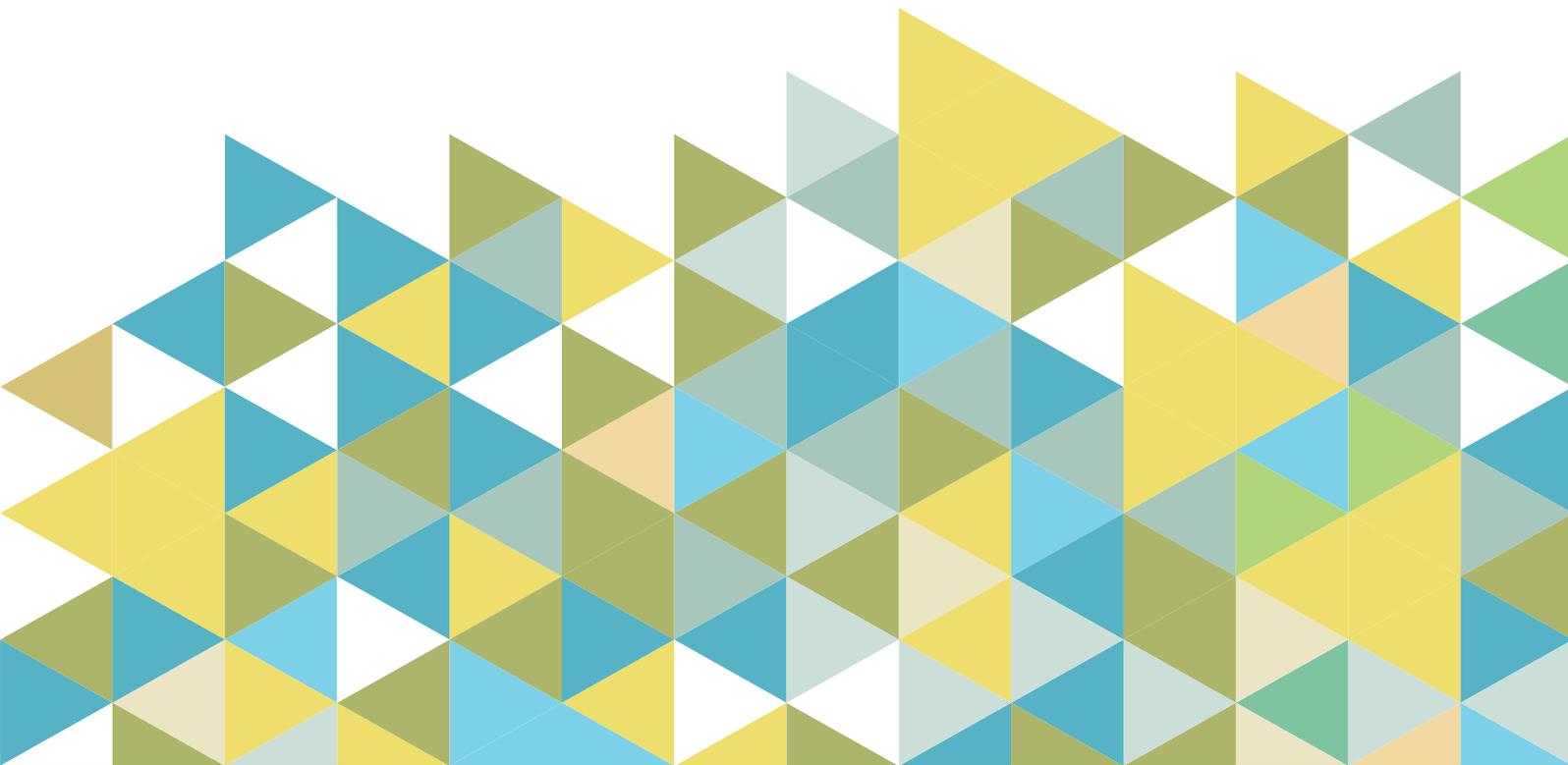Ute Hippach-Schneider | Verena Schneider (Hrsg.)

Tertiäre berufliche Bildung in Europa – Beispiele aus sechs Bildungssystemen

Bundesinstitut
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▶ Forschen
▶ Beraten
▶ Zukunft gestalten

Ute Hippach-Schneider | Verena Schneider (Hrsg.)

Tertiäre berufliche Bildung in Europa – Beispiele aus sechs Bildungssystemen

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I Einführung

Phänomene wie Dienstleistungsgesellschaft und Informationsgesellschaft führen zunehmend zu einer Auflösung des Gegensatzpaares „Lernen" und „Arbeiten". Bildung und Lernen sind nicht nur eine Vorbereitung auf Arbeit, sondern sie sind auch substantieller Teil der Arbeit, und Arbeit ist Teil des Lernens (Sloane 2000). In Ländern mit dualen Berufsbildungssystemen ist dies für den sekundaren Bildungsbereich bereits eine tradierte und verbreitete Wahrnehmung. Für den tertiären Bildungsbereich gilt dies zwar für einzelne Studiengänge ebenfalls, jedoch ist hier eine internationale Entwicklung zu beobachten, die für eine größere Anzahl von Studiengängen akademische Lerninhalte durch konkrete Anwendungs- und Arbeitserfahrung ergänzen und systematisch miteinander kombinieren (Boud/Solomon 2001; Arum/Gamoran et al. 2007; Shavit/Arum 2007; Kyvik 2009; Powell/Solga 2010; Camilleri 2013; Graf 2013; CEDEFOP 2014; Smeby 2015).

In Deutschland haben sich im tertiären Bildungsbereich duale Studiengänge etabliert, die eines der Kerncharakteristika der dualen Berufsausbildung – das systematische Lernen im Arbeitsprozess – zum integralen Bestandteil des Studiums machen. Die Anzahl solcher Studiengänge sowie der Studierendenzahlen hat in den letzten Jahren stark zugenommen (Leichsenring/König et al. 2015). Im Forschungsprojekt „Arbeitsbasiertes Lernen im tertiären Bildungsbereich – eine international vergleichende Analyse von Modellen und Funktionen" (http://www.bibb.de/de/24108.php; Zugriff: 14.10.2015) wird untersucht, ob und in welchem Ausmaß der Hochschulbereich in ausgewählten europäischen Ländern ebenfalls das Konzept des Lernens in der Arbeit aufgreift und in hochschulische Bildung integriert und welche arbeitsbasierten Programme darüber hinaus im Tertiärbereich existieren. Ein Fokus ist dabei die Funktion dieser Modelle im Bildungssystem. Für den Vergleich wurden England, Frankreich, Irland, Norwegen, Österreich und Polen gewählt.

Das Projekt formuliert die These, dass die nationalen und internationalen Entwicklungen im tertiären Bildungsbereich nicht nur eine Expansion von akademischer, dem sog. *academic drift*, sondern ein teilweise verdecktes Wachstum von beruflicher Bildung darstellen, u. a. in Form von arbeitsbasiertem Lernen.

Das Projekt will einen Beitrag dazu leisten, die Sichtbarkeit beruflicher Bildung in der Form von arbeitsbasiertem Lernen im tertiären Bildungsbereich zu verbessern, deren Wertschätzung zu erhöhen sowie zu einem vertiefenden Verständnis der internationalen Bildungsdaten von OECD und Eurostat sowie der EQR-Niveaus 5 und 6 beizutragen.

Arbeitsbasiertes Lernen (work-based learning, WBL) wird dabei wie folgt definiert:

> *WBL ist das Lernen im Rahmen von Programmen, in denen theoretisches Lernen verbunden wird mit Lernen im Arbeitsprozess an realen Arbeitsplätzen und dessen Reflexion. Die praktischen Lernphasen können bezahlt oder unbezahlt sein. Sie können im Rahmen unterschiedlicher institutioneller Arrangements stattfinden, beispielsweise als formalisierte Apprenticeships oder Praktika von unterschiedlicher Dauer.*

Nicht dazugezählt werden jedoch solche Programme, bei denen das praxisorientierte Lernen in Werkstätten, Workshops, Lernfirmen oder durch Simulation erfolgt. Insofern ist das Verständnis enger gefasst als in der Definition des CEDEFOP (2011), das auch die letztgenannten Lernorte in der Definition zulässt.

Das Projekt ist in zwei Phasen unterteilt. Ziel der ersten Phase des Projektes war es, sich einen Überblick über die Strukturen der tertiären Bildungsbereiche der Vergleichsländer zu verschaffen und arbeitsbasierte Bildungsprogramme zu identifizieren. Dazu wurde mit nationalen Experten und Epertinnen kooperiert und für jedes Land ein Länderbericht angefertigt.

Um einen vollständigen Eindruck zu erhalten, wurden in dieser ersten Phase des Projektes auch Programme betrachtet, die im jeweils nationalen Kontext als beruflich bzw. praxisorientiert definiert werden, jedoch keine verpflichtenden externen Praxisphasen beinhalten. Ebenso wurden Programme mit WBL-Anteil auf dem Niveau 5 des EQR in die Untersuchung einbezogen, die national als postsekundär eingestuft werden. In der zweiten Projektphase werden ausgewählte Programme, die als arbeitsbasiert (WBL) charakterisiert werden können, im Rahmen von Fallstudien hinsichtlich ihrer strukturellen Organisation und Funktion im Bildungssystem vertiefend untersucht. Der Schwerpunkt liegt dabei auf der Rolle der Betriebe bei der Gestaltung der Bildungsinhalte sowie der Organisation und Relevanz der Lernphasen im Betrieb.

Es ist das Ziel des Projekts, exemplarisch zu untersuchen, ob sich hinter den internationalen Daten (OECD 2014), die für einen starken Anstieg Studierender von hochschulischen Programmen sprechen, die verkürzt auch als akademisch bezeichnet werden, nicht tatsächlich (auch) eine Expansion „beruflicher" Bildung verbirgt, deren arbeitsbezogene Lernprogramme sich insbesondere durch folgende Kriterien auszeichnen:

► eine Berücksichtigung von Qualifikationsbedarfen von Unternehmen in den Curricula,
► Lernphasen bei Unternehmen,
► spezifische Kooperationsvereinbarungen mit Unternehmen,
► Funktion als Übergangsprogramm von beruflichem Sekundarbereich in den Hochschulbereich.

Es zeigte sich, dass die nationalen Definitionen des tertiären Bildungsbereiches in den untersuchten Ländern voneinander abweichen. Die Ausgestaltung ist teilweise ausschließlich hochschulisch, teilweise werden aber auch nicht-hochschulische Bildungsprogramme dazugerechnet. Dadurch ist das Projekt bildungsbereichsübergreifend angelegt. Die Diversität des tertiären Bildungsbereichs in den Vergleichsländern ist eine notwendige sowie geeignete Grundlage für die Fragestellungen und Ziele des Projekts, weil dadurch eine große Bandbreite unterschiedlich im Bildungssystem verankerter Programme Berücksichtigung findet und somit länder- und bildungsbereichsübergreifende Erkenntnisse möglich sind.

Diese Veröffentlichung fasst die wichtigsten Ergebnisse der ersten Phase des Projektes zusammen. Dabei lässt sich feststellen, dass in den Vergleichsländern das Ausmaß, in dem Formen von arbeitsbasiertem Lernen in tertiäre Programme integriert werden, sehr unterschiedlich ist. Die vorgefundenen Modelle im tertiären Bildungsbereich sind sehr heterogen, die Formate vielfältig, die bildungspolitischen Funktionen variieren. So dienen einige Modelle der Ausdifferenzierung der Hochschulbildung und sollen diese stärker an die Bedarfe der Wirtschaft anbinden. Teilweise ermöglichen sie aber auch den Übergang von einer Berufsausbildung im Sekundarbereich in den Hochschulbereich oder eine fachliche Höherqualifizierung.

Im Kapitel 2 dieses Berichts folgt eine Einführung in das Verständnis des tertiären Bildungsbereichs mit Hinweis auf die internationale statistische Datensituation. Es schließt sich eine Analyse und Zusammenfassung der wesentlichen Ausgestaltungsmerkmale in den Vergleichsländern an. Einen schnellen Überblick ermöglicht jeweils eine Kurzübersicht (s. Kapitel 3).

Im Kapitel 4 werden die einzelnen Hintergrundberichte selbst veröffentlicht.

II Zusammenfassung und Analyse der Länderberichte

1 Tertiäre Bildungssysteme

1.1 Das Verständnis von tertiärer Bildung in den ISCED (International Standard Classification of Education)–Klassifikationen 1997 und 2011

Statistisch erfasst und international transparent gemacht werden sollen die institutionellen Bildungsprogramme und Bildungswege einzelner Länder in der internationalen ISCED-Klassifikation. Sie ist input-orientiert und strukturiert die Bildungsprogramme, ihre inhaltliche Grundausrichtung, Zugangswege und Berechtigungen. Die ISCED-Klassifikation wurde 2011 grundlegend überarbeitet, allerdings basieren die aktuellen Statistiken zum Zeitpunkt der Erstellung des Beitrags noch auf der Vorgängerversion ISCED 97.

Gemäß der neuen ISCED-2011-Klassifikation umfasst tertiäre Bildung „what is commonly understood as academic education but also includes advanced vocational or professional education" (http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf, S. 46). Im Gegensatz zur ISCED-97-Klassifikation umfasst der „klassische" Tertiärbereich nunmehr drei anstelle von vormals zwei Niveaus und spiegelt damit die Bologna-Struktur der Hochschulbildung wider. Auf Niveau 6 ist das Bachelorstudium (sowie diverse Kurzstudien), auf Niveau 7 das Masterstudium (sowie Diplomstudium und postgraduale universitäre Lehrgänge) und schließlich auf Niveau 8 das (postgraduale) Doktoratsstudium angesiedelt. Darüber hinaus ist mit dem neuen Niveau 5 ein Niveau für die sog. Short-cycle-Programme eingeführt worden. Darunter werden nach UNESCO-Definition folgende Programme verstanden:

> „*Programmes at ISCED level 5, or short-cycle tertiary education, are often designed to provide participants with professional knowledge, skills and competencies. Typically they are practically based, occupationally-specific and prepare students to enter the labour market. However, these programmes may also provide a pathway to other tertiary education programmes. Academic tertiary programmes below the level of a Bachelor's programme or equivalent are also classified as ISCED level 5.*" (UNESCO 2012)

Demzufolge ist der tertiäre Bildungsbereich nicht gleichzusetzen mit dem Hochschulbereich, denn er ist explizit offen sowohl für hochschulische als auch für nicht-hochschulische Programme, wie beispielsweise berufliche Fortbildungsprogramme.

Bislang ist die Grundlage für den jährlichen Bildungsbericht der OECD „Bildung auf einen Blick" sowie die derzeit existierenden internationalen Bildungsdaten allerdings noch die ISCED-97-Klassifikation. Gemäß ISCED 97 beginnt der tertiäre Bildungsbereich mit Niveau 5. Niveau 6 umfasst post-graduierte Programme wie Promotion und ist somit nicht Gegenstand des Projekts.

1.2 Das Verständnis von tertiärer Bildung im Europäischen Qualifikationsrahmen

Anders als die ISCED-Klassifikation, die Bildungsprogramme erfasst, fokussiert der Europäische Qualifikationsrahmen auf Qualifikationen. Strukturelemente sind sog. Output-Kriterien – Kenntnisse, Fertigkeiten und Kompetenzen. Der tertiären Bildung werden die Qualifikationen der Niveaus 6 bis 8 zugerechnet (CEDEFOP 2011).

Die Datenlage nach ISCED 97

Statistisch erfasst und international transparent werden die institutionellen Bildungsprogramme und Bildungswege in der internationalen ISCED-Klassifikation. Gemäß der ISCED-97-Klassifikation beginnt der tertiäre Bildungsbereich mit Niveau 5. ISCED 5B umfasst berufs- bzw. praxisbezogene Studiengänge an Fachschulen, Berufsakademien u.Ä. Die Bildungsgänge von ISCED 5B unterscheiden sich von denen des Niveaus ISCED 5A auch durch die kürzere Dauer (mindestens zwei Jahre, in der Regel bis drei Jahre) und sind im Allgemeinen nicht auf den Zugang zu einem weiterführenden universitären Abschluss orientiert, sondern unmittelbar auf den Eintritt in den Arbeitsmarkt. Meister- und Technikerabschlüsse werden statistisch nur erfasst, wenn sie im Rahmen eines schulischen Bildungsprogramms erworben werden.

Das Niveau 5A umfasst die Hochschulbildung unterhalb der Promotion (z. B. an Fachhochschulen), das Niveau 6 steht für tertiäre Bildung als Forschungsqualifikation.

In den vergangenen Jahren wurde ISCED überarbeitet. Der Tertiärbereich bei ISCED 2011 umfasst mit den Niveaus 5 bis 8 nun vier statt zwei Niveaus in ISCED 97 und spiegelt auf den Niveaus 6 bis 8 die Bologna-Struktur wider. „Neu" ist Niveau 5, das als „short-cycle tertiary education" definiert ist. Für Deutschland werden hier lediglich die Fachschulprogramme (Meisterausbildung) zugeordnet, die kürzer als drei Jahre sind.

Die vorhandenen Statistiken basieren noch auf ISCED 97.

Niveau 5 des EQF spielt eine besondere Rolle (CEDEFOP 2014). Hier finden sich sehr unterschiedliche Qualifikationen wieder, z.B. Qualifikationen, die in hochschulischen Short-cycle-Programmen erworben werden können, aber auch Qualifikationen nach einer beruflichen Fortbildung, die im nationalen Kontext als „tertiär" definiert sind, dem tertiären Bildungsbereich von ISCED 97 zugerechnet oder durch ISCED gar nicht erfasst werden.

1.3 Definition des Tertiärbereichs im Projekt

Der Begriff „tertiäre Bildung" ist also nicht eindeutig und muss vor dem Hintergrund des Gesamtkontextes eingeordnet werden, in dessen Zusammenhang der Begriff verwendet wird. Im Rahmen des Projektes sowie der Ausführungen in dieser Veröffentlichung wird der Begriff tertiäre Bildung gemäß des Verständnisses der ISCED-2011-Klassifikation verwendet.

1.4 Formen und statistische Entwicklung des tertiären Bildungsbereichs

Die Ausgestaltung des tertiären Bildungsbereichs in den Vergleichsländern ist vielfältig und uneinheitlich. Die in den vergangenen Jahren wachsende Diversität ist das Ergebnis unterschiedlicher bildungspolitischer Ziele, die den Veränderungen in diesem Bildungsbereich zugrunde liegen. Zu nennen sind insbesondere die Intensivierung der Beziehung zwischen hochschulischer Bildung und der Wirtschaft, um u.a. eine stärkere Berücksichtigung der Bedarfe des Arbeitsmarktes sicherzustellen, die Verbesserung des sozialen und geografischen Zugangs zu hochschulischer Bildung, die Verbesserung beruflicher Vorbereitung auf den Arbeitsmarkt durch stärker anwendungsorientierte Programme auf hohem Bildungsniveau oder die Berücksichtigung der zunehmenden Diversität von Qualifikationen und Erwartungen von Studierenden.

Auf der Grundlage der ISCED-97-Zuordnungen und der entsprechenden statistischen Daten kann in Europa zwischen Staaten differenziert werden, die keine außerhochschulischen Bildungsprogramme im Tertiärbereich haben, z.B. Polen, Niederlande, Finnland, Norwegen, und denjenigen wie beispielsweise die Schweiz und Deutschland, die mit ihrer „Höheren Berufsbildung" über einen außerhochschulischen tertiären Bildungsbereich verfügen. Für Deutschland wird durch die Vorgaben zur Programmdauer nur der Teil des tertiären beruflichen Bildungsbereiches erfasst, der an den Fachschulen durchgeführt wird. Die Fortbildungsabschlüsse nach Berufsbildungsgesetz und Handwerksordnung, die über eine Kammerprüfung zertifiziert werden,

tauchen dagegen in den Statistiken nicht auf. Ähnliches gilt für die Meisterqualifikationen in Österreich.

Der Hochschulbereich selbst kann in die beiden Unterkategorien „universitär" und „außeruniversitär" unterteilt werden. Beispiele für außeruniversitäre Programme sind die Studiengänge der Fachhochschulen in Deutschland, der Schweiz oder auch in Finnland, Polen mit den State Schools of Higher Professional Education oder Frankreich mit den Instituts Universitaires de Technologie etc. Es werden national unterschiedliche Bezeichnungen verwendet. Einen gemeinsamen Überbegriff gibt es nicht. Es hat sich jedoch 1990 ein europäischer Verband von „praxisorientierten Hochschulen" (EURASHE) gegründet. Mitglieder sind neben nationalen Hochschulverbänden auch individuelle Hochschulen, wie (University) Colleges und Fachhochschulen, aber auch Universitäten sowie praxisorientierte Verbände und Akteure aus dem Hochschulbereich. Ein Ziel des Verbandes ist es, ein gemeinsames europäisches Verständnis von „Professional Higher Education" (PHE) zu entwickeln und diesen Bereich der Hochschulbildung zu fördern (DELPLACE 2014).

In vielen Ländern ist die Umwandlung von außeruniversitären Hochschulen zu Universitäten zu beobachten, auch als „academic drift" bezeichnet (TEICHLER 2014). Entweder wurden nichtuniversitäre Colleges durch eine „Aufwertung" oder durch Zusammenlegung mit Universitäten Teil des universitären Bildungsbereichs. Sie wurden jedoch nicht zum Kern des neuen Two-type-Hochschulsystems. Gleichzeitig differenziert sich das Hochschulangebot weiter aus, z.B. hinsichtlich der Studienfächer. International gesehen aber auch hinsichtlich Anwendungsbezug und Modellen von arbeitsbasiertem Lernen (BOUD/SOLOMON 2001).

Die beschriebenen Entwicklungen schlagen sich auch in den Daten über die tertiären Erstabschlüsse nieder.

Während im Vergleich der Jahre 1995, 2005 und 2012 die Anteile der Tertiär-A-Abschlüsse an allen Erstabschlüssen in den ausgewählten Ländern (vgl. Tab. 1) durchweg gestiegen sind, stellen sich die Entwicklungen bei den Tertiär-B-Abschlüssen als sehr divers dar. In der Schweiz, Deutschland, Österreich, Tschechien und Finnland konnten sich die Tertiär-A-Abschlussraten von 1995 zu 2012 sogar mehr als verdoppeln[1]; der OECD-Durchschnitt stieg in diesem Zeitraum um 22 Prozentpunkte. Ein deutlicher Anstieg der Erstabschlussquoten bei ISCED 5B ist lediglich in Spanien und Irland (auch Neuseeland und USA; hier nicht dargestellt) zu verzeichnen. Ganz anders ist die Situation in Finnland. Hier werden die beruflichen Bildungsprogramme seit der Einführung der Polytechnics (Universities of applied sciences) ausschließlich dem ISCED-Niveau 5 A zugeordnet, ähnlich auch in Norwegen. In Deutschland, Dänemark und der Schweiz sind nur moderate Steigerungen festzustellen. Der OECD-Durchschnitt im Bereich Tertiär 5B stagnierte bei ca. elf Prozent.

Die Zahlen legen somit eine Tendenz zur Akademisierung der Bildungssysteme nahe. Gleichwohl spricht Delplace (2014) von einer „vocational drift", was angesichts der Daten zunächst nicht nachvollziehbar erscheint. Er begründet dies mit der verstärkten Diskussion um die Beschäftigungsfähigkeit (Employability) von Hochschulabsolventen/-innen in den vergangenen Jahren und der entsprechenden Fokussierung der Studiengänge auf eine Vorbereitung auf den Arbeitsmarktbedarf sowie die Integration von Praxisphasen in die Curricula. So drängt sich beispielsweise die Frage auf, ob es in Norwegen oder Polen tatsächlich keine Absolventen und Absolventinnen von Programmen gibt, welche sich durch Elemente arbeitsbasierten Lernens oder anwendungsorientierter Bildungsinhalte auszeichnen und möglicherweise in anderen Ländern bei sehr ähnlichen Curricula ISCED 97 auf dem Niveau 5B zugeordnet würden.

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[1] In diesem Zeitraum wurde die ISCED-Einstufung der Dualen Hochschule Baden-Württemberg von 5B in 5A überführt und ist ein gutes Beispiel für den „academic drift".

Tabelle 1

Vergleich der Erstabschlüsse auf ISCED-97-Niveau 5 A und 5 B (1995, 2005 und 2012, in %)

Land (Auswahl)	Tertiär A (Erstabschluss)			Tertiär B (Erstabschluss)		
	1995	2005	2012	1995	2005	2012
Irland	30*	38	46	15*	24	23
Spanien	24	30	29	2	15	20
Australien	36*	50	53**	k. A.	k. A.	21**
Schweiz	9	27	31	13	8	14
Deutschland	14	20	31***	13	11	15***
Vereinigtes Königreich	42*	48	55	7*	11	13**
Österreich	10	20	39	k. A.	8	12
OECD-Durchschnitt	20	36	42	11	9	10
Dänemark	25	46	49	8	10	11
Tschechische Republik	13	23	40	6	6	5
Polen	34*	47	53	k. A.	n	1
Niederlande	29	42	45	k. A.	n	1
Finnland	21	47	47	34	n	0
Norwegen	26	41	42	6	2	n

* Erhebungsjahr 2000; ** Erhebungsjahr 2011; *** Bruch in der statistischen Erhebung zwischen 2008 und 2009 aufgrund einer veränderten Zuordnung zu ISCED 2 und ISCED 5B; n = die Größenordnung ist entweder vernachlässigbar oder null

Quelle: OECD 2014

Im Folgenden wird ein Überblick über die tertiären Bildungsbereiche der Vergleichsländer gegeben.

2 Verständnis und Struktur arbeitsbasierter tertiärer Bildung in sechs europäischen Staaten

2.1 England

In England können Qualifikationen auf den EQR-Niveaus 5–7 sowohl im Hochschul- als auch im Berufsbildungsbereich erworben werden. Für beide Wege existieren eigene Qualifikationsrahmen, bei denen die Niveaus auf den höheren Ebenen aufeinander abgestimmt sind. Der Großteil der Lernenden wählt im tertiären Bereich Qualifikationen, die von Universitäten und anderen Hochschuleinrichtungen vergeben werden und dem Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ) zugeordnet sind. Höhere berufliche Abschlüsse werden über eine der zahlreichen Institutionen für die Verleihung von Abschlüssen (Awarding Bodies) zertifiziert. Diese Qualifikationen werden im Qualification and Credit Framework (QCF) abgebildet, dem der Großteil der beruflichen Qualifikationen in England und Wales zugeordnet ist.[2]

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[2] Derzeit findet eine Reform des QCF statt. Der zukünftige Qualifikationsrahmen soll alle regulierten Qualifikationen enthalten: https://www.gov.uk/government/consultations/after-the-qcf-a-new-qualifications-framework (Zugriff 19.08.2015).

In England verfügen Berufsverbände (Professional Bodies) über einen großen Einfluss in ihrem jeweiligen Sektor. Sie vergeben in der Regel einen Mitgliederstatus und/oder eine Qualifikationsbezeichnung (z. B. chartered engineer) und akkreditieren dazu auch Studiengänge und berufliche Kurse. Einige Berufsverbände bieten ihren Mitgliedern eigene Qualifikationen bzw. Titel an, welche sie teilweise mit den Niveaus der nationalen Qualifikationsrahmen ins Verhältnis setzen oder auch formal zuordnen lassen.

Charakteristisch für England ist, dass im Hochschulbereich auf der Ebene 5 des EQR in verschiedenen Kurzstudiengängen ein akademischer Abschluss „unterhalb" des Bachelors erworben werden kann. Auf dieser Ebene kommt es auch zu Überschneidungen zwischen beruflichem und akademischem Bereich. So wird z. B. ein geringer Teil (ca. 5,6 %)[3] der Hochschulbildung über Partnerschafts- und Validierungsvereinbarungen von Further Education Colleges (FEC) erbracht, welche dem Berufsbildungssektor zugerechnet werden. Gleichzeitig bieten Hochschuleinrichtungen mit Lizenz der jeweiligen Awarding Bodies die Abschlüsse Higher National Certificates und Diplomas an, die dem QCF auf den Niveaus 4 und 5 (EQR 4 und 5) zugeordnet sind. Diese ursprünglich beruflichen Abschlüsse werden inzwischen beiden Bildungsbereichen zugeordnet.

In den letzten Jahren gewinnen in der politischen Diskussion Alternativen zur klassischen akademischen Vollzeitausbildung an Gewicht. Ein zentrales Ergebnis dabei ist die Einführung der Foundation Degrees, der Higher und Degree Apprenticeships und maßgeschneiderter Hochschulprogramme, die das Lernen am Arbeitsplatz und den Erwerb von Bildungsabschlüssen auf den EQR-Ebenen 5–7 systematisch kombinieren sollen.

▶ Arbeitsbasierte Programme

Maßgeschneiderte Hochschulprogramme

Eine strukturelle Verzahnung des Lernens in der Arbeit und in der Hochschule findet seit Anfang der 1990er-Jahre unter dem Titel „work-based learning" statt. Neben den klassisch strukturierten Bachelorstudiengängen werden unter dieser Bezeichnung von einigen Hochschulen zahlreiche „maßgeschneiderte" Programme entwickelt, die sich an Qualifizierungsbedarfen von Unternehmergruppen, einzelnen Unternehmen oder seltener auch Einzelpersonen orientieren. Dazu wird von den Beteiligten ein individuelles Programm entwickelt, das sich an den Vorkenntnissen der Lernenden und den realen Arbeitsaufgaben im Unternehmen orientiert. Ein fester Bestandteil maßgeschneiderter Programme ist die Anerkennung von bereits erbrachten Lernleistungen und das Lernen im Arbeitsprozess. Auf diesem Weg können sowohl der Bachelor- als auch der Masterabschluss (EQR-Niveaus 6 und 7) erworben werden.

