

ISCED Field	Level 5 Certificate	Advanced Certificate	Higher Certificate
Agriculture, Fisheries and Veterinary	88% of graduates progressed onto an AC programme in agriculture in 2019.	No statistics were available on the number of Level 6 AC graduates progressing into higher education. Employment figures were also not available.	Statistics on progression to Level 7 were not available. 89% achieved full-time employment on graduation with 93% in relevant employment, 7% in further study.
Services (Sports and Recreation)	No figures available.	No figures available.	All HC graduates in coaching over the last three years have transferred on to further study, either the Level 7 Community Sports Development course, or the Level 8 Sports Management course.
Health Services	20% of graduates are now pursuing a Level 6 AC in related subject.	65% of those graduating with Major QQI awards progressed onto HE programmes, whilst 35% progressed to employment.	97% of graduates progressed onto higher education programmes, the majority at Level 7.

As can be seen in the table above, the progression rates for HC holders onto Level 7 programmes and ultimately Level 8 programmes tend to be higher than for AC holders.

However, it is important to note that not all providers collate progression data, and those that collect such data do not generally differentiate the learning stage (or level of study) or specific qualifications taken by students enrolling onto programmes. Therefore, while it has been possible to identify some general trends in terms of the progression route from the Level 5 to the AC programmes, and from the HC onto Level 7 programmes, it is not possible based on the progression data collected to detect a definitive pattern of progression to further studies for holders of AC qualifications.

In particular, whilst there is some evidence that AC students may be able to gain advanced standing onto Year 2 of related HC or Bachelor degree programmes, there is no direct evidence from the available data of progression of AC graduates onto Bachelor programmes (Year 3) in related subjects. This does not mean that such progression does not take place, but only that it was not tracked by FET providers engaged with as part of this study. Progression routes to further study for AC graduates have been discussed in the focus groups reported in Section 5.

4. Key Findings – Analysis to the NFQ

This section comprises two sub-sections. Section 4.1 discusses the findings of the qualitative analysis of the sample of AC and HC programmes against NFQ descriptors for the eight sub-strands. Section 4.2 includes the quantitative analysis, testing the hypothesis that there are no significant differences in terms of level between the AC and the HC.

4.1 Qualitative Analysis to NFQ Sub-Strands – Descriptive Statistics and Key Observations

As highlighted in the methodology, evidence of achieved learning outcomes, as identified from programme materials and assessment materials from two sample modules, were compared against NFQ sub-strands to determine best-fit levels for the Level 5 and AC together and the HC qualifications as implemented. A review of the descriptors, including similarities and differences between Level 5, 6 and 7 for each NFQ sub-strand descriptor can be found in Appendix 1.

It is important to reiterate here that each qualification was assessed in relation to the NFQ independently following the comparative review, focusing on the comparability of achieved qualification learning outcomes on completion. Pre-assigned levels to modules and qualifications given by institutions may have been considered for contextual purposes. However, in line with the aims and objectives of this project and best practice in credential evaluation, conducting an objective and independent assessment of outcomes to NFQ sub-strands has been the primary focus of this exercise.

The results from the qualitative analysis to the NFQ sub-strands are outlined in Section 4.1.1 through Section 4.1.8. The final judgement on best-fit level for the PLC AC (including both Level 5 and AC programmes together) and the HC are presented for each of the eight ISCED field pairings.

4.1.1 Knowledge, Breadth

The table below provides the best-fit levels for the NFQ sub-strand on knowledge, breadth for each AC and HC qualification in the sample:

Table 18: Knowledge, Breadth NFQ Levels

	Knowledge, Breadth NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	7
Business, Administration & Law	6	6
ICT (Computer systems)	7	7
ICT 2 (Software)	6	7
Engineering, Manufacturing & Construction	6	7
Health & Welfare	6	7
Services	6	6
Agriculture, Forestry, Fisheries & Veterinary	6	7
Average NFQ Level (Mean)	**6.1**	**6.8**
Average NFQ Level (Mode)	**6**	**7**

Overall, the mean average NFQ Level is somewhat higher for the HC as compared to the AC for knowledge breadth, reflecting the fact that Level 7 has been determined in six of the eight ISCED fields following review of the HC awards. HC students typically cover a greater number of different subjects as all modules are generally compulsory and tend to cover theoretical subjects in the first year and more specialised applications in the second year.

In comparison, the Level 5 programmes provide more of a general grounding while the AC awards provide options and in some cases routes where students specialise in one broader area and take optional modules relating to that area. The NFQ Level 6 descriptor to "demonstrate specialised knowledge in a broad area" is therefore generally met by the Level 5 and AC qualifications taken together. Breadth is achieved across both awards although the HC generally exhibits greater breadth than the AC given that all modules across a range of related subjects (including modules that are skills related) are mandatory. In most of the eight ISCED fields, therefore, the breath of the HC more closely matches the Level 7 descriptor "specialised knowledge in a variety of knowledge areas", whilst acknowledging that the level of specialisation can vary by field and provider.

4.1.2 Knowledge, Kind

The table below provides the levels for the NFQ sub-strand on knowledge, kind established for each qualification in the sample:

Table 19: Knowledge, Kind NFQ Levels

	Knowledge, Kind NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	6
Business, Administration & Law	6	6
ICT (Computer systems)	6	6
ICT 2 (Software)	6	6
Engineering, Manufacturing & Construction	6	6
Health & Welfare	6	6
Services	6	6
Agriculture, Forestry, Fisheries & Veterinary	6	6
Average NFQ Level (Mean)	**6**	**6**
Average NFQ Level (Mode)	**6**	**6**

In summary, there is a general uniformity observed across the sample, with Level 6 being the average NFQ Level established across all awards in the sample for knowledge kind. Theoretical understanding is developed in both the AC and HC across the disciplines and qualifications reviewed; the HC programmes in particular have a theoretical focus with standalone modules that aim to develop a theoretical grounding to inform practical application.

In the AC, theoretical knowledge is included within a number of modules, including applied subjects to ensure the student builds up a secure understanding of the concepts. In terms of theoretical coverage, NFQ Level 6 is frequently met for knowledge kind across the Level 5 and the AC qualification sample. Some subjects may require more theory based learning than others however, with ICT and engineering qualifications (both AC and HC) demonstrating significant theoretical content.

The level of abstract thinking (a component of the NFQ Level 6 sub-strand) varies between qualifications and subject areas, although the AC and HC qualifications across the sample largely meet the expectations as outlined in the NFQ Level 6 descriptor for knowledge kind. For example, the requirement to identify, analyse and discuss industry trends in business and engineering subjects is reflected across the AC and HC qualifications in different fields and is a skill which requires some degree of abstract thinking.

On the other hand, the AC and HC in the majority of subject areas do not explicitly include reference to recognising the limits of knowledge, that would involve a deeper and more analytical exploration of the theories underpinning the subject area. It is in this area (i.e. recognising the limits of knowledge), that both sets of AC and HC awards across subject areas

frequently fall short of meeting the NFQ Level 7 descriptor in full for knowledge kind. Nevertheless, in some of the HC programmes there is evidence that new emergent technologies and trends are covered within the scope of the modular content and students are expected to integrate new concepts, highlighting Level 7 comparability in relation to part of the sub-strand descriptor on "familiarity with sources of new knowledge".

4.1.3 Know-How and Skill, Range

The table below summarises the levels for the NFQ sub-strand on know-how and skill, range determined for each qualification sampled across the eight ISCED fields:

Table 20: Know-How and Skill, Range NFQ Levels

	Know-How and Skill, Range NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	7
Business, Administration & Law	6	7
ICT (Computer systems)	7	7
ICT 2 (Software)	7	7
Engineering, Manufacturing & Construction	7	7
Health & Welfare	6	6
Services	6	7
Agriculture, Forestry, Fisheries & Veterinary	7	7
Average NFQ Level (Mean)	**6.5**	**6.9**
Average NFQ Level (Mode)	**6/7**	**7**

Across the sample of awards, it was generally found that students studying the Level 5 and AC in succession and those taking the HC two-year programmes develop a comprehensive range of skills by completion, fulfilling NFQ Level 6 for know-how and skill range. This reflects the increase in range as well as specialisation in terms of skill coverage from the Level 5 Certificate / Year 1 of the HC through to the one-year AC programme and Year 1 and 2 of the HC.

In some subject areas, comparability to NFQ Level 7 is observed through the development of technical and/or creative skills across a field of study. For instance, a number of the HC programmes place significant emphasis on technical skill development in a variety of areas, as is apparent from the aims, learning outcomes and the sample of assessment tasks reviewed.

A number of variations between field of study are however apparent between HC awards where some focus more on a comprehensive skill set as opposed to a technical, specialised skill set required to function in a particular area. This is found in some of the awards which have a more business or practical orientation, where the focus is not so much on technical or creative skills development than on broader based transferable skills and the necessary

practical skills required to operate a business. Despite these differences, the overall average (mean) level is only slightly higher for the HC with the modal NFQ Level being Level 6 for the AC and Level 7 for the HC.

4.1.4 Know-How and Skill, Selectivity

The table below summarises the levels for the NFQ sub-strand on know-how and skill, selectivity determined for each qualification:

Table 21: Know-How and Skill, Selectivity NFQ Levels

	Know-How and Skill, Selectivity NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	5	5
Business, Administration & Law	6	6
ICT (Computer systems)	7	7
ICT 2 (Software)	6	6
Engineering, Manufacturing & Construction	6	6
Health & Welfare	6	6
Services	6	6
Agriculture, Forestry, Fisheries & Veterinary	6	6
Average NFQ Level (Mean)	**6**	**6**
Average NFQ Level (Mode)	**6**	**6**

Problem solving in non-routine contexts (indicative of NFQ Level 5) is generally well reflected across the programme and modular level outcomes of the Level 5, AC and HC qualifications in the sample reviewed. The level of abstraction and context of problem solving, as well as the degree to which it is a core element vary across the different modules and by qualification type. Generally speaking, the more technically focused subjects tend to place more emphasis on problem solving, particularly in assessments which can include application tasks and/or calculation type problems which involve adapting strategies to solve novel problems. However, problem solving can also been seen in some of the less technical subjects such as business and services, where case study and scenario based assessments are incorporated at a modular level. Problem solving is generally well-defined although the level of abstraction generally increases from Level 5 to AC qualifications. This can also be seen in terms of the progression from Stage 1 to Stage 2 of the HC programmes in similar subject areas. The ability to solve well-defined abstract problems, indicative of L6 for this sub-strand, is generally met by both sets of qualifications in the sample. Being able to engage in the planning and design of technical operations and exercising judgement, skills associated with NFQ Level 7, were nevertheless seen to be developed to some extent in both the AC and HC qualifications in Computer Systems.