Foundation Degrees

Die Foundation Degrees wurden als berufsbezogene Kurzstudienprogramme (EQR-Niveau 5) von Universitäten in Kooperation mit Unternehmen und Arbeitgeberverbänden im Jahr 2001/2002 eingeführt. Sie richten sich speziell an Bewerber mit beruflichen Vorqualifikationen und verbinden einen akademischen Abschluss mit Lernen am Arbeitsplatz. Die Programminhalte werden von den Universitäten gemeinsam mit Arbeitgebern und/oder Berufsverbänden entwickelt. Das Studium in Vollzeit dauert in der Regel zwei Jahre und ist äquivalent zu den ersten beiden Jahren des Bachelorabschlusses. Voraussetzung für die Einstufung als Foundation Degree ist eine ausreichende Unterstützung durch Arbeitgeber und eine klare Anschlussmöglichkeit zu einem Bachelorstudium.

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[3] Siehe Länderbericht England.

Bei Vollzeitprogrammen ist die Integration praktischer Arbeitserfahrung in das Studium vorgegeben. Dabei kann es sich um ein jährliches Praktikumsmodul (typischerweise ein Sechstel oder ein Achtel des Kurses) oder einen längeren Praktikumszeitraum handeln. Die Arbeitserfahrung muss klare Lernziele verfolgen und fließt normalerweise in die Bewertung ein. Der Foundation Degree wird von Hochschuleinrichtungen auch in Kooperation mit FECs angeboten. Inzwischen haben auch einige FECs die Berechtigung, den Abschluss Foundation Degree direkt zu vergeben. Unter Berücksichtigung dieser Grundregeln gibt es in der Praxis bereits zahlreiche Varianten der Foundation-Degree-Programme.

Im Jahr 2012/13 schlossen 25.240 Personen ihr Studium mit einem Foundation Degree ab.

Higher National Certificate (HNC) und Higher National Diploma (HND)

HNCs und HNDs sind berufliche Qualifikationen, die nach ein- bzw. zweijährigen Programmen erworben werden können. Praktika sind üblich, aber nicht obligatorisch. Teilweise werden die Programme auch von Hochschulen angeboten, die dafür die entsprechenden Lizenzen von dem anbietenden Awarding Body erwerben müssen. Häufig sind sie dann Teil von beruflich orientierten Bachelorprogrammen oder ermöglichen einen Zugang in das zweite oder dritte Bachelorstudienjahr, wodurch ihnen eine Brückenfunktion von beruflicher Sekundar- in hochschulische Tertiärbildung zukommt. Seit der Einführung der hochschulischen Foundation Degrees ist die Nachfrage nach HNCs/HNDs zurückgegangen.

Higher and Degree Apprenticeships

Higher Apprenticeships sind berufsbezogene Programme auf den EQR-Niveaus 5–7. Sie kombinieren den Erwerb berufsbezogener Kompetenzen und des notwendigen Fachwissens in einem Beruf oder einem Industriebereich. Sie wurden im Jahr 2008 auf EQR-Niveau 5 als Alternative zu Vollzeitstudiengängen und als Zugangsmöglichkeit zu höheren technischen und beruflichen Laufbahnen eingeführt. Im Jahr 2013 wurden sie auf die EQR-Niveaus 6 und 7 ausgeweitet. Den Arbeitgebern, in der Regel (falls vorhanden) in Verbindung mit den Berufsverbänden, wurde die Führungsrolle bei der Entwicklung der Standards zugesprochen. Bisher sind diese Angebote auf Systemebene überwiegend auf dem EQR-Niveau 5 angesiedelt. Sie sollen jedoch künftig auch verstärkt auf den höheren Niveaus angeboten werden.

Im Jahr 2013/14 begannen 9.800 Personen eine Higher Apprenticeship.

Higher Apprenticeships sind in ihrer Ausgestaltung sehr flexibel und führen zu

▶ einer oder mehreren Qualifikationen aus dem beruflichen Bereich (z. B. HNC/Ds, Qualifikationen aus dem QCF oder National Vocational Qualifications (NVQs)),

▶ einem Abschluss im Hochschulbereich (z. B. einem Foundation Degree oder einem Bachelor-Abschluss),

▶ der Erfüllung der Voraussetzungen für die Aufnahme in einen einschlägigen Berufsverband oder

▶ einer Kombination aus den drei genannten Möglichkeiten.

Demzufolge sind auch die Rahmenbedingungen der einzelnen Higher Apprenticeships sehr unterschiedlich. Die Dauer und das Verhältnis von theoretischer und praktischer Ausbildung am Arbeitsplatz variieren zwischen den einzelnen Programmen. Die Auszubildenden müssen in einem Arbeitsverhältnis stehen und haben bei einem Alter über 19 Jahren ab dem zweiten Jahr Anspruch auf den Mindestlohn. Für die Ausgestaltung des betrieblichen Teils der Ausbildung gibt es keine gesetzlichen Vorgaben.

Ende 2014 wurde von der britischen Regierung die Einführung von Degree Apprenticeships bekanntgegeben, die zu einem Bachelor- oder Masterabschluss (EQR-Ebene 6 bzw. 7) führen.

Bemerkenswert ist, dass die Studiengebühren zu zwei Dritteln vom Staat und zu einem Drittel vom Arbeitgeber finanziert werden. Dies steht im Gegensatz zu den hohen Eigenleistungen der Studierenden für Studiengebühren in regulären Hochschulstudiengängen.

▶ Fazit

In England erfolgte in den letzten Jahren eine politisch geförderte Entwicklung hin zu mehr arbeitsbasierten Bildungsprogrammen im tertiären Bereich. Higher und Degree Apprenticeships sollen zu einer attraktiven Alternative zu traditionellen Studiengängen ausgebaut werden. Dies wird von der Regierung auch finanziell stark gefördert.

2.2 Frankreich

Überblick über die tertiäre Berufsbildung – Programme und Qualifikationen

Für das Verständnis des Bildungssystems in Frankreich sind zwei Aspekte von zentraler Bedeutung: Es können grundsätzlich alle beruflichen Qualifikationen, die im zentralen Register *„Répertoire National des Certifications Professionnelles"* (RNCP) aufgelistet sind, auch in der Form eines *„Apprentissage"* oder über das Verfahren der Anerkennung von Erfahrung (*Validation des Acquis de l'Experience*) erworben werden. Dies gilt auch für die hochschulischen Qualifikationen. Dadurch kann die Vorbereitung auf die Prüfungen grundsätzlich auch immer in der Form von arbeitsbezogenem bzw. arbeitsbasiertem Lernen erfolgen.

In Frankreich werden die hochschulischen nicht-universitären Bildungs**programme** (ISCED-97-Niveaus 5 bis 7) insbesondere von den sog. *Instituts Universitaires de Technologie* (IUT), aber auch den *Lycées* (Sekundarschulen) angeboten.

Die beiden wichtigsten beruflichen **Qualifikationen** im tertiären Bildungsbereich sind das *Diplôme Universitaire de Technologie (DUT)* und das *Brevet de Technicien Supérieur (BTS)*. Beide Qualifikationen werden auf EQR-Niveau 5 eingeordnet. Sie unterscheiden sich in der Zielrichtung dadurch, dass das BTS als ein Abschluss angesehen wird, der direkt auf den Arbeitsmarkt führt, während das DUT als ein Schritt zu weiterer höherer Bildung genutzt wird. Diese unterschiedliche bildungspolitische Ausrichtung der beiden Qualifikationen wird auch bei der schulischen Vorbildung der Programmteilnehmer/-innen und Absolventen/Absolventinnen sichtbar (s. u.).

Im Bereich des Handwerks verleihen die Kammern die Qualifikation *Brevet de Maîtrise,* die ebenfalls dem Niveau 5 des EQR zugeordnet ist. In den Vorbereitungskursen, die ca. 530 Stunden[4] dauern, vertiefen Absolventen eines beruflichen Sekundarabschlusses mit dreijähriger einschlägiger Berufserfahrung ihre Fachkenntnisse und werden auf das Führen eines Betriebs vorbereitet. Wie bei allen Qualifikationen ist es aber auch hier möglich, diese ohne Teilnahme an einem Vorbereitungskurs durch Nachweis der Fachkompetenzen zu erwerben.

Zulassungsvoraussetzungen

Grundsätzlich ist für die Zulassung zu den Vorbereitungsprogrammen zu einer DUT- oder BTS-Qualifikation jeweils ein Baccalauréat notwendig. Allerdings sind drei Formen zu unterscheiden: der allgemeine Bac (Bac gen), der technische Bac (Bac tech) sowie der berufliche Bac (Bac pro). Der Bac pro ist ein sehr populärer Weg, mit einer beruflichen Bildung im Sekundarbereich Zugang in den Hochschulbereich zu erwerben. Auch die Vorbereitung auf den Bac pro kann im Rahmen einer *apprentissage* erfolgen, s. u. (Kasten).

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[4] Die 530 Stunden sind in sieben thematische Module aufgeteilt, die einzeln abgeprüft werden. Wird die Prüfung eines Moduls nicht bestanden, so hat der bestandene Teil eine Gültigkeit von fünf Jahren. In diesem Zeitraum kann die Prüfung dieses Moduls nachgeholt werden.

Tabelle 2

Quote der Teilnehmer im tertiären Bildungsbereich (in %)

	Universität, ISCED 5A	IUT[5], ISCED 5B	STS[6], ISCED 5B
2000	39,2	8,7	19,6
2005	39,1	8,7	19,3
2010	35,0	8,3	19,5
2011	33,4	7,7	19,1
2012	32,1	7,3	18,5

Anmerkung: Frankreich fehlt in den OECD-Statistiken über die Absolventenquote der Erststudierenden. Um jedoch eine Vorstellung der Größenordnung zu bekommen, werden die Daten der Teilnehmer/-innen (im Gegensatz zu den Absolventen/Absolventinnen) aus der nationalen Statistik verwendet. Neben den aufgeführten Bildungsanbietern gibt es weitere, die in diesem Zusammenhang jedoch nicht relevant sind und entsprechend nicht aufgeführt werden.

Quelle: Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche (2014), S. 45

Von den Studienanfängern/-innen für BTS-Vorbereitungsprogramme im Jahr 2013 verfügten 35,2 % über einen Bac pro (41,9 % über einen Bac tech und 22.9 % über einen Bac gen), bei den DUT-Programmen ist die Zusammensetzung deutlich anders. Hier hatten lediglich 2,6 % einen Bac pro, dagegen verfügten 67,5 % der Teilnehmer/-innen über einen Bac gen und 29,9 % über einen Bac tec (Ministère de l'éducation nationalexyx 2015).

Schaubild 1:

Verteilung der Bac-Absolventen und Absolventinnen im Jahr 2014

2014 gab es folgende Verteilung der Absolventen: Bac gen 48,9 % (2009: 53,2 %), Bac tec 20,7 % (24,4 %), Bac pro 30,5 % (22,4) (Ministère de l'éducation nationale 2015). Im Jahr 2014 haben 19,4 % den Bac pro über ein Apprentissage erworben. (Quelle: Ministère de l'éducation nationale 2015)

Schaubild 2:

Bac pro *(Baccalauréat professionnel)*

Der Bac pro (EQF-Level 4) wurde 1985 eingeführt. Die Teilnehmerzahlen von Bac-pro-Programmen (incl. der *Brevet des métiers d'art)* stiegen in den vergangenen Jahren an. So nahm die Zahl der Teilnehmer/-innen von 194.932 im Jahr 2003 auf 625.369 im Jahr 2013 zu (Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche 2014) und stellen damit 82 % aller Teilnehmer/-innen beruflicher Sekundarausbildung im Jahr 2013. Der wichtigste Grund für den Anstieg ist, dass die berufliche sekundare Qualifikation BEP (Brevet d'études professionnelles, EQF-Level 3) abgeschafft wurde. Die ursprünglich zwei Jahre dauernden Programme wurden in das Dreijahresprogramm des Bac pro integriert; durch diese Reform von 2009 wird den Absolvierenden beruflicher Sekundarausbildung die Möglichkeit des Übergangs in den Hochschulbereich eröffnet.

Übergang in den Hochschulbereich

Allerdings wird diese Möglichkeit weniger häufig wahrgenommen als von Absolvierenden der beiden andern Bac-Varianten. Während 2012 beinahe alle allg. Bac-Absolvierenden in den Hochschulbereich wechselten, Bac-tech-Absolvierenden zu 76,4 % (2012), lag die Quote der Bac-pro-Absolvierenden bei 28,7 %. Zählt man jedoch diejenigen hinzu, die sich im Rahmen von *Apprentissage*-Programmen vorbereiteten, lag der Anteil der Bac-pro-Absolvierenden, die in den

Hochschulbereich wechselten, bei 48 %, die der Bac-tech-Absolvierenden bei 84 %, denn die Absolventen dieser beiden Bac-Varianten machen häufig Gebrauch von der Möglichkeit, sich im Rahmen von *Apprentissage* auf die BTS-Prüfungen vorzubereiten. (Quelle: Ministère de l'éducation nationale 2014, S. 44)

Schaubild 3:

Apprentissage

Grundlage ist ein spezieller Arbeitsvertrag zwischen dem/der Lernenden und einem Unternehmen. Die Ausbildungsplätze werden von den Regionen finanziert. Dadurch entsteht je nach Finanzlage und Finanzierungsbereitschaft ein sehr heterogenes landesweites Bild im Hinblick auf die Zahl und Verteilung der Ausbildungsplätze.

Die Phase im Betrieb wird von einem Tutor/einer Tutorin betreut, der schulische Teil wird einem Ausbildungszentrum (Centre de formation d'apprentis, CFA im Sekundarbereich oder den IUT bzw. STS (Section de technicien supérier) im Tertiärbereich) absolviert. Grundsätzlich gibt es eine Altersbeschränkung auf 16 bis 25 Jahre, für Teilnehmer/-innen über 25 ist es möglich, einen sog. Contrat professionnel abzuschließen, der weitgehend dieselbe Struktur hat. 60 bis 75 % der Zeit wird in den Betrieben verbracht.

Bei beiden Vorbereitungsprogrammen auf BTS und DUT ist der Anteil der *Apprentissage*-Ausbildung in den letzten Jahren gestiegen. Von 2005 bis 2012 stieg der Anteil derjenigen, die sich mit einer Apprentissage auf ein DUT vorbereiten, um 24,8 %, auf ein BTS um 74,8 %. Im Jahr 2010 lag der Anteil derjenigen, die im Rahmen einer Apprentissage lernen, bei den DUT sowie BTS bei 23 % (Ménard 2014).

Seit 1987 ist es möglich, auf Hochschulebene *Apprentissages* zu absolvieren. Etwa 30 % aller *Apprentissage*-Ausbildungen finden zwischenzeitlich in diesem Bildungsbereich statt (Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche 2014). Auf diesem Bildungsniveau ist diese Form des Lernens attraktiver und genießt eine vergleichsweise höhere gesellschaftliche Anerkennung als im Sekundarbereich (dem sog. first-level apprenticeship). Dies kann u. a. den Grund darin haben, dass die Betriebe die Studierenden eher als Mitarbeiter/-innen denn als Lernende betrachten. Dadurch bieten Betriebe Ausbildungsplätze eher im höheren Bildungssegment an, da dort eine Einbeziehung der Studierenden in den Arbeitsprozess und somit ein Nutzen für den Betrieb leichter und schneller möglich ist. Im Tertiärbereich umfassen die Apprentissages zudem ein breiteres Spektrum an Fachrichtungen, insbesondere den Dienstleistungsbereichen Sales und Management. Im Sekundarbereich liegt der Schwerpunkt traditionell auf dem Produktionsbereich (ca. 70 %).

Dauer und Organisation der Praxisphasen

Bei den hochschulischen Programmen sehen sowohl DUT- als auch BTS-Programme Praktika mit einer Dauer vor 10 bzw. 14 Wochen vor, häufig in den Sommermonaten.

Bei den DUT unterstützt die Hochschule die Studierenden zwar bei der Suche nach Praktikumsplätzen, jedoch gibt es keine institutionellen Kooperationen mit externen Partnern. Es findet während des Praktikums ein Besuch durch eine Lehrkraft (Tutor/-in) statt. Diese unterstützt die Erarbeitung des Praktikumsberichts. Der Bericht wird im Rahmen einer Prüfung dem Prüfungsausschuss vorgetragen, der aus Lehrkräften, Tutoren sowie Fachleuten besteht, die am Projekt beteiligt waren.

Bei der BTS werden die Praktika mit dem für die Koordination von Bildungseinrichtung und Betrieben zuständigen Lehrkräften abgestimmt. Studierende führen eine meist digitale Doku-

mentation über ihr Praktikum, zu der sowohl der betriebliche als auch der schulische Tutor Zugang haben.

Die Entwicklung der Curricula für DUT und BTS findet in einem zentralisierten Prozess durch die *Commissions Professionnelles Consultatives* (CPC) statt und sind landesweit gültig. Derzeit existieren 17 CPN für DUT, eine pro Fachrichtung, die sich aus Lehrkräften, Wissenschaftlern und Experten aus den jeweiligen Fachbereichen bzw. Betrieben zusammensetzen. Ihre Aufgabe ist, einen Vorschlag für die Beschreibung von „Knowledge, Skills and Competences" zu entwickeln, die erworben und geprüft werden sollen. Die Entscheidung liegt beim zuständigen Ministerium für Hochschulbildung.

Aufbauend auf DUT und BTS kann mit einem einjährigen Programm die *Licence professionelle* (*licence pro*) erworben werden.

Das nächste Niveau – die „licence professionelle"

Der berufliche Bachelorabschluss (*licence pro)* wurde im Jahr 2000 eingeführt. Die Bezeichnung „licence professionelle" wurde insbesondere gewählt, um die Gleichwertigkeit mit der klassischen universitären Licence (Bachelor) zu verdeutlichen und dadurch die Qualifikation von vornherein attraktiv zu machen. Sie werden von Universitäten, IUTs, aber auch sog. *lycées professionnels* angeboten. Sie sehen einen Praktikumsanteil von 12 bis 16 Wochen vor, werden häufig aber auch in der Form einer Apprentissage vorbereitet (s. o.). Lehrinhalte und Prüfungsaufgaben können bis zu einem gewissen Maße durch die IUTs dem regionalen Fachkräftebedarf angepasst werden. In einer Verordnung aus dem Jahr 2014 werden dem Lehrpersonal weitere Möglichkeiten eröffnet, die zu erwerbenden Kompetenzen noch stärker am Arbeitsmarkt zu orientieren.

Bemerkenswert ist die Attraktivität der *licence pro*, die an der steigenden Zahl von Studierenden sichtbar wird. Sie stieg von 3.600 im Jahr 2002 auf 52.000 im Studienjahr 2013/14, das waren im Jahr 2013 knapp 28 % aller Licence-Absolventen/-innen (Quelle: DEPP 2014). Derzeit gibt es 173 verschiedene Fachrichtungen, für die eine licence pro erworben werden kann (http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029039732; accessed: 23.07.2015). Die populärsten sind Business und Handel, gefolgt von Kommunikation und Industrieproduktion.

Der Grund für die Attraktivität wird bei dem Vergleich der Beschäftigungsquote der Absolventen/-innen deutlich. Drei Jahre nach Erwerb der Qualifikation im Jahr 2007 befanden sich im Jahr 2010 88 Prozent der Licence-pro-Absolventen/-innen in einem Beschäftigungsverhältnis – gegenüber 75 Prozent der LMD-licence-Absolventen/-innen. Im Vergleich ist auch der Anteil derjenigen, die einen unbefristeten Arbeitsvertrag haben, höher (78 % zu 68 %), und sie verfügen im Durchschnitt über ein höheres Einkommen. Ein Grund für den erfolgreichen Übergang in den Arbeitsmarkt kann auch darin gesehen werden, dass ca. 20 Prozent der Licence-pro-Absolventen und -Absolventinnen die Qualifikation über eine *apprentissage* (Lehrlingsausbildung) erworben haben (Ménard 2014). Die *Licence-pro*-Studiengänge zeichnen sich insbesondere in Form der *apprentissages* durch ihre Arbeitsmarkt- und Betriebsnähe aus. Ihnen kommt die Funktion zu, das akademische mit praxis- bzw. betriebsnahem Lernen zu verbinden.

Eine *licence pro* eröffnet den Zugang zu Masterstudiengängen an Hochschulen, jedoch ist dieser fachbezogen beschränkt.

► Fazit

Das Lernen im Betrieb ist im tertiären Bildungsbereich in Frankreich sehr populär. Insbesondere das Lernen in der Form von „apprentissages" stellt einen wichtigen Pfeiler im tertiären Bildungs-

system dar und verfügt über eine höhere gesellschaftliche Wertschätzung als die „apprentissa-ges" auf Sekundarebene. Die Attraktivität und Akzeptanz dieser Form der Hochschulbildung zeigt sich gerade auch im Hinblick auf den vergleichsweise erfolgreichen Übergang in Beschäftigung. Insgesamt lässt sich sagen, dass in Frankreich arbeitsbasiertes Lernen, d. h. Berufsbildung, in einem hohen Maße im Bereich der Hochschulbildung zu finden ist.

2.3 Irland

Irland verfügt mit dem National Qualifications Framework (NQF) über einen einheitlichen Qualifikationsrahmen mit zehn Niveaus, der sich über alle Bildungsbereiche erstreckt. Bis zu einer institutionellen Reform im Jahr 2012 war in diesem Qualifikationsrahmen eine Trennung zwischen postsekundärer beruflicher Bildung (Further Education and Training) und Hochschulbildung optisch und institutionell erkennbar. Abschlüsse im Berufsbildungsbereich wurden vom „Further Education and Training Awards Council (FETAC)", einer staatlichen Institution zur Verleihung von Abschlüssen (Awarding Body), vergeben; im Hochschulbereich war es der „Higher Education and Training Awards Council (HETAC)". Eine Überschneidung zwischen beiden Bereichen gab es auf dem Niveau 6 des NQF, das dem EQR-Niveau 5 entspricht. Dort sind der höchste berufliche Abschluss „Advanced Certificate" und der Hochschulabschluss „Higher Certificate" für zweijährige Kurzstudiengänge eingeordnet. Durch eine institutionelle Reform gibt es jetzt mit „Quality and Qualifications Ireland (QQI)" nur noch einen staatlichen Awarding Body für alle beruflichen Abschlüsse und die Abschlüsse an Hochschuleinrichtungen.[5] Letzteres betrifft nicht die staatlich geförderten Universitäten und das Dublin Institute of Technology, welche ihre eigenen Abschlüsse vergeben.

Die berufliche Bildung wird in Irland dem Bereich der Fort- und Weiterbildung zugeordnet. Sie findet hauptsächlich in Form von Post-Leaving-Certificate[6]-Kursen statt, die sich an Sekundarschulabsolventen/-innen und verstärkt auch an Erwachsene richten. Wichtigster Anbieter sind hier die Further Education Colleges. Außerdem gibt es sogenannte Traineeships und im gewerblich-technischen Bereich ein System der Lehrlingsausbildung (Apprenticeships). Diese drei beruflichen Bildungsprogramme sind national als postsekundär eingestuft, ermöglichen aber Abschlüsse auf der EQR-Ebene 5 und werden deshalb im Anschluss näher beschrieben. Darüber hinaus existieren sektorspezifische Bildungsprogramme, z. B. im Tourismus und in der Landwirtschaft, die ebenfalls zu höheren beruflichen Abschlüssen führen.

Der Berufsbildungssektor durchläuft seit einigen Jahren ein umfassendes institutionelles Reformprogramm, mit dem eine weitreichende Restrukturierung einherging. So wurde mit SOLAS (*The Further Education and Training Authority*) eine eigene Berufsbildungsbehörde geschaffen, welche u. a. für die Lehrlingsausbildung zuständig ist.

In Irland spielen die Berufsverbände in vielen Berufen eine wichtige Rolle bei der Qualifikation ihrer Mitglieder und auch zukünftigen Mitglieder.[7] Einige Verbände akkreditieren einschlägige Studiengänge, deren Absolvierende dann automatisch die Eingangskriterien des jeweiligen Verbandes erfüllen. Vor Kurzem änderte der Berufsverband für Ingenieure „Engineers Ireland" die Zugangsvoraussetzung zum von ihm vergebenen Status des „Chartered Engineers". Statt eines vierjährigen Studiums zum Bachelor of Honours ist nun ein fünfjähriges Masterstudium erforderlich.

Das Hochschulstudium ist in Irland der meistgewählte Qualifikationsweg nach Abschluss der Schulbildung. Etwa die Hälfte der Sekundarschulabsolvierenden beginnt direkt im Anschluss ein Studium.

Der Zugang zum Hochschulbereich erfolgt in der Regel über den Leaving Certificate, den Abschluss der Sekundarstufe II. Allerdings reservieren die Hochschuleinrichtungen auch eine beschränkte Anzahl von Plätzen für alternative Zielgruppen, z. B. für Inhaber beruflicher Abschlüsse.

Viele Hochschulen in Irland integrieren Praktikumsphasen von drei Monaten bis zu einem Jahr in ihre Programme. Am häufigsten sind halbjährliche Praktika. Programme mit einer systematischen Verknüpfung von alternierenden Lernphasen in der Hochschule und in einem Unternehmen konnten in den untersuchten Bereichen Wirtschaft und Ingenieurwesen in der ersten Projektphase aber nicht identifiziert werden.

Interessant ist, dass über Kooperationsvereinbarungen mit Universitäten aus Großbritannien an einigen irischen Further Education Colleges Kurse angeboten werden, die zu einem britischen Hochschulabschluss führen.

► Arbeitsbasierte Programme

Post Leaving Certificate (PLC)

PLC-Kurse richten sich in erster Linie an Absolvierende des Sekundarbereichs und verstärkt auch an Erwachsene und sollen die Teilnehmer/-innen auf eine berufliche Laufbahn vorbereiten. Die Kurse kombinieren allgemein- und berufsbildende Inhalte mit Betriebspraktika von einem begrenzten Umfang.

Die meisten PLC-Programme werden von Further Education Colleges angeboten. Daneben gibt es viele weitere Anbieter, bei denen private Colleges dominieren. Der Großteil der Programme ist einjährig; zu einem Abschluss auf EQR-Niveau 5 führen aber nur die zweijährigen Programme. PLC-Programme können andere Qualifikationen enthalten, z. B. von Berufsverbänden oder britischen Awarding Bodies.

Für jedes der Programme werden weiterführende Bildungsmöglichkeiten aufgelistet. Über Kooperationsvereinbarungen mit Hochschuleinrichtungen ist für Absolvierende einiger Kurse auch die Aufnahme in das zweite Studienjahr eines verwandten Hochschulstudiengangs möglich.

Apprenticeships

Apprenticeships beschränken sich in Irland bisher auf wenige Sektoren. Ende 2014 gab es in Irland 26 Apprenticeships in den Bereichen Bau (Construction), Elektro (Electrical), Technik/Maschinenbau (Engineering), Motor (Motor) und Druck (Printing). Durch die wirtschaftlichen Schwierigkeiten der letzten Jahre und speziell den Einbruch der Baubranche sind die Zahlen der Auszubildenden sehr stark zurückgegangen, obwohl aktuell eine leichte Erholung stattfindet. Alle Apprenticeships führen zu einem Advanced Certificate auf dem NQF-Level 6 (EQR 5).[8]

Seit der institutionellen Reform im Berufsbildungsbereich ist die 2013 neu gegründete Berufsbildungsbehörde SOLAS für die Apprenticeships zuständig. Ausbildende Arbeitgeber müssen bei der Behörde registriert sein. Gesetzliche Grundlage der Apprenticeships ist der Apprenticeship Act von 1959.

[8] Derzeit werden alle Apprenticeships einem Review unterzogen, u. a. im Hinblick auf die Einstufung in den Qualifikationsrahmen.

Um eine Ausbildung zu beginnen, ist eine Stelle bei einem registrierten Arbeitgeber erforderlich. Die Ausbildung dauert in der Regel vier Jahre und unterteilt sich in vier praktische Phasen beim Arbeitgeber und drei Lernphasen an einem Institute of Technology im Hochschulsektor und/oder einem ETB-Trainingszentrum[9] im Berufsbildungssektor.

Im Jahr 2013 wurde vom Bildungsministerium eine Überprüfung des Apprenticeship-Systems initiiert. Dazu wurden ein Hintergrundbericht veröffentlicht und anschließend eine unabhängige Expertengruppe eingesetzt. Die Empfehlungen der Gruppe werden von der Regierung im Rahmen des Mitte 2014 veröffentlichten „Apprenticeship Implementation Plan"[10] umgesetzt. Ein Ziel ist die Ausweitung der Apprenticeships auf weitere Sektoren und auf höhere Niveaus des NQF. Dazu wurde Ende 2014 ein Aufruf an unternehmergeführte Konsortien zur Einreichung von Vorschlägen für neue Apprenticeships gestartet. Von den 86 eingegangenen Vorschlägen soll der Großteil zu Hochschulabschlüssen auf den Ebenen 6–9 des NQF (EQR 5–7) führen. Aus allen Vorschlägen wurden die 25 ausgereiftesten ausgewählt, um diese zu Apprenticeships zu entwickeln. Außerdem steht die Schaffung eines rechtlichen Rahmens für die neuen Apprenticeships aus.[11]

Traineeships

Traineeships wurden von Industrievertretern entwickelt und werden von Unternehmen in Kooperation mit ETB-Trainingszentren angeboten. Sie sehen einen Wechsel von Phasen im Unternehmen und im Trainingszentrum vor. Von den 20 existierenden Traineeships führen allerdings nur zwei zu einem Abschluss auf der EQR-Ebene 5. Im Rahmen der Reform des Apprenticeship-Systems stehen auch die Traineeships auf dem Prüfstand.