4.1.5 Competence, Context

The table below summarises the levels for the NFQ sub-strand on competence, context determined for each qualification:

Table 22: Competence, Context NFQ Levels

	Competence, Context NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	6
Business, Administration & Law	6	6
ICT (Computer systems)	6	7
ICT 2 (Software)	6	7
Engineering, Manufacturing & Construction	6	7
Health & Welfare	6	6
Services	6	7
Agriculture, Forestry, Fisheries & Veterinary	6	6
Average NFQ Level (Mean)	**6**	**6.5**
Average NFQ Level (Mode)	**6**	**6/7**

NFQ Level 6 is met overall by the majority of the qualifications in the sample for competence, context with fewer variations than observed in comparison with other NFQ sub-strands. Both sets of Level 5+AC and HC awards, and to some extent the Level 5 Certificates prescribe programme level outcomes that invoke the ability to act in a range of varied and specific contexts involving non-routine activities. The AC and HC qualifications in the sample all included reference both at a programme and a modular level to developing the ability to transfer theoretical concepts and/or technical/creative skills to a range of contexts. Evidence that students are expected to apply theoretical concepts across a range of practical and theoretical situations was observed in the sample assessments to inform the comparability.

A number of qualifications in the sample, including the more technically oriented HC programmes, were also found to reflect the Level 7 descriptor in requiring a range of diagnostic testing of technical systems and equipment as well as strategizing and troubleshooting to find solutions to non-standard problems across the full programme of study (Stages 1 and 2). The AC programmes in the same ISCED field may also have elements of diagnostic tests, but only in relation to specific elective modules and not in the preceding Level 5 awards, placing the overall achieved outcomes at Level 6 overall for modules in similar subject areas.

4.1.6 Competence, Role

The table below summarises the levels for the NFQ sub-strand on competence, role determined for each qualification type:

Table 23: Competence, Role NFQ Levels

	Competence, Role NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	5
Business, Administration & Law	6	5
ICT (Computer systems)	6	6
ICT 2 (Software)	6	5
Engineering, Manufacturing & Construction	5	5
Health & Welfare	6	5
Services	6	6
Agriculture, Forestry, Fisheries & Veterinary	6	6
Average NFQ Level (Mean)	**5.9**	**5.4**
Average NFQ Level (Mode)	**6**	**5**

Whilst similarities were observed in terms of developing the student to exercise initiative and autonomy in both the HC and AC sets of qualifications, the degree to which supervisory skills are covered and developed in practical situations varies by qualification. Some differences are noted between the AC and HC in the coverage of supervisory skills. Whilst a number of the HC awards may contain coverage of leadership principles and management in standalone modules, the development of supervisory skills as an outcome was not observed across the majority of awards in the sample. However, notably, the reviewed HC in Sport and Recreation included supervisory and management skills in its overarching and modular learning outcomes. In the AC, by contrast, in a number of subjects the ability to assume supervisory responsibility is a key programme level outcome. The degree to which these skills are developed and assessed at a modular level nevertheless varies, with the work placement invariably offering scope for development of these skills, but not necessarily assessing supervisory and management skills in practice.

Overall, the AC providers may place supervisory skills more at the forefront of their programmes than the HC, reflected in the programme level outcomes. It should also be noted that it is invariably in the AC, and not in the Level 5 Certificate in which supervisory skills are specified and developed to some extent, so relatively less time may be devoted to supervisory skills than to working autonomously (also evident in the Level 5 awards), which has also been taken into account in the evaluation.

None of the qualifications in the sample were found to align to Level 7 for this sub-strand. Review of programme and modular level outcomes indicate that the Level 7 descriptor components to demonstrate accountability for group outcomes and a significant level of

supervisory responsibility was found to be outside the scope of the Level 5, AC and HC qualifications in terms of their design and delivery as well as their assessment.

4.1.7 Competence, Learning to Learn

The table below summarises the levels for the NFQ sub-strand on competence, learning to learn determined for each qualification type:

Table 24: Competence, Learning to Learn NFQ Levels

	Competence, Learning to Learn NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	6
Business, Administration & Law	6	6
ICT (Computer systems)	6	6
ICT 2 (Software)	5	5
Engineering, Manufacturing & Construction	5	5
Health & Welfare	6	6
Services	6	6
Agriculture, Forestry, Fisheries & Veterinary	6	5
Average NFQ Level (Mean)	**5.8**	**5.6**
Average NFQ Level (Mode)	**6**	**6**

The ability to identify and evaluate own learning needs, a key component of the Level 6 descriptor was found to be included and developed across the vast majority of the qualifications reviewed. Both sets of AC and HC qualifications place self-evaluation at the forefront, reflected in the programme level outcomes as well as in modules and assessments which include journals for self-evaluation.

However, assisting of others to identify their own development needs was not found to be covered across a number of awards (both AC and HC) either in programme outcomes or in the modular outcomes or assessments, which reflects comparability to Level 5 for competence, learning to learn for a number of the qualifications in the sample.

Although all awards evidently include a focus on identifying learning needs, and self-evaluation of learning, there is less direct evidence from the qualification design and assessment that students are expected to take initiative for development needs. The majority of the outcomes place emphasis on the instructor and relevant assessment tasks providing opportunity for the student rather than the student taking it upon themselves to engage in self-evaluation and development, hence the Level 7 sub-strand for learning to learn is not reflected by qualifications in the sample.

4.1.8 Competence, Insight

The table below summarises the levels for the NFQ sub-strand on competence, insight determined for each qualification type:

Table 25: Competence, Insight NFQ Levels

	Competence, Insight NFQ Levels	
ISCED Field	**L5 and AC**	**HC**
Education	6	6
Business, Administration & Law	6	6
ICT (Computer systems)	6	6
ICT 2 (Software)	5	6
Engineering, Manufacturing & Construction	5	6
Health & Welfare	6	6
Services	6	6
Agriculture, Forestry, Fisheries & Veterinary	5	6
Average NFQ Level (Mean)	**5.6**	**6**
Average NFQ Level (Mode)	**6**	**6**

Overall, there was a fair degree of variation in terms of how competence insight is developed throughout the awards. Some of the AC qualifications make direct reference to the skills associated with competence insight in their overarching learning outcomes. In the HC awards, the scope of the learning outcomes associated with competence insight varies considerably across different subjects.

NFQ Level 6 is the most commonly determined level for competency insight, although some of the HC awards notably include greater reference to developing awareness and understanding of an occupational role in industry, together with building an ethical awareness. For example, HC awards in software development and design explicitly expect an understanding of the role of the engineer and interconnections with other roles in industry, areas which are not explicitly developed in the reviewed AC programmes in software development.

A number of AC awards (including the Level 5 Certificates) were found to be comparable to Level 5 for this sub-strand. Although developing self-understanding is reflected across all the awards to varying degrees indicative of Level 5, the development of a viewpoint and awareness of ethical considerations is not readily apparent either in the design or delivery at a modular level. Developing a personalised worldview while engaging with others (indicative of NFQ Level 6) is also not explicit as an outcome in a number of the AC qualifications including those in software, agriculture and engineering.

4.1.9 Average NFQ Levels by ISCED Field

The following table summarises the average NFQ Levels, based on the above analyses, by ISCED field and determines an overall average NFQ Level for the combined Level 5 and AC and the HC.

Table 26: Average NFQ Levels by ISCED Field

	Average NFQ Levels by field	
ISCED Field	**L5 and AC**	**HC**
Education	5.9	6.1
Business, Administration & Law	6	6
ICT (Computer systems)	6.4	6.5
ICT 2 (Software)	5.9	6.1
Engineering, Manufacturing & Construction	5.8	6.1
Health & Welfare	6	6
Services	6	6.3
Agriculture, Forestry, Fisheries & Veterinary	6	6
Average NFQ Level (Mean)	**6.0**	**6.1**
Average NFQ Level (Mode)	**6**	**6**

Referring to the data in the table above, the average level of the sub-strands for AC and HC awards offered in three of the eight ISCED fields (business, health and agriculture) is exactly Level 6. The average NFQ levels vary across other fields, with the greatest discrepancy in average NFQ level observed between AC and HC qualifications reviewed in engineering which were 5.8 and 6.1 respectively. This is perhaps reflective, as discussed in Section 3, of the AC apprenticeship programme in engineering (electrical instrumentation) not being directly aligned with competence NFQ sub-strand descriptors. Although variations are evident in average NFQ level across the AC and HC qualifications, these may not appear significant in fields outside of engineering, with the greatest difference being 0.2-0.3 in fields which include software and services. Where there are differences in average NFQ level, it appears that the HC is generally higher average NFQ level when compared with the Level 5/AC qualifications in the same field.

4.2 Quantitative Analysis

4.2.1 Analysis of Average (Mean and Modal) NFQ Levels per Sub-strand for the AC and the HC

The following table presents the averaged (mean) NFQ Levels per sub-strand for both the AC (including the Level 5 Certificate) and the HC for the sample of qualifications.

Table 27: Average Level of Achieved Learning Outcomes by NFQ Sub-Strand

Level of Achieved Learning Outcomes	Average NFQ Levels	
NFQ Sub-strand	Level 5 Certificate and the Advanced Certificate	Higher Certificate
Knowledge, Breadth	6.1	6.8
Knowledge, Kind	6	6
Know-How and Skill, Range	6.5	6.9
Know-How and Skill, Selectivity	6	6
Competence, Context	6	6.5
Competence, Role	5.9	5.4
Competence, Learning to Learn	5.8	5.6
Competence, Insight	5.6	6
Average NFQ Level for all qualification sub-strands (Mean)	**6**	**6.1**
Average NFQ Level for all qualification sub-strands (Mode)	**6**	**6**

As can be seen in the table above, the average NFQ Level across the sub-strands are predominantly observed to be Level 6, with knowledge, breadth and know-how and skill, range for the HC qualifications showing closer comparability to NFQ Level 7 (to the nearest level). The average NFQ levels were lower for competence role and competence learning to learn for the HC whereas the competence insight average NFQ Level is lower across the AC awards. Through drawing comparisons between sub-strand categories, higher average NFQ Levels have been found for the knowledge and skill sub-strands than for the competence sub-strands (in particular competence role, learning to learn and insight sub-strands), of which a number fall below an average (mean) NFQ Level of 6.

Overall, the average (mean) level was not significantly different between the HC and AC qualifications, which were calculated to be 6 and 6.1 respectively.

4.2.2 Chi-Square Analysis

To test whether there is an association between qualification type (AC or HC) and the total number of sub-strands at Level 5, 6 and 7, a chi-square test of independence is conducted. As stated in the methodology, both the level of the sub-strands (Level 5, 6 and 7) and qualification type are independent categorical variables for the purposes of the chi-square test. The table below shows the total number of sub-strands determined to be at Level 5, Level 6 and Level 7 from across the sample of qualifications.

Table 28: Total Number of Sub-Strands across Sample Qualifications

	Total number of sub-strands across sample of qualifications assessed at specified NFQ Levels	
NFQ Level	**Level 5 Certificate and Advanced Certificate Overall**	**Higher Certificate Overall**
Level 5	7	9
Level 6	51	37
Level 7	6	18
Total	**64**	**64**

The chi-square statistic is calculated to be 8.5, X^2 (2, N = 128) = 8.5. The *p*-value is 0.014 The result is significant at $p < .05$ so there is an association between qualification type (AC or HC) and the total number of sub-strands at each level (Level 5-7) (the NFQ Level of the sub-strands is dependent on the qualification type - AC or HC) and the null hypothesis is rejected.[32]

A chi-square test for "Goodness of fit" has also been conducted for the AC and HC to assess the null hypothesis[33] that the proportion or distribution of sub-strands at Level 5, 6 and 7 for AC is the same as that for HC. The chi-square value is 13.7, X^2 (2, N = 128) = 13.7. The *p*-value is 0.001, therefore the result is significant at $p < .05$ and the null hypothesis is rejected. The difference relates to the higher proportion of sub-strands at Level 7 in the HC at 18, as opposed to 6 in the AC when considering the proportion of sub-strands and their comparability to the NFQ. Further discussion around this finding and the implications can be found in the conclusions section.

4.2.3 Mann-Whitney U Test of Significance

In order to test whether there is a significant difference between the average (median) levels of the AC and HC sub-strands, a Mann-Whitney U test is conducted based on NFQ level being the dependent variable, and qualification AC and HC being the two independent variables. The Mann-Whitney U test can be appropriately used for assessing the comparability of averages (median) for ranked, ordinal data such as NFQ Level, which ranges from 5 to 7 for the NFQ sub-strands.

[32] H_0 There is no association between qualification type (AC or HC) and total number of sub-strands at Level 5, 6 and 7, i.e. both categorical variables – qualification and NFQ Level are independent and not related.
[33] H_0 The proportion of sub-strands at Level 5, 6 and 7 for AC the same as for HC.

The value of *U* is calculated to be 1764, (*Mdn* = 6), *U* = 1764.The distribution is approximately normal. Therefore, the z-score below should be used. The z-score is -1.4. The *p*-value is 0.18. The result is not significant at $p < .05$, therefore the null hypothesis that there is no significant difference in the average NFQ level between the HC and AC is not rejected.[34]

The findings from these two statistical tests suggest that while there is a difference in the proportion of sub-strands at NFQ Level 7 between the AC and the HC (the HC sample reflecting a greater number at Level 7), there is no significant difference in the median (average) of the sub-strands between the two groups (the AC and the HC).

[34] H_0There is no significant difference in the average (median) NFQ Levels between the AC and HC qualifications.

5. Focus Groups with Key Stakeholders

This section reports on the discussions from six focus groups that were organised to explore the views of key stakeholder groups on the AC and HC qualifications. Focus groups were organised for AC and HC providers (two), higher education institutions, employers (two) and AC and HC graduates.

Questions for each group were shaped by lines of enquiry emerging from the comparative review of the sets of qualifications. Discussion centred around key similarities and differences of the AC and HC.

The purpose of this section is to provide an accurate record of the actual discussions that took place. Thus, it is important to note that some of the views reported could at times be factually incorrect, and conflicting. We have decided to report these discussions together with misunderstandings and contradictory views because we thought this would be an interesting finding in itself.

It is also important to note that the focus groups were not aimed at informing the findings of the comparative review as outlined in the previous sections. They were carried out to complement the comparative review by identifying stakeholders' perceptions, which could possibly be helpful to inform further reflections by QQI and the broader FET and HE sectors going forward.

The focus groups discussions are reported by thematic areas, looking at each stakeholders group in turn.

5.1 AC/HC Institutions Focus Groups

Two focus groups for institutions offering AC and / or HC awards were held on 22nd and 24th March 2021, with representatives from a cross-section of institutions delivering the AC, HC and in some instances both programmes: 23 practitioners attended, 11 from higher education and 12 from the further education sector. The group comprised teachers, course lecturers, career guidance advisors, heads of department, programme coordinators and curriculum development practitioners.

They covered experiences in a range of subject fields including accounting, agricultural mechanisation, business, computing, education, engineering, early childhood care, nursing and sports science. Attendees worked for Institutes of Technology, Technical Universities, Further Education Colleges, Institutes for Art, Design and Technology, Education and Training Boards and Colleges of Commerce across Ireland. A set of prepared questions were used to initiate and steer the direction of the discussion.

5.1.1 Parity of Esteem

In a pattern that has emerged across most of the focus groups, the question of parity of esteem was one of the key points of discussion for the institution and practitioners' groups. Whilst it is

acknowledged that both the AC and HC awards sit at Level 6, a majority clearly regarded the HC in higher esteem and questioned whether the AC and HC were comparable. The HC student learning efforts are generally described as more demanding where individuals must assume responsibility for their own learning. AC design was generally deemed to lack cohesion, with a high number of learning outcomes (circa 14), spanning multiple levels (5, 6 and 7) and excessive assessment. The volume of outcomes is deemed to dilute the detail expected from the assessment.

From the discussion, the AC emerged as a composite award, with a focus at the modular level rather than a more holistic focus on the programme. The possibility to choose between a wide range of modules was viewed as possibly resulting in significant differences between awards of the same title, both between and within colleges. Indeed, one member referred to the AC as a 'pick and mix' award: broad-based subjects, particularly at Level 5 Certificate, and a free range of options at Level 6 AC.

Credit weighting discrepancies were noted between the AC and HC. In dental nursing, for example, there is a higher volume of learner effort hours in the HC (3,500) than in an AC counterpart award. The HC requirement equates to 350 further education credits, a volume of learning that is not permitted in the AC as the award is limited to 240 credits.

5.1.2 Preparedness for Further Studies

The members of both focus groups presented a range of views on how well-prepared AC and HC graduates were likely to be for study at higher education level.

Opinions on the preparedness of AC students varied and sometimes appeared contradictory. A majority of members across both focus groups regarded AC students as unready for further study and believed they lack academic study skills, including referencing, independent learning and exposure to rigorous assessment.

The transition from further education colleges to undergraduate study was described as overwhelming; many AC graduates required a lot of additional support in making the transition. The difference in class sizes was cited as a possible reason for this because in the higher education environment the classes tend to be bigger whereas AC courses at further education colleges are delivered to smaller groups.

Some members of the groups, however, felt that AC students went on to perform well once the transition, or 'bump in the road', from further to higher education had been negotiated. One lecturer described AC graduates as well-equipped, eager and good problem solvers.

With respect to the preparedness of HC students for higher education study, the overriding opinion in both groups was consistent. HC students were described as having better writing skills and benefited from studying alongside undergraduate students. Some members suggested this was partly due to there being greater similarities between the HC and undergraduate awards.

5.1.3 AC Articulation to Higher Education Studies

This aspect dominated discussions and highlighted the difficulties that articulation and advanced entry from Level 6 can generate for 'sending' and 'admitting' institutions. Progression from AC programmes is opaque. Experiences across the groups highlighted that the process for determining articulation is ad hoc, carried out case-by-case. In practical terms this creates significant additional work for both FET colleges and the admitting higher education institutions. Engagement in collaborative partnership agreements emerged as a strategy central to a smooth transition process, with further education colleges connecting with providers of higher education awards, primarily on a local basis.

In particular, the range of modules available to AC students, in some cases involving 25 to 30 options, can be problematic if the subjects are not relevant to the higher education programmes the students would like to progress to. Collaborative partnerships focus on identifying the course content at the higher level and mapping AC programme content against the higher level modules in order to facilitate smoother progression for students from further education and into higher education study.

One representative from a further education college outlined how their college spoke with AC students at the start of each academic year to determine which higher education institutions their students intended to apply to. The further education college would then organise meetings with the respective higher education institutions identified by their own AC students. Discussions between the college and institutions would seek to determine the most relevant and appropriate subject areas to cover in the AC programme to enable student access and transition. This process is evidently highly time-consuming, resulting in additional work at both further education colleges and higher education institutions which have to carry out content mapping work and any subsequent readjustment of programme content and delivery.

This also demonstrated the incredible commitment of further education staff to the success and wellbeing of their students, and the determination of receiving institutions to make access as smooth as possible.

Comments from the focus groups about the higher education institutions in the technological sector demonstrated how those institutions try to avoid creating barriers, make reasonable accommodations for any deficits in coverage – including bridging modules – and ensure that students have a high chance of succeeding in the programmes into which they are accepted. Some higher education professionals were unaware of the significant differences and challenges posed by the different awards at Level 6; all were impressed by the efforts to ensure progression. Credit exemptions were also explored where students were not fully able to gain advanced entry.

5.1.4 Conclusions

There were some conflicting views on having two awards at Level 6 of the NFQ with unclear parity of esteem, but there was also widespread agreement on the need for two progression routes. It was felt that having multiple progression routes, if not awards, at Level 6 might serve specific functions. Although one distinct route would make things simpler, some people in the group felt it important to ensure that 'vocational' or less academically oriented students would

not be disadvantaged if one route only was explored. This was in fact considered the primary function of the AC award, described as the logical choice for students who are less academically oriented at the time to make their choice of tertiary studies, thus providing a bridge to higher education for students who otherwise might not have access to it, often because of their social background. Nevertheless, it was felt that more cohesion is needed between the Level 6 awards and surrounding levels of the framework, ensuring that both awards enjoy parity of esteem.

5.2 HEIs Focus Group

The Higher Education Institutions focus group met on April 23rd 2021, with three participants, one working in admissions at an IoT, one a Dean of Faculty for continuing online professional education and one who is an Assistant Registrar at an IoT.