▶ Fazit

Auch in Irland gibt es augenblicklich mit der Reform und dem Ausbau des Apprenticeship-Systems eine hohe Dynamik in der Entwicklung von arbeitsbasierten Programmen im Tertiärbereich. Hervorzuheben ist, dass die traditionellen Apprenticeships über die Lernphasen an den Institutes of Technology bereits Kontakt zum Hochschulsystem haben.

2.4 Norwegen

Norwegen ist eines der beiden Vergleichsländer neben Polen, die statistisch gesehen nicht über eine nennenswerte „höhere Berufsbildung" verfügen, wenn man die Zuordnung zum ISCED-Niveau 5B als Maßstab ansetzt.

Überblick über die tertiäre Berufsbildung – Programme und Qualifikationen

Der tertiäre Bildungsbereich, gemäß internationalem Verständnis, ist in Norwegen ausschließlich hochschulisch. Es sind insbesondere zwei Formen von Institutionen zu unterscheiden, die universitären Colleges und die Universitäten. Die universitären Colleges sind vergleichbar mit den Fachhochschulen oder Polytechnics, jedoch können sie teilweise Doktorgrade vergeben und bieten im Gegensatz zu den Universitäten auch zweijährige Kurzstudiengänge an (sog. *partial Bachelor*). Die Abgrenzung zwischen den beiden Gruppen ist in den letzten Jahren zunehmend

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[9] Die Trainingszentren gehörten bis zu einer institutionellen Reform in 2013 zur damaligen Behörde für Berufsbildung und Beschäftigung (FÀS). Jetzt werden sie von den Education and Training Boards (ETBs) betrieben, zu denen auch die Further Education Colleges gehören.
[10] DES 2014: Apprenticeship Implementation Plan. http://www.education.ie/en/Publications/Education-Reports/Apprenticeship-Implementation-Plan.pdf (Zugriff 15.10.2015)
[11] Apprenticeship Council 2015: Report on New Apprenticeship Programme Proposals. http://www.education.ie/en/publications/policy-reports/apprenticeship-council-report-on-new-apprenticeship-programme-proposals.pdf (Zugriff 15.10.2015)

undeutlich geworden, nicht zuletzt aufgrund der Regelung durch ein gemeinsames Gesetz aus dem Jahr 1995. Beschleunigt wird dieser „Vereinheitlichungsprozess" durch die Bestrebung einiger universitärer Colleges, den Rang einer Universität zu erhalten, z. B. durch einen Zusammenschluss untereinander oder mit Universitäten. Gleichzeitig streben die beruflichen Colleges (*fagskole*, vergleichbar mit den Fachschulen) an, den Rang eines universitären Colleges zu erreichen.

Der Begriff „tertiäre Bildung" wird in Norwegen im Gegensatz zum internationalen Verständnis allerdings anders definiert (REFERNET 2013, S. 19). Er umfasst auch die Programme auf ISCED-97-Niveau 4, d. h. auch die sog. post-sekundaren Programme, wie die Programme der beruflichen Colleges oder die Meisterprogramme.

Schaubild 4:

Tertiäre Bildung nach norwegischem Verständnis umfasst:

▶ Berufliche Colleges (ISCED-97-Niveau 4; d. h. nach internationaler Definition „post-sekundar") und Meisterprogramme
▶ Universitäre Colleges
▶ Universitäten

Norwegen ist ein gutes Beispiel für widerstreitende Tendenzen im tertiären Bildungsbereich. Einerseits kann beobachtet werden, dass es auf Bachelor-Ebene eine Verschiebung hin zu theoretischem Wissen im Vergleich zu praktischen Kenntnissen gibt. Dies wird u. a. dadurch deutlich, dass Praxiserfahrung keine Zulassungsvoraussetzung mehr ist und die vorgeschriebenen Praxisphasen kürzer wurden (KYVIK 2009; aus seinem LB). Andererseits wurden die Hochschuleinrichtungen durch das White Paper 2009 zur Bildungsstrategie dazu aufgerufen, mit der Wirtschaft stärker zu kooperieren. So sind sie aufgefordert, ein Beratungsgremium (*Råd for samarbeid med arbeitslivet, RSA)* einzusetzen, das mögliche Kooperationen mit der Arbeitswelt prüft und eine entsprechende Strategie entwickelt. Das Ziel dabei ist, die Relevanz der Studieninhalte für den Arbeitsmarkt zu erhöhen. Allerdings gibt es keine bildungspolitischen Pläne, „duale Studiengänge" mit langen betrieblichen Lernphasen zu entwickeln.

Auch haben in den vergangenen Jahren **universitäre Colleges und Universitäten** eine Reihe von speziellen Bachelor- und Master-Programmen entwickelt, die den **Höherqualifizierungsbedarf** von Fachkräften decken sollen und somit dem Weiterbildungsbereich zuzurechnen sind. Dies ist insbesondere der Fall im Bereich der Lehrerqualifikation, aber auch im Managementbereich. Beispielsweise bietet die *Norwegian Business School* ein Master-Programm für Management auf Teilzeitbasis für Berufstätige an. Dies ist eine Entwicklung, die gezielt von der staatlichen Agentur „Norway Opening University" (*Norgesuniversitetet)* vorangetrieben wird. Flexible Programme und unterschiedliche, IT-gestützte Formen von Lehrveranstaltungen werden gefördert. So gibt es zahlreiche Teilzeitmodelle, webbasierte Kurse, Angebote zum Fernlernen etc. Die Grenzen zu den traditionellen Lehrangeboten für Erststudierende werden zunehmend unklarer, denn zwischenzeitlich sind diese ebenfalls überwiegend als Teilzeitstudium möglich und somit auch in gewissem Sinne Work-based-learning-Modelle, allerdings ohne eine strukturelle oder gar curriculare Verknüpfung von Theorie und Praxis.

Von den universitären Colleges werden teilweise auch zweijährige Programme angeboten, die zu einem universitären Abschluss (*Høgskolekandidatgrad)* führen. Diese Programme können integraler Bestandteil eines Bachelorprogramms werden, das die Studierenden ohne weiteren Zeitverlust anschließen können (d. h. ein zusätzliches Jahr). Diese Programme werden ISCED 5B zugeordnet. Die Teilnehmerzahlen sind vergleichsweise klein.

Die Teilnehmerzahl an Programmen von **beruflichen Colleges** (*fagskole*) ist sehr klein im Vergleich zu den hochschulischen Programmen der Universitäten und universitären Colleges (2012: 16.000 Studierende an beruflichen Colleges, 240.000 Studierende an Hochschulen, Bakken 2013). Ein von der norwegischen Regierung eingesetztes Komitee, das den tertiären Bildungsbereich untersuchen sollte, hat eine Stärkung der außerhochschulischen Bildungsprogramme empfohlen, da es einen Bedarf an entsprechend qualifizierten Fachkräften in der Wirtschaft gäbe. Auch wird die Befürchtung geäußert, dass eine weitere Zunahme des Theorieanteils in Programmen der beruflichen Colleges sie für einige Studierende unattraktiver werden lässt.

Da die Programme der beruflichen Colleges ISCED-97-Niveau 4 zugeordnet werden, tauchen sie in der internationalen Statistik über tertiäre Bildung (s. o.) nicht auf. Dabei gibt es durchaus zweijährige Programme, die denen der Fachschulen in Deutschland auf ISCED 97 5B sehr ähnlich sind. Im achtstufigen nationalen Qualifikationsrahmen werden sie Niveau 5 zugeordnet, wobei Niveau 1 leer bleibt, d. h. es gibt in Norwegen keine Qualifikation auf Niveau 1 des EQR. Niveau 5 ist zweigeteilt, je nach Dauer (0,5 bis 1,5 Jahre bzw. 2 Jahre) der Programme.

Der Meister-Brief

In Norwegen gibt es ebenfalls wie in Deutschland einen Meister-Brief (*mesterbrev*). Die ministerielle Zuständigkeit liegt beim Ministerium für Industrie und Handel, die Umsetzung und Organisation beim Ausschuss für die Meisterzertifizierung (*Mesterbrevnemnda*, MCC). Dieser entwickelt die Ausbildungsstandards, regelt die praktischen Anforderungen und vergibt die Zertifikate.

Üblicherweise haben die Vorbereitungskurse eine Dauer von zwei Jahren und werden in Teilzeitform, meist abends neben einer Vollzeitbeschäftigung als Angestellte/er oder Inhaber/-in eines KMU absolviert. Zulassungsvoraussetzung sind der Gesellenabschluss und mehrere Jahre Berufserfahrung. Die Meisterprogramme werden in ISCED 97 auf 4 A angesiedelt; in Deutschland werden die Meisterprogramme dagegen auf ISCED 5B verortet.[12] 2013 gab es 73 unterschiedliche Fachrichtungen, in denen eine Meisterqualifikation erworben werden konnte (ReferNet 2013, S. 21).

Zulassungsvoraussetzungen

Die Voraussetzung für den **Zugang zum Hochschulbereich** und somit zu den universitären Colleges und Universitäten ist grundsätzlich ein Abschluss des Sekundarbereichs. Hier sind insbesondere die drei folgenden Varianten zu erwähnen:

▶ Der erfolgreiche Abschluss des allgemeinbildenden Sekundarprogramms[13]
▶ Die Schüler, die den Berufsbildungsweg gewählt haben, können nach den beiden ersten Jahren, statt in den betriebspraktischen Teil weiterzugehen, in ein einjähriges Programm wechseln, in dem die sechs Kernfächer Norwegisch, Englisch, Mathematik, Naturwissenschaften, Sozialwissenschaften und Geschichte unterrichtet werden. Die Quote derjenigen, die diese Wechseloption wählen, liegt bei knapp 30 %.[14]

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[12] Die Vorbereitungsprogramme der Kammern oder sonstiger privater Anbieter auf die Meisterprüfungen in Deutschland werden statistisch nicht von ISCED 97 erfasst. Wird die Vorbereitung in Fachschulen, d. h. im Rahmen von staatlichen Bildungsprogrammen absolviert, werden diese auf ISCED-97-Niveau 5B verortet. Dies ändert sich bei ISCED 2011. Die statistischen Daten auf der Grundlage von ISCED 2011 werden zum ersten Mal im Herbst 2015 von den statistischen Ämtern an die OECD und Eurostat geliefert.
[13] S. Diagramm
[14] Diese einjährigen Programme stehen auch Bewerbern über 23 Jahren mit fünf Jahren Berufserfahrung offen (sog. „23/5"-Programme) und eröffnen dadurch auch zu einen späteren Zeitpunkt die Möglichkeit, in den Hochschulbereich einzutreten.

► Den Abschluss der beruflichen Erstausbildung mit anschließendem zusätzlichem Jahr, wie bei der 2. Option.

Daneben gibt es unter bestimmten Bedingungen die Möglichkeit des Zugangs über eine Anerkennung vorangegangenen Lernens.

Der **Übergang von beruflicher Sekundarbildung in den Hochschulbereich** wird seit 2001 dadurch erleichtert, dass einige Bachelorstudiengänge im Ingenieurbereich auch Absolvierende der beruflichen Erstausbildung ohne zusätzliche Hochschulzugangsberechtigung offenstehen. In ministeriellen White-papers von 2008 und 2013 wird die Absicht geäußert, diese Form von beruflichen Hochschulprogrammen auch auf andere Fachbereiche auszudehnen.

Der Zugang zu den **zweijährigen Programmen** der **beruflichen Colleges** erfordert entweder einen Abschluss des Sekundarbereichs oder eine fünfjährige Berufspraxis in einem fachverwandten Bereich. Etwa 60 % der Studierenden verfügen tatsächlich über einen Gesellenbrief, 30 % über eine allgemeine Hochschulzugangsberechtigung, und ca. 10 % erhalten den Zugang über eine individuelle Kompetenzfeststellung.

Dauer und Organisation der Praxisphasen

Die **beruflichen Colleges** sind für die Kurse und Curricula ihrer Programme selbst verantwortlich. Jedes Programm muss allerdings von der nationalen Agentur für Qualitätssicherung in der Bildung (NOKUT, *Nasjonalt organ for kvalitet i utdanningen*) zertifiziert werden. Eine Lernphase im Betrieb ist meistens nicht vorgeschrieben, da die Studierenden in der Regel bereits über Berufserfahrung verfügen. Dies wird auch durch das durchschnittliche Alter der Studenten plausibel. Etwa 60 % sind älter als 25 Jahre, 40 % über 30 Jahre alt. Lediglich etwa 15 % der tertiären Berufsbildungsprogramme (d. h. ohne die hochschulischen Programme) beinhalten Praxisteile. Die meisten davon haben einen Umfang von 20 % bis 30 % der Programmzeit. Die meisten Programme mit Praxisanteilen finden sich im Gesundheitsbereich. Es gibt eine große Bandbreite, wie das Praxislernen organisiert und die Formalisierung der Kooperation zwischen den beruflichen Colleges und den Betrieben bzw. Einrichtungen ausgestaltet ist.

Es ist nicht immer möglich, diese Praxisphasen in dem Betrieb zu leisten, in dem der/die Studierende arbeitet. Etwa 20 % der Programme, die eine Praxisphase vorschreiben, verpflichten dazu, diese in einem anderen Betrieb oder einer anderen Einrichtung zu absolvieren. Gleichwohl entscheiden sich nur 40 % der Studierenden, diese auch im eigenen Betrieb zu leisten, sondern wählen einen alternativen Lernort.

Die Studie von NOKUT (2012) kommt hinsichtlich der Qualität der Praxisphasen zu einem positiven Gesamtergebnis, insbesondere wird festgestellt, dass die unterschiedlichen Praxisarrangements in positiver Weise an die Kompetenzbedarfe der Studierenden sowie der Praxispartner angepasst sind. Den beruflichen Colleges wird empfohlen, die Ziele der Praxisphasen und die Zielgruppen stärker zu spezifizieren, die Studierenden früher über die möglichen Praxisarrangements zu informieren sowie eine Evaluation anzustreben, deren Ergebnisse transferierbar sind.

Eine Regierungskommission zur Untersuchung des tertiären Bildungsbereichs hat nun 2014 empfohlen, in alle Programme verpflichtende Praxisphasen einzuführen, wobei die Definition sehr weit ist. So wird darunter auch ein Projekt verstanden, das in Kooperation mit einem externen Partner durchgeführt wird.

Die zweijährigen Programme der beruflichen Colleges werden teilweise berufsbegleitend angeboten, wie beispielsweise im Gesundheits- und Sozialbereich. Insbesondere in diesem Bereich zeigt sich die Funktion dieser Bildungsprogramme als Höherqualifizierungsweg, weniger als direkt anschließender Bildungsweg nach dem Sekundarbereich.

Sie eröffnen den Zugang in den Hochschulbereich und erfüllen neben der Funktion einer Höherqualifizierung auch eine Brückenfunktion. Häufig besteht eine Kooperation zwischen beruflichen Colleges und Hochschuleinrichtungen, die beispielsweise die Möglichkeit einer Anrechnung von Lernleistungen regelt. Dadurch kann die Bachelorstudienzeit um ein Jahr verkürzt werden, und es eröffnet sich ein Zugang direkt in das 2. Studienjahr.

Die **Universitäten und universitären Colleges** werden über ein anderes Gesetz geregelt[15], sind jedoch ebenfalls selbst für das Design ihrer Bildungsprogramme im Rahmen der vorgegebenen Qualitätssicherungsregeln verantwortlich. NOKUT evaluiert alle sechs Jahre die Studiengänge gemäß definierter Qualitätskriterien. Darüber hinaus sind die Bildungseinrichtungen verpflichtet, eigene Qualitätssicherungssysteme einzurichten.

Die Professionalisierung oder Praxisorientierung in Bachelorstudiengängen zeigt sich nicht in Pflichtpraktika, sondern beispielsweise im Bereich „Engineering" in der Praxisbezogenheit der Bachelorarbeiten. Die Themen werden häufig von Unternehmen vorgeschlagen und in Absprache zwischen Studenten, Hochschule und Unternehmen koordiniert. Lediglich im Gesundheits- und Sozialbereich sind häufig Praxisphasen vorgeschrieben.

► Fazit

Im Hochschulbereich in Norwegen gibt es in einigen Bachelorstudiengängen des Gesundheits- und Sozialbereichs Studienprogramme, die Pflichtpraktika vorschreiben. In anderen Fachbereichen kommt dies kaum vor. Allerdings werden die Themen für die Bachelorarbeiten im Ingenieurbereich häufig unter Einbeziehung von Unternehmen entwickelt.

Im Hinblick auf Durchlässigkeit von sekundärer Berufsbildung in den Hochschulbereich haben die zweijährigen technikorientierten Programme der beruflichen Colleges eine wichtige Scharnierfunktion, da sie den Absolvierenden den Zugang zu speziellen Bachelorstudiengängen eröffnet. Bereits erbrachte Lernleistungen können auf die Studiendauer angerechnet werden. Im Ingenieurbereich stehen seit 2001 auch einige Bachelorstudiengänge Bewerbern/-innen ohne Hochschulzugangsberechtigung offen. Es wurde die politische Absicht erklärt, diese Möglichkeiten auch auf andere Fachbereiche auszuweiten. Insgesamt steht der statistischen „Akademisierungstendenz" eine Bildungsrealität entgegen, die eine praxisorientierte Bildung auf tertiärem Niveau durch unterschiedliche Elemente verstärkt. Work-based-learning-Modelle, im Sinne der Definition des Projekts, sind in Norwegen allerdings nur im Einzelfall anzutreffen.

2.5 Österreich

Der Anteil an Personen mit einem tertiären Berufsbildungsabschluss ist ISCED 97 zufolge in Österreich eher gering (vgl. Tab. 2). Zwar liegt Österreich mit 12 % über dem OECD-Durchschnitt (2012: 10 %), dennoch aber weit hinter Ländern wie Irland (23 %), Australien (21 %) oder Spanien (20 %). Um diesen vergleichsweise niedrigen Wert besser verstehen zu können, ist es erforderlich, die Struktur des österreichischen Bildungssystems zu kennen. Mit ISCED 97 (und teilweise auch mit der reformierten Version von 2011) lassen sich die Besonderheiten des österreichischen Bildungssystems nur bedingt abbilden. Dies gilt insbesondere für den tertiären Bereich, der in Österreich anders gestaltet ist als etwa in angelsächsischen oder nordeuropäischen Ländern.

Unter „Tertiärbildung" wird in Österreich akademische Bildung verstanden, die in Bachelor-, Master- und PhD-Studien an Universitäten, Fachhochschulen (FH) und Pädagogischen Hochschulen (PH) angeboten wird. Die Gleichsetzung von „tertiär" und „akademisch" hängt mit der Tatsache zusammen, dass Österreich über ein stark qualifikationsorientiertes Erstausbildungs-

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[15] *Lov om universiteter og høyskoler* 2005, zuletzt neu geregelt 2012

system auf der oberen Sekundarstufe verfügt: Rund 80 % der Jugendlichen eines Altersjahrganges durchlaufen auf dieser Ebene eine Ausbildung, die zu einem beruflichen Abschluss führt (duale Berufsbildung, berufsbildende Vollzeitschulen) und einen direkten Arbeitsmarkteinstieg ermöglicht. Vergleichsweise schmal ist hingegen die Tertiärebene, die primär wissenschafts- und forschungsorientiert ausgerichtet ist. In anderen Ländern ist der Hochschulsektor differenzierter ausgelegt, sowohl was dessen inhaltliche Zuschnitte, die Ausbildungszeiten und -ziele als auch deren Einordnung in Bildungsklassifikationen betrifft. In der öffentlichen Wahrnehmung sowie im Selbstbild des Tertiärsektors wird daher in diesen Ländern berufliche Qualifizierung als Teil und Aufgabe des Hochschulsektors gesehen. Tertiärbildung bedeutet in diesen Ländern somit nicht unbedingt und ausschließlich akademische Bildung.

Durch die enge Verknüpfung von tertiärer mit akademischer Bildung ist in Österreich das Verständnis für eine „tertiäre Berufsbildung" praktisch inexistent. Das hat aber auch damit zu tun, dass viele berufliche Bildungsprogramme im Anschluss an die Sekundarstufe nicht an Hochschulen angeboten werden, sondern von Einrichtungen der Erwachsenenbildung (EB). Der EB-Bereich ist in Österreich von einer großen institutionellen Vielfalt und einem damit einhergehenden breiten Angebot geprägt. Einige Angebote führen zu gesetzlich geregelten (oder formalen) Qualifikationen. Viele dieser Bildungsangebote haben aber keine gesetzliche Verankerung. Die aus diesen Bildungsangeboten resultierenden Abschlüsse, die im NQR-Kontext als „nicht-formale Qualifikationen" bezeichnet werden, sind jedoch am Arbeitsmarkt akzeptiert und anerkannt. In der ISCED-Klassifikation werden sie aber nicht erfasst, da ihnen keine formale Ausbildung zugrunde liegt. Das hat zur Folge, dass die Qualifikationsstärke Österreichs durch ISCED nur ungenügend dargestellt wird und statistische Vergleiche (etwa von Tertiärquoten, vgl. Tab. 2) nur bedingt aussagekräftig sind.

Überblick über die tertiäre Berufsbildung – Programme und Qualifikationen

Jenseits der öffentlichen Wahrnehmung und statistischen Klassifikation ist der tertiäre Berufsbildungsbereich in Österreich daher de facto sehr breit und vielfältig. Er umfasst sowohl Qualifizierungen in Einrichtungen (nicht-hochschulische und hochschulische) des formalen Bildungswesens als auch Ausbildungen in EB-Einrichtungen (d. h. des nicht-formalen Bildungswesens).

Zum formalen Bildungswesen zählen etwa Kollegs, die in zweijähriger Tages- oder dreijähriger Abendform zum Abschluss einer berufsbildenden höheren Schule (BHS) führen. Ebenfalls zu diesem Abschluss führen dreijährige Aufbaulehrgänge. Im Unterschied zu Kollegs, für deren Besuch eine Reifeprüfung erforderlich ist, richten sich Aufbaulehrgänge an Personen mit mittlerem Berufsbildungsabschluss (Lehre, berufsbildende mittlere Schule – BMS). Zudem gibt es BHSen für Berufstätige, die modular gestaltet sind und berufsbegleitend zur Reife- und Diplomprüfung führen. Meister-, Werkmeister- und Bauhandwerkerschulen zählen ebenfalls zum höheren Berufsbildungsbereich. Sie ermöglichen eine Weiter- bzw. Höherqualifizierung nach Absolvierung einer Berufsausbildung (Lehre, BMS) im technisch-gewerblichen Bereich. Sie dauern zwei Jahre und enden mit einer kommissionellen Abschlussprüfung. Sie berechtigen zur Ausbildung von Lehrlingen und geben nach vier Jahren Tätigkeit die Möglichkeit zur Selbstständigkeit in einem einschlägigen Handwerk. Während Meisterschulen im formalen Bildungswesen angesiedelt sind, werden Werkmeister- und Bauhandwerkerschulen in Einrichtungen der Erwachsenenbildung angeboten. Dennoch haben sie öffentlich-rechtliche Lehrpläne, die im Verantwortungsbereich des Bildungsministeriums liegen. Zusammen bilden diese Ausbildungen das ISCED-97-Niveau 5B.

In hochschulischen Einrichtungen wird Berufsbildung insbesondere von Fachhochschulen im Rahmen von Bachelor- und Masterprogrammen (ISCED 97 5A) angeboten. Seit Einführung der Fachhochschulen in den 1990er-Jahren wächst dieser Bildungssektor sehr dynamisch: Die Anzahl der Studiengangangebote, der Studierenden und der Absolvierenden hat sich seither konti-

nuierlich erhöht. Im Jahr 2014 haben mehr als 45.000 Studierende einen Fachhochschul-Studiengang belegt. Dies entspricht etwa 16 % aller Studierenden in Österreich. Rund ein Drittel aller Studiengänge wird berufsbegleitend angeboten. Nur eine sehr geringe Anzahl an Studiengängen ist dual gestaltet, d. h. Theorieunterricht wechselt sich mit Praxisphasen in Unternehmen ab.

Der nicht-formale Bildungsbereich spielt in der höheren Berufsbildung eine zentrale Rolle. EB-Einrichtungen, wie beispielsweise die Institute der Sozialpartner, bieten eine breite Palette an Weiter- und Höherqualifizierungen (etwa in Fach- und Berufsakademien) an, deren Abschlüsse am Arbeitsmarkt nachgefragt und anerkannt werden. Diese Ausbildungen, die häufig in Kooperation mit Unternehmen bzw. Experten/-innen aus der Wirtschaft erstellt werden, werden mehrheitlich berufsbegleitend angeboten. Auch Unternehmen bzw. EB-Einrichtungen von Arbeitsgebern/-innen bieten Ausbildungen an, die zu höheren Berufsabschlüssen führen. Die Ausbildung der Exekutivbeamten erfolgt beispielsweise in der Sicherheitsakademie des Bundesministeriums für Inneres, in der Verwaltungsakademie werden diverse Ausbildungen für Bundesbedienstete angeboten. Die Qualifizierung von Piloten und Pilotinnen sowie Fluglotse/ Fluglotsin erfolgt ebenfalls berufsbegleitend bzw. direkt im realen Arbeitsgeschehen bei Fluglinien sowie der österreichischen Flugkontrollbehörde. Viele größere Unternehmen, etwa Banken oder Versicherungen, haben eigene Weiterbildungsakademien, in denen sie Höherqualifizierungen für ihre Mitarbeiter/-innen anbieten. Eine Reihe von Abschlüssen auf höherem Qualifikationsniveau werden von Zertifizierungsstellen – etwa der Meisterprüfungsstelle – vergeben (z. B. Bilanzbuchhalter-Qualifikation, Meister- und Befähigungsqualifikation). All diese Ausbildungen bzw. Abschlüsse werden – da sie nicht im formalen Bildungswesen stattfinden/erworben werden – nicht in ISCED klassifiziert und damit nicht statistisch erfasst.

Rolle der Wirtschaft in der höheren (tertiären) Berufsbildung

Die Berufsbildung generell, aber die höhere Berufsbildung im Besonderen, zeichnet sich in Österreich durch ihre Nähe zum Arbeitsmarkt bzw. zur Wirtschaft aus. In den diesem Bildungsbereich zugehörigen Programmen geht es vorrangig darum, den Teilnehmenden Fachkompetenzen zu vermitteln, die am Arbeitsmarkt direkt einsetzbar sind (Stichwort: Employability). Daneben ist auch die Festigung von Schlüsselkompetenzen, wie Teamfähigkeit, Konfliktfähigkeit, unternehmerisches Denken etc., ein zentrales Bildungsanliegen. Die Einbeziehung von Unternehmen bzw. deren Vertretungen in den gesamten „Lebenszyklus" einer Qualifikation (von der Bedarfsanalyse über die Curriculumgestaltung bis zur Ausbildung und dem Feststellungsverfahren) ist daher von großer Bedeutung.

Praktische Arbeitsphasen, die mit dem Theorieunterricht verzahnt sind (d. h. „duale" Ausbildungen) – also alternierend oder nach diesem in geblockter Form stattfinden –, gibt es im Bereich der höheren Berufsbildung jedoch kaum. Dies hat primär damit zu tun, dass zahlreiche Ausbildungen ohnehin berufsbegleitend stattfinden bzw. implizit auf beruflicher Erfahrung aufbauen. Dabei werden häufig reale Szenarien aus dem betrieblichen Alltag der Teilnehmenden in den Unterricht integriert (etwa im Rahmen von Diskussionen oder in Form von Projekten), um möglichst nah an der Praxis zu sein. Bei manchen höheren Berufsabschlüssen erfolgt der Kompetenzerwerb informell am Arbeitsplatz, da es dafür keine verpflichtende Ausbildung gibt (z. B. Meister- und Befähigungsqualifikation). Ausbildungen, die von (EB-Einrichtungen) von Arbeitgeber/-innen angeboten werden, beinhalten in der Regel eine On-the-job-Trainingsphase, der eine Theoriephase vorangeht.

Duale Fachhochschulstudiengänge

Ein Bereich der höheren Berufsbildung, in den arbeitsbasierte Lernphasen integriert sind, ist der Fachhochschulbereich. In Fachhochschulen kann man Bachelor- und Master-Abschlüsse im Rah-

men eines Vollzeit- oder eines berufsbegleitenden Studiums erwerben. Im Vollzeit-Bachelor-Studium, das zumeist drei Jahre umfasst, ist ein verpflichtendes Betriebspraktikum im Ausmaß von zwölf bis 16 Wochen vorgesehen. Dieses soll dazu beitragen, dass der Übergang zwischen Hochschule und Arbeitsmarkt möglichst nahtlos verläuft. Neben den genannten Organisationsformen gibt es auch sogenannte duale Studiengänge, in denen sich Theorie- und Praxisphasen abwechseln. Derartige Studiengänge sind in Österreich jedoch selten – derzeit (Stand: November 2015) gibt es nur drei Studienrichtungen, die so konzipiert sind. Dementsprechend gering ist auch die Anzahl an Absolventen/-innen, die einen dualen Studiengang durchlaufen haben. Rund 1.200 Absolventen und Absolventinnen haben im Studienjahr 2012/13 einen derartigen dualen Studiengang abgeschlossen.

Zugangsvoraussetzungen

Für die Zulassung zu einem dualen Fachhochschulstudium ist die allgemeine Hochschulreife (Reifeprüfung einer allgemeinbildenden höheren Schule, Reife- und Diplomprüfung einer berufsbildenden höheren Schule, Berufsreifeprüfung) oder eine Studienberechtigungsprüfung erforderlich. Zudem können auch Personen mit einschlägiger beruflicher Qualifikation und entsprechenden Zusatzprüfungen ein duales Fachhochschulstudium beginnen.

Dauer und Organisation der Praxisphasen

Die Gestaltung der Dualität obliegt den Verantwortlichen des jeweiligen Studienganges. Zumeist verbringen die Studierenden die ersten beiden Semester ausschließlich an der jeweiligen Fachhochschule, da sie eine fundierte Grundausbildung in ihrem Fachbereich erhalten. Danach wechseln sich Praxis- und Theoriephasen in einem bestimmten Rhythmus, z. B. in einem Dreimonatsrhythmus ab. Die Studierenden haben mit dem Unternehmen einen Ausbildungsvertrag und werden für ihre Arbeit in der Regel auch bezahlt. In den Praxisphasen arbeiten die Studierenden an facheinschlägigen Projekten, in denen die theoretischen Inhalte, die im Unterricht erworben wurden, in die Praxis umgesetzt werden sollen. Die Themen bzw. Inhalte dieser Projekte müssen am Beginn der Praxisphase mit den Lehrenden an der Fachhochschule abgestimmt werden, um die „Passgenauigkeit" mit dem Studienplan sicherzustellen.

► Fazit

Das Angebot an dualen Studiengängen ist in Österreich sehr begrenzt. Neben dem breiten Angebot an berufsbegleitenden Studiengängen dürfte die primär klein- und mittelbetrieblich strukturierte Unternehmenslandschaft Österreichs einem Ausbau dieses Ausbildungsangebotes entgegenstehen.

2.6 Polen

Ebenso wie Norwegen gehört Polen zu den Staaten, deren tertiärer Bildungsbereich ausschließlich hochschulisch ist. Die Hochschulstruktur ist an die Bologna-„cycle"-Struktur angelehnt (Bachelor, Master, Doctorate). In Polen gibt es bislang keine sog. Short-cycle-Studiengänge, wie sie der Europäische Hochschulrahmen ermöglicht, d. h. unterhalb des Bachelorniveaus, und deren Qualifikationen EQR-Niveau 5 zugeordnet werden können.

Allerdings gibt es in Polen einen bildungspolitischen Diskurs über den Umgang mit Niveau 5 des polnischen Qualifikationsrahmens, der Niveau 5 des EQR entspricht und bislang dem polnischen Bildungssystem fremd ist, denn die Sekundarstufe endet auf Niveau 4, die tertiäre Bildung beginnt bei Niveau 6. Noch ist unklar, welche Qualifikationen dort verortet werden können, ob neue, dem Hochschulbereich zuzuordnende Qualifikationen entwickelt werden sollen und welche Funktion diese Qualifikationen im Bildungssystem erfüllen sollen.

Im Gegensatz zu Norwegen hat Polen derzeit aber auch keine post-sekundaren beruflichen Qualifikationen (gem. ISCED-97-Klassifikation) diesem Niveau im Europäischen Qualifikationsrahmen zugeordnet.

Die Meisterqualifikationen (*dyplom mistrzowski)* im Handwerk, die in der Zuständigkeit der Handwerkskammern liegen, sind nicht dem nationalen Qualifikationsrahmen zugeordnet und werden nicht als Teil des tertiären Bildungsbereichs betrachtet.[16]

Der erste hochschulische Zyklus führt nach mindestens sechs Semestern zu einem *licencjat*-Abschluss, nach mindestens sieben Semestern zu einem *inżynier*-Abschluss (im Technologiebereich). Es schließt sich mit einer Dauer von drei bis fünf Semestern der zweite hochschulische Cycle an. Jedoch gibt es in Polen noch sog. Langstudiengänge mit einer Dauer von neun bis zwölf Semestern (z. B. bei Pharmazie oder Medizin).

Der Hochschulbereich unterteilt sich hinsichtlich seiner Institutionen in Universitäten und nicht-universitäre Hochschulen. Er umfasst neben den als akademisch definierten Programmen, die die ersten beiden „Cycles" umfassen, auch sog. berufliche Programme, die häufig lediglich den Bachelor-Cycle umfassen und fachspezifisch ausgerichtet auf den Übergang in den Arbeitsmarkt vorbereiten. Beide Formen können grundsätzlich von allen hochschulischen Bildungseinrichtungen angeboten werden. Der strukturelle Unterschied zwischen den akademischen und den beruflichen Programmen liegt hauptsächlich darin, dass den Lernergebnissen von praxisorientierten Programmen eine besondere Arbeitsmarktrelevanz zugeschrieben werden.

Ein Gesetz aus dem Jahr 2005 zur Gestaltung der Hochschulbildung und der Einführung der Bologna-Struktur ist sowohl die rechtliche Grundlage für die Universitäten als auch die staatlichen höheren beruflichen Schulen (*Państwowa Wyższa Szkoła Zawodowa*, State Schools for Higher Vocational Education, SHVE) geregelt. Auch für die Entwicklung von Studiengängen und Kursen gelten für beide Gruppen von Bildungseinrichtung dieselben Regelungen. Nur müssen die höheren beruflichen Schulen keine Forschung durchführen oder Programme des 2. Hochschulniveaus anbieten. Es bleibt allerdings den einzelnen Schulen überlassen, die inhaltlichen oder strukturellen Merkmale zu entwickeln, die die Programme zu einer „beruflichen" Qualifizierung machen, wie beispielsweise die Festlegung der Lernergebnisse, die Gestaltung des Fächerangebots, die Regelung von Pflichtpraktika, Einbeziehung von qualifizierten Fachkräften als Lehrpersonals etc. Das führt zu einem etwas verschwommenen Profil der höheren beruflichen Schulen.

Es kann jedoch festgehalten werden, dass den höheren beruflichen Schulen auf regionaler Ebene eine besondere Bedeutung zugemessen wird. Ein wesentlicher Grund, diese im Jahr 1997 einzuführen, war die Vorstellung der Regionen, durch sie den wirtschaftlichen Fortschritt auch außerhalb der Ballungszentren stärker fördern zu können. Das Bevölkerungswachstum, steigende Bildungserwartungen der Bevölkerung sowie neue Bedarfe der Wirtschaft in den 1990er-Jahren spielten ebenfalls eine Rolle bei ihrer Einführung. Diese regionale Verankerung führt häufig zu einer stärkeren Vernetzung mit der dort ansässigen Wirtschaft als in Ballungszentren mit großen Universitäten.

Trotz identischer gesetzlicher Regelungsgrundlagen hat sich faktisch eine Zweiteilung des Hochschulbereichs entwickelt und zu einer Abgrenzungshaltung seitens der Universitäten geführt. Die höheren beruflichen Schulen stehen vor der Herausforderung, deutlich zu machen, dass der Bachelorabschluss, der bei ihnen erworben wird, den akademischen Maßstäben der Universitäten genügt und dass gleichzeitig ein berufsbildendes Profil deutlich wird.

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[16] Die Voraussetzungen für den Erwerb dieser beruflichen Qualifikation im Handwerksbereich sind denen in Deutschland ähnlich. In der Regel ist ein beruflicher Abschluss des Sekundarbereichs mit unterschiedlich langer, fachlich einschlägiger Berufserfahrung Voraussetzung für die Zulassung zur Meisterprüfung. Die Teilnahme an Vorbereitungskursen ist ebenfalls nicht verpflichtend.

„Duale Studiengänge", die eine enge Verbindung von Arbeitsmarkt und Bildungssystem bedeuten, gibt es bislang in Polen nicht, gelten jedoch als ein attraktives Modell, das derzeit an ausgewählten Universitäten modellhaft getestet wird (z. B. Poznan University of Technology, Opole University, Poznan School of Logistics).

Zulassungsvoraussetzungen

Für den Übergang in den Hochschulbereich, d. h. zu den Bachelorprogrammen, ist ein Matura-Zertifikat erforderlich. Auch wenn grundsätzlich diese Zulassungsvoraussetzungen für alle Institutionen des Hochschulbereichs gelten, werden die höheren beruflichen Schulen aufgrund der Ausrichtung auf spezielle Fachrichtungen ihrer Programme als ein Element der Öffnung des Hochschulbereichs für eine größere Gruppe an Studierenden betrachtet.

Sekundarbildung in Polen

Die Matura kann nach drei Schuljahren in einer allgemeinbildenden Sekundarschule (*liceum ogólnokszta łcace*) erworben werden. Die berufliche Ausbildung im Sekundarbereich zielt grundsätzlich darauf, die Absolvierenden auf den Arbeitsmarkt vorzubereiten. Allerdings ist es möglich, nach vier Jahren an einer technischen Sekundarschule (*technikum*) ebenfalls die Hochschulzulassung zu erwerben, gleichzeitig mit einer beruflichen Qualifikation. Die Absolvierenden der dreijährigen beruflichen Schulen (*zasadnicza szkoła zawodowa*) erwerben eine berufliche Qualifikation für den Übergang auf den Arbeitsmarkt und haben die Möglichkeit, auf einer allgemeinbildenden Sekundarschule für Erwachsene eine Hochschulzugangsberechtigung zu erwerben. Im Schuljahr 2013/14 besuchten ca. 547.200 Schüler/-innen die 2312 allgemeinbildenden Sekundarschulen, im Vergleich zu ca. 711.300 Schülern, die 4225 berufliche Sekundarschulen (darunter auch die technischen Sekundarschulen) besuchten (EURYDICE 2014). Etwa 61 % der Schüler/-innen an den dreijährigen beruflichen Schulen lernen in Form einer Lehrlingsausbildung, d. h. auf der Grundlage eines Vertrages mit einem Betrieb und durchschnittlich zwei Tage in der Schule und drei Tage im Betrieb. Gemäß der Daten des nationalen Statistikamtes besuchten im Schuljahr 2013/14 allerdings lediglich 184.500 Schüler/-innen, sodass die absolute Zahl derjenigen, die in einer Form der Lehrlingsausbildung lernen, verhältnismäßig klein ist. Der Schwerpunkt der Ausbildungsplätze liegt im Bereich des Handwerks (REFERNET 2014).

Die sog. post-sekundaren Bildungsprogramme werden als Teil der Sekundarbildung betrachtet (im Gegensatz z. B. zu Norwegen, wo sie dem tertiären Bildungsbereich zugeordnet werden). Die Programme sind vielfältig hinsichtlich ihrer fachlichen Ausrichtung und an unterschiedliche Gruppen gerichtet, wie z. B. Absolventen der allgemeinbildenden Sekundarstufe, Absolventen einer beruflichen Erstausbildung, aber auch Erwachsene etc. Die Dauer variiert zwischen einem und 2,5 Jahren. Sie führen zu einem mittleren Qualifikationsniveau.

Dauer und Organisation der Praxisphasen

Über die regionale Vernetzung der höheren beruflichen Schulen entstehen teilweise Kooperationen, die es ermöglichen, dass Studierende Werkstätten oder Laboratorien von Unternehmen nutzen, oder sie führen zu einer Anstellung von erfahrenen Fachkräften als Teilzeitdozenten an den Schulen. Einige höhere berufliche Schulen haben mittlerweile ihr Selbstverständnis als „beruflich" qualifizierende Einrichtung gefunden, andere jedoch nicht. Ein gutes Beispiel hierfür ist die höhere berufliche Schule in Elbląg (www.pwsz.elblag.pl). Sie fördert durch zahlreiche Kooperationsvereinbarungen mit Unternehmen die gemeinsame Organisation der Praxisphasen des Studiums. Diese Vereinbarungen können den Studierenden das Finden der Praktikumsplätze erleichtern. In jedem Fall ist aber ein individueller Vertrag zwischen Studierendem und Betrieb für das 15-wöchige Praktikum erforderlich.

▶ Fazit

Die Diskussion über die Einführung von stärker arbeitsmarktorientierten tertiären, d. h. im Falle Polens, hochschulischen Bildungsprogrammen wird nun seit mehreren Jahren geführt, aller-

dings bislang ohne eine konkretes Ergebnis über ein Gestaltungskonzept und seine Umsetzung. Zwar gibt es den Vorschlag, den Hochschulbereich explizit in zwei Sektoren zu teilen, gleichzeitig gibt es jedoch Stimmen, die die derzeitige Struktur beibehalten wollen, die es ermöglicht, dass sowohl akademische als auch berufliche bzw. praxisorientierte Programme grundsätzlich von allen Hochschuleinrichtungen angeboten werden können. So bleibt das tertiäre Bildungssystem Polens formal ein sehr homogener Bereich, gleichzeitig gibt es eine große Bandbreite von beruflichen bzw. praxisorientierten Programmen. Für die Sichtbarkeit und Profilklarheit von beruflicher Bildung im tertiären Bildungsbereich ist dies sicherlich von Nachteil.

3   Zusammenfassung und Fazit

Die Vergleichsländer des Projekts, England, Irland, Frankreich, Norwegen, Polen und Österreich unterscheiden sich sowohl hinsichtlich der Struktur ihres tertiären Bildungsbereichs als auch ihres Hochschulbereichs.

Schaubild 5:
Überblick über die Struktur des tertiären Bildungssystems in den Vergleichsländern

	Universitäre Bildung	Außeruniversitäre Hochschulbildung	Höhere Berufsbildung
England	Bologna-Struktur mit Short Cycle	HNC/HND-Programme (werden der Hochschul- und der beruflichen Bildung zugeordnet)	NVQ Levels 6 to 8 (?)
Frankreich	Bologna-Struktur mit Short Cycle	BTS, DUT	Niveau 4 bis Niveau 1 des NQR
Irland	Bologna-Struktur mit Short Cycle	Higher certificate (2 years) oder andere Undergraduate-Programme	Zweijährige PLC-Kurse, apprenticeships
Norwegen	Bologna-Struktur	Programme der University Colleges	Programme der Vocational Colleges
Österreich	Bologna-Struktur	Programme der WIFI-Fachakademien	Meisterprüfung
Polen	Bologna-Struktur	Programme der State School of Higher Professional Education	–

Im tertiären Bildungsbereich sind sehr unterschiedliche Modelle und Formen arbeitsbasierter Programme zu finden. Die Bandbreite reicht von Studiengängen in Frankreich, die aufgrund ihrer organisatorischen Struktur einem ausbildungsintegrierenden Studiengang ähnlich sind und in Form von *apprentissages* zu einem hochschulischen Abschluss (BTS, DUT, LP), allerdings nicht zu einer formalen Doppelqualifikation, führen. Andererseits gibt es wie in Norwegen Ausprägungen tertiärer Bildungsprogramme, in denen lediglich in ausgewählten Fachbereichen Pflichtpraktika vorgeschrieben sind (z. B. Sozial- und Gesundheitsberufe). In Polen erfolgt die Abgrenzung zwischen akademischen und beruflichen Bildungsprogrammen entlang der Qualifikationserfordernisse des Lehrpersonals sowie der Beschreibung der Lernergebnisse, und nicht durch Praxislernen bzw. obligatorische Praktika oder berufsorientierte Curricula. Sog. duale Studiengänge werden allerdings erstmals erprobt. In Irland gibt es einen großen Bereich höherer beruflicher Bildung, mit einer großen Bandbreite hinsichtlich der Dauer von Praxislernen. Durch die staatliche Einführung der Degree Apprenticeships und die entsprechende finanzielle Förderung ist diese Lernform im hochschulischen und auch im universitären Bereich angekommen.

Die Transparenz tertiärer beruflicher Bildung in der statistischen Erfassung gem. ISCED 97

In einigen Ländern werden Programme beruflich-fachlicher Höherqualifizierung nicht zum Bildungssystem gezählt und somit auch nicht als Teil des tertiären Bildungsbereichs betrachtet. Dies gilt beispielsweise für Polen und Norwegen, die „Meisterqualifikationen" im Handwerksbereich kennen. Diese Qualifikationen sind deshalb auch nicht den nationalen Qualifikationsrahmen zugeordnet. Etwas anders ist dies in Österreich, wo die Meisterqualifikation sowie weitere berufliche Höherqualifikationen Teil des im oberen Bereich zweigeteilten nationalen Qualifikationsrahmens sind. Jedoch werden diese Daten, ebenso wie die beruflichen Fortbildungsabschlüsse in Deutschland, die nicht an einer Schule erworben werden, statistisch nicht von den OECD-Bildungsdaten erfasst.

In Frankreich gibt es in Form der BTS- und DUT-Qualifikationen, die im nationalen Verständnis hochschulisch sind, im Fall des BTS aber auch an nicht-hochschulischen Einrichtungen angeboten werden (z. B. den *Lycées*). Die formalen Zugangsvoraussetzungen sowie die mit dem Abschluss erworbenen Berechtigungen sind grundsätzlich gleichwertig, jedoch zeigen die schulischen Vorabschlüsse der Studierenden einen bildungssystematischen Unterschied, der in der internationalen Statistik nicht sichtbar ist.

In Irland, England und Frankreich gibt es zweijährige sog. Short-cycle-Programme im Hochschulbereich.

Die Transparenz von EQR-Niveau 5

Das Niveau 5 des Europäischen Qualifikationsrahmens enthält sehr unterschiedliche Qualifikationen. Diese unterscheiden sich formal sowohl im Hinblick auf die nationale Einordnung als post-sekundar bzw. tertiär als auch im Hinblick auf das Verständnis als „akademisch" bzw. „vorakademisch" oder „beruflich". Neben einer sog. Brückenfunktion wie in England und Irland haben die Niveau-5-Qualifikationen teilweise aber auch eine eigenständige Funktion im Sinne eines Abschlusses, der auf den Arbeitsmarkt führen soll, z. B. BTS in Frankreich. In einigen Ländern, wie z. B. Polen, gibt es derzeit keine Qualifikationen, die dem EQR-Niveau 5 zugeordnet werden. In Österreich werden die Qualifikationen der berufsbildenden höheren Schulen, die dem Sekundarbereich zugerechnet werden, aufgrund ihrer Doppelqualifikation (Hochschulzugangsberechtigung und berufliche Qualifikation) dem Niveau 5 zugeordnet. Allein die Tatsache, dass diese sehr unterschiedlichen Qualifikationen einem Niveau zugeordnet werden, erzeugt somit keine Transparenz. Es ist ein Verständnis ihrer Einbettung in das jeweilige nationale Bildungssystem erforderlich, um die Qualifikationen z. B. in Rekrutierungsprozessen hinsichtlich ihrer Passung in den betrieblichen Bedarf einordnen zu können.

Literatur

Arum, R.; Gamoran, A. et al. (2007): More inclusion than diversion: expansion, differentiation, and market structure in higher education. Monograph chapter in: Stratification in higher education: 1–35

Boud, D. e.; Solomon, N. e. (2001): Work-based learning: a new higher education? Buckingham, The Society for Research into Higher Education and Open University Press: 234 p.

Camilleri, A. F. e. a. (2013): Profile of Professional higher education in Europe Malta, HAPHE Consortium; EURASHE: 56

CEDEFOP (2011): Vocational education and training at higher qualification levels. Luxembourg, CEDEFOP

CEDEFOP (2014): Qualifications at level 5: progressing in a career or to higher education. Cedefop Working Paper. Luxembourg, CEDEFOP. **23:** 186

Graf, L. (2013): The hybridization of vocational training and higher education in Austria, Germany, and Switzerland. Opladen

Kyvik, S. (2009): The dynamics of change in higher education: Expansion and concentration in an organisational field. Dordrecht

Leichsenring, A.; König, M. et al. (2015): Duales Studium in Zahlen: Trends und Analysen. Bonn, BIBB: 13

Ménard, B. (2014): "Leavers from higher education : increased levels of education have not prevented a rise of unemployment " Training and Employment **111 May-June 2014**: 4

Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche (2014): The state of education 2014: costs, acrivities, results: 32 indicators of the French education system. Paris, Direction de l'evaluation de la prospective et de lan performance

Ministère de l'éducation nationale, d. l. e. s. e. d. l. r. (2015): "L'état de l'Enseignement supérieur et de la Recherche en France: 49 indicateurs " No 8, juin 2015. 2015, from http://publication.enseignementsup-recherche.gouv.fr/eesr/8/l-etat-de-l-enseignement-superieur-et-de-la-recherche-en-france-8.php

OECD (2014): Education at a Glance. Paris OECD

Powell, J. J. W.; Solga, H. (2010): "Analyzing the nexus of higher education and vocational training in Europe: a comparative-institutional framework." Studies in higher education **35**(No 6): 705–721

Shavit, Y. e.; Arum, R. e. (2007): Stratification in higher education. Stanford, Stanford University Press: 484

Sloane, P. F. E. (2000): "Berufsbildung als Allgemeinbildung in einer Wissensgesellschaft: Zur Auflösung des Gegensatzes von Berufsbildung und Allgemeinbildung in einer wissensstrukturierten Gesellschaft." In: Impulse für die Wirtschaftspädagogik, S. 37–51

Smeby, J.-C. (2015): Academic drift in vocational education ? From Vocational to Professional Education. London, 7–25

Teichler, U. (2014): Hochschulsysteme und quantitativ-strukturelle Hochschulpolitik : Diffenzierung, Bologna-Prozess, Exzellenzinitiative und die Folgen. Studienreihe Bildungs- und Wissenschaftsmanagement Münster: **16**

UNESCO (2012): International Standard Classification of Education 2011. Montreal/Canada, UNESCO Institute for Statistics: 88

III   Kurzübersichten / Fact Sheets

England

First time graduation rates 2012 und 1995 (Source: Zwischenbericht; http://www. oecd-ilibrary.org/education/education-at-a-glance-2014_eag_highlights-2014-en)	5A 1995: 42 2005: 48 2012: 55	5B 1995: 7 2005: 11 2012: 13
Tertiary Programmes ISCED 1997 (Beispiele)	5A: Bachelor's degree Master's degree	5B: National Vocational Qualification (NVQ) Level 4 und 5 Higher National Certificate (HNC) Higher National Diploma (HND) Foundation Degree (FD)
Tertiary Programmes ISCED 2011 (Beispiele)	665 Bachelor's degree 767 Master's degree	551 NVQ Level 4 HNC 554 NVQ Level 5 HND FD
Qualifications on EQF-Level 5	HND, FD, Abschlüsse im Qualifikationsrahmen QCF und im National Qualifications Framework (NQF) auf Niveaus 4 und 5	
Qualifications on EQF-Level 6	Bachelor's degree, Abschlüsse im Qualifikationsrahmen QCF und im National Qualifications Framework (NQF) auf Niveau 6	

Zwei Beispiele tertiärer beruflicher Programme		
	hochschulisch	hochschulisch/beruflich
Name	Foundation Degree (FD)	Higher Apprenticeships (HAs) (neue Bezeichnung: Degree Apprenticeships für zukünftige Programme auf EQF-Ebene 6 und 7)
EQF/ISCED 2011	EQF 5, ISCED 5B/554	EQF 5–7, ISCED 5B, 5 A/551, 554, 665
National QF		
Access Requirements	Qualifikation auf EQF-Ebene 4 (insbesondere als Anschlussmöglichkeit für berufliche Qualifikationen), Ausnahmen für ältere Bewerber möglich	i. d. R. eine Qualifikation der vorhergehenden EQF-Ebene; einige HAs erfordern Vorerfahrungen
Duration	i. d. R. 2 Jahre Vollzeit (120 ECTS); Teilzeit entsprechend länger	EQF 5: Mindestdauer ein Jahr (mind. 45 ECTS)
Provider	Hochschuleinrichtungen, Further Education Colleges (FEC)	Bildungsanbieter (NVQs),

Relation of learning places (Duration)	Bei Vollzeitstudium integrierte Arbeitserfahrung in einem Unternehmen (i. d. R. mindestens 1/6 oder 1/8 der Kursdauer)	Abhängig von dem Standard/ Framework (auslaufend) für die HA; in einigen Programmen ist auch ein individueller Zuschnitt möglich
Relation between learning institution and external partner (company)	----	Arbeitgeber: Freistellung für die Erlangung der in der HA enthaltenen Qualifikationen
Connectivity between learning content	Individuelle Regelungen der Bildungsinstitutionen/Bildungsgänge	Es gibt keine Vorschriften für den betrieblichen Teil der Ausbildung.
Qualification/Certificate	FD + Bereich (z. B. FDEng für Ingenieurwissenschaften)	Eine oder mehrere berufliche Qualifikationen und/oder einen berufsbezogenen Hochschulabschluss und/oder vollen oder intermediären Mitgliedsstatus in einer Berufsorganisation
Further access rights	Voraussetzung für die Anerkennung als FD ist eine konkrete Anschlussmöglichkeit zu einem Bacheloranschluss in maximal 1,3 Jahren Vollzeitstudium	Abhängig vom konkreten Abschluss

Frankreich

Quote der Teilnehmer/-innen in Programmen des tertiären Bildungsbereichs (in %, Auszug) (Anmerkung: Frankreich fehlt in den OECD-Statistiken über die Absolventen- quote der Erststudierenden. Um jedoch eine Vorstellung der Größenordnung zu bekommen, werden die Daten der Teil- nehmer (im Gegensatz zu den Absol- venten) aus der nationalen Statistik ver- wendet. Quelle: Ministère de l'Éducation natio- nale, de l'Enseignement supérieur et de la Recherche (2014) S. 45)	5A		5B		
		Universität		IUT*	STS**
	2000	39,2	**2000**	8,7	19,6
	2005	39,1	**2005**	8,7	19,3
	2010	35,0	**2010**	8,3	19,5
	2011	33,4	**2011**	7,7	19,1
	2012	32,1	**2012**	7,3	18,5
			* Instituts universitaires de technologie ** Sections de techniciens supérieurs		
Tertiary Programmes ISCED 1997 (aus- zugsweise)	5A Licence (Universität) Licence pro (Bachelor professional[17])		5B DUT, BTS, Brevets de maitrise		
Tertiary Programmes ISCED 2011 (aus- zugsweise)	645[18] licence (LMD), 655[19] Licence pro (im Anschluss an DUT und BTS; 1-jähriges Programm)		554[20] DUT, BTS		

[17] Quelle: ISCED 2011-Zuordnungstabelle, Achtung: anders in Cedefop-Länderchart!!! Dort 5B!!
[18] Definition: Bachelor's or equivalent level, academic
[19] Definition: Bachelor's or equivalent level, professional
[20] Definition: Short-cycle tertiary vocational education

Qualifications on EQF-Level 5	BTS, DUT	
Qualifications on EQF-Level 6	Licence, Licence professionelle	
Zwei Beispiele tertiärer beruflicher Programme		
Name der Qualifikation	Licence Pro Sog. „bac +3" Qualifikation	DUT („Diplôme Universitaire de Technologie") BTS („Brevet de Technicien Supérieur") Sog. „bac +2" Qualifikationen
EQF/ISCED-97/ISCED 2011	EQF 6, ISCED 5 A/ISCED 645	EQF 5, ISCED 5B/ISCED 554
National QF	Level II[21]	Level III
Zugangsvoraussetzungen	BTS oder DUT[22]; Dossier und Aufnahmegespräch	Baccalauréat 1. Bac gen, Bac tec, Bac pro[23] 2. Bac gen, Bac tec, Bac pro
Dauer	1 Jahr	2 Jahre
Bildungsanbieter	IUT oder Universitäten In der Form von *Apprentissage*: Betrieb und IUT	1. IUT (Instituts universitaires de technologie, eingeführt 1965) 2. STS[24] (Sections de techniciens supérieurs) In der Form von *Apprentissage*: Betrieb und STS
Anbieter von Qualifikationen	Sowohl staatliche als auch private Einrichtungen können Qualifikationen entwickeln und anbieten. Diese werden jedoch durch offizielle Gremien validiert, die sich aus Vertretern des Staates, der Arbeitgeberverbände und Gewerkschaften zusammensetzen. Nach der Validierung erfolgt die Aufnahme in das zentrale Register *Répertoire National des Certifications Professionnelles*, RNCP.	
Dauer des betrieblichen Lernens	20 % der LP-Qualifikationen werden durch *Apprentissage*-Programme erworben, d. h. 60 bis 75 % des Lernens findet im Betrieb statt. 20 % der LP-Qualifikationen werden durch *Apprentissage*-Programme erworben, d. h. 60 bis 75 % des Lernens findet im Betrieb statt. Bei hochschulischen Vorbereitungsprogrammen sind für 12 bis 16 Wochen Praktika vorgeschrieben.	23 % der DUT- und BTS-Qualifiktionen werden durch *Apprentissage*-Programme erworben (Quelle: s. Text), d. h. 60 bis 74 % des Lernens findet im Betrieb statt. Bei hochschulischen Vorbereitungsprogrammen sind für 10 bis 14 Wochen Praktika vorgeschrieben.
Verhältnis Bildungseinrichtung/Externer Partner (z. B. Betrieb)	Die Kooperationen zwischen den Bildungsanbietern und Unternehmen sind meist informelle Vereinbarungen, Kontakte, die über Jahre entstanden sind. Sie werden genutzt, um Praktikums- oder Ausbildungsplätze zu vermitteln.	
Entwicklung der Lerninhalte	Entwicklung findet im Rahmen eines zentralisierten Prozesses durch die *Commissions Pédagogiques Nationales* (CPN) für DUT bzw. der *Commissions Professionnelles Consultatives* (CPC) für BTS statt und sind landesweit gültig. Für die LP-Programme besteht ein größerer Spielraum, regionale Qualifikationsbedarfe abzudecken.	

[21] S. französischer Länderbericht S. 37 ff.
[22] Oder VAE
[23] Der Baccalaureat professional, Bac pro,
[24] *Section de techniciens supériers* (STS): Überbegriff für die unterschiedlichen Bildungsanbieter der Programme, die auf die Qualifikation BTS vorbereiten.