5.2.1 Admission to Higher Studies: Advanced Entry and Mapping

According to the members from admissions departments, most undergraduate applicants held Level 5 qualifications and came through the Central Applications Office; fewer applicants held Level 6 awards and those numbers are also in decline. AC advanced entry applicants were categorised as 'non-standard' by the admissions staff in the group and in their respective institutions programmatic mapping is used to determine if advanced entry is possible. Such work is normally undertaken by relevant heads of department, cases are handled individually, and the process can be time consuming. One of the institutions represented in the group records the mapping outcomes as a reference point to future applications, but advanced entry for AC students is not guaranteed. On balance, the group felt that AC students were less able to demonstrate independent or critical thinking skills than HC students.

The group discussed the essential role that 'strategic alliances' play between sending colleges and admitting higher education institutions, with programme mapping between Level 6 and Levels 7 and 8 programmes a significant outcome of such collaborations. This theme was also covered at length in the AC and HC providers group.

The three members of the HEIs focus group agreed that programmatic mapping is an integral, essential component for making admissions decisions, determining the students' points of access, possible advanced entry or exemptions when articulating onto the higher education programmes. Mapping can identify the extent of overlap between an AC programme and at the first two years of a Bachelor degree, or Honours Bachelor degree.

The mapping process is regarded as a guard against disadvantaging AC students by checking that sufficient and relevant subject content has been covered at Level 6. It helps to satisfy those in admissions that the students they offer places to are adequately prepared and have every opportunity of succeeding. Lack of preparation was a concern and the group believed that this risk increased where programmatic mapping was not carried out. Further, mapping processes are increasingly viewed to be important when developing new AC or HC programmes and could ensure greater cohesion between those awards and higher level programmes.

The group acknowledged that mapping is not a straightforward process and can be challenging. This is because using a transcript to determine the type and depth of learning is difficult; and that analysis needs to extend beyond the transcript to achieve 'academic cohesion'.

The three members of the group acknowledged that their own institutions' approaches to mapping for advanced entry was 'fairly lenient' and observed how a more rigorous approach might likely result in no advanced entry. There was recognition that further education colleges' programmes could not mirror exactly the content of the first years of undergraduate study at higher education institutions because the nature and purpose of each sector differs. Thus, approaches to mapping are broad and aim to identify sufficient 'overlap'. Some of the institutions also determined the level of student preparedness in terms of study skills and ability to handle assessments. The institutions also put monitoring processes in place to ensure that students were coping with their course demands and were not disadvantaged. Advanced entry would also generally apply in cognate areas only, in effect enrolment onto the most relevant and appropriate programmes; and more caution is exercised in programmes overseen by a professional/competent body.

5.2.2 Funding and Information

The reported decline in Level 6 applications to higher education institutions was attributed in part to funding. As the further education sector is well supported financially, it was argued that this leads to students being 'marketed to' and encouraged to stay studying within the sector.

Furthermore, an issue about clarity of information to students about options was raised, as it was felt that students are not always aware of the choices available to them, and for this reason are less likely to progress with their studies. Misinformation included reports that students might be under the false impression that they might be able to obtain a level 6 award by accumulating micro certificates over the years, a practice one member described as the 'merry-go-round of minor certificates'.

5.2.3 Conclusions

The group argued that fundamental differences exist between FET and HE programmes, irrespective of the subject and content similarity, because the objectives of the respective sectors, teaching delivery and student expectations are generally different. Further education qualifications are regarded as being designed principally for employment rather than academic progression.

Nevertheless, the group strongly believed that the access routes to higher education open to students from different streams and backgrounds were a positive aspect, whilst stressing the point that academic progression does not need to be the central focus. This led discussion onto what should be offered at Level 6 and who should offer it. It was observed that the creation of two Level 6 awards has been confusing, and since most students access higher education via Level 5 qualifications, the group wondered to what an extent a year in further education help.

Fundamentally, the question the group grappled with was ‘what is the Level 6?’. It was felt that the AC and HC are not generally compatible in terms of credit, depth and purpose. The AC is focused on employability whilst the HC offers greater links to academic progression. Members were mindful to praise the efforts of the further education sector, but felt it was equally unrealistic to view AC and HC awards similarly on academic terms. The group acknowledged the complexity of the situation, that problems and benefits can be seen in having the two Level 6 awards.

5.3 Employers Focus Group

Two employer focus groups were organised on the 22nd March and 22nd April 2021. A total of five people attended, two in the first group and three in the second group. The members had backgrounds in nursing and midwifery education and technical apprenticeship course design and provision; two worked in companies, in the engineering and integrated network components industries; one person was from the Irish Congress of Trade Unions.

5.3.1 Sectoral Perspective

Representatives within the two employer groups offered their sectoral perspectives regarding the relevance and usefulness of the AC and HC awards within their fields. For nursing and healthcare studies, programmes at Levels 5, 7 and 8 are more common in the field with few Level 6 awards available. For healthcare assistants, the minimum requirement to practice is a Level 5 award but presently there is little by way of progression beyond this. The introduction of Level 6 awards in this area could provide healthcare assistants with continual professional development and progression opportunities that currently do not exist. In the engineering company represented, most employees enter through an apprenticeship route, typically comprising four years of learning following the Leaving Certificate. Some staff go on to complete Level 7 or 8 awards. The data network industry professional stated that most project managers are Level 6 qualified, without specifying the award type, but confirmed that having such a qualification offered a way for working professions to enter the academic sphere.

5.3.2 ‘Higher Level 6’ vs ‘Just Level 6’ Awards

The notion of 'higher Level 6’ awards arose in discussion within the first employers focus group where the HC was referred to as a superior Level 6 award. Apprenticeships at Level 6 were viewed to be of this ‘higher’ level, in effect a reference to pre-2016 apprenticeships modelled on the HC. By contrast, the second group was unaware of a perceived hierarchy of awards within Level 6, and even suggested that employers just want to see that the individual holds a Level 6 award, whether it is an AC or HC. Above all they want to determine the ability of the individual and not the qualifications they hold.

References to Level 6 awards were often unclear and confusing in the employers focus groups. Although there are only two major awards in the NFQ at Level 6, namely the AC and HC, it was not always clear which qualifications members were referring to.

5.3.3 Level 6 Awards and Apprenticeships

The first employers' group referred to a 'confusion of qualifications' in the system, and much of the discussion in both groups focused on apprenticeships as much as AC and HC awards. Level 6 was regarded by the first group as a 'dumping ground' for qualifications that do not fit neatly elsewhere. Both groups also seemed to feel that Level 6 does not adequately capture the range of levels and abilities that can be acquired through apprenticeships, despite the fact that statutory apprenticeships currently run from levels 5 to 10 on the NFQ.

This discrepancy might be related to comments made in both groups about a sense that Level 6 apprentices often possess more technical depth, know-how and competence than graduate counterparts.

Both groups believed that the apprenticeship study route does not receive the credit it deserves; even with the development of a new apprenticeship system, some stigma remains despite apprenticeships generally preparing employees with better skills.

5.3.4 Bias Towards Academic Learning

Both employer focus groups implied that there is a long-standing preference and bias in society towards progression in higher education and academic studies over progression through vocational routes. The national drive towards 'tertiary' education was viewed positively as it represents a step away from the further and higher education divide. Similarly, the new Ministry for Further and Higher Education and the action plan 2021-25, which advances the apprenticeship as a credible alternative, were also viewed positively.

However, members commented that the further education sector is still too often viewed to be the lesser road, in an unequal relationship with higher education. It is felt that there is still a perceived disparity of esteem between the sectors. They argued that longstanding perceptions persisted, with the impression that HE students are 'smarter' and the stream of study preferable; there seems to be little focus on how further and higher education streams are both useful and can be compatible and complementary. In this regard, Level 6 was viewed favourably where qualifications opened opportunities for work and further study for students and workers.

As a broader observation, both groups suggested that Ireland is producing more graduates than are needed, that higher education is not always the most appropriate or suitable direction of study for some and that often students are disappointed that their degrees do not lead them to the types of jobs they want.

From a nursing perspective, where an undergraduate degree is now a requirement, some doubts remain about the difference between the apprentice route and the graduate route; it was argued that current student placements do not provide the same experiential, 'hands-on' learning and accumulation of experience.

5.3.5 Benefits of Level 6 Awards

The group agreed that the Level 6 apprenticeships and ACs provide study opportunities to non-academically inclined students and help them realise their abilities and see further study as a viable option. In this respect, ACs and apprenticeships are seen to perform a social function, an access route to encourage people who may otherwise have never considered further and higher levels of study as an option.

5.3.6 Need for a Holistic Perspective

The focus group observed that a study of the AC and HC awards is 'out of context' in the sense that there is a broader and bigger issue with qualifications in Ireland; that this is not restricted solely to Level 6. The group argued that the AC and HC need to be viewed alongside the qualifications that co-exist at levels either side of them. This explains why the first employers' group repeatedly suggested that the national framework needed reviewing. This also resonates with a theme to emerge in other focus groups too which pointed to the need for greater cohesion between qualifications on the framework and consideration of how Level 6 interacted with other levels. The challenges centre around how the AC and HC are understood to relate with other awards.

5.3.7 Conclusions

There was uncertainty across both groups in addressing whether there is a rationale to maintain different level 6 awards. Discussion did not centre on the AC or HC but tended to shift focus towards apprenticeships or the ways in which qualifications at level 6 might interact with other awards.

There was a struggle to identify an explicit rationale supporting both the AC and HC and yet members were uncertain about whether both awards should be replaced by one. Whilst some felt it might be simpler to have one award, they also realised it would be difficult to determine the effect if either award were to be removed. Where members struggled to argue in favour of keeping both AC and HC awards, this was more a reflection of the need to rethink 'higher education' and consideration of a more holistic approach to the framework. It was argued that thought needs to be given to apprenticeship style-learning, to parity of all types and streams of qualifications and to easier access and exit points. The groups agreed with the importance of this study but reiterated that its focus should not be restricted to Level 6.

5.4 Graduates Focus Group

The AC and HC student graduates focus group was held on 18th March 2021, with seven graduate students in attendance. Of the seven graduates, two had studied and completed both AC and HC awards; a further two graduates held the HC and two had completed the AC; one student was studying towards their AC, having completed a Level 5 Certificate.

The graduates brought experiences from different AC and HC courses across disciplines including business studies, childcare, nursing and sports and recreation.

5.4.1 Reasons for Choice of Study

AC students identified convenience and accessibility in terms of location, time and cost, as reasons for choosing their courses. Students were more likely to enrol at a college closer to home. As AC courses are considered shorter in duration, and are offered as short, standalone programmes, students liked the less 'onerous' time commitment, which was particularly appealing for those who were unclear about their longer-term study aims or hopes. The AC provided students with 'time to think' about future options and an opportunity to explore pathways beyond the AC that might not have been previously considered. This benefit extended to further studies. The ability to access the employment market as soon as possible was also seen to be a great incentive.