Qualification/Abschluss	Licence pro	1. Diplôme Universitaire de Technologie (DUT)
		2. Brevet de Technicien Supérieur (BTS)
Zugangsberechtigungen	Zugang zu universitären Master-Studiengängen, häufig fachbezogen begrenzt.	Zugang zu LP-Vorbereitungsprogrammen

Irland

First time graduation rates 2012 und 1995 (Source: Zwischenbericht; http://www.oecd-ilibrary.org/education/education-at-a-glance-2014_eag_highlights-2014-en)	5A 1995: 30 2005: 38 2012: 46	5B 1995: 15 2005: 24 2012: 23
Tertiary Programmes ISCED 1997 (Beispiele)	5A: Honours Bachelor Degree Masters Degree	5B: Higher Certificate Ordinary Bachelor Degree
Tertiary Programmes ISCED 2011 (Beispiele)	665 Honours Bachelor Degree 767 Masters Degree	544 (general orientation), 554 (vocational orientation) Higher Certificate
Qualifications on EQF-Level 5	Advanced Certificate (Post Leaving Certificate – PLC, traditional Apprenticeships, Traineeships): Berufsbildungssektor Higher Certificate: Hochschulsektor	
Qualifications on EQF-Level 6	Ordinary Bachelor Degree, Honours Bachelor Degree, Masters Degree	
Zwei Beispiele tertiärer beruflicher Programme		
	Beruflich	Beruflich
Name	Apprenticeship	PLC (zweijährig)
EQF/ISCED 2011	EQF 5, ISCED 4C/453	EQF 5, ISCED 4C/453
National QF	NFQ 6	NFQ 6
Access Requirements	Auszubildende werden vom Arbeitgeber eingestellt und anschließend bei SOLAS (Berufsbildungsbehörde) registriert	i. d. R. Leaving Certificate (Abschluss der Sekundarstufe II)
Duration	4 Jahre	2 Jahre
Provider	Praktische Phasen: Arbeitgeber, Lernphasen: Institutes of Technology (Hochschulsektor) und/oder ETB-Trainingszentren (Berufsbildungssektor)	Further Education College (FEC, Berufsbildungssektor)
Relation of learning places (Duration)	4 Abschnitte beim Arbeitgeber und 3 Abschnitte bei einem IoT und/oder Training Centre (ca. 2/3 der Zeit im Unternehmen)	Voll- oder Teilzeit an FEC, mindestens zwei Wochen Praktikum (abhängig vom Kurs)

Relation between learning institution and external partner (company)	I. d. R. außer bei Problemen der Auszubildenden eher wenig Verbindungen zwischen Betrieb und Anbietern der Lernphasen; SOLAS hat die Aufsicht über alle Phasen	
Connectivity between learning content	Die Ausbildungsstandards machen konkrete Vorgaben für die Inhalte der praktischen und der Lernphasen.	
Qualification/Certificate	Advanced craft certificate	Advanced certificate
Further access rights	Mit Leaving Certificate: Extra-Punkte bei Hochschulbewerbung durch den Berufsabschluss, Ohne Leaving Certificate: Bewerbung an Hochschulen als Erwachsene, Studierende oder über Berufsabschluss (Quote); Studienaufnahme erleichtert durch Kontakt zu Institutes of Technology während Lernphasen	Mit Leaving Certificate: Extra-Punkte bei Hochschulbewerbung durch den beruflichen Abschluss, Ohne Leaving Certificate: Bewerbung an Hochschulen als Erwachsene, Studierende oder über Berufsabschluss (Quote);

Norwegen

First time graduation rates 2012 und 1995 (Source: http://www.oecd-ilibrary.org/education/education-at-a-glance-2014_eag_highlights-2014-en)				
		1995	**2005**	**2012**
	ISCED 5A	26	41	42
	ISCED 5 B	6	2	n

Tertiary Programmes ISCED 1997 (auszugsweise)	5A: Programme der universitären Colleges und Universitäten	5B: 2-jährige Programme der universitären Colleges
Tertiary Programmes ISCED 2011 (auszugsweise)	641[25] 2-jährige Programme der universitären Colleges 645[26] Bachelor	554[27] 2-jährige tertiäre Berufsbildung der beruflichen Colleges (*Fagskoleutdanning*)
Qualifications on EQF-Level 5	5.1 Certificate of completed post-secondary VET 1 (Programme der beruflichen Colleges mit einer Dauer von 0,5 bis 1,5 Jahren) 5.2 Certificate of completed post-secondary VET 2 (Programme der beruflichen Colleges mit einer Dauer von 2 Jahren)	
Qualifications on EQF-Level 6	Partial Bachelor (2-jährige Programme der universitären Colleges) Bachelor	

[25] Definition: Bachelor's or equivalent level, academic, „insufficient for level completion"
[26] Definition: Bachelor's or equivalent level, academic, „first degree"
[27] Definition: Short-cycle tertiary vocational education, „sufficient for level completion"

Zwei Beispiele tertiärer beruflicher Programme

	universitär	außeruniversitär
Name	2-jährige Programme der universitären Colleges	2-jährige tertiäre Berufs-bildung der beruflichen Colleges (*Fagskoleutdan-ning*)
EQF/ISCED 2011	6/641	5/554
National QF	6	5
Zugangsvoraussetzungen	▶ Den erfolgreichen Abschluss des allgemein-bildenden Sekundar-programmes ▶ Die Schüler, die den Ber-ufsbildungsweg gewählt haben, können nach den beiden ersten Jahren, statt in den betriebsprak-tischen Teil weiterzuge-hen, in ein einjähriges Programm wechseln, in dem die sechs Kern-fächer, Norwegisch, Englisch, Mathematik, Naturwissenschaften, Sozialwissenschaften und Geschichte unterrichtet werden. ▶ Den Abschluss der beru-flichen Erstausbildung mit anschließendem, zu-sätzlichem Jahr, wie bei der 2. Option.	▶ Sekundarabschluss und Berufserfahrung
Dauer	2 Jahre	2 Jahre
Anbieter	University Colleges	Berufliche Colleges
Verhältnis der Lernorte (Dauer)	Keine Pflichtpraktika	Teilweise Praktika, dann meist mit einem Umfang von 20 bis 30 % der Pro-grammdauer
Verhältnis Bildungseinrichtung/externer Partner (z. B. Betrieb)	Keine formalen Kooperatio-nen	Teilweise Kooperationsver-einbarungen
Verzahnung der Lerninhalte	Betreuung durch Tutoren bei freiwilligen Praktika	Betreuung durch Tutoren bei freiwilligen Praktika
Qualifikation/Abschluss	Zertifikat	Zertifikat
Zugangsberechtigungen	Drittes Bachelorjahr	----

Österreich

Erstausbildungsabschlüsse auf ISCED-97-Niveau 5 A und 5B (in %) Quelle: OECD 2014	5A		5B	
	1995	10	1995	k. A.
	2005	20	2005	8
	2012	39	2012	12
Tertiary Programmes ISCED 1997 (auszugsweise)	5A Bakkalaureats-, Diplom- und Magisterstudium an Universitäten und Fachhochschulen; postgraduale Universitätslehrgänge		5B Meister- und Werkmeisterausbildung, Bauhandwerkerschulen, Kollegs, Akademien, universitäre Lehrgänge	
Tertiary Programmes ISCED 2011 (auszugsweise)	665 – Bachelorstudium 766 – Diplomstudium 767 – Masterstudium, universitärer Lehrgang (postgradual) 864 – Doktoratsstudium		554 Meisterschule, Werkmeister- und Bauhandwerkerschule, Kollegs, Akademien, Aufbaulehrgänge, berufsbildende höhere Schule – Jahrgang 4–5	
Qualifications on EQF-Level 5	Noch keine Zuordnung erfolgt; Referenzqualifikationen auf Niveau 5: berufsbildende höhere Schulen			
Qualifications on EQF-Level 6	Noch keine Zuordnung erfolgt; Referenzqualifikationen auf Niveau 6: Meister, Ingenieur			
Zwei Beispiele tertiärer beruflicher Programme				
Name der Qualifikation	Duale Fachhochschulstudiengänge		Bilanzbuchhalter (BBH)-Qualifikation	
EQF/ISCED 97/ISCED 2011	► EQR: Bachelor – Niveau 6, Master – Niveau 7 ► ISCED 97: 5A ► ISCED 2011: 665 – Bachelor, 767 – Master		► EQF: Zuordnung zum NQR noch nicht erfolgt; ► Nicht in ISCED klassifiziert, da es keine formale Ausbildung zum BBH gibt	
National QF	Zuordnung noch nicht erfolgt		Zuordnung noch nicht erfolgt	
Access Requirements	Zugangsvoraussetzung zur Ausbildung: ► Hochschulzugangsberechtigung (Reifeprüfungszeugnis, Reife- und Diplomprüfungszeugnis, Berufsreifeprüfung, Studienberechtigungsprüfung) ► Beruflicher Erstausbildungsabschluss und Zusatzprüfung		Zugangsvoraussetzung zur Fachprüfung zum Erwerb des Qualifikationsnachweises: ► Das Bilanzbuchhaltungsgesetz schreibt weder eine bestimmte Ausbildung oder einen Kursbesuch noch den Nachweis von Praxis als Voraussetzung für den Antritt zu BBH-Fachprüfung vor, somit gibt es keine speziellen Zugangsvoraussetzungen. Zugangsvoraussetzung zu den (nicht verpflichtenden) Vorbereitungskursen: ► Der jeweilige Kursanbieter definiert die Zugangsvoraussetzungen. Zumeist müssen die Teilnehmenden über Fachkenntnisse verfügen, die dem Niveau der Buchhalter-Prüfung entspricht.	
Duration	Das Bachelorstudium dauert sechs Semester, das daran anschließende Masterstudium zwei bis vier Semester.		Die Kursdauer wird vom jeweiligen Kursanbieter festgelegt.	

Provider of training	Fachhochschulen	Verschiedene Anbieter im nicht-formalen Bildungskontext (Erwachsenen- bzw. Weiterbildungsbereich)
Awarding bodies	Fachhochschulen	Die Fachprüfung für Bilanzbuchhalter fällt in die Zuständigkeit der Wirtschaftskammer Österreich. Die bei den regionalen Wirtschaftskammern angesiedelten Meisterprüfungsstellen sind für die Organisation und Durchführung der Prüfung zuständig. Es ist aber auch möglich, sich Teile der Prüfung, die an EB-Einrichtungen erworben wurden, auf die Fachprüfung anrechnen zu lassen.
Duration of work-place learning	Im Rahmen von dualen Fachhochschul-Studiengängen wechseln sich Theoriephasen (an der Fachhochschule) mit Praxisphasen (in Unternehmen) ab. Die Ausgestaltung der Dualität obliegt dabei der Fachhochschule – es gibt keine spezifischen Vorschriften, etwa zum Ausmaß der Praxisphasen.	Der Erwerb der BBH-Qualifikation setzt keine spezifische Ausbildung voraus. Daher gibt es auch keine arbeitsplatzbezogenen Lernphasen. Vielmehr findet der Erwerb der für die Prüfung erforderlichen Fachkenntnisse und Fertigkeiten am Arbeitsmarkt statt. Zusätzlich können Vorbereitungskurse in diversen EB-Einrichtungen besucht werden.
Relation between learning institution and external partner (company)	Das Verhältnis von Theorie- und Praxisphasen ist abhängig von der konkreten Ausgestaltung des Studienganges.	---
Development of curricula	Die Studienpläne werden von der jeweiligen Fachhochschule gemeinsam mit Partnerunternehmen erstellt.	Die Inhalte der Vorbereitungskurse werden vom jeweiligen Anbieter definiert. Sie orientieren sich an den Inhalten der Fachprüfung. Die Fachprüfung ist im Bilanzbuchhaltungsgesetz, in der Gewerbeordnung sowie in der Bilanzbuchhaltungsberufe-Prüfungsordnung geregelt.
Financing	Der Besuch von Fachhochschul-Studiengängen ist zumeist gratis. Einige Fachhochschulen verlangen jedoch eine Studiengebühr in Höhe von etwa EUR 370,- pro Semester.	Die Vorbereitungskurse sind von den Teilnehmenden zu zahlen. Die Höhe der Kurskosten wird vom jeweiligen Anbieter festgelegt. Für die Absolvierung der Fachprüfung fällt eine Prüfungsgebühr von rund EUR 500,- an.
Qualification/Certificate	Bachelor Master	Bilanzbuchhalter/in
Further access rights	Der Bachelor ermöglicht den Zugang zu einem Masterstudium. Dieses wiederum ermöglicht den Zugang zu einem PhD-Studium an einer Universität.	Tätigkeit als (un-)selbstständige/r Bilanzbuchhalter/in

Polen

First time graduation rates 2012 und 1995 (Source: Zwischenbericht; http://www.oecd-ilibrary.org/ education/education-at-a-glance-2014_eag_highlights-2014-en)		**1995**	**2005**	**2012**
	ISCED 5A	34	47	53
	ISCED 5 B	k. a.	n	1

Tertiary Programmes ISCED 1997 (Beispiele)	5A: Licencjat, Inzynier	5B: –
Tertiary Programmes ISCED 2011 (Beispiele)	Licencjat, Inzynier	–
Qualifications on EQF-Level 5	keine	
Qualifications on EQF-Level 6	Licencjat, Inzynier	

Zwei Beispiele tertiärer beruflicher Programme

	University	Non-university
Name des Bildungsgangs	Mechanical Engineering and Applied Computer Science	Mechanical Engineering
EQF/ISCED 2011	Level 6 EQF	Level 6 EQF
Zugangsvoraussetzungen	matura certificate	matura certificate
Dauer	Licencjat: 6 Semester, Inżynier: 8 Semester	Licencjat: 6 Semester, Inżynier: 8 Semester
Verhältnis der Lernorte (Dauer)	The majority of the classes planned in the study programmes take place on HEIs' campuses. Nevertheless there are some activities, in particular within the program of studies at the State Schools of Higher Vocational Education which are held in the enterprises cooperating with those schools.	
Verhältnis Bildungseinrichtung/externer Partner	practical learning phases in forms of laboratories, student projects and internships (100/240 ECTS, 15 ECTS for the internship); cooperation on the internships, consultation for the final projects of the students; usually only research based cooperation without formal contracts	practical learning phases in forms of laboratories (founded by industry at school or in companies) and internships (109/240 ECTS, 30 ECTS for the internship); schools sign many agreements with companies every year
Verzahnung der Lerninhalte	Academic program: 10-week internship to see the practical part of the production as addition to the theoretical part	Practical/vocational program: High standard study programmes at school connected with a 15-week integrated student placement to study and deepen the practical skills and to prepare for the professional live
Qualifikation/Abschluss	*Licencjat, Inżynier*	*Licencjat, Inżynier*
Zugangsberechtigungen	second cycle studies (magister or magister inżynier)	second cycle studies (magister or magister inżynier)

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Higher Vocational Education and Training in England

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Initials, acronyms and definitions used in the report

Initials and acronyms used in the report

ACCA	Association of Chartered Certified Accountants
BIFM	British Institute of Facilities Management
BTEC	Business and Technology Education Council (now a brand within Edexcel/Pearson)
ECTS	European Credit Transfer and Accumulation System
ECVET	European Credit System for Vocational Education and Training
EFA	Education Funding Agency
EQF	European Qualifications Framework
F-EHEA	Framework of the European Higher Education Area
FD	Foundation Degree
FE	Further education
FHEQ	Framework of Higher Education Qualifications
FT	Full-time
GCE	General Certificate of Education (the upper secondary certificate)
GCSE	General Certificate of Secondary Education (the lower secondary certificate)
HA	Higher Apprenticeship
HE	Higher education
HEFCE	Higher Education Funding Council for England
HNC/D	Higher National Certificate/Diploma
ISO17024	International Standards Organisation standard for the certification of persons
NEET	Not in employment, education or training (normally in relation to the 16–19 age-group)
NOS	National Occupational Standards
NQF	National Qualifications Framework (refers to a specific framework in England)
NVQ	National Vocational Qualification
PT	Part-time
OCR	Oxford, Cambridge and RSA Examinations
Ofqual	Office of Qualifications and Examinations Regulation
QAA	Quality Assurance Agency for Higher Education
QCF	Qualifications and Credit Framework (discontinued 2015)
RQF	Regulated Qualifications Framework (introduced 2015)
SFA	Skills Funding Agency
SSC	Sector Skills Council
VET	Vocational education and training

Terminology

Terms in the UK education sector can be notoriously imprecise (or are given specific definitions for particular purposes, for instance the definitions of Award, Certificate and Diploma in the former QCF). These are commonly-used definitions for terms used in the report.

Access	An Access course is a programme, normally at EQF level 4, designed specifically to provide entry to higher education (sometimes linked to an individual degree programme) or to a professional training programme. In Scotland, Access levels are the same as the Entry levels in England (EQF level 1 and below).
Award	'Award' can be used as a general synonym for qualification (or as a verb e. g. to award a qualification), or in the former QCF specifically to refer to a qualification of 6 ECTS/ECVET credits or less.
Certificate	'Certificate' is used to refer (a) to a qualification, sometimes with a connotation of being shorter or at a lower level than a related diploma; (b) the piece of paper denoting achievement of a qualification, as in for instance a degree certificate; and (c) in the former QCF, a qualification of over 6 and up to 18 ECTS/ECVET credits.
College	A college is normally an educational institution that takes students from the age of 16 or above, e. g. further education college, sixth-form college, higher education college, or a college (constituent part) of a university. Some, particularly private, schools use the title 'college' e. g. Eton College or King's College Taunton.
Degree	The title 'degree' is reserved for qualifications awarded by institutions with degree-awarding powers, specifically foundation (short cycle), bachelor's (first cycle), master's (second cycle) and doctoral (third cycle) degrees.
Diploma	A qualification at any level, sometimes indicating greater length or a higher level than a certificate. In the former QCF, Diploma refers to a qualification of greater than 18 ECTS/ECVET credits at any level. There is also a specific series of qualifications called (14–19) Diplomas designed for vocational preparation in schools and colleges.
Foundation	The term 'foundation' is used in several contexts to describe programmes and qualifications at different levels, and on its own has no specific meaning. A foundation course (not foundation degree) in a university can be at EQF level 4.
Further	Further education generally refers to education post-16 that takes place outside of schools and universities or other institutions of higher education. FE colleges can provide programmes at all levels of the EQF, though not normally at level 8.
Higher	Higher education refers to education at EQF level 5 and above (level 4 and above in the English system) that is validated by degree-awarding institutions; sometimes it is used more loosely to mean all education at level 5 and above. Higher as applied to certificates and diplomas is a relative term and does not imply higher education level.
Module	A discrete part of a qualification or programme, normally with the implication of being able to be taught and assessed separately. See also 'unit'.
Occupational	Relating to work. The term 'occupational qualification' is sometimes used to denote a qualification based on demonstrating competence at or for work, e. g. an NVQ or NVQ successor.

Professional	Loosely, relating to work; more specifically, relating to occupations that normally require education at EQF level 5 or higher, and have some form of recognised qualified status. A professional body is the governing body (association or independent regulator/registration body) for a profession, membership of which may be voluntary or mandatory in order to practise.
Secondary	Secondary education is the phase between ages 11 and 16 or 18. Classes at 16+ in schools and sixth form colleges are generally referred to as upper secondary education; outside, as further education.
Sixth form	The classes in a school, or a separate college, providing GCE A-levels and similar provision, normally for 16–18-year-olds.
Tertiary	Traditionally, the tertiary phase in the UK referred to education after the age of 16, but not including higher education; a tertiary college is an institution that provides both general (GCE/GCSE) and vocational education post-16. The term is now used variably: for this original purpose, to refer to all post-16 or post-18 education outside of schools, or specifically to higher-level education.
Unit	A discrete part of a qualification or programme, normally with the implication of being able to be taught and assessed separately (similar to module, though some programmes distinguish teaching modules from assessment units). In the former QCF, a unit needed to be capable of being certificated in its own right.
University	The title 'university' in the UK is conferred by Royal Charter, order of the Privy Council, or Act of Parliament, and restricted to degree-awarding institutions.
Vocational	Relating to work. In its strict sense, a vocation is a 'calling' or occupation that a person has a particular aptitude for and predisposition towards. In relation to education and qualifications, 'vocational' can be used in a broad sense to mean any work-related programmes, to refer to work-related provision outside of universities (VET), or sometimes to contrast with 'professional' to mean lower-level or less well-defined occupations and qualifications. The term 'vocationally related qualification' has sometimes been used to refer to non-HE work-related qualifications that are designed to be taken before entering the workplace.

Part 1: Higher education and training in England

1.1 The English education system

▶ **Education to age 16**

English education up to age 16 is commonly divided into a primary phase, accommodating ages 5–11, and secondary, from 11 onwards. A small and declining minority of provision is divided into primary, middle (9–14), and secondary phases. Each phase involves attending a separate school or division of a combined school. Schools may be under the control of local government organisations, other public or charitable (including church) interests, or operated privately on a grant-aided or fee-paying basis. It is also permissible for parents to educate their children at home, subject to certain controls. Recent legislation has made it possible for children aged 14–16 to attend approved further education (FE) colleges. At present, only a few colleges have sought permission to enrol under-16s directly, although more provide vocational courses for school-based learners.

Most school pupils start working towards certificates at age 14. The majority follow the general education route, leading to the General Certificate of Secondary Education (GCSE) in several subjects, each of which is examined and graded; higher grades are equivalent to EQF level 3[28] and lower grades level 2. Alternative routes are available leading to vocationally-related diplomas at levels 2 and 3 or a variety of qualifications in the Foundation Learning Tier (levels 1 and 2); these can also be combined with GCSEs. Depending on the availability of suitable provision, learners who are capable of doing so are able to start studying towards level 4 qualifications pre-16.

▶ **Education and training at 16+**

At the age of 16, young people may leave full-time education but must stay in some form of education and training until 17 (18 from 2015). A wide range of options are available for the 16–18 phase. Nearly 50 % of 16-year-olds continue towards the General Certificate of Education at Advanced level (GCE A-level)[29] at level 4, which is normally taken over two years and acts as the main route into higher education. Five 'good' (grade A*-C) passes at GCSE are typically needed to start an A-level course. A-levels are taken in separate subjects, with a majority of A-level candidates taking three.[30] Other mainstream options include vocationally-related diplomas in schools and colleges, full-time vocational courses at colleges, and apprenticeships; these latter combine on-the-job training with a part-time course at a college or training provider. Vocational routes lead to qualifications at any level between 1 and 4 (3 or 4 for apprenticeships), in a few cases with direct progression from level 4 to higher-level provision. Recently there has been a trend for already-employed learners of all ages to enrol in apprenticeship programmes with their existing employer in order to access training.

A-levels are commonly perceived as having higher status than vocational routes, principally because they provide the main route into higher education. Attempts to increase the 'parity of esteem' between the two routes have been largely unsuccessful, mainly because vocational programmes have a significantly lower progression rate into higher education and higher-level occupations; 16-year-olds with better GCSE results normally opt for A-levels, and the information available to them about alternatives can be limited and confusing. Some level 4 vocational programmes, such as apprenticeships and work-based routes in engineering and accountancy, are

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[28] All references to qualification levels and credit in Part 1 of the report are to EQF levels and ECTS/ECVET credit except where stated. English level 3 is equivalent to EQF level 4, and English levels 4 and 5 can be interpreted as 'lower' and 'upper' sub-levels of EQF level 5. Credits in the UK systems are normally regarded as half the value of those in ECTS and ECVET.

[29] Many 16/17-year-olds initially work towards intermediate certificates (GCE AS-level), taken in the first year.

[30] Gill, T. 2012. Uptake of GCE A level subjects 2011. Cambridge: Cambridge Assessment.

perceived as having high status because of the career opportunities they provide; recent efforts to improve the image of apprenticeships have focused on these kinds of career and progression opportunities.

The range of institutions involved in full-time 16–18 education and training include schools, sixth form colleges (institutions focusing principally on 16–18 general education), and FE colleges (independent but mainly publicly-funded corporations that provide a broad range of full- and part-time programmes for young people and adults). Other than vocationally-related diplomas, which can be delivered in schools, vocational courses are primarily provided by FE colleges, independent training organisations, and in a few cases by employers directly.

The school and vocational qualifications system in England is regulated by an independent public body, the Office of Qualifications and Examinations Regulation (Ofqual), via the new Regulated Qualifications Framework (RQF)[31] [formerly the Qualifications and Credit Framework (QCF) and residual National Qualifications Framework], described in more detail in Part 2. Ofqual does not award qualifications itself, but approves and monitors other organisations which do so. Many of these awarding organisations (of which there are currently 176) act only as qualification awarding bodies, although some are professional or industry bodies or educational institutions. Most awarding organisations operate by approving and overseeing other organisations – principally educational institutions, training providers and employers – to act as 'centres' responsible for the delivery and assessment of specific qualifications.

Industry and social partners, including employers, professional and industry bodies and trade unions, are widely involved in the development of vocational qualifications; they may initiate and design qualifications themselves, or act as advisers and consultees when qualifications are developed by awarding bodies. Vocational qualifications may also be endorsed by the relevant Sector Skills Council (SSC); SSCs are government-licensed organisations representing employers, professions, employee and educational interests for industry sectors, responsible among other things for developing national occupational standards (NOS)[32] for their area of activity.

▶ Higher-level education and training[33]

Approximately 37 % of young people in England progress to education and training at level 5 and above before they reach the age of 21, and 54 % have experienced programmes at this level by the age of 60.[34] The majority of higher-level provision can be divided into (a) higher education (HE), leading to qualifications awarded or validated by universities and other HE institutions with degree-awarding powers (of which there are 138 in England); and (b) higher vocational education and training (higher VET), principally leading to certification by vocational awarding bodies. The two parts of the sector overlap and are defined differently for different purposes; for instance, 5.6 % of HE provision is delivered in FE colleges via partnership and validation arrangements, while some HE institutions offer qualifications validated or licensed by VET awarding bodies, in particular Higher National Certificates and Diplomas (HNC/Ds) at level 5. There is also a growing private HE sector, where most providers lack degree-awarding powers

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[31] The RQF was introduced in 2015: see https://www.gov.uk/government/consultations/after-the-qcf-a-new-qualifications-framework (last accessed 13.10.2015).

[32] See UKCES, *National Occupational Standards Quality Criteria* 2011, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304238/nos-quality-criteria-2011.pdf accessed: 01.08.2016

[33] In the UK, the term 'tertiary' is not widely used; it can be applied to any post-school education. A tertiary college in England is an institution that provides both general and vocational education primarily for learners in the 16–19 age-range, traditionally in a local authority area where school provision does not extend beyond age 16 (see http://tertiarycolleges.org.uk, last accessed 12.12.2014).

[34] Department for Business, Innovation and Skills Statistical First Release: Participation rates in higher education: academic years 2006/2007–2011/2012. The figures are based on 2010–11, as the latest available figures for early progression are likely to be unrepresentative due to the effects of changes in course fees.

and offer HNC/Ds or qualifications validated by other institutions. HE provision ranges from full- and part-time courses in traditional academic disciplines through degrees and diplomas designed for entry to specific professions, occupations and industries, to mainly part-time and work-based programmes geared to people in work. These latter span short certificate courses (e.g. 20 ECTS) at level 5 through to master's degrees and doctorates designed for senior managers and professionals. Table 1 summarises the number of students in English higher education programmes, including those in FE colleges, in 2012/13.

Table 1

Students in English higher education 2012/13

	Short cycle EQF level 5	First cycle EQF level 6	2nd/3rd cycle EQF levels 7/8	Total
Full-time	80,500	1,082,780	245,060	1,408,340
Part-time	246,995	213,215	202,565	662,770
Total	327,495	1,295,995	447,625	2,071,110

Source: Higher Education Statistics Agency SFR197: Higher education student enrolments and qualifications obtained at higher education institutions in the United Kingdom for the academic year 2012/13. Figures are rounded to the nearest 5.

While the introduction of bachelor's degrees in non-traditional or perceived lower-status vocational areas (e.g. golf course management or beauty therapy) has attracted some scepticism, there is no major difference in the way that professional/vocational and purely academic degrees are perceived. Some professional degrees such as medicine, dentistry, law and architecture are held in particularly high regard and, particularly at the most sought-after institutions, are among the most competitive to which to gain entry. In general, HE qualifications tend to be more highly regarded than those in the higher VET system, though some higher VET qualifications are held in similar esteem to HE qualifications at the same level (the aforementioned HNCs and HNDs are a good example).
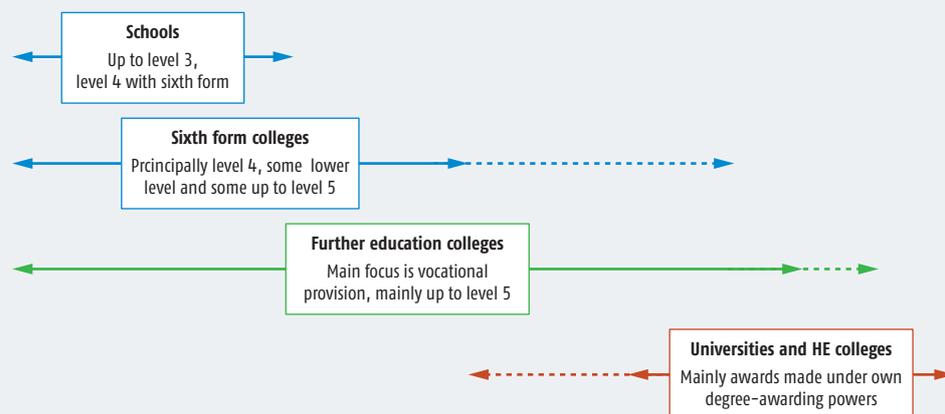
Higher VET outside of HE includes a large and diverse range of vocational and professional programmes that are designed to prepare people for careers and jobs, provide specific skills and ongoing development for people in work, and support career progression. These programmes typically lead to qualifications that were formerly in the Qualifications and Credit Framework (QCF), and will now be in the RQF (see Part 2); these are provided in FE colleges as well as, to a lesser extent, by HE institutions, training providers and directly by some employers for their staff. In 2012/13, 115,260 certificates at EQF level 5 and above were awarded in the sector (including in Wales and Northern Ireland), of which 60,000 were QCF Diplomas (qualifications of over 18 ECTS/ECVET credits).[35] A recent trend has been for vocational programmes, including some higher-level apprenticeships, to lead to HE qualifications rather than awards in the vocational system; this has been aided by increasing flexibility in the HE system, the introduction of foundation degrees (a short cycle, work-related qualification), and the higher recognition and perceived status attached to a university qualification. In 2012/13, FE colleges had 119,040 enrolments for HE-validated programmes, compared with 52,940 for non-HE higher VET.

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[35] Ofqual Statistical Release 14/5492: Annual qualifications market report England, Wales and Northern Ireland 2012/13, spreadsheet statistics for Figure 49. The figures for England will be approximately 8% less than those quoted.

Entering many higher-level occupations across the UK involves gaining qualified status through professional associations or regulatory bodies.[36] Professional bodies are widely involved in accrediting degree and higher vocational courses as meeting their requirements, and some also develop their own courses and license other organisations to run them; this may be associated with, or independent from, the university or Ofqual systems. Many professions also operate their own assessments for final sign-off for qualified status. The role of other industry and social partners in developing higher VET qualifications is broadly the same as that described for vocational provision at the lower levels. Beyond any requirements for professional accreditation, in HE the involvement of external partners is at the discretion of the institution; employer involvement has

Figure 1

Qualifications and levels in the English education system.

Eng.	EQF	General (NQF*)		Vocational (QCF/NQF*)	Awards, certificates and diplomas in the QCF*	Vocational qualifications in the NQF*	Non-framework qualifications	Higher (FHEQ)
8	8							Doctorate
7	7							Master's degree, postgraduate certificate and diploma
6	6							Bachelor's degree
5	5			BTEC Higher National Diploma				Foundation degree, diploma of higher education, Higher National Diploma**
4				BTEC Higher National Certificate				Certificate of higher education, Higher National Certificate**
3	4	GCE A-level	Advanced Diploma	BTEC National Certificate/Diploma				Access and Foundation courses
2	3	GCSE (grades A–C)	Higher Diploma	BTEC First Certificate/Diploma				
1	2	GCSE (grades D–G)	Foundation Diploma	BTEC Introductory				
E3	1	Foundation learning and basic skills certificates						
E1–2	–							

Schools
Up to level 3, level 4 with sixth form

Sixth form colleges
Prcincipally level 4, some lower level and some up to level 5

Further education colleges
Main focus is vocational provision, mainly up to level 5

Universities and HE colleges
Mainly awards made under own degree-awarding powers

* These will now be in the RQF: see Part 2.
** HNCs and HNDs are currently regarded as part of both the higher education and vocational systems, according to their awarding arrangements (see page 57f.).

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[36] The term 'profession' is used loosely to refer to higher-level occupations that commonly (but not always) have some form of entry-requirement set by a governing body.

been required in the development of foundation degrees, and vocationally-oriented programmes are often developed in conjunction with local or sectoral employers, or to meet the needs of a specific employer.

Figure 2
Simplified progression routes in English education.
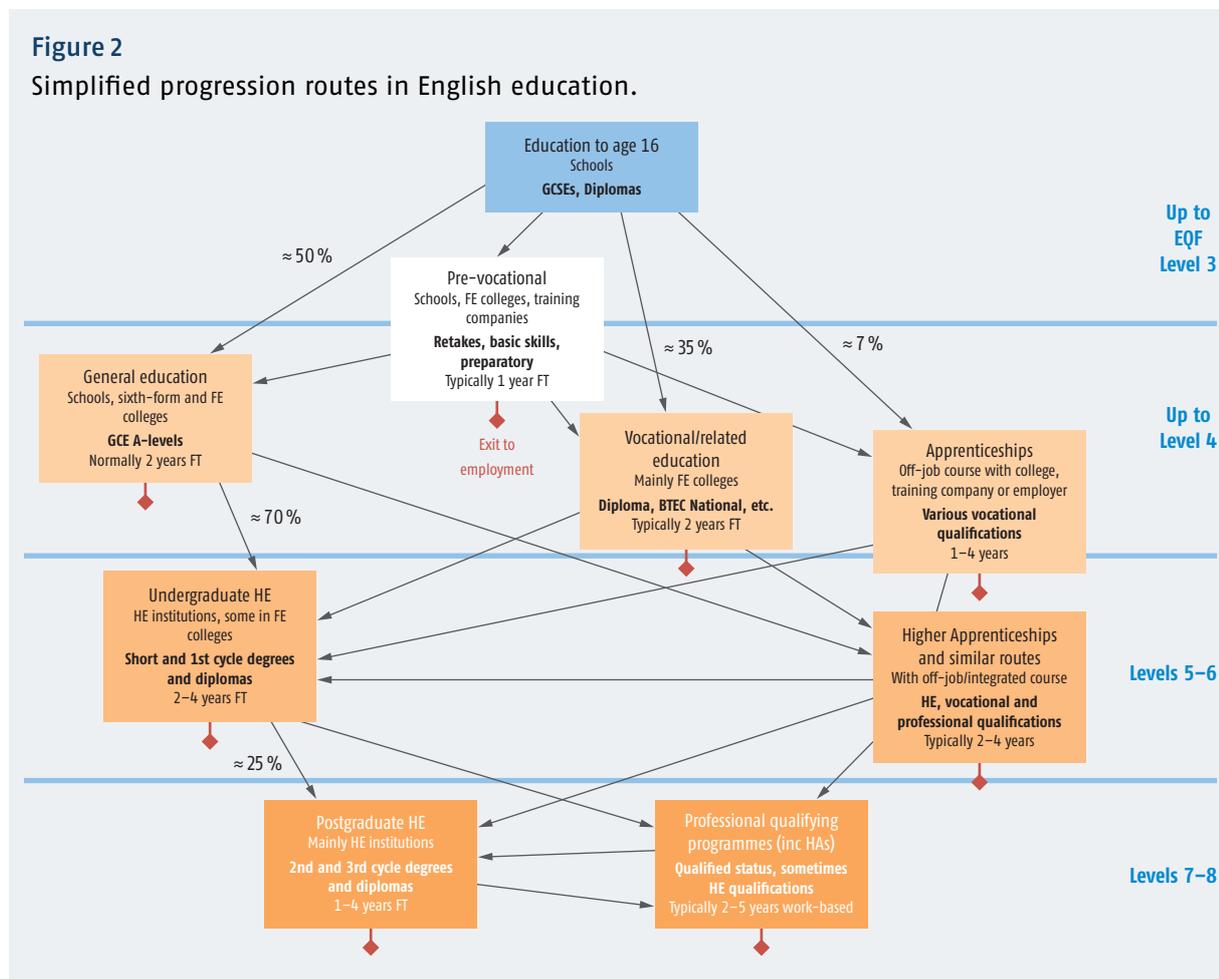
1.2 Programmes and qualifications at EQF levels 5–7

This section outlines the main qualification and programme types in the higher education and higher VET sectors in England, excluding doctorates. Specific examples of programmes that include work-based learning are provided in section 1.3.

► Funding

Universities and other higher education institutions are principally funded through student fees and via the Higher Education Funding Council for England (HEFCE), which provides allocations for student numbers, research and capital works. Institutions may also bid for research grants from the Research Councils and charitable or commercial sources, and derive income from commercial training, research, consultancy and knowledge transfer. Further education colleges receive funding from the Skills Funding Agency (SFA) with respect to learners aged over 18, and the Education Funding Agency (EFA) for 16–18s. Those offering HE provision are also eligible for HEFCE funding, either directly or via their validating HE institution. Colleges charge fees to students not eligible for fully-funded places, and may also provide training on a commercial basis. Approved non-college training providers can also access SFA and EFA funding.

Funding for the off-job element of apprenticeships (i. e. not the employment costs) is provided by the SFA and routed via employers; currently this is restricted to paying for VET (not HE or professional body) qualifications for apprentices up to the age of 24. A less restrictive apprenticeship funding regime is expected as apprenticeships move to new employer-led specifications, with two-thirds funding for all qualifications (to a maximum agreed for each occupational area) proposed from 2017. Apprentices must be employed, and paid at least the national minimum wage (a lower rate, currently £2.73/€3.41 per hour, can be paid to apprentices aged under 19 and all apprentices in their first year).

Students on undergraduate (i. e. level 5 and 6) programmes are normally eligible for financing in the form of a student loan, provided that they have not previously completed a programme at the same or a higher level. Grants to cover part of the costs are also available to students from lower-income families. Loans start having to be repaid when the ex-student's gross income goes above a certain level, currently £21,000/€26,250 per year. Career development loans can be obtained for some other courses, including level 7 courses; repayments start a month after the end of the course regardless of income (a limited system of student loans is currently planned for master's degrees). Other sources of funding include bursaries and grants provided by institutions; specific government funding sources, mainly in health, social work and education; sponsorship by employers, both for existing employees and sometimes for potential recruits; and self-funding. Beyond the undergraduate and postgraduate distinction, funding does not normally discriminate by type of qualification. In practice, full-time undergraduate programmes are more commonly financed by student loans, while programmes for existing workers are commonly paid for by the employer or by the individual if self-employed.

▶ Qualifications awarded and validated by higher education institutions

The following are the main qualification types at levels 5–7 that are made under the authority of institutions with degree-awarding powers. These qualification titles are fairly consistent across institutions. Other HE qualification types and titles are in use on a smaller scale and tend to vary between institutions.

The content of HE programmes is determined by institutions individually, taking into account any relevant QAA subject area benchmark statements and professional bodies' requirements for course recognition. It is common for universities to work with or consult professional bodies and employers in developing professionally- and vocationally-oriented programmes.

Many HE institutions use a system of modules and credit. This can support choice within programmes; enable students to switch between full- and part-time modes; enable qualifications to be built up over time (there is normally a limit, typically from seven to 16 years for a bachelor's degree); and enable qualifications to 'nest' within one another, so that a student leaving before achieving a full degree can be awarded a certificate or diploma depending on the components achieved. Many vocationally-oriented programmes also allow credit for previous learning, including from informal (i. e. work-based or other previously unaccredited) sources.

Certificate of Higher Education

The Certificate of HE is equivalent to the first year of a three-year bachelor's degree, and may be taken over one academic year full-time or, typically, two years part-time. A significant application is to provide a first step into higher education for mature entrants, either as a route to further study or to support entry or development in an occupation.

Level and credit EQF level 5/FHEQ level 4 (partial short cycle); 60 ECTS credits.

Designation CertHE (in subject-area).

Admission requirements Typically a qualification at EQF level 4; exemptions may be available for mature entrants.

Uptake (certificates awarded) 22,060 in 2012/13.[37]

Mode Full- or part-time, including distance learning.

Diploma of Higher Education

The Diploma of HE is nominally equivalent to the first two years of a three-year bachelor's degree, and may be taken over two academic years full-time or, typically, four years part-time. The DipHE has declined in recent years due to the upgrading of courses to bachelor's degrees (e. g. nursing, which had used the DipHE extensively, moved to all-graduate entry between 2008 and 2013), and substitution by foundation degrees.

Level and credit EQF/FHEQ level 5 (short cycle); 120 ECTS credits.

Designation DipHE (in subject-area).

Admission requirements Typically a qualification at EQF level 4; exemptions may be available for mature entrants. Some DipHE programmes allow direct access into the second year for holders of CertHE, HNC or equivalent qualifications or experience.

Uptake (certificates awarded) 20,255 in 2012/13.

Mode Full- or part-time, including distance learning.

Foundation Degree

The foundation degree is (like the DipHE) nominally equivalent to the first two years of a three-year bachelor's degree. It was introduced in 2001/2 as a work-related programme developed by universities in conjunction with employers or professions.[38] In addition to higher education institutions, four FE colleges currently have authorisation to award foundation degrees directly.

Level and credit EQF/FHEQ level 5 (short cycle); 120 ECTS credits.

Designation FDA (arts), FDSc (sciences) (in subject-area) or field-specific title, e. g. FDEng.

Admission requirements Typically a qualification at EQF level 4; exemptions may be available for mature entrants. Some foundation degree programmes allow direct access into the second year for holders of CertHE, HNC or equivalent qualifications or experience. FDs are particularly geared to applicants with vocational qualifications at level 4.

Uptake (certificates awarded) 25,240 in 2012–13, a slight decrease from a peak of 27,000 in the previous two years. Current enrolments suggest that numbers will fall slightly for the next two years; it is unclear whether this is a temporary or permanent trend.

Mode Full- or part-time; full-time programmes are required to have integrated work experience, which may be limited to a placement module in each year (typically a sixth or an eighth of the course) or comprise a longer period of employment. Work experience must have clear learning objectives, and normally contributes to formal assessment for the degree. Additional requirements for programmes to be classified as FDs rather than DipHEs include adequate em-

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[37] All HE statistics in this section are provided by the Higher Education Statistics Agency (HESA): personal correspondence 23.09.2014.

[38] Lee Harvey's 2009 literature review for Foundation Degree Forward provides a summary of developments, research and reactions in relation to FDs: https://www.heacademy.ac.uk/sites/default/files/first_year_experience_full_report.pdf, accessed: 01.08.2016.

ployer support and involvement and a clear progression route to a bachelor's degree that does not involve more than 1.3 years of full-time (or equivalent part-time) study.[39]

Bachelor's Degree

The bachelor's degree is the most common programme entered after upper secondary education, and accounts for over half of all HE students. In addition to standard three-year, full-time courses, a wide range of other modes are used including longer professional courses (e. g. medicine and dentistry, but see below); sandwich courses (typically with an additional year in industry); full-time programmes with shorter work placements; part-time and distance programmes, sometimes linked to the student's work; and top-up programmes for people who have completed short-cycle or equivalent qualifications, or can demonstrate equivalent learning.

First degrees in medicine, dentistry and veterinary medicine are designated as bachelor's degrees (e. g. MB/ChB, BDS, BVM, BVSc) and included in the statistics above, but they follow a similar pattern to integrated master's degrees (see below) and are regarded as being at level 7. The BArch (architecture), which used to follow this pattern, has been split into separate bachelor's and master's degrees.

Level and credit EQF/FHEQ level 6 (first cycle); 180 ECTS credits over levels 5 and 6.

Designation BA (arts), BSc (sciences), or field-specific titles e. g. BEd (education), BMus (music), LLB (law) etc; see note below about medical, dental and veterinary degrees.

Admission requirements A qualification at EQF level 4, normally with more stringent requirements for grades and volume of learning than for entry into level 5 higher education qualifications.

Uptake (certificates awarded) 388,030 in 2012/13.

Mode Full- or part-time, including distance learning.

Integrated Master's Degree

Integrated master's degrees are commonly used to take school-leaver entrants through to meeting the educational requirements for a profession, and cover similar ground as would a bachelor's and separate master's degree. They are mainly available in scientific and technical fields and have field-specific titles (see below), although they have recently appeared in applied arts subjects. The full programme is treated as an undergraduate course for student loan purposes, making it easier to fund than separate bachelor's and master's degrees; this is currently a factor influencing the expansion of this type of programme beyond its traditional use for science-based professions.

Level and credit EQF/FHEQ level 7 (second cycle); 270–300 ECTS credits over levels 5–7.

Designation MEng (engineering), MChem (chemistry), MPharm (pharmacy), etc.

Admission requirements A qualification at EQF level 4, normally with more stringent requirements for grades and volume of learning than for entry into level 5 higher education qualifications.

Uptake (certificates awarded) 15,735 in 2012/13, subject to an upward trend with more universities and subject-areas adopting integrated master's degrees.

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[39] See *Foundation degree qualification benchmark*, QAA 2010: http://www.qaa.ac.uk/en/Publications/Documents/Foundation-Degree-qualification-benchmark-May-2010.pdf (last accessed 12.12.2014).

Mode Full- or part-time. Full-time courses normally run over four or five years and can include periods of professional or industry experience.

Postgraduate Certificates and Diplomas

Postgraduate certificates and diplomas are used for a variety of purposes, including providing a shorter course to extend study beyond first-cycle level, but without needing to complete the dissertation that is a normal requirement for a master's degree; to provide preparation for some professional careers (e. g. 21,000 awards in 2012/13 were in teaching); and to provide updating and extension for people in work. Many programmes take the form of a 'nested' certificate, diploma and master's degree, enabling direct progression for students who meet the requirements at each stage.

Level and credit PGCert, EQF/FHEQ level 7 (partial second cycle); 30+ ECTS credits.

PGDip, EQF/FHEQ level 7 (partial second cycle); normally 60 ECTS credits.

Designation PGCert/PGDip (in subject-area).

Admission requirements Normally a first-cycle degree, sometimes a short-cycle or professional qualification or (for mature entrants) relevant experience.

Uptake (certificates awarded) 68,720 in 2012/13.

Mode Full- or part-time, including distance learning.

Master's Degree

Master's degrees are used for a wide range of purposes including advanced academic study, preparation for professions and careers, and ongoing development in work. Full-time UK master's degrees are typically 12-month intensive programmes; some, particularly those geared to professional entry, run over longer periods.

Level and credit EQF/FHEQ level 7 (second cycle); 90–120 ECTS credits.

Designation MA (arts), MSc (sciences), or field-specific titles e. g. MBA (business), MEd (education), MArch (architecture) etc; MRes (research) is specifically for preparation for a doctorate or research career.

Admission requirements A first-cycle degree, often specified as requiring an Upper Second or First classification; professionally-related master's degrees may accept a professional or vocational qualification instead, or verifiable professional experience and achievement.

Uptake (certificates awarded) 167,415 in 2012/13, excluding research degrees (MPhil/MProf).

Mode Full- or part-time, including distance learning.

▶ Qualifications validated by vocational awarding bodies

There are currently 136 awarding bodies offering nominally 1,958 vocational and similar qualifications regulated by Ofqual at levels 4–7 (EQF levels 5–7), although less than half of these were in active use in 2012/13.[40] Table 2 shows the distribution of these qualifications by level and size. In 2012/13, approximately 60,000 higher-level Qualifications and Credit Framework (QCF) Diplomas were awarded in England, Wales and Northern Ireland, with 82 % at level 5 and 4 % each at levels 6 and 7. Of the total, 20 % were management qualifications, another 20 %

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[40] From the Ofqual Register of Regulated Qualifications, http://register.ofqual.gov.uk/ (last accessed 12.12.2014).

directly-awarded HNCs and HNDs (see below), and 30 % provided certification in financial serv-
ices, accountancy, further education teaching and law.[41] Two qualifications, both for accounting
technicians, made up 14.5 % of all QCF Diplomas awarded in 2012/13.

Table 2

Higher-level qualifications on the Ofqual database

	All qualifications		All Diplomas (at least 19 credits)		Diplomas of 60 credits or more	
	Registered	In use*	Registered	In use*	Registered	In use*
Level 5 (EQF)	1,622	757	789	389	218	107
Level 6	182	79	127	67	65	34
Level 7	157	70	110	52	48	23
Total	1,958	906	1,026	508	331	164

* At least one certificate awarded in 2012/13. The final column is estimated based on the figures for all diplomas. 73 of the level 5 qualifications in this column are HNC/Ds.

Sources: Ofqual Register of Regulated Qualifications, plus analysis of statistics at http://webarchive.nationa larchives.gov.uk/20140807151639/http://ofqual.gov.uk/documents/annual-qualifications-market-report-eng land-wales-northern-ireland-data-tables/ (last accessed 12.12.2014).

Qualification types within the vocational sector are highly diverse. Qualification content com-
monly reflects relevant NOS or formal professional or industry standards, and in the QCF, it was
presented in a standard format of learning outcomes and assessment criteria.

Although a minimum level of standardisation of titles was required within the QCF, each
awarding body typically has its own range of qualifications and there is less commonality than in
higher education. The following three qualification types have been selected as they are avail-
able across a wide range of fields and account for a significant number of registrations.

Higher National Certificate and Diploma (Edexcel[42])

There are currently 40 HNC/D titles listed by Edexcel. HNC/Ds may be awarded directly by
Edexcel ('BTEC HNC/Ds') or under licence by HE institutions, where they are viewed as part of
the HE system (both types are widely delivered in FE colleges). They are generally considered a
more standardised and practically-oriented alternative to the CertHE and DipHE. In some uni-
versities, they are integrated with vocationally-oriented bachelor's degrees, allowing entry into
the second or third years, respectively, of the degree. HNC/Ds have gradually been eroded by
HE institutions' own qualifications, including foundation degrees, and by full-time programmes
being revised to lead to full degrees rather than HNDs. In the last two years, there has been a
significant increase in enrolment via private, non-degree-awarding HE providers, though as yet
this has not translated into qualifications awarded.

Level and credit HNC, EQF level 5/RQF or FHEQ level 4 (partial short cycle); 60 ECTS credits.

HND, EQF level 5/RQF or FHEQ level 5 (short cycle); 120 ECTS credits.

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[41] See figure 49 in http://webarchive.nationalarchives.gov.uk/20141031163546/http://ofqual.gov.uk/standards/statis tics/annual-qualification-market-report-england-wales-northern-ireland/; accessed: 01.08.2016. Figures for England are likely to be around 8 % lower.
[42] Edexcel is owned by Pearson Education. It incorporates former Business and Technology Education Council (BTEC) qualifications.

Designation HNC or HND (in subject-area).

Admission requirements Typically a qualification at EQF level 4; exemptions may be available for mature entrants.

Uptake (certificates awarded) 19,290 including both direct ('BTEC') awards and those made under licence from Edexcel by universities (2012/13): 9,695 HNCs and 9,595 HNDs.

Mode Full- or part-time. Traditionally, HNCs were taken part-time over two years, HNDs full-time over two years, sometimes with a sandwich (work experience) year in between. Both can now be taken via both modes, with the two programmes frequently linked so that HNC graduates can gain an HND with further study. Work placement modules are common, but not compulsory, in full-time programmes.

Professional Certificate and Diploma (Edexcel)

The Edexcel 'Professional' programmes are designed for people in work. They cover specific occupational needs, support career progression and support entry to longer programmes (those at EQF level 5, for instance, can provide credit into an HNC/D). In addition to the (currently 37) standard awards listed on the Ofqual register, custom qualifications can be developed for specific applications such as staff development by a particular employer or group of employers. These are not normally submitted to Ofqual unless the level of uptake justifies it.

Level and credit EQF levels 5–7/RQF levels 4–7; variable credit size, most under 30 ECTS.

Designation Professional Certificate/Diploma (in subject-area), or a standard QCF-type title is used e. g. Level 5 Diploma in Management.

Admission requirements Variable, may require a relevant qualification at the previous level or experience in a suitable occupational role.

Uptake (certificates awarded) 7,300 in 2012/13: 5,300 at level 5 and 2,000 at level 7 (level 7 mainly one qualification, Certificate/Diploma in Strategic Management and Leadership). These exclude small awards of 6 ECTS credits or less, as well as larger qualifications outside the QCF. None were awarded at level 6 in 2012/13.

Mode Normally part-time or work-based (i. e. all the work for the qualification is done at the workplace, with tutor support) or a mix of both.

National Vocational Qualifications (NVQs) (various awarding bodies)

NVQs were introduced towards the end of the 1980s as a type of qualification based directly on NOS and assessed through demonstration of competence in the workplace. Although NVQs are no longer recognised as a distinct qualification type, qualifications that follow these principles could be designated 'NVQ' in the QCF, and this provision remains in the RQF. The NVQ title has been retained in some occupational areas and dropped in others; it is likely over time that fewer higher-level qualifications will be designated as NVQs, although some will continue to follow the same principles.

Level and credit EQF levels 5–7/RQF levels 4–7; variable credit size.

Designation NVQ Certificate/Diploma (in subject-area).

Admission requirements Experience in a relevant occupational role. A principle of NVQs at all levels has been that they are open to anyone able to demonstrate the appropriate level of competence.

Uptake Achievement of higher-level NVQs peaked at 34,400 in 2009/10 before the qualifications started to migrate to the QCF. No separate figures are available for NVQ-type qualifications within the QCF or RQF. Over 75 % of higher-level NVQs were awarded in business and management.

Mode Work-based with part-time, distance or self-managed study. People already experienced in the area concerned who are working at an appropriate level can simply enrol and be assessed.

► Higher Apprenticeships

Higher Apprenticeships (HAs)[43] are work-based programmes at EQF levels 5–7 that require both the development of work-based competence and in-depth knowledge relevant to a professional or industry field. Higher Apprentices will normally achieve one or more of a higher vocational qualification, a vocationally-oriented HE qualification, and full or intermediate qualified status in a profession or licensed occupation.

HAs were introduced in 2008, initially at EQF level 5, as an alternative to full-time higher education and a means of accessing higher technical and professional careers. From 2013, HAs have been extended to levels 6 and 7, and employers have been given the lead role in developing the standards for apprenticeships, normally in conjunction with professional bodies where they exist; these are developed as outline statements normally not exceeding two pages, and need to reflect standards that are widely used in the industry or profession concerned. The duration of HAs, and the balance between on- and off-job training, varies between programmes, and for some programmes, it can also be tailored to individual needs. Funding for apprenticeships is provided via employers rather than educational institutions or training providers.

Level and credit EQF levels 5–7/RQF or FHEQ levels 4–7; programmes at EQF level 5 must be at least 45 ECTS credits, and at levels 6 or 7, 60 credits.

Qualifications Various combinations are possible, provided that they demonstrate both mastery of knowledge and competence at work. Typical qualification outcomes include (a) an HE qualification such as a foundation degree that attests to both knowledge and practical competence; (b) an HE or other knowledge-based qualification, such as an HNC/D or degree, plus an NVQ-type qualification or recognition in a profession; or (c) completion of the knowledge-based and practical components leading to recognition in a profession.

Admission requirements Generally a qualification at the previous level. Some can be entered from full-time education, while others are designed to follow on from relevant experience.

Uptake (enrolments) 3,700 starts in 2011/12, 9,800 in 2012/13, plus additional starts on programmes leading to HE qualifications only; numbers are expected to increase significantly as more HA programmes are introduced.

Mode Work-based with part-time or distance study.

► Professional body qualifications

There are nearly 400 professional bodies in the UK,[44] including learned societies, self-governing associations and independent regulators or registration bodies. Many of these exercise a high

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[43] A summary, including currently-available programmes, is given by the National Apprenticeships Service at http://www.apprenticeships.org.uk/employers/higher-apprenticeships.aspx; guidance on developing apprenticeship specifications is at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/287276/bis-14-p194-future-of-apprenticeships-in-england-guidance-for-trailblazers-revised-version-2.pdf (both last accessed 12.12.2014).
[44] Professional Associations Research Network estimate, 2014.

level of authority in their areas of work, particularly where membership is backed by legislation or customarily expected by clients and employers. The more formalised professions award a qualified status in the form of a full membership grade or a title such as Solicitor, Chartered Engineer or Registered Nurse. Qualified status normally requires achievement of a higher-level qualification or passes in a series of examinations, plus a period of supervised and (increasingly) assessed practical experience. Retaining qualified status depends on meeting ongoing requirements, working within the profession's code of practice, and sometimes undergoing some form of periodic reassessment. The detailed regulations for achieving qualified status vary between professions.[45]

Some professional bodies also provide permanent certificates and diplomas, normally to meet the academic requirements for entry, provide staging-posts on the way towards full qualification, or provide an intermediate-level qualification for associate professionals or technicians. These qualifications may be validated via Ofqual (e. g. legal executives, accounting technicians and some financial services qualifications) or through the international standard ISO17024 (at the higher levels largely limited to financial services and energy performance assessors), or more commonly simply developed and awarded under the authority of the professional body and delivered by approved training providers or occasionally by the professional body itself. Particularly in the business and financial sectors, it is common for qualifications to be made up of taught or self-study modules that are assessed by written examinations, without coursework or integration with practice. Sometimes these non-framework qualifications are identified as being at a national framework level, but unless they have been credit-rated by a university, this is usually simply the result of an informal assessment by the profession itself.

1.3 Higher-level programmes and qualifications with practical learning

The following seven examples of higher-level programmes include both practical and academic learning. They are arranged in a rough sequence from full-time programmes with placement or sandwich periods, through structured part-time programmes to those that can be built around learners' needs and careers. .

▶ Integrated work placement modules (Chester University)

Qualification Bachelor's degrees (level 6) and foundation degrees (level 5); the modules themselves are at level 5 and are worth 10 ECTS credits, so they form 8 % or 5 % of the programme, respectively.

Background and developments Since the early 1990s Chester University has increasingly required its full-time bachelor's and foundation degree students, including those studying purely academic subjects, to undertake a module entitled 'Enhancing your employability through work-based learning.' This is a key element of the University's employability strategy and a selling-point for its courses. The module, which is normally taken in the second year of a three-year degree (final year of a foundation degree), is based on a work placement, and provides academic credit towards the degree. Work experience may be related to the subject of the degree or to the student's interests and intended career.

Numbers and trends Over the last five years, the number of students completing the module has increased from 870 to 1,233 annually. This trend is set to continue as the module is incorporated into more degree courses and the university expands.

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[45] For a summary of professional bodies' approaches see Lester, S. 2008. *Routes and requirements for becoming professionally qualified.* Bristol: Professional Associations Research Network. This is pre-development of Higher Apprenticeships and of all-graduate entry in nursing, but the principles and most of the examples are still current.

Mode and structure Placements are at least five weeks and lead to 20 UK credits (10 ECTS credits).