Course fees are considerably cheaper for AC courses in comparison to HC counterparts. Group members suggested that an AC costs around €300 a year, whereas the HC could be upwards of €2000. The lower financial burden was appealing for students unsure of their future pathways. It was felt that the AC offered better value in terms of money outlay and coupled with the lower time commitment made it a better option. AC students also referred to small class sizes and work placements as attractive features.

HC students and graduates also referred to location as an influential factor in deciding on enrolment. They also spoke about subject area interest and one graduate said that their course was generalised and less specific, which meant that their post-study options were kept open.

5.4.2 Progression Pathways

There was varied understanding over how AC and HC courses offered opportunities for onward study progression. This uncertainty was mirrored across all focus groups to some extent with an apparent lack of understanding of differences between the programme types.

References to qualification titles were not limited to the AC or HC but were confused and often conflated with framework levels. This could reflect individual understanding; it could also indicate that the ways in which qualifications correlate and interact is complex and hard to understand.

Collectively, the group did not fully understand that progression from the AC and HC varied and that articulation or advanced entry was not guaranteed. This includes the link between the Level 5 Certificate and the AC at Level 6.

5.4.3 Differences Between AC and HC

The main difference identified between the qualification types related to cost, with some students saying that course fees for the HC were a 'big, hindering factor'. Students spoke about financial support that might be available to AC students based on factors including family background and earnings and accounting for people from disadvantaged communities.

On the AC award composition, students noted it covered a greater number of subjects, had a heavier workload and involved many assignments; time to study and complete assignments

was described as ‘tight’. Some students appreciated the continuous assessment element of the programmes.

HC students spoke about the progression routes offered from Level 6 through to Level 10 which were viewed as a means to keep academic options open. The AC was primarily viewed as a short qualification to study before moving into work.

Students felt that both AC and HC awards strengthened core understanding of subjects. Students studying the AC felt it provided a solid foundation for Bachelor degree study in terms of content, workload and study skills preparation. This point conflicts with some of the views expressed in the AC and HC practitioner and HEI focus groups.

5.4.4 Progression to Further Studies

One student suggested that articulation between programmes was a downside. It was noted that since some AC students progressed on to the second year of an HC programme, it seemed as though the student was in effect required to repeat the content from the AC. The purpose of this was not understood; this repetition was described as unhelpful. The same student suggested that AC holders should transition directly on to the third year of study towards the Level 8 award with a module to assist students with that process.

One student claimed that there was a lot of misinformation around what is and is not possible for AC holders, particularly regarding advanced entry onto Level 7 or Level 8 programmes. The student felt that colleges were not clear about the extent to which the qualification would guarantee advanced entry.

5.4.5 Strengths and Weaknesses

Despite the critical comments on articulation and advanced entry, graduates in the group identified study progression opportunities and links to undergraduate level from the AC as a strength. Students viewed the delivery of AC courses favourably, referring to support, smaller class sizes, the organisation of learning activities, balance of studies and assignments; the work placements and connections to the employment market were also positives. Some graduates felt that employers understand the AC more than the HC. One AC graduate said that the qualification taught them the importance of interpersonal skills and managing people at work.

The HC was seen as a good opportunity to gain an extra qualification and provided opportunities for work experience (and in the case of this group, directly resulting in full-time employment for some on graduation). Course fees were the only negative.

5.4.6 Conclusion

The student graduate group provided valuable insight into how they view, understand and access the AC and HC qualifications. From the graduate perspective, the relationship between both qualifications is not straightforward, and the fact that AC holders reported needing to cover the second year of HC programmes to progress onto undergraduate study reinforces the sense that the two awards do not enjoy parity of esteem. Differences between the AC and

HC seem to be poorly communicated or at least not well understood by students, the benefits of studying one over the other unclear, and students seem not to be fully aware of the options and study routes available to them. Variety creates confusion and from this, uncertainty extends to the way in which Level 6 awards fit in with and relate to other qualifications on the NFQ. Study progression is viewed almost entirely from the perspective of academic advancement, with the direction of study centred on undergraduate study. There is little discussion of progression in technical and vocational learning.

6. Conclusions

This section draws together the findings of the study from Sections 3 - comparative review, Section 4 - the analysis against the NFQ and Section 5, the focus groups with key stakeholders. Overall conclusions are made regarding the comparability of the AC and HC programmes as implemented and the implications for the further review and development, including the continued use of differentiated award-type descriptors. A number of recommendations are also provided for further consideration of QQI and providers of AC and HC qualifications.

6.1 Summary of the Methodological Approach

The approach drew upon a combination of qualitative and quantitative methods to evaluate overall comparability of the PLC AC programme (Level 5 and AC combined) in relation to the HC as implemented. Qualitative research focused on collating programme core component data, developing qualification profiles and conducting comparative reviews of the PLC AC programmes (Level 5 and AC combined) and HC programmes in terms of core components, based on an initial full sample of 47 programmes across the eight ISCED groupings. Following this holistic initial analysis of the programmes, qualitative analysis of the achieved learning outcomes was undertaken based on a sample of 24 programmes in relation to the NFQ sub-strands with a view to computing the total number of NFQ sub-strands per level.

A chi-square analysis was firstly carried out to compare the total number of NFQ sub-strands identified during the analysis of best-fit levels at Level 5, 6 and 7, based on both NFQ level and qualification type (AC and HC) being categorical variables. As a test that assesses the **comparability of distribution**, it has been used to assess whether there was a statistical difference in the **distribution of NFQ sub-strands** between the AC and HC samples.

As NFQ Levels can also be interpreted as an ordinal scale of values (Level 5 followed by Level 6 and Level 7), it was also decided to conduct a Mann-Whitney U test which evaluates **the comparability of the two sets of qualifications** (the AC and HC being the independent variables) **in terms of their average (median and mean) NFQ level** (the dependent variable). For both chi-square and Mann-Whitney U tests, the significance level was set at $p < .05$, the sample size was 128 sub-strands (64 sub-strands for the group of 8 Level 5/AC combinations vs 64 sub-strands for the group of 8 HC programmes).

Complementing the quantitative analysis and comparative review of programme design, Ecctis also conducted focus groups with employers, AC/HC providers, higher education institutions and AC/HC graduates, with a view to clarifying aspects emerging from the comparative review and identifying perceptions of key stakeholders on the comparability issue in question.

6.2 Comparability of the Level 5, AC and HC Programmes

The comparative review of programme design initially identified similarities but also differences in terms of core components of the AC and HC programmes.

A detailed review of entry requirements did not identify a significant difference in terms of the overall educational level of entrants to the Level 5 and HC programmes (both requiring the leaving Certificate at Level 4-5). Progression pathways did show some differences, with HC holders typically able to progress directly onto Level 7 programmes whereas AC graduate progression patterns are more varied, with evidence of progression into Year 2 of HE in particular programmes and institutions. Data on graduate destinations in higher education or employment however were found not to be well documented by institutions and it was not possible to confirm the rates quantitatively of AC holders progressing onto Stage 1, 2 or 3 programmes. Progression to HE was reported for holders of Level 5 Certificates, but typically onto Stage 1 of HC programmes.

Demands in terms of notional learning hours and duration are broadly comparable between the combination of the Level 5 Certificate and AC and the two-year HC qualifications. However, it was observed that the learner effort may in some cases be higher in the HC qualifications given that one ECTS credit can range from 20 to 30 notional learning hours, and therefore the total HC qualification time can equal up to 3,600 hours based on the 120 ECTS credit allocation. In comparison one FET credit in the Level 5 and AC programmes equates to 10 notional hours, which when combined consist of 2,400 total notional hours.

The structure and content of the AC and HC programmes in similar subjects were compared side-by-side. The most striking overall difference relates to the level of optionality and specialisation, with Level 5 and AC programmes including a large number of optional modules ultimately resulting in a large range of possible topics being selected by students, whereas the HC programmes typically require mandatory completion of all modules. This leads to greater uniformity in terms of the content coverage and ultimately the subject-specific outcomes acquired by HC students. This observation was also borne out in the stakeholder focus groups, where providers acknowledged the wide array of possible outcomes of AC students, which as pointed out, may complicate progression for those students intending to progress onto HE programmes in similar subject areas, where some Institutes of Technology may stipulate that a significant proportion of the mandatory HC qualification content must have been covered by the AC student for direct entry onto Year 2 or Year 3. The inclusion of a range of optional modules in the AC can nevertheless afford broad opportunities for progression to employment.

A further difference in content and skill coverage relates to the inclusion of research methods, which are typically covered in HC in standalone modules in greater depth than in the AC programmes. This is reflected in HC learning outcomes which make reference to the ability to develop research methodologies and critique methodologies.

Research Question: Is there is a (statistically) significant difference between the achieved learning outcomes associated with ACs (based on programmes leading to Level 5 Certificates followed by ACs and apprenticeship programmes) and HCs as implemented?

In addressing the key research question “Is there a significant difference in level between the AC and HC qualifications as implemented?”, the answer emerging from the quantitative analysis is two-fold. Statistically, it has been demonstrated that there is a significant difference in the distribution of sub-strands between the AC and HC programmes sampled, therefore

rejecting the first null hypothesis.[35] Whilst the number of sub-strands at Level 5 was comparable for the AC and HC samples respectively, the number of sub-strands at Level 7 was significantly higher for the HC programmes overall (18 for the sample of HCs vs 6 for the sample of ACs).

However, when comparing differences in the mean (average) levels of sub-strands between the AC and HC qualifications reviewed using the Mann Whitney U test, there was no significant difference in NFQ level, thereby supporting the second null hypothesis.[36] This suggests that both the AC and HC qualifications are both appropriately aligned to NFQ Level 6 in terms of their overall framework level.

If there is an overall significant difference, what may be the reasons for this difference relating to AC and HC qualification design, delivery and assessment in practice?