Integration of practical learning A pre-placement induction programme is provided by the university, to help students develop and agree an action plan that develops employability skills (e. g. communication, time and project management, negotiation skills, teamwork, etc). This forms the basis of a learning agreement with their tutor and the employer. Students are responsible for managing their own learning during the placement and are also required to analyse and reflect critically on their approach to and achievement of the targets specified in their action plan. Students also devise a personal professional development plan based on their module experiences; this enables them to identify future career options and the actions required to attain them.

Roles of employers and tutors The employer provides experience in normal work tasks as well as mentoring. The placement tutor liaises with the employer and student, providing advice and guidance as needed through the placement.

Assessment At the end of the placement, students write a critically reflective account which is assessed by the university as the main piece of work for the module. The employer also completes a placement appraisal which contributes 10 % towards the module.

Labour market relevance The placement module is designed to give full-time students experience of the workplace and of learning from, and critically reflecting on, work and the way it is organised. The module may contribute directly to professional learning and to the student gaining employment, or may act as a more general preparation for employability.

Funding Placements are unpaid and are treated as part of the degree course for funding purposes. The university provides a subsidy for travel costs associated with the placement.

▶ Foundation degree in Marine Engineering (South Tyneside College, validated by Northumbria University)

Qualification FDEng, level 5, 120 ECTS credits.

Background and developments The FD was designed to provide an entry programme for a career as an Engineering or Electrotechnical Officer under International Maritime Organisation regulations, as part of the Merchant Navy officer cadet training scheme. Content was developed by the college in conjunction with relevant employers and the Maritime and Coastguard Agency (MCA). The programme includes certification as an Engineer Officer of the Watch with the MCA, and all the academic requirements for Chief Engineer.

Numbers and trends Approximately 30 students per year at South Tyneside College.

Mode and structure Full-time over three years, with a four-month practical phase at sea in year 1 and a second six-month period between years 2 and 3: i. e. amounting to approximately 40 % of the programme. In addition to the FD, students take short technical and safety courses during their programme. Entry requires a level 4 qualification, either relevant A-levels or an engineering-based vocational qualification.

Integration of practical learning The FD is designed to support the practical phases and includes one work-based learning module that involves a practical investigation into aspects of the student's work; otherwise there is no direct integration between the college and practical phases.

Roles of employers and tutors Students must be sponsored by a relevant employer to start the course. The employer is responsible for the practical phases and for courses that are not part

of the FD. College tutors support the FD, but do not normally become involved in the practical phases beyond assessment of the work-based learning module.

Assessment The FD is assessed by the college through examinations, assignments and practicals. The practical phases are assessed by the employer via a logbook, and students also take an oral examination with the Maritime and Coastguard Agency for registration as an Officer of the Watch.

Labour market relevance The programme provides entry and initial qualification for a career as a merchant marine engineering officer, including associate membership of the Institute of Marine Engineering, Science and Technology. Students can progress to completing a BEng degree.

Funding Students need to be sponsored by a suitable employer, who provides the work placements and funds the programme.

▶ Higher Apprenticeship in Construction Management (National consortium including industry bodies, the validating university, employers and colleges)

Qualification Leads to a foundation degree, level 5, 120 ECTS credits.

Background and developments The HA in Construction Management was developed in 2011–12 by a consortium led by Middlesex University and supported by CITB, the construction industry skills body, and the Universities Vocational Awards Council; content was developed in conjunction with the CITB and to reflect relevant professional standards. The HA is designed to be provided through an FE college in conjunction with an employer; the qualification is validated by Middlesex University.

A related level 6 HA has also been developed, which will lead to a bachelor's degree and qualified membership of the Chartered Institute of Building and/or the Royal Institution of Chartered Surveyors.

Numbers and trends The HA is currently (2014 onwards) being piloted with one FE college (from a group of ten potential partners), with 15 students. Numbers are expected to increase modestly next year, and more significantly (with 1,200 planned places) as the financial situation in the construction industry improves and apprenticeship funding rules change to include HE qualifications.

Mode and structure Apprentices are employed full-time. Previous experience in the construction industry, for instance through a level 4 apprenticeship or vocational programme, is required. Apprentices will take the HA over three years, working full-time with regular or periodic study release; the exact design of courses and balance of day and evening attendance will vary between colleges. The length can be shortened for apprentices who already have an HNC or similar qualification.

Integration of practical learning Each course module includes theoretical learning and learning directly from the work environment. The way that the practice requirements for each module are met is negotiated individually to reflect the particular workplace setting. Off-job teaching can be provided through various modes and in different settings, including at employers' premises where feasible.

Roles of employers and tutors Employers must ensure that the professional competence requirements of the apprenticeship are met, and provide each apprentice with a workplace mentor. The mentor helps identify workplace activities and projects that will contribute to module learning outcomes, and is also involved in formative assessment of competence. The college

provides a link tutor who liaises with the employer and workplace mentor, and is accessible to the apprentice throughout the programme.

Assessment The main means of assessment are work-based projects, which cover both the knowledge and practice aspects of the programme. The specific projects are negotiated between the college, the apprentice and the employer, with formative assessment in the workplace and a final assessment by the college according to the module learning outcomes. The workplace assessment also contributes to the practice-based requirements of the relevant professional body.

Labour market relevance The HA provides a work-based development route for construction site managers. It has been developed with the support of employers in the sector and meets an identified need for skills. On completion, apprentices will be eligible to continue directly to a bachelor's degree in the same area, including via the level 6 HA that is currently being developed.

Funding Programmes may be fully employer-funded (with the employer being able to claim a proportion of the college fees under current apprenticeship funding rules), or the college fees may be paid by the apprentice; in the latter case, the apprentice is eligible for student finance.

▶ Association of Chartered Certified Accountants (ACCA) accountancy pathway

Qualification Pathway to qualification as a Chartered Certified Accountant (level 7 equivalent), includes diplomas at level 5 and an optional first-cycle degree in accounting and finance.

Background and developments ACCA is one of four chartered accountancy bodies operating in England and setting standards for the training of accountants. Of the four, it has the largest non-graduate intake, at just over 50 %: many enter directly from upper secondary education and some from level 4 FE courses and apprenticeships, including ACCA's own foundation course. ACCA courses are provided by a mix of HE and FE institutions and private providers. A link with Oxford Brookes University enables non-graduate entrants to work towards a bachelor's degree *en route*.

Numbers and trends There are over 370,000 people studying with ACCA worldwide, with 9,700 qualifying at the chartered level in 2013; an estimated 3,700 of these will have qualified in England. Numbers of students are growing, although there was a slight dip in the number of qualifiers in 2013.

Mode and structure Normally part-time, with no set structure. Entry to the main professional route requires a level 4 qualification. The main route, which entrants are allowed ten years to complete, is divided into two phases: Fundamentals, consisting of nine compulsory modules, and Professional. ACCA diplomas are awarded for the achievement of groups of modules in the Fundamentals phase, with the first (3-module) Diploma recognised on the QCF. At the end of this phase, students are eligible to complete a research and analysis project to gain a BSc in Applied Accounting. Various exemptions are available from the modules for accountancy degrees and other accredited learning.

The Professional phase is pitched at level 7[46] and requires five out of seven modules to be taken. ACCA also requires a total of three years' mentored practical experience in an accounting or financial role in order to qualify. This can be alongside, after, or partly before taking the courses.

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[46] Professional phase courses are widely regarded as being at level 7, although not placed on any UK qualifications framework; they are in the Irish NFQ at level 9 (EQF level 7).

Integration of practical learning The performance objectives for the practical requirement are each linked to a theory module, encouraging students to organise their programme so that their work and their course topics coincide. Some employers will support this, but there is no compulsion to take modules and gain relevant work experience in parallel.

Roles of employers and tutors The student's employer normally provides a mentor who is a qualified accountant, who signs off the achievement of workplace performance objectives. It is also possible for the student to have a mentor from outside the workplace, provided that s/he has access to the student's work. The course provider does not normally become involved in the practical part of qualifying. Students also have a workplace or other relevant mentor for the degree project.

Assessment Modules are assessed by written examinations. The practical requirement is assessed through meeting performance objectives at work, which the student writes up and has countersigned by his or her mentor.

Labour market relevance Qualifying as an accountant provides access to a range of professional careers in the financial and business sectors. Qualified accountants may be accepted on to second-cycle programmes such as MBAs, sometimes without a first degree.

Funding Programmes are commonly funded by employers, although this may not extend to the degree, for which student finance is normally available.

▶ Higher Apprenticeships in Professional Services

Qualification Two frameworks are available, at EQF levels 5 (RQF level 4), equivalent to 'technician' level, and 7, the full professional level. The level 5 programme has three routes: audit, leading to the Institute of Chartered Accountants' Certificate in Finance, Accounting and Business, plus a competence-based RQF diploma; tax, leading to qualification with the Association of Taxation Technicians, plus an RQF diploma; and consulting, leading to an RQF certificate and diploma (there is no relevant professional qualification at this level). At level 7, all pathways include an RQF diploma awarded by the vocational awarding body OCR; the accountancy and audit pathways result in qualification as a chartered accountant, and the tax pathway qualifies the apprentice either as a chartered accountant or chartered tax adviser.

Background and developments Development of the HA programmes was led by PricewaterhouseCoopers (PWC), a global network of accountancy and professional services firms, in conjunction with other employers in the sector and the Financial Skills Partnership. They build on PwC's existing school-leaver and work-integrated degree entry-routes, which have each operated successfully for over ten years, and aim to widen the pool of recruits beyond the traditional graduate intake in order to ensure a continuing supply of talent; with over 600,000 new jobs expected in this sector over the next decade, recruitment and training is expected to be a major challenge.[47] As one of England's largest graduate recruiters, PwC is conscious of the need to foster social mobility by providing high-level pathways for non-graduates. The level 5 programme was launched in 2012, and the level 7 programme in 2013.

Numbers and trends Information on uptake is currently unavailable.

Mode and structure The programmes are taken while in full-time employment, and include off-job courses normally via block- or day-release, or various forms of blended learning, with a college or higher education provider. There is no time limit for gaining qualified status, and individual programmes can be designed to suit the needs of individuals and employers.

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[47] Department for Business, Innovation and Skills 2013, *Growth is our Business*.

Integration of practical learning The RQF qualifications in all schemes draw on learning from the workplace, which apprentices need to demonstrate for assessment.

Roles of employers and tutors Employers provide a training supervisor responsible for the apprentice's development and for certain aspects of work-based assessment and sign-off. Tutors for the professional qualifications do not become involved in on-the-job development or assessment, but assessors for the RQF qualifications will examine work-based evidence and liaise with training supervisors.

Assessment Professional qualifications are assessed via a series of written examinations and through sign-off by the training supervisor against the professional body's practising criteria. The RQF diplomas are assessed through varied means, including the assessor examining documents produced by the apprentice at work, testimony from the training supervisor and verbal questioning.

Labour market relevance The programmes at both levels provide entry to professional careers and meet demand identified by employers. The lower-level programme offers good progression opportunities to fully qualified levels in the relevant professions and to higher education. PwC's experience with similar programmes indicates a near-100% employment rate after completion.

Funding Learners are fully employed and funded by the employer.

▶ Professional pathway and Higher Apprenticeship in facilities management

Qualification Qualifications at EQF levels 5–7, including British Institute of Facilities Management (BIFM) Diplomas at all levels, HNC/D and Foundation Degree.

Background and developments Facilities management (the management of commercial and public buildings, estates and associated services) is increasingly demanding a high level of technical knowledge in addition to general management ability. It is not strongly formalised as a profession, although BIFM has a full member grade based on a level 5 qualification and associated experience, and a certificated grade at level 6. BIFM recently replaced its two-stage examination system with a suite of certificates and diplomas, validated in the RQF, that cater to entrants across a wide spectrum of educational attainment, experience and job roles. A Higher Apprenticeship (HA) leading to level 5 (RQF level 4 and 5) qualifications was introduced in 2012 and forms part of the pathway; it can take between one and four years to complete.

Numbers and trends In 2012/13, 320 BIFM certificates and diplomas were awarded at level 5 (for both HA and non-Apprenticeship pathways), and eleven at levels 6 and 7. The trend is expected to continue upwards as these relatively new qualifications become established.

Mode and structure Part-time or distance learning; the mode and duration of learning can vary according to individual need with, for instance, each level of the two-part HA being offered over eighteen months. The BIFM certificates and diplomas form a progression from EQF levels 3 to 7, relating to different job roles in the industry. The qualifications are modular and have a core-and-options structure to allow tailoring to job role and career interests. The HA is available at RQF levels 4 and 5 (EQF level 5), either separately or with progression from one to the other. The lower-level (RQF level 4) HA leads to a competence-based qualification and either a BIFM diploma or an HNC; depending on pathway and provider, the upper-level HA leads variously to a foundation degree, an HND and a BIFM certificate, or an extended BIFM diploma. On meeting the experience requirements, graduates from the upper-level programme are eligible for full BIFM membership.

Integration of practical learning The qualifications are designed for people in work, and include assignments designed to draw directly on participants' work activities.

Roles of employers and tutors BIFM and associated qualifications are designed to support workplace-integrated learning without specific employer support or tutors becoming involved in learners' workplaces, beyond discussing and assessing assignments.

Assessment The assessment may occur through a variety of methods; most modules include assignments that draw on participants' work situations.

Labour market relevance Programmes are matched to work roles in facilities management and geared directly to job demands. Progression from one qualification level to the next is designed to support career progression. The Level 7 Diploma provides credit towards a facilities management master's degrees at two partner universities.

Funding The funding may be provided by the employer, or via student or career development loans, depending on the programme.

▶ Work–based Learning programmes (Middlesex University)

Qualification HE qualifications at EQF levels 5–7, from certificates of credit to master's degrees.

Background and developments Work-based learning (WBL) at Middlesex originated in the early 1990s as a means of providing negotiated higher education pathways for people in work. A variety of routes are offered, including individually-negotiated, employer cohort and sector-specific programmes. WBL at Middlesex takes a transdisciplinary approach rather than being grounded in a specific academic or professional field, enabling custom programmes to be developed to respond to sector, organisational or individual work contexts and development aims.[48]

Numbers and trends In 2013/14, there were 613 graduates, of which 296 were at level 7 (including 118 full master's degrees), 309 at level 6 (152 full degrees) and eight at level 5. There is an increasing trend towards employer- or sector-based cohorts rather than fully individual programmes.

Mode and structure, integration of practical learning Work-based. WBL programmes are centred around participants' practice. Individual programmes normally start with a planning component enabling the learner to reflect on his or her experience; if relevant, they claim credit for prior learning; and they negotiate a learning agreement that defines the programme and how it will be assessed. Cohort programmes are developed through negotiation at the employer, group or profession level, with the resulting framework potentially allowing for further adaptation at the individual level. Further components are agreed through a group or individual learning agreement and can include in-house development activities, work projects and research, and existing or purpose-designed modules.

Roles of employers and tutors The employer (or sector body) may play a central role in defining the detailed curriculum and supporting learning and assessment; at minimum, employers agree to support work-based projects. University tutors typically support learners via the University's virtual learning environment, as well as providing face-to-face workshops.

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[48] See Bravenboer D. W. and B. Workman (in press). Developing a Transdisciplinary Work Based Learning Curriculum: a model for recognising learning from work. In Keppell, Reushle and Antonio. *Open Learning and Formal Credentialing in Higher Education: Curriculum Models and Institutional Policies*. Hershey, PA: IGI Global.

Assessment The assessment is negotiated on a cohort or individual basis and can include written work, reflective reports and commentaries, audio-visual accounts, and presentations of artefacts or products that demonstrate how work-based learning has contributed to the enhancement of practice. In all cases, learning achievement is assessed in relation to the module learning outcomes at the relevant level for the qualification being sought.

Labour market relevance WBL programmes are used by organisations to support strategic workforce development, and they have also been used to transform industry sectors where barriers to professional development exist. They are used by people in work as a means of personal professional development, to aid career progression, and to validate levels of achievement that have otherwise been unaccredited. They are used as a starting-point in HE, to 'top up' from lower-level qualifications to a degree (for instance, teaching assistants wanting to qualify as teachers), and by businesspeople and senior professionals as a vehicle for ongoing development. HE qualifications obtained through WBL enable progression to the next academic level, including into doctorates, and can contribute to qualified status in some professions.

Funding Normal sources of student finance can be used, but employer- and self-funding (or a combination of both) is common for WBL programmes.

1.4 Developments, reforms and debates

A number of developments and reforms have affected higher-level work-related education and training over the last few decades, of which the following have had a lasting impact on the sector:

- ▶ Credit and modularisation. Credit is not universal, but is used in many HE institutions at least for part-time courses, and was compulsory in the QCF. Credit has facilitated flexibility and progression in qualifications, but its over-use has also led to programmes losing coherence and a reduction in synoptic or integrative assessment.
- ▶ Credit for previous learning. The principle of giving credit for previous relevant learning is now well-established, although not universal. This can include exemption from taking a unit or module, or credit within a unit or module; it can be based either on equivalent previously certificated learning or on making a case (which can be in the form of a narrative or portfolio) based on non-certificate-bearing courses or experience-based learning. In higher education, it is usual to put a limit on the proportion of a qualification that can be acquired in this way, although some programmes permit work done before registration to be used for the entire qualification (in a similar way to a doctorate by publication).
- ▶ Direct access to assessment. The principle of separating assessment, and therefore achievement of the qualification, from courses and learning processes has become widely used in NVQs. Although it is most common in NVQ-type qualifications and some professional assessments, similar principles are used in a wider range of programmes for providing credit for experience-based learning.
- ▶ Individually negotiated content. HE programmes based around learning agreements, where the content and the work to be assessed is negotiated by the learner or their employer with the university, have been offered in some universities since the early 1990s. These programmes still form a small minority of the provision, generally for people in work.

More recently, the most significant structural changes have been the introduction and subsequent withdrawal of the QCF in 2008 and the gradual introduction of Higher Apprenticeships. The QCF (described more fully in Part 2) was introduced as a credit-based qualifications framework, and designed to focus on units rather than full qualifications. It necessitated re-specifying thousands of qualifications (including former NVQs) into a format based on units, learning out-

comes and assessment criteria, with the aim that units would be registered on a database and could be used in multiple qualifications, facilitating common content and ease of progression. In practice, this facility has been poorly used and the QCF resulted in a large increase in the number of vocational qualifications; it also never fully replaced the pre-existing NQF. A recent review by Ofqual has resulted in the withdrawal of the QCF and its replacement by the RQF, returning to a single framework outside of higher education.

Higher Apprenticeships (HAs) were initially introduced in 2008 at level 5 in five occupational areas, expanding to 45 by 2012. Initially, the design rules for HAs were based on those for lower-level apprenticeships, which proved restrictive and confusing, particularly in the requirement for separate 'knowledge' and 'competence' qualifications and the acceptance of a relatively small amount of credit as meeting the requirements for either. The rules were revised in 2013 to remove the necessity for separate qualifications, allow HAs to be extended to levels 6 and 7 and include university qualifications, and increase the minimum size of qualifications closer to the norms in higher education. Employers have also been given a much stronger role in the design of HAs and in controlling funding, leading to an increase in the proportion of apprenticeship frameworks at the higher levels and a focus on areas with high labour market relevance. While HAs at the upper levels are in an early stage of development, they have been well-received by many professional bodies and employers, with interest in using them as alternatives to recruiting graduates. It should be noted that HAs currently (in 2014) account for only 1.5 % of enrolment in higher-level programmes, although they have a good level of political support and are expected to expand.

An underlying if gradual trend that HAs are a part of is the opening up of many professional careers to entrants who do not initially have degrees, effectively creating alternatives to full-time higher education. This has emerged partially in response to government concern about restrictive access to professions,[49] although initially policy initiatives emphasised widening access to higher education (and particularly to highly regarded courses such as medicine, veterinary science and law) rather than creating alternative routes. Professions themselves have also been active in creating alternative entry-routes, although aside from a few notable examples (such as ACCA, as described in the preceding section), these have remained limited in scale. Initiatives to bypass higher education have led to concerns that professionals who qualify without degrees may be disadvantaged in the labour market. This has encouraged work-based routes that incorporate higher education qualifications, either as a matter of course (as with many HAs), or as an option (as for instance with the ACCA and BIFM examples in section 1.3 and the Chartered Institute of Legal Executives). A series of HAs leading to degrees in professional areas ('degree apprenticeships') were announced in 2015.

As previously noted, a trend is for mainstream higher vocational qualifications to be replaced by those validated by higher education institutions. This has particularly affected HNCs and HNDs, which have both been substituted by HE qualifications at the same level and upgraded to full degree courses.[50] At the higher levels, non-HE higher vocational qualifications remain strong in some niches (e.g. management, intermediate-level accountancy and law, financial services, and FE teaching).

Finally, the effect of funding reforms needs to be considered. Until 1998, most short- and first-cycle courses were free, and full-time students living away from home could obtain a means-tested grant to help with living costs. Grants were replaced by loans in 1998, and tuition fees

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[49] *Unleashing Aspiration: Final report of the Panel on Fair Access to the Professions*, chair A. Milburn, Cabinet Office 2009.

[50] The case for increased sub-degree higher level provision and high-level training for the existing workforce was made in the widely-supported Leitch review of skills (*Prosperity for all in the global economy – world class skills*, The Stationery Office 2006), but the main focus of expansion has remained on full degrees and younger students.

initially of £1,000/€1,250 per year were introduced. Fees were increased to a maximum of £3,000/€3,750 per year in 2004, and £9,000/€11,250 in 2012. Most universities charge at or close to the maximum for full-time first degrees; short-cycle and part-time courses, and courses in FE colleges, are typically cheaper. As described in section 1.2, second-cycle and other level 7 courses, as well as qualifications at a lower or equivalent level to those the student already holds, are treated less favourably for student loans. The effect on full-time student numbers has been less pronounced than feared, partly because of the income-contingent nature of loan re-payments; it has nevertheless raised concerns about equality of access to higher education and to professional careers. Part-time enrolment has declined by 24% over the last four years after a steady long-term increase. This is currently cause for concern in terms of diversifying entry-routes to higher-level careers, providing access for older learners, and supporting retraining, skills upgrading and career development.

1.5 Conclusions

In England, entry to many higher-level occupations evolved from a principally apprenticeship-style model before the Industrial Revolution, through a parallel mode where work-based learning was accompanied by day- or block-release classes, to a sequential model with full-time higher education followed by work-based training (in some cases accompanied by off--the-job study).[51] By the end of the twentieth century, the sequential model and full-time degrees had largely marginalised part-time study as a route to a professional career, and made 'going to university' the automatic choice for academically able school leavers. This tacit message was re-inforced at the end of the millennium by an official target for 50% of young people to progress to higher education by the age of 30.

More recent thinking has questioned the wisdom of using the continuing expansion of full-time higher education to drive the supply of higher-level skills. Various initiatives have emerged that contribute to stemming the drift towards the sequential model, including the introduction of foundation degrees and Higher Apprenticeships, and the introduction or expansion of non-graduate routes by professional bodies. When taken together, these are beginning to create credible alternatives to the full-time route (or modifying it, for instance by introducing more exposure to work pre-graduation), but they have sometimes been pursued less effectively than they might have been. The continued low priority given to vocationally-related routes pre-18, along with limitations in the advice and guidance available to young people, also make it more difficult to gain support for high-status alternatives to full-time higher education. The introduction of apprenticeship-type routes that lead to careers in sought-after professions and organisations, while also providing well-recognised higher education qualifications, has the potential to be a significant step towards creating a mainstream alternative to full-time higher education.

In introducing 'new' parallel routes and work placements, a factor that currently needs more attention is the extent to which academic and practical learning are actually integrated. Many parallel routes are parallel only in terms of the two components running alongside each other, with little interaction between what is happening in each of them. Genuinely integrated training is present in a few programmes, primarily in the health and social care sector and in company-based programmes; the theory and technique-based modules that are common, for instance, in the business sector leave this much more to chance. A dilemma exists between the level of structure that is needed to properly integrate practical and theoretical learning, and the flexibility that can be provided by approaches such as ACCA's modular professional pathway. There are,

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[51] These modes (and 'integrated' pathways) are explained in Bines, H. 1992. Issues in course design, in *Developing professional education*, ed. H. Bines and D. Watson. Buckingham: Open University Press, and Lester, S. 2008. *Routes and requirements for becoming professionally qualified*. Bristol: Professional Associations Research Network.

however, examples where integration is improved in open-structure pathways through using modules or assessment activities that encourage work-based investigation, reflection and evaluation.

Finally, English higher vocational qualifications have suffered through the country's bipartite and at times ideologically-driven approach to qualifications frameworks, along with, in some cases, poor articulation with professional standards and qualified status. Recent evidence suggests that this situation may be improving, with more flexibility introduced into Higher Apprenticeships and the removal of the more restrictive requirements of the Qualifications and Credit Framework following the recent Ofqual review.

Part 2: National Qualifications Frameworks

▶ Introduction

Following recent reforms, there are now two national qualifications frameworks operating in England: the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ),[52] for qualifications awarded or validated by higher education institutions, and the Regulated Qualifications Framework (RQF),[53] operated by Ofqual. The RQF has recently replaced both the Qualifications and Credit Framework (QCF),[54] which contained vocational and basic skills qualifications, and the *de facto* relict National Qualifications Framework (NQF), which contained school and other qualifications that were not transferred into the QCF.

The first partial NQF was created in 1987 for the newly-introduced National Vocational Qualifications (NVQs, certificates based on the demonstration of occupational competence). This five-level framework was later extended to other qualifications, and revised in 1999 as an 'eight-plus-Entry' level NQF to better accommodate the wider range of qualifications that it now contained. In 2008, the unit-based QCF was introduced, with the expectation that all NQF qualifications would be redesigned to QCF rules. The main general education qualifications (GCEs and GCSEs), plus a minority of other regulated qualifications, remained outside the QCF; the recent decision to withdraw the QCF rules has left the RQF as a single framework for qualifications other than those made or validated by degree-awarding institutions. The FHEQ was introduced in 2001 with minor revision in 2008 and 2014. It has a five-level structure based on pre-existing conventions for qualifications and credit. The upper five levels of the RQF mirror the FHEQ levels.

The two frameworks currently account for almost all qualifications that can be achieved via publicly-funded education and training. Some qualifications validated by industry and professional bodies exist outside of the frameworks; some of these are informally referenced to a framework level, although this has no official standing. The UK frameworks cannot include any qualified or licensed title that can be revoked or given up, such as that denoting professionally qualified status or licence to practise in a regulated trade.

▶ European referencing

The official referencing of the QCF to the EQF was completed in 2009,[55] and the FHEQ was mapped to the framework of the European Higher Education Area in 2008.[56] It is likely that the QCF referencing will remain valid following the withdrawal of regulations specific to the framework, as the levels are described in broadly the same way. There is no intention to reference the FHEQ directly to the EQF. The referencing of the two frameworks, and the implied relationship between them, is shown overleaf.

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[52] http://www.qaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf (2014, last accessed 12.12.2014).
[53] See https://www.gov.uk/government/consultations/after-the-qcf-a-new-qualifications-framework (accessed 13.10.2015).
[54] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/371294/2008-08-15-regulatory-arrangements-qcf-august08.pdf (2008, last accessed 12.12.2014).
[55] See the England section of the UK referencing report at http://www.eqf-ref.eu/index.php?option=com_docman&task=doc_download&gid=40&Itemid= (last accessed 12.12.2014).
[56] Quality Assurance Agency for Higher Education. 2008. *Verification of the compatibility of the framework for higher education qualifications in England, Wales and Northern Ireland (FHEQ) with the Framework for Qualifications of the European Higher Education Area (FQ-EHEA).* Gloucester: QAA.

Table 3

English qualification framework referencing

QCF[57]	Entry 1&2	Entry 3	1	2	3	4&5	6	7	8
EQF		1	2	3	4	5	6	7	8
F–EHEA cycle						Short	1st	2nd	3rd
FHEQ						4&5	6	7	8

▶ Framework structure

The RQF (as with the QCF and post-1999 NQF) consists of eleven levels: three Entry (basic skills and pre-vocational) levels, and eight 'main' levels, as illustrated above. The FHEQ consists of five levels, parallel with the upper five RQF levels. In the RQF. each level is described via a descriptor containing a set of indicators relating to knowledge and a further set relating to skills (the QCF had a third domain, autonomy and accountability, similar to the 'competence' domain in the EQF, which was dropped in the RQF due to it having been seen as largely unhelpful in determining level). Levels can be applied to whole qualifications or to individual components. In the FHEQ, the levels are each described for a 'full' qualification at the relevant level; smaller qualifications at the same level need to fit with the descriptor, but need not cover everything it describes. A separate set of outline descriptors that can be applied to modules is provided through the Higher Education Credit Framework for England.[58]

▶ Regulation and quality assurance

Qualifications in the RQF are regulated by Ofqual through rules governing how qualifications are approved and awarded.[59] Organisations wanting to run RQF qualifications need to apply to a relevant awarding organisation for 'centre' approval, and also apply specifically to run the qualifications that they wish to deliver. A system of initial and ongoing monitoring is used to ensure that awarding organisations are compliant with Ofqual requirements; awarding bodies carry out similar monitoring of their centres. The awarding body system, which places an intermediate authority between the qualifications authority and the educational institution, is a particular feature of UK education, and an option that is currently being considered is to allow individual FE institutions greater power to award qualifications directly. With a few exceptions, public funding and student loans are only available for (non-HE) qualifications that are in the framework; there is also an advantage for qualifications to be in the framework from the viewpoint of marketing and aiding students' progression.

The FHEQ is not a regulated framework but an agreed set of benchmarks that is designed to promote common standards between qualifications at the same level and provide a language for communicating how different types of higher education qualification relate to one another. The framework is managed by the Quality Assurance Agency for Higher Education (QAA), but interpreted and applied by individual institutions.