The findings of the sub-strand level qualitative analysis highlighted similarities and differences in their comparability to the NFQ between the AC and HC qualifications including:

- In terms of **knowledge breadth**, the HC qualifications showed closer comparability to the NFQ Level 7 overall with a number of qualifications in the sample covering "specialised knowledge in a variety of areas".
- In **knowledge kind**, NFQ Level 6 comparability was observed across the programme sample with no significant differences between the AC and HC.
- For the sub-strand **know-how and skill, range**, the majority of HC awards compared to NFQ Level 7 whereas the Level 5/AC sample was broadly split between NFQ Levels 6 and 7.
- For **know-how and skill, selectivity**, NFQ Level 6 was typically observed across qualification samples.
- For **competence context**, the Level 5/AC programmes generally compared to NFQ Level 6 while a number of the HC programmes related to NFQ Level 7.
- A key difference was observed in regard to **competence, role,** with it being the only sub-strand where the HC demonstrated closer overall comparability with Level 5 and the AC to Level 6.
- For **competence, learning to learn** there was general comparability to NFQ Level 6 across the samples.
- In regard to **competence insight**, comparability to Level 6 was generally observed in the HC, while some of the AC programmes reviewed showed less consistent coverage of developing a personal worldview while engaging with others that is expected at NFQ Level 6.

Summarising where the main differences lie in terms of sub-strand level distribution (and to explain the significant result from the chi-square test of distribution comparability), one of the key areas of difference where the HC showed a greater number of NFQ Level 7 sub-strands was **knowledge breadth**, reflecting the broader coverage of mandatory specialised topic

[35] The null hypothesis states that there are no statistical differences in the distribution of NFQ sub-strands at Levels 5, 6 and 7 between the HC and the AC.
[36] The null hypothesis states that there are no significant differences in the average (median) NFQ Levels between the AC and HC qualifications.

areas across Stages 1 and 2 of the HC programmes. The other principal difference relates to **competence, context** where interestingly the HC also more consistently reflected the NFQ Level 7 descriptor "utilise diagnostic and creative skills" compared to the Level 5 and AC programme sample, despite the fact the AC award-type descriptor specifies NFQ Level 7 for this sub-strand (and the HC Level 6). The reason for this can be seen in the greater number of mandatory modules in a number of the HC programme, which develop both diagnostic as well as creative skills, particularly in technically oriented subjects and the inclusion of mandatory work practice modules where these skills are put into practice.

Overall, the chi-squared test positive result is also supported by the stakeholder engagement findings which suggested there would be a perceived difference in level, while acknowledging that the focus groups didn't specifically discuss the scope or comparability in terms of NFQ level descriptors or sub-strands.

Despite the non-significant result of the Mann-Whitney U test in terms of NFQ Level, AC/HC and HEI providers focus group participants reportedly felt that AC students are less prepared to transit to level 7 or 8 than HC graduates. However, this could be due to the fact that the set of skills or capacities indicated by the focus groups as often lacking in AC graduates, are not necessarily firmly embedded within the NFQ at least at Levels 5-7, for example the ability to synthesise large amounts of information, extended research skills, the ability to undertake critical analysis and extended analytical writing tasks. These skills are not directly referenced and differentiated at Levels 5-7 in the NFQ. It stands to reason that any particular differences in the coverage of these skills would not necessarily be reflected in an objective and independent analysis to the NFQ sub-strand descriptors which was the principal goal of the quantitative analysis.

Notwithstanding these broader observations and feedback from the focus groups, the overall conclusion points to there being a difference significant enough in terms of the distribution of NFQ sub-strands to warrant differentiated award-type descriptors, yet in terms of overall education (framework) level they nevertheless both relate to NFQ Level 6 in terms of their achieved learning outcomes.

6.3 Implications for Phase 2

While the statistical analyses do indeed point to both the Level 5 and AC taken in succession and the two year HC qualifications being comparable to NFQ Level 6, the rationale, coverage and ultimately the outcomes demonstrate a degree of variation across the two types of award which may support the continued use of differentiated award-type descriptors. The discussions of the focus groups reported above might help identify key aspects to consider when reflecting on the differences between the two types of Level 6 awards.

In terms of implications for the next stage of the study, QQI and the Steering Group might consider whether changes could be made to award-type descriptors in order to reflect the varying orientation and rationale of the AC and HC programmes and in light of the differences identified in this study, and whether more detailed award-type descriptors would be desirable to guide the design and delivery of the AC and HC awards.

If the AC and HC awards are to continue to be offered separately as two distinct award pathways, the findings of this study suggest that some consideration could be given to enhancing comparability in areas relating to structure, content and outcomes between the AC and HC. While both awards may continue to have separately defined rationales and functions, due consideration might need to be given to how to secure the transferability of learning in particular from AC to higher level awards. For example, in light of the findings, and the discussion held with the focus groups, it may be worth considering reducing the level of optionality provided in the AC programmes thus streamlining the range of possible and expected outcomes of AC graduates.

This study may also highlight broader questions that QQI may want to consider over whether award-type descriptors and the NFQ itself should be interpreted and used principally as tools of regulation and/or communication, bearing in mind that qualification frameworks can be multi-purpose and facilitate top down as well as bottom up approaches to qualification design. While considering the purpose of the framework overall, there is perhaps an identified need for award-type descriptors and framework descriptors to enable a closer connection with the qualification delivery and design. Incorporating skills at lower levels (for example research) which also are further developed at higher level study at Levels 7, 8 and 9 could lead to greater coherence and progression in term of skill demand across the framework as a whole and facilitate comparable outcomes for holders of AC and HC qualifications at NFQ Level 6.

Engaging with stakeholders through the focus groups has demonstrated to be a very useful exercise in helping to identify some of the main issues underlying the comparability of the two Level 6 awards as implemented. Based on this experience, more systematic and broader engagement with stakeholders across all sectors than what was possible to undertake as part of this project, would be encouraged in the next phase of the project as QQI and the sector will begin to consider whether there is a continued rationale for both awards to be offered and any subsequent policy developments these decisions may entail.

6.4 Recommendations

6.4.1 Recommendations for Providers

Duration and Entry Requirements

- **Consider calculating and including a full breakdown of the total number of independent study hours within course handbooks.**

A number of providers, both in the FET and HE sector do not provide a clear indication of the volume of independent study in terms of hours required to complete their award. There were a few instances where the indication of contact hours/total qualification hours did not reflect the credit allocations for Level 5, AC and HC qualifications, whereas in practice they should be closely aligned to reflect European best practices in ECTS allocation (for the HCs) or the Irish FET credit system (for the AC/Level 5).

Assessment

- **Level 5/AC and HC providers may want to consider devising and implementing more detailed levels of performance indicators to use in tandem with model answers for open-ended assessment tasks.**

Whilst the sample of assessment tasks appeared to be aligned to learning outcomes, there were a number of module assessments reviewed where the marking criteria did not appear to be aligned to learning outcomes, or only comprised model answers or a checklist of points without scope for differentiating between levels of performance and threshold levels of achievement required to pass the module(s). In the absence of clearly defined pass/fail thresholds for assessment tasks, the onus placed on individual assessor judgements could lead to inconsistency in assessment standards within programmes and across institutions. It is also difficult for an independent reviewer or indeed a student or teacher to fully understand the level of performance expected to reach the threshold or pass level on open-ended assessment tasks.

Qualification Design

- **HC providers may want to consider reviewing the levels assigned to Stage 1 modules (i.e. Level 6), and assigning credits at this level, particularly in the case of semester 1 modules.**

It was observed that some of the content of semester 1 modules of the HC is pitched more at a foundational level to introduce students to the key principles of the field of study, having entered with a Level 4-5 Leaving Certificate. These modules are not differentiated in terms of assigned NFQ level from some of the more advanced modules in Stage 2 which are also assigned to Level 6. The feasibility of students being able to progress to two NFQ levels – from at least Level 4 (depending on what leaving certificate programme and subject levels were achieved) to Level 6 – with a view to demonstrating Level 6 outcomes on completion of individual modules at this stage of the course may be open to question. In practice it may be

difficult for all students to progress by two NFQ levels within one semester as is suggested by the current credit levels assigned to modules (at Level 6) by Institutes of Technology.

- **SOLAS may want to consider how best to integrate NFQ sub-strand learning outcomes at Level 6 across the design and delivery of their apprenticeship programmes, whilst also matching the intended aims and objectives of the apprenticeship programmes.**

SOLAS apprenticeship programmes (assuming they follow a similar pattern to the one evaluated here) follow a different format of qualification design to the Level 5 and AC qualifications. To support closer alignment with the expectations at Level 6 and the AC programmes delivered by FET colleges, SOLAS may want to consider, where possible, integrating Level 6 skills more explicitly within the design and delivery of the apprenticeship programmes. It is acknowledged, however, that some differences between the apprenticeship programmes and Level 5 and AC qualifications may reflect the orientation of the apprenticeship and competency based nature of its delivery and assessment.

- **All FET and HE providers may want to consider adopting overarching learning outcomes linked broadly to the NFQ to facilitate a consistent approach to programme design across institutions.**

It was noted that some providers, particularly in the FET sector do not specify overarching outcomes in the form “the student will be able to” as such, but rather programme objectives setting out the range and type of skills the programme is designed to facilitate. Whilst programme objectives are an integral component of qualification design, learning outcomes on a programme level are considered of equal if not more importance in delivering a student-centred curriculum.

Associated Outcomes

- **Consideration might be given to encouraging providers to collate progression data, perhaps with follow-up with questionnaires to inform a clearer picture of progression routes for Level 5, AC and HC graduates including to further qualifications and employment.**

There was significant variability in the progression data collated by institutions, with a number of institutions canvassed not collecting information about graduate destinations. Those institutions that do collate data do not always differentiate between progression to Years 1, 2 or 3 of Bachelor degree studies, making it difficult to gauge the associated outcomes of AC qualification holders across subject fields. Obtaining a clearer indication of the progression routes taken by students may better inform the subsequent review and development of programmes.

6.4.2 NFQ Related Recommendations

- **Consider reviewing and revising the NFQ level descriptors, to incorporate references to enable levels to be clearly differentiated in terms of skill level and cognitive demand, while ensuring clearly defined progression and relevance to the sub-strands.**

As mentioned in the methodology, the difference between a number of NFQ sub-strand levels may not be immediately clear from the NFQ level descriptors, potentially leading to variations in interpretation and adoption by providers in qualification design and delivery. For instance, it may not be clear to all providers how "solve well defined abstract problems" at L6 is differentiated from solving non-routine problems at Level 5 in relation to know-how and skill, selectivity. There is also no further reference to solving less well-defined problems, or problems with many interacting factors at the higher levels. Instead reference is made to exercising judgement in planning and supervisory functions at Level 7 which may involve some element of problem solving but could be considered to encompass a significantly broader range of skills.

Given the broad scope of some of the descriptors, in particular those for competence insight at Levels 6 and 7, significant variations were identified in the way they are integrated at qualification level. For example, few of the qualifications reviewed directly make reference to "developing a personalised world view" expected at Level 6 at a modular level but may instead focus on personal and professional development competencies.

- **Consider the number of sub-strands and scope for sub-strands to be merged particularly in the case of competence, where there are four sub-strands as opposed to two for knowledge.**

It may be considered whether the relative emphasis on competence descriptors covering aspects of self-evaluation, team working and collaboration should be given greater than equal weighting with knowledge and skills in the overall articulation of the framework and, subsequently, the overarching learning outcomes of programmes.

As a general observation, most of the modular level outcomes and content across Level 5, AC and HC relates to knowledge and skill NFQ sub-strands with only a small minority covering skills associated with competence, despite the fact that competence components comprise four out of eight sub-strands within the NFQ.

- **Consider whether the scope of the NFQ sub-strands of the award-type descriptors accurately reflect qualification provision at Level 5-Level 6.**

Some of the variations in the award-type descriptors were not found to be reflected in the qualifications offered. For instance, utilising diagnostic and creative skills was much more frequently found in the HC course design as opposed to the AC, despite the AC award-type descriptor specifying this Level 7 NFQ strand within the learning outcomes. Alternatively, additional guidance to providers on how best to integrate diagnostic and creative skills at a programme and modular level, may help to ensure closer connection between programme delivery in practice and the intended skills covered in the award-type descriptor.

- **Reconsider the feasibility of being able to demonstrate supervisory skills as being a typical outcome of learning at Level 6 in relation to competence, role.**

A frequent challenge that arose during the evaluation was verifying the implementation of learning outcomes regarding supervisory skills, which were frequently stated as an outcome in line with NFQ Level 6, yet did not appear to feature strongly in the assessment raising questions over how feasible it is at this level to expect students to demonstrate and be assessed on supervisory skills in practice across different fields. This may be particularly the case in technical subjects and those of a highly specialised nature where additional work-based experience is essential to progress into supervisory roles. As such the associated outcomes reflect a gap between prescribed and achieved learning outcomes in the case of supervisory skills which could be considered as part of a review of qualification framework sub-strand descriptors.

- **Consider reviewing the NFQ descriptors so that they can applied more generally on a modular as well as on a qualification level, if it is intended that modules are to continue to be assigned credit levels.**

The descriptors as they are currently written place more emphasis on student outcomes on completion of whole qualifications, whereas more specific guidance on skills differentiating levels in general that could be applied on a modular level may allow for more reliable orientation of level for individual modules or potentially smaller awards that may be offered at the same level. For example, for knowledge breadth, where students are expected to "demonstrate specialised knowledge across a variety of areas", it is not clear how this Level 6 ability can be demonstrated in individual modules based on one specialised area. Reconsidering the applicability of descriptors may allow for more flexibility in assigning levels at the modular level.

Appendix 1: Comparative Review of NFQ Sub-Strand and Award-Type Descriptors

A1.1 Comparative Review of NFQ Sub-Strand and NFQ Level Descriptors

The following table includes the NFQ Sub-strands the key considerations for evaluation:

Table 29: Summary of NFQ Sub-Strands and Key Considerations for Evaluation

NFQ Sub-Strand[37]	Key Considerations for Evaluation in Reference to NFQ Level Descriptors
Knowledge, Breadth	A key concern will be determining the level of specialisation of the knowledge requirements, differentiating Levels 5, 6 and 7.
Knowledge, Kind	The analysis will consider the extent to which theoretical knowledge and abstract thinking are expected as well as the depth of knowledge indicated by the learning outcomes, curriculum and the assessment.
Know-How and Skill, Range	This focuses on the degree of specialisation in terms of skills and tools and how they are applied.
Know-How and Skill, Selectivity	This component will examine the type of problem solving expected, in particular the level of abstraction, familiarity and predictability in the problems as well as the level of definition.
Competence, Context	This component considers the context, in particular the variety and range of contexts and the proportion of routine/non-routine aspects to applying knowledge and skills across different contexts.
Competence, Role	Focusing on the range of roles indicated by learning outcomes and associated outcomes, the level of autonomy and responsibility will be considered in terms of a typical qualification holder.
Competence, Learning to Learn	Considering the metacognitive skills of the qualification holder, the extent to which the individual's ability to learn independently and the nature of the environment where learning takes place.
Competence, Insight	Level of self-understanding attained by the typical qualification holder, level of engagement expected with others.

The table that follows overleaf includes the NFQ descriptors by sub-strand and highlights some of the key differences between the levels in grey:

[37] Quality and Qualifications Ireland (QQI), 2003. National Framework of Qualifications. [pdf] Published by: National Qualifications Authority of Ireland. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

Table 30: NFQ Descriptors by Sub-Strand - Key Differences

NFQ Sub-Strand[38]	NFQ Level 5	NFQ Level 6	NFQ Level 7
Level synopsis	Learning outcomes at this level include a broad range of skills that require some theoretical understanding. The outcomes may relate to engaging in a specific activity, with the capacity to use the instruments and techniques relating to an occupation. They are associated with work being undertaken independently, subject to general direction.	Learning outcomes at this level include a comprehensive range of skills which may be vocationally-specific and/or of a general supervisory nature, and require detailed theoretical understanding. The outcomes also provide for a particular focus on learning skills. The outcomes relate to working in a generally autonomous way to assume design and/or management and/or administrative responsibilities. Occupations at this level would include higher craft, junior technician and supervisor.	Learning outcomes at this level relate to knowledge and critical understanding of the well-established principles in a field of study and the application of those principles in different contexts. This level includes knowledge of methods of enquiry and the ability to critically evaluate the appropriateness of different approaches to solving problems. The outcomes include an understanding of the limits of the knowledge acquired and how this influences analyses and interpretations in a work context. Outcomes at this level would be appropriate to the upper end of many technical occupations and would include higher technicians, some restricted professionals and junior management.
Knowledge, Breadth	Broad range of knowledge.	Specialised knowledge of a broad area.	Specialised knowledge across a variety of areas.
Knowledge, Kind	Some theoretical concepts and abstract thinking, with significant depth in some areas.	Some theoretical concepts and abstract thinking, with significant underpinning theory.	Recognition of limitations of current knowledge and familiarity with sources of new knowledge; integration of concepts across a variety of areas.

[38] Quality and Qualifications Ireland (QQI), 2003. National Framework of Qualifications. [pdf] Published by: *National Qualifications Authority of Ireland*. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

NFQ Sub-Strand[38]	NFQ Level 5	NFQ Level 6	NFQ Level 7
Know-How and Skill, Range	Demonstrate a broad range of specialised skills and tools.	Demonstrate a comprehensive range of specialised skills and tools.	Demonstrate specialised technical, creative or conceptual skills and tools across an area of study.
Know-How and Skill, Selectivity	Evaluate and use information to plan and develop investigative strategies and to determine solutions to varied unfamiliar problems.	Formulate responses to well defined abstract problems.	Exercise appropriate judgement in planning, design, technical and/or supervisory functions related to products, services, operations or processes.
Competence, Context	Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts.	Act in a range of varied and specific contexts involving creative and non-routine activities; transfer and apply theoretical concepts and/or technical or creative skills to a range of contexts.	Utilise diagnostic and creative skills in a range of functions in a wide variety of contexts.
Competence, Role	Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups.	Exercise substantial personal autonomy and often take responsibility for the work of others and/or for allocation of resources; form, and function within, multiple complex and heterogeneous groups.	Accept accountability for determining and achieving personal and/or group outcomes; take significant or supervisory responsibility for the work of others in defined areas of work.
Competence, Learning to Learn	Learn to take responsibility for own learning within a managed environment.	Learn to evaluate own learning and identify needs within a structured learning environment; assist others in identifying learning needs.	Take initiative to identify and address learning needs and interact effectively in a learning group.
Competence, Insight	Assume full responsibility for consistency of self-understanding and behaviour.	Express an internalised, personal world view, reflecting engagement with others.	Express an internalised, personal world view, manifesting solidarity with others.

Level Synopsis

Learning outcomes at Level 5 emphasise some theoretical understanding, while the focus is on learning skills related to a particular occupation, including the main instruments and techniques. Level 6 meanwhile refers to developing a more detailed theoretical understanding, while there is also a strong focus on comprehensive skills acquisition, particularly in areas that may involve taking a supervisory role. The level of autonomy expected at Level 5 involves the ability to work independently subject to general direction. In contrast, at Level 6, individuals work autonomously but with some level of design, management or administrative responsibilities.

Level 7 represents a clear progression from Level 6, at which individuals relate knowledge and a critical understanding of the field of study to application across different contexts. The ability to critically evaluate different approaches and to develop an appreciation of the limits of knowledge is important. The outcomes are associated with those at a higher technician and junior management level, whereas NFQ Level 6 leads to technician level roles with some supervisory responsibility.

Knowledge, Breadth

The most important differences between NFQ Levels 5, 6 and 7 is the level of specialisation of the knowledge coverage. At Level 5, the emphasis is on broad knowledge acquisition. At Level 6, it is on more specialised knowledge; whereas at Level 7, the focus shifts to specialised knowledge coverage in a variety of areas.

Knowledge, Kind

The depth and nature of knowledge coverage is a key factor, differentiating Levels 5, 6 and 7. Whereas at Level 5, depth is expected in some areas, at Level 6, theoretical knowledge is expected across most. There is a clear progression in expectations at Level 7; at this level the student is expected to recognise limitations of knowledge and the way in which concepts may integrate across different topic areas.

Know-How and Skill, Range

At Level 5, individuals are expected to show a broad range of specialised tools and skills, whereas at Level 6 the outcomes specify the ability to demonstrate a comprehensive range of tools and skills. Creative, technical and conceptual tool and skill demonstration is an expected outcome at Level 7.

Know-How and Skill, Selectivity

This descriptor is primarily concerned with the complexity of problem-solving and implementing skills in practical situations with Level 5 requiring the ability to find solutions to unfamiliar problems. At Level 6, individuals are expected to solve well-defined abstract problems whilst at Level 7 they are required to exercise appropriate judgement in planning and design in the delivery of products and running of operations.

Competence, Context

Acting in varied contexts is expected at both NFQ Levels 5 and 6, although at Level 6 activities are described as “non-routine” and “creative”. At Level 6, individuals can transfer and apply technical, theoretical and creative skills and knowledge to different contexts, whereas at Level 5 application is more broadly focused on general skills and knowledge. At Level 7, the emphasis shifts to demonstrating the application of diagnostic as well as creative skills across a wider variety of contexts.

Competence, Role

The level of autonomy exercised by qualification holders varies between NFQ Levels 5, 6 and 7. At Level 5 the focus is on being able to practice with some independence, whereas at Level 6, substantial autonomy is expected. Being able to supervise the work of others is key at Level 6, whereas at Level 7 taking significant responsibility for the supervision of groups is an expected outcome.

Competence, Learning to Learn

At Level 5, taking responsibility for one’s own learning within a managed environment is an expected outcome whilst at Level 6 being able to evaluate one’s own learning and identify learning needs indicates clear progression from Level 6. Moreover, at Level 6, individuals can also assist with the learning of others. Taking the initiative in identifying learning needs, while also being able to interact within a group learning environment, is indicative of achievement at Level 7.

Competence, Insight

Individuals qualified at NFQ Level 5 would be expected to assume responsibility for self-understanding and behaviour under the competence and insight descriptor. At Level 6, they progress to developing an internalised, personal worldview which involves the engagement with others whereas at Level 7, individuals “manifest solidarity” with others while expressing an internalised worldview.

A1.2 Comparative Review of Award-Type Descriptors for Qualifications at NFQ Level 5 and Level 6

Award-type descriptors are descriptions of specific awards within the NFQ and their key design features, including the NFQ sub-strands which inform the development of the specified qualifications. The following table includes the award-type descriptors for the PLC and two awards at Level 6 (some variations between AC and HC descriptors are highlighted):

Table 31: Award-Type Descriptors by Sub-Strand

NFQ Sub-Strand[39]	Award-Type Descriptor G – Level 5 Certificate	Award-Type Descriptor H – Advanced Certificate	Award-Type Descriptor I – Higher Certificate
Knowledge, Breadth	Broad range of knowledge.	Specialised knowledge of a broad area.	Specialised knowledge of a broad area.
Knowledge, Kind	Some theoretical concepts and abstract thinking, with significant depth in some areas.	Some theoretical concepts and abstract thinking, with significant depth in some areas.	Some theoretical concepts and abstract thinking, with significant underpinning theory.
Know-How and Skill, Range	Demonstrate a broad range of specialised skills and tools.	Demonstrate a comprehensive range of specialised skills and tools.	Demonstrate a comprehensive range of specialised skills and tools.
Know-How and Skill, Selectivity	Evaluate and use information to plan and develop investigative strategies and determine solutions to varied unfamiliar problems.	Formulate responses to well-defined abstract problems.	Formulate responses to well-defined abstract problems.
Competence, Context	Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts.	Utilise diagnostic and creative skills in a range of functions in a wide variety of contexts.	Act in a range of varied and specific contexts involving creative and non-routine activities; transfer and apply theoretical concepts and/or technical or creative skills to a range of contexts.

[39] Quality and Qualifications Ireland (QQI), 2003. National Framework of Qualifications. [pdf] Published by: *National Qualifications Authority of Ireland*. Available at: <https://www.qqi.ie/Downloads/Determinations%20for%20the%20outline%20National%20Framework%20of%20Qualifications.pdf>.

NFQ Sub-Strand[39]	Award-Type Descriptor G – Level 5 Certificate	Award-Type Descriptor H – Advanced Certificate	Award-Type Descriptor I – Higher Certificate
Competence, Role	Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups.	Exercise substantial personal autonomy and often take responsibility for the work of others and/or for allocation of resources; form, and function within, multiple complex and heterogeneous groups.	Exercise substantial personal autonomy and often take responsibility for the work of others and/or for allocation of resources; form, and function within, multiple complex and heterogeneous groups.
Competence, Learning to Learn	Learn to take responsibility for own learning within a managed environment.	Learn to take responsibility for own learning within a managed environment.	Take initiative to identify and address learning needs and interact effectively in a learning group.
Competence, Insight	Assume full responsibility for consistency of self-understanding and behaviour.	Express an internalised, personal world view, reflecting engagement with others.	Express an internalised, personal world view, reflecting engagement with others.

As can be seen in the table above, award-type descriptors utilise the NFQ sub-strands to guide the development of specific types of NFQ award. The award descriptors predominantly include NFQ sub-strands at the target level of the qualification, although there are variations, where some NFQ sub-strands are drawn from either one level above or one level below the overall intended level of the qualification. This is particularly the case when comparing the award-type descriptors for the AC and HC qualifications. For example, for knowledge (kind) the HC descriptor specifies the Level 6 NFQ sub-strand whereas the AC descriptor specifies the Level 5 sub-strand. A further variation concerns competence (context) where interestingly, the AC descriptor indicates the Level 7 NFQ sub-strand whereas the HC descriptor specifies the Level 6 sub-strand.

Whilst award-type descriptors can be considered alongside NFQ sub-strand level descriptors when undertaking the referencing exercise, the main focus will be on comparing each award against NFQ sub-strands independently, acknowledging that specific awards may vary in their coverage of skills specified in NFQ sub-strands. Nonetheless, any discrepancies between NFQ sub-strand level and coverage between the specific awards under evaluation and the those specified for the award-type descriptors can be noted and inform the overarching analysis.

Appendix 2: Key Sources

Education

Cork College of Commerce

Level 5 Certificate in Early Childhood Studies Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Early Childhood Care & Education Syllabus, Sample Assessment, Marking Criteria and Progression Data

Dunboyne College

Level 5 Certificate in Early Childhood Care & Education Syllabus, Sample Assessment Materials, Marking Criteria

Advanced Certificate in Early Childhood and Education Syllabus, Sample Assessment, Marking Criteria

Limerick College of Further Education

Level 5 Certificate in Early Childhood Care & Education Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Early Childhood and Education with Special Needs Syllabus, Sample Assessment, Marking Criteria and Progression Data

Letterkenny IT

Higher Certificate in Early Childhood Education and Care Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Business, Administration and Law

Mallow College of FE Cork

Certificate in Business Administration Syllabus, Sample Assessment Materials and Marking Criteria

Advanced Certificate in Business and Administration Syllabus, Sample Assessment Materials and Marking Criteria

Limerick College of FE

Certificate Business Administration Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Administration Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Rathmines College

Certificate in Business and Finance Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Business Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Galway-Mayo IT

Higher Certificate in Business Syllabus, Sample Assessment Materials and Marking Criteria

Sligo IT

Higher Certificate in Office Administration Syllabus, Assessment Materials, Marking Criteria and Progression Data

Cork IT

Higher Certificate in Business for Mature students / Part-time Syllabus, Sample Assessment Materials, Marking Criteria

Engineering

SOLAS

Apprenticeship in Electrical Instrumentation (SOLAS) leading toward Level 6 Advanced Certificate Craft Qualification from QQI, Syllabus and Sample Assessment and Marking

Cork IT

Higher Certificate in Industrial Measurement & Control Syllabus and Progression Data

ICT 1: Computer Systems

Limerick College of FE

Certificate in Computer Systems and Networks Syllabus, Sample Assessment Materials and Marking Criteria

Whitehall College

Certificate in Systems and Networks Syllabus (from Website only: Whitehall College of Further Education, (n.d.). Computer Systems & Networks - Level 5. Available at: <https://whitehallcollege.com/courses/information-technology/computer-systems-networks-level-5>.)

Advanced Certificate in Computer Systems & Networks Syllabus, Sample Assessment Materials and Marking Criteria

Tralee IT

Higher Certificate in Computer Systems and Networking Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

TU Dublin

Higher Certificate in Science in Computer Systems Management Syllabus, Sample Assessment Materials and Marking Criteria

ICT 2: Software Engineering

Cork College of Commerce

Certificate in Software Development Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Software Development Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Rathmines College FE

Level 5 Certificate in Software Development Syllabus and Sample Assessment Materials

Advanced Certificate in Software Development Syllabus and Sample Assessment Materials

Athlone IT

Higher Certificate in Engineering (Software Design) Syllabus, Sample Assessment Materials and Marking Criteria

Cork IT

Higher Certificate in Software Development Syllabus, Sample Assessment Materials and Progression Data

Agriculture, Fisheries and Veterinary

Teagasc College

Certificate in Agriculture Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Agriculture (Mechanisation) Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Limerick IT

Higher Certificate in Agricultural Mechanisation Syllabus and Sample Assessment Materials

Services

Coláiste Íde College of Further Education

Certificate in Sports, Exercise and Recreation Syllabus, Sample Assessment Materials, Marking Criteria

Advanced Certificate in Physical Education and Coaching Syllabus, Sample Assessment Materials, Marking Criteria

Central College Limerick

Certificate in Sports and Recreation Exercise Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Sport and Recreation Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Drogheda Institute FE

Certificate in Sport, Recreation and Exercise Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Sport, Recreation and Exercise Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Athlone IT

Higher Certificate in Business in Sport and Recreation Syllabus, Sample Assessment Materials, Marking Criteria

Letterkenny IT

Higher Certificate in Sports Studies Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Limerick IT

Higher Certificate in Sports Development and Coaching Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Health Services

Ballyfermot College FE

Certificate in Community and Health Services Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Advanced Certificate in Social and Vocational Integration Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

Waterford College FE

Certificate in Applied Social Studies Syllabus, Sample Assessment Materials and Marking Criteria

Advanced Certificate in Social Care Syllabus, Sample Assessment Materials and Marking Criteria

Letterkenny IT

Higher Certificate in Health and Social Care Syllabus, Sample Assessment Materials, Marking Criteria and Progression Data

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Appendix 3: Steering Group Members

- Karena Maguire, (Chair) Quality and Qualifications Ireland (QQI)
- Barbara Kelly, Quality and Qualifications Ireland (QQI)
- Peter Cullen, Quality and Qualifications Ireland (QQI)
- Aidan Kenny, Teachers Union of Ireland (TUI)
- Aoife Walshe, An tSeirbhís Oideachais Leanúnaigh agus Scileanna (SOLAS)
- Jenny Conroy, Education and Training Boards Ireland (ETBI)
- Jim Murray, Technological Higher Education Association (THEA)
- John Fitzgibbons, Cork Education and Training Board (CorkETB)
- Joseph Gleeson, Department of Further and Higher Education, Research, Innovation and Science
- Kevin Mc Stravock, Union of Students in Ireland (USI)
- Michael Hannon, Galway Mayo Institute of Technology (GMIT)
- Nora Trench Bowles, Irish Universities Association (IUA)
- Patricia Hehir, Education and Training Boards Ireland (ETBI)
- Rory O'Sullivan, Killester College of Further Education, City of Dublin Education and Training Board (CDETB)
- Ruaidhri Neavyn, Higher Education Authority (HEA)
- Sean O'Reilly, Technological Higher Education Association (THEA)
- Terry Maguire, National Forum for the Enhancement of Teaching and Learning