Higher education institutions derive their degree-awarding powers directly from a Royal Charter, Act of Parliament or order of the Privy Council. These institutions are responsible for

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[57] The referencing was carried out for the QCF rather than the RQF. The RQF levels are regarded as being the same as those of the QCF.
[58] http://www.qaa.ac.uk/en/Publications/Documents/Academic-Credit-Framework.pdf (last accessed 12.12.2014).
[59] The requirements are on the Ofqual web site, https://www.gov.uk/awarding-organisations-understanding-our-regulatory-requirements (last accessed 13.10.2015).

the standards of their qualifications, subject to compliance with the Higher Education Quality Code[60] and periodic review by the QAA, as well as ensuring that the levels and titles of their qualifications accord with the conventions of the FHEQ. Many institutions validate higher education qualifications that are delivered by organisations such as further education colleges, independent training providers, and employers, including those outside the UK. Institutions are responsible for putting in place standards and processes to ensure the quality and consistency of these external programmes.

▶ Objectives and strategies

A major objective for introducing qualification frameworks in both sectors has been improving understanding of how qualifications relate to one another, in order to improve choice, access and progression. Qualifications in the vocational sector in particular have been viewed as confusing, and one of the purposes of the original NVQ framework was to impose some order on this apparent chaos. A further objective has been to achieve a more rational system of qualifications with more consistent titles and structures, reduction in duplication, and clear progression routes in each vocational sector. In HE, a light-touch approach has been used, limited for instance to ensuring that qualification titles reflect the relevant level and amount of learning. In the vocational sector, the regulatory approvals needed for qualifications to be admitted to the successive frameworks have sought to impose greater coherence and to ensure that new awards are relevant to industry, although the extent to which particularly the former has been achieved is questionable.

The NVQ framework and subsequently the QCF introduced further rules concerning the design of qualifications and support from employers and other interested parties, designed to improve industry relevance, accessibility, and ease of uptake. The unit-based approach of the QCF was designed to increase industry involvement in qualification content, enable new qualifications to be assembled quickly from units, and support access and progression including through the ability to gain credit for individual units. Achievement of these aims was partial at best, and both of these 'transformational' frameworks proved overambitious and ultimately too restrictive. A further objective of the non-HE frameworks has been to recognise learning below EQF level 1; this is widely viewed as an important strategy in encouraging excluded and low-achieving individuals to stay in or re-enter education and the labour market.

▶ Development partners and links to the labour market

The development of the QCF involved extensive consultation with partners from outside the education and training establishment, including employers, trades unions, industry and professional bodies. The majority of QCF qualifications were linked to the labour market in that they were designed to provide broad or more specific preparation for an occupation or range of related occupations, support progression in a career or provide continuing development at or for work. When qualifications and units are submitted to the framework, appropriate support normally needs to be demonstrated from relevant industry interests; depending on the sector and the application, the support of any or all of those listed above is required. Some QCF qualifications and units were developed directly by employers and professional bodies. The review of the QCF and subsequent consultation on the RQF was open to all parties who wished to comment.

Qualifications in the FHEQ are geared to a wide range of purposes, including development in an academic discipline; preparation for or entry to work in a particular profession; continuing development at or for work; and contributing to the knowledge and practice of a discipline, profession or industry. Involvement of external partners in the development of higher education

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[60] http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code (last accessed 12.12.2014).

qualifications is at the discretion of individual institutions. It is usual practice for qualifications that relate to a career in a specified profession, where validation by a professional body may be required or advantageous, and common in programmes with a strong work-based or work-related input. Employer involvement is a standard expectation in the development of foundation degrees.

▶ Type of learning outcomes supported

The RQF is designed to support learning outcomes that are formally assessed against a qualification or unit specification. While some qualifications will have specific regulations about learning processes, the frameworks are neutral as to where or how learning takes place, or whether or not it is structured through a formal education or training programme. This means for instance that units and qualifications can be achieved through a wide range of learning processes, including independent study, self-managed workplace learning, structured training in the workplace, conventional classroom-based or distance learning, or a combination of methods. Some types of qualification (particularly NVQs and NVQ successors) may be achieved based entirely on candidates' current levels of proficiency, provided that it is formally assessed. The frameworks do not support certification based purely on course attendance or on other learning processes where there is no robust form of assessment.

The FHEQ supports a wide range of qualification programmes validated by higher education institutions. There are no specific requirements for programme design attached to any of the levels of the framework, and it is now possible to achieve full qualifications at any level through, for instance, individually-designed work-based or learner-managed learning, and in some cases through accreditation of prior learning, as well as through more conventional full-time, part-time and distance programmes in a variety of settings.

▶ Communication through certificates

All qualification certificates awarded according to the QCF were required to conform to a protocol for titling, which includes the QCF level of the qualification and a title based on the qualification's number of credits: Diploma for qualifications of 37 QCF credits or over,[61] Certificate for 13–36 credits, and Award for up to 12 credits. This protocol differed from common usage by some awarding bodies, so it was possible to have, for instance, a Level 4 HNC (Higher National Certificate) Diploma valued at 120 QCF credits. Certificates stated the level of the qualification, whether it is an Award, Certificate or Diploma, and the number of credits earned. Certificates stating the level and number of credits are also issued for achievement of individual units or groups of units. The Award/Certificate/Diploma protocol was abandoned with the introduction of the RQF.

In the FHEQ, a number of protocols operate that link major qualification titles to levels and to the volume of learning represented (increasingly expressed as credit, although not all universities use credit as a currency, or they use it for only part of their provision). It is not usual for the FHEQ level and credit value of a qualification to be stated explicitly on the certificate, although this is more common in transcripts and certificates of credit, and is sometimes done for non-standard qualifications (e. g. a University Certificate).

▶ Developments and issues

The QCF was introduced in 2008 with the aim that it would take over from the NQF, which was expected to be substantially empty by the end of 2011. In practice, the QCF qualification design

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[61] One ECTS/ECVET credit is regarded as equivalent to two credits in the English system.

rules proved too specific to enable some kinds of awards to transfer into the framework; this applied particularly to GCSEs and GCEs, but also included some vocational qualifications. The framework started to work against innovation and imposed sometimes inappropriate and fragmented approaches to assessment; it also encouraged a marked increase in the number of qualifications, while being less successful than expected at including professional, trade and user certification.[62] The restricted, heavily regulated nature of the QCF contrasted with the more open systems in Wales and Scotland, and recent reviews of the vocational education system highlighted inadequacies both in the framework itself and in the occupational standards used to underpin many vocational qualifications.[63,64,65] Ofqual recently undertook a review and consultation in which there was majority support for withdrawing the regulations specific to the QCF and reintroducing a single framework (now the RQF) that is less prescriptive about approaches to qualification design.[66] The RQF appears to have responded to many of the criticisms made of the QCF, although it is unclear to what extent principles that were generally regarded as helpful – for instance awarding bodies' acceptance of credit from other awarding bodies' qualifications – will still be followed.

England has also been criticised for lacking a single overarching qualifications framework.[67] This is not necessarily an urgent issue due to the presence of a common, EQF- and F-EHEA-referenced system of levels, but it results overall in a less coherent and comprehensive system than those in, for instance, Scotland and Wales. Compared with the Scottish and Welsh frameworks, there is also less scope to indicate how non-regulated programmes and certificates relate to the framework. At present, it is unlikely that a single English framework will emerge in the immediate future, although the RQF, lacking the specific design rules of the QCF, would in principle make it easier to accommodate both the Ofqual and HE systems under some form of meta-framework.

[62] For an independent critique of the QCF see Lester, S. 2011. The UK Qualifications and Credit Framework: a critique. *Journal of Vocational Education and Training* 63 (2), 205–216, http://devmts.org.uk/qcf.pdf (last accessed 12.12.2014).
[63] Wolf, A. 2011. *Review of Vocational Education – The Wolf Report*. London: Department for Education and Department for Business and Skills.
[64] Richard, D. 2012. *The Richard Review of Apprenticeships*. London: School for Startups.
[65] Whitehead, N. (chair). 2013. *Review of adult vocational qualifications in England*. Wath-upon-Dearne: UK Commission for Employment and Skills.
[66] Details of the consultation and resulting decision are posted at https://www.gov.uk/government/consultations/withdrawing-qcf-regulatory-arrangements (last accessed 12.12.2014).
[67] Bjørnåvold, J. and Pevec Grm, S. 2013. *Analysis and overview of NQF developments in European countries: annual report 2012*. Luxembourg: Publications Office of the European Union (CEDEFOP working paper 17).

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List of Acronyms

AERES	Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur
BAC	Baccalauréat
BTS	Brevet de Technicien Supérieur
BTSA	Brevet de Technicien Supérieur Agriculture
CFA	Centre de Formation d'Apprentis
CM	Cours Magistraux
CNAM	Conservatoire National des Arts et Métiers
CNCP	Commission Nationale de la Certification Professionnelle
CNESER	Conseil National de l'Enseignement Supérieur et de la Recherche
CPC	Commission Professionnelle Consultative
CPGE	Classes Préparatoires aux Grandes Ecoles
CPN	Commission Pédagogique Nationale
CNESER	Conseil National de l'Enseignement Supérieur et de la Recherche
CTI	Commission des Titres d'Ingénieurs
DEGESIP	Direction Générale de l'Enseignement Supérieur et de l'Insertion Professionnelle
DEPP	Direction de l'Evaluation, de la Prospective et de la Performance
DIF	Droit Individuel à la Formation
DMA	Diplôme des Métiers d'Art
DUT	Diplôme Universitaire de Technologie
ECTS	European Credit Transfer System
EQF	European Qualification Framework
HE	Higher Education
HSE	Hygiène, Sécurité, Environnement
H-VET	Higher education including VET
IUT	Institut Universitaire de Technologie
LMD	Licence, Master, Doctorat
LRU	Libertés et Responsabilités des Universités (Law)
MENESR	Ministère de l'Education Nationale, de l'Enseignement Supérieur et de la Recherche
NQF	National Qualification Framework
PPN	Programme Pédagogique National (for DUT)
PPP	Projet Personnel et Professionnel
PRDF	Plan Régional de Développement de la Formation
RNCP	Répertoire National des Certifications Professionnelles
TD	Travaux Dirigés
TP	Travaux Pratiques
UE	Unités d'Enseignement
VAE	Validation des Acquis d'Expérience (2002 Law)
VAP	Validation des Acquis Professionnels (1985 Decree)
VET	Vocational Education and Training

Part 1: Tertiary Education in France

1.1   Introduction

The French education system is often seen as very complex because it is composed of several sub-systems overlapping each other with more or less the same goals, at least in appearance. History and societal context provide a large range of initiatives and stakeholders sharing a common purpose of citizen education according to their field of governance, always at the national level.

Three drivers must be considered in the French approach:

▶ Private as well as public authorities are allowed to be awarding bodies delivering diplomas, titles or certificates socially recognized as relevant to the 1969 scale. A "*Validation Commission*" was created in 1972 to list the qualifications delivered by authorities other than the National Education Ministry. In 2002, a new Commission ("*Commission Nationale de la Certification Professionnelle*" – CNCP) replaced this old Commission with new quality and registration rules. The list to be set was named "*Répertoire National des Certifications Professionnelles*" – RNCP). Since 2002, trade certificates ("*Certificats de Qualification Professionnelle*") delivered through economic sectors (branches) can be registered in the RNCP, but not classified as part of the grid of levels.

▶ All qualifications registered in the RNCP may be available by different training routes (initial, continuing education or alternating) and through a validation process of non-formal and informal learning outcomes (in French: "*Validation des Acquis d'Expérience*" – VAE). This process leads to the same qualifications as students obtain through a training route.

▶ In HE, all "*licences*" and masters diplomas are considered as vocational certifications, even if the domains of study are general. Nevertheless, in practice, Professional Licences were distinguished from General Licences. Not all masters degrees, especially those with a clear vocational orientation, lead to the "*Doctorat*", because the research aspect is compulsory and clearly required to enter this higher level of studies.

So far, for example, "academic" HE and H-VET public national credentials are registered in the RNCP at the same level as private qualifications in the same area. This makes any analysis difficult to follow and the French educational landscape more or less difficult to read.

For the design of VET qualifications, professional bodies are systematically involved in the implementation of vocational training. Nine ministries apply this principle through their Vocational Consultative Committee (in French: "*Commission professionnelle consultative*" – CPC), composed of representatives of the State and representatives of employers and employees. Such consultation is strongly recommended for all types of qualifications and awarding bodies. As the public national qualifications cover the majority of titles, public certifications delivered under the umbrella of the Ministry of Education will be described in more detail than private ones in this study.

▶ The legal background

In France, the certification system and the content of the programmes leading to national qualifications are regulated at a centralized national level. However, the management of training is the responsibility of the regional level. The system operates on a principle giving the same value to a qualification regardless of where in the country it is obtained and whether it is achieved through formal, non-formal or informal learning. Since 1993, relations between the central level and the

regions in education matters are facilitated through a regional Committee[68] in charge of developing a *"Plan Régional de dévelopement de la formation"* – PRDF). The regional planning for education development allows the organization of education policies and resources according to a national orientation, but also according to the economic and social context of each region. So the establishment or the elimination of qualification projects, training supports or new training centres are decided in this Committee.

The HE and H-VET qualifications developed cover a large range of entities from level 5 to level 7 (EQF scale). Most of the legal aspects related to the French education system are detailed in an official Education Code. It gathers official texts such as laws, decrees and the main application rules and is published and regularly updated by the official French government website.[69] Added information related to the functioning and regulations for public establishments, official programmes, diplomas and grades delivered under the Ministry of Education responsibility are published in the ministry's Official Bulletin.[70] The CNCP and RNCP statements and regulations are integrated in this Education Code. Where the education system and regulations intersect with labour programmes and rules, a linkage is made with the Labour Code (*"Code du Travail"*). This is the case for VETs involving apprenticeships, alternating work and school placements, continuing or adult education (all of these together also named *"Formation Professionnelle"* in French). This Code is related to the organization of on-the-job time and training centre time. It sets out the main principles on financial support and the organization of training; it is not relevant to the initial training.

▶ The education system

In the French education system in general and academic education in particular, the primary and secondary cycles (ISCED 1 to 4) can be provided by private or public establishments, but the relevant certifications (especially the *"Baccalauréat"*) are under the Ministry of National Education. The *"Baccalauréat"* is the entrance key to the tertiary education. As mentioned before, VET and H-VET tasks are shared by different credentialing bodies through public and private institutions and Chambers of Trade. They may develop their own training programmes and their own credentials, but the value of those credentials is regulated by a national certification system and regulated by law through the Education Code. The main streams are presented in Table 1. For other types of credentials registered in the RNCP, those pathways are up to each licensing body, but it *CNCP* endorsement is required to be attributed a level.

Admission to a higher education route requires a *"Baccalauréat."* Several options exist to get a qualification equivalent to the *"Baccalauréat."*[71] The structure of H-VET is embedded in the global HE rules following the Bologna process. Pathways are regulated according to a number of credits which are themselves corresponding to semesters. It is used to speak in number of years necessary to be graduates in three degrees *"Licence"* (or Bachelor), Master and *"Doctorat"* PhD) or with this acronym "LMD" through initial training: so 3 years for L, 5 years for M and 8 years for D. Nevertheless, pathways between each grade need also an agreement from the training center, according to the advice of the diploma responsible teacher to verify the accordance between the applicant previous curriculum and the content of the further grade curriculum.

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[68] This Committee includes representatives of the local level of the State (Préfecture), representatives of the Region (Regional Council authority), and representatives of social partners (see www.regionreunion.com/fr/spip/Qu-est-ce-que-le-PRDF).
[69] www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006071191.
[70] www.google.fr/?gfe_rd=cr&ei=yNofVMWYA-fL8gfb4YHQAg&gws_rd=ssl#q=bulletin+officiel+%C3%A9ducation+nationale.
[71] For example, the *"Diplôme d'accès aux études universitaires (DAEU),"* which can be obtained through continuing education with two options – scientific or letters.

To be admitted to the *"Grandes écoles,"* applicants have to pass some examinations or even competitions. The term *"Grandes écoles"* covers two types of establishments: *"Ecoles d'ingénieurs"* (under the umbrella of several ministries, such as agriculture, industry, culture, Marine, Army…), and *"écoles de commerce"* (under the umbrella of Chambers of Commerce and Industry). The *"écoles d'ingénieurs"* grant engineering titles, which are equivalent to an official Masters degree. The other *"Grandes écoles"* grant their own degrees, which can be registered as level 5, 6 or even 8, according to the CNCP regulations. There is a specific Committee (*"Commission des visas"*) under the responsibility of the Ministry in charge of HE that grants permission to grant official *"licences,"* *"licences pro"* or Masters degrees.

Figure 1

Main tertiary education streams

Source: Ministry of Education

Several streams have been developed since the sixties to provide vocational qualifications after two years of training. One is called the *"Diplôme Universitaire de Technologie" (DUT)*. It is granted at *"Instituts Universitaires de Technologie" (IUT)*, which correspond to institutes integrated in a university. The other stream is called *"Brevet de Technicien Supérieur" (BTS)*. It is granted at *"Lycées"* and more focused on professional aims. Around 90 % of *DUT* holders go on to further studies to get a *"licence professionnelle"*. *BTS* are less numerous, but display the same tendencies.

In France, universities are public establishments under the responsibility of the Ministry in charge of HE. Only three institutions have private status. There is currently a major impetus towards the vocational and social inclusion of students. A specific law in 2010 obliges all HE institutions to do a follow-up through observatories. Agreements to allow HE establishments to grant degrees require that they provide information about this and their study opportunities, explaining how the degrees they grant relate to labour market needs. Universities have autonomous sta-

tus and have to deal with regional authorities and with enterprises to develop training offers. Funding for continuing education leading to degrees is a major part of these relationships. At the same time, they provide opportunities to develop on-the-job internships (in French "*stages*") for the initial training of students. The same courses often cater to a mix of students in their initial training and students in continuing adult education.

Social partners (representatives of employers and employees) are members of the main committees for the administration and management of public establishments. When the content of the studies is clearly labour-market oriented, social partners are members of the committees in charge of the design of qualification standards and are involved in the definition of the professional profile aimed for and in the assessment process. They are also members of the *CNCP*. They have a consultative role for the design of qualifications but an active role in the assessment as they must be jury members for most of the vocational credentials. However, weak union representation often makes this objective difficult to meet for all cases.

In general, BTS and DUT are highly valued by employers, who appreciate the "*Licence pro*" because most of the time, graduates are also BTS or DUT owners. Though "*licence pro*" owners are paid the same salary as BTS or DUT, they reach higher level jobs faster. In the licence route, which is general and not *professional*, only general "*licences*" allow for admission to a Masters cycle, although there may be some exceptions.

About the vocabulary:

In the French language, the English word "qualification" can be translated by "certification" and sometimes by "qualification". The French word "certification" covers exactly the EQF definition and is related to the evidence of knowledge, skills and attitudes assessed after formal, non-formal or informal learning.

The French word "qualification" is more related to a level defined in collective agreements. In most of them, qualification is composed of several criteria, including the duration of formal learning and the type of certification obtained.

The scope of certifications is very large and includes diplomas, national or State diplomas, titles, certificates of ability, brevets, *certificats de qualification professionnelle*, etc. The name of a credential generally depends on the granting body which issues it. All credentials were included under the same section on "*certification*" in the 2002 law creating the RNCP.

Since the implementation of the Bologna process in 2002, the European degrees (in French "grade") have been adopted in HE: Bachelor, Masters, PhD (in French LMD). The universities grant national diplomas with the same names as the degrees. The other HE establishments (public and private) grant their own qualifications with their own names. Some of them may be allowed to issue degrees after a specific procedure. The "*titre d'ingénieur*," for example, is also a Masters degree.

To understand the French NQF, it is necessary to keep in mind two main principles:
Traditionally, any public or private sectorial branches of training providers such as trade chambers are allowed to develop training and qualification systems with their own rules. This is why credentials and accreditation bodies are so numerous. Diplomas delivered by the Ministry of Education are the basis of initial training and, till the end of the secondary level with the *Baccalauréat*, the only way to reach Higher Education (HE). In order to answer to the need for qualifications in vocational fields not covered by the Ministry of Education (such as agriculture, social affairs, health, sport, etc.) and in adult education (over 18 years old), a large range of providers has implemented their own pedagogical and qualification systems according to the type of learners and specialities they manage.

All qualification standards are designed according to existing skills profiles and the levels are decided a priori, before designing the standards. The positioning is decided in the committees in

charge of consultation with the social partners; it is negotiated and adjusted all along the design process. However, the development of HE harmonizing degrees and curricula according to training duration has created a real confusion in this approach.

Statistics related to HE development are published by the Ministry of Education through its Direction de l'Evaluation, de la Prospective et de la Performance (DEPP) in a *bulletin* updated every year under the title: "*Repères et références statistiques.*" The last edition used for this study is the 2014 edition.

The vocabulary used in this study corresponds to the CEDEFOP definitions as published in glossaries in September 2011 and by the UNESCO in 2009. VET is not really considered as a specific education category to be dissociated from HE. Some VET can be developed in HE. As indicated in terms of reference for this study, H6VET will cover VET routes in the tertiary education sector corresponding to the further routes after the secondary education sector.

1.2 Short description of education programmes and qualifications on EQF levels 5–7 (ISCED 5 A and 5 B) in brief

The H-VET qualifications developed in France cover a large range of entities from level 5 to level 7 (EQF scale). According to the referencing report[72] presented to the EQF Advisory Group in October 2010, qualifications are referenced as mentioned in Table 2.

Qualifications positioning at a specific level is decided before the design of standards. As explained in Part 2 of this document, the creation of a qualification is decided according to the level of the qualification (meaning here socio-professional categories) needed in the labour market.

The education programmes and qualification standards are designed through different processes according to the type of certification to which they are relevant (see Table 2). Globally, BTS and DUT are developed in a centralized process covering all specialties, and they are available in all the different training establishments in the country. The other qualifications are designed by the training centres. The standards provided follow a quality assurance process according to the type of certification they lead to.

Table 1
Conceptualization and validation process of qualification standards registered in the RNCP

Type of establishment	Name of the qualification	Levels NQF	Levels EQF	Quality examination stakeholders	Official decision institution	Decision
Lycée Lycée Agriculturel	Brevet de Technicien Supérieur (BTS) BTSA (Agricole)	III	5	CPC Commissions Professionnelles Consultatives	Ministry of Education or Agriculture and HE Ministry	Creation, modification or elimination of BTS or BTSA
IUT	Diplôme Universitaire de Technologie (DUT)	III	5	CPN Commissions Pédagogiques Nationales	Ministry in charge of HE	Creation, modification or elimination of DUT
Universities	Licence Master Doctorat	II I I	6 7 8	AERES Agence d'Evaluation de la Recherche et de l'Enseignement supérieur	CNESER* Ministry in charge of HE	Permission to grant Licence, Master or Doctorate degrees

[72] http://www.nok.si/files/nok/userfiles/datoteke/66_file_path.pdf.

(Continuing Table 1)

Type of establishment	Name of the qualification	Levels NQF	Levels EQF	Quality examination stakeholders	Official decision institution	Decision
Ecoles d'ingénieurs	Titre d'ingénieur	I	7	CTI Commission des Titres d'Ingénieurs	CNESER Ministry in charge of HE	Permission to grant Master
Other Grandes écoles	Titre	III,II or I	5 to 8	CNCP Commission Nationale de la Certification Professionnelle	Ministry of Labour by delegation from Prime Minister	Position level 5 to 8
	Diplôme visé	II or I	6 – 7	Commission des visas	Ministry in charge of HE	Permission to grant Licence or Master degrees

* Conseil National de l'enseignement supérieur et de la recherche

Source: A. M. Charraud

For universities, the process is driven by the Ministry in charge of HE – the "*Direction Générale de l'Enseignement Supérieur et de l'Insertion professionnelle*"(*DGESIP*). This process implies a specific audit by the "*Agence d'évaluation de la recherche et de l'enseignement supérieur » (AERES)*.[73] This audit has to examine whether the certification project is in accordance with the LMD standard as designed by the Ministry.

For the "*écoles d'ingénieurs,*" the same process is followed, but the audit is carried out through a "*Commission des titres d'ingénieurs.*" This commission evaluates the conformity with the standard designs for such titles. Then the Masters degree is automatically granted by the Ministry in charge of HE.

For the other "*Grandes écoles*", two processes are available:

► One is through the CNCP,[74] which proceeds with a quality evaluation of the qualification process and provides advice about the attribution of a level (EQF 5 to 8 – French scale levels III to I).
► The other one involves an audit by a specific committee (named *Commission des visas*) created in 2001,[75] which allows Business and Management schools, and some other "*Grandes écoles*" relevant to cultural domains, to grant Licence or Master degrees.

In each case, except for the *BTS* and *DUT*, the validation procedure of the standard is supposed to provide a "dossier" describing the qualification content and assessment process for each speciality developed. The "dossier" is examined by independent experts in the quality assurance bodies. Their advice is validated by Committees with representatives of the State and the social partners, before the standard is published with a minister's signature in the Official Journal. This publication permits registration in the RNCP. A summary of the professional outcomes and description of the standard is published there, following the Certificate Supplement Europass template. Though it is compulsory to provide a Diploma Supplement to each LMD degree holder, the Certificate supplement is also required in the "dossier" leading to the permission to grant those degrees or diplomas. The same process is set up for BTSA (*BTS* in the field of agriculture) through a specific "*Commission Professionnelle Consultative*" under the responsibility of the Min-

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[73] See: www.aeres-evaluation.fr.
[74] See: www.cncp.gouv.fr.
[75] See: Legifrance.gouv.fr – Decree n°2001-295 of 4 April 2001.

istry of Agriculture. An agreement between the Ministry of Education and the Ministry of Agriculture permits equivalences and pathways between the qualifications they grant.

The development and validation of *DUT* is realized in National Pedagogical Committees (*Commissions Professionnelles Nationales*[76]), one by speciality. They propose a description of the knowledge, skills and competences developed during the training, the organization of the studies and the assessment.

A re-organisation of the *DUT* was decided in 2005 in order to apply the Bologna rules, with a duration of two years or four semesters and the attribution of 120 ECTS to the applicants who pass the evaluation at the end of the curriculum. To understand the role of the practical dimension and the theoretical one, it is necessary to consider that there are two aspects to the qualifications rules: one corresponds to the learning outcomes as proven in the assessment at the end of the training and the other corresponds to the structure of the learning. Information about these two aspects is provided in the decrees for each type of certification. A brief summary will be presented below, certification by certification.

▶ A first landscape of HE education students in 2013–2014

In 2013–2014, 2,429,900 students were registered in HE cycles (2 % more than the previous year, following a consistent trend over the previous five years). HE is mostly provided in public establishments: only 443,600 students (18.3 %) are studying in private schools.

Table 2
Students according to the type of certification they seek

	Levels EQF	Number of students (thousands)
Diplômes LMD	6 – 8	1,028.6
Health professional	6 – 8	6,278.7
Formations d'ingénieur	7	137.3
DUT	5	115.8
BTS and similar	5	255.0
CPGE + préparations Intégrées	5	93.5
Others (*)	5 – 8	521.0
Total		2,429.9

(*) Including business and management schools (136,800 students), journalist and literary schools (38,300 students), medical and social schools (32,200 students), art schools (48,400 students), architecture schools (19,000 students), and veterinarian schools (2,600 students).

Source: DEPP 2014

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[76] The missions of these CPN were defined by *an "arête"* on 4 June 1992. There are currently 17 CPN: one CPN per DUT specialty or group of specialties. The CPN are composed of 25 members (mainly teachers, researchers and professionals relevant to the domain of specialization) and are set up by the Minister in charge of HE for two years. The CPN have to follow the technological and economical evolution of the specialty for which they are responsible, monitor the inclusion of DUT students and holders in further education and in the labour market, and design or modify the Pedagogical Programme related to the training and assessment standards. This programme is published by the Ministry in charge of HE (see: http://www.enseignementsup-recherche.gouv.fr/cid53575/programmes-pedagogiques-nationaux-d. u.t.html).

As this table shows, most HE is related to VET. Academic or general studies are developed in universities. Most of the others certifications are under the umbrellas of the ministries in charge of health or culture. The attribution of levels is a responsibility of those ministries and is officially published in the Official Journal. For the other certifications, the level is assigned based on advice from the CNCP.

Only the major certifications will be described in this study (*BTS, DUT, Licence professionnelles, Titre d'ingénieur)*. The evolution of student streams since 2005 is described in Annex 1.

a) Main facts about the BTS

In keeping with the evolution of technology and to adapt to a new environment, the main rules related to BTS qualifications have been modified since their creation in 1959. Changes were made in 1995 and 2011.[77] A decree in 2007 modified the status of the BTS, integrated it in the Bologna process and re-organized it in four semesters and 120 ECTS.[78] Its contents are designed by the CPC. This diploma can be earned through initial training, apprenticeships, continuing education or VAE (*Validation des acquis d'expérience*).[79] To enter such a programme, it is compulsory to have a *Baccalauréat* or another diploma or title registered at level 4 (NQF or EQF). A vocational *Baccalauréat* is accepted if it was obtained with a very good mention. Those without this mention have to pass an examination to be admitted. Over a hundred different specialties are currently available through BTS programmes,[80] in addition to around 40 related to the arts and handicrafts and 13 in the agricultural domain.

Each BTS standard is described with information related to vocational activities and competences on the one hand ("*référentiel d'activités professionnelles*") and with the certification process and the assessment content on the other hand ("*référentiel de certification ou de diplôme*").

The certification standard is composed of three units (one may not be compulsory). Content knowledge is assessed through six different examinations. They can be organized altogether at the end of the training or by cumulative units of continuing education learning. To obtain the diploma, it is necessary to get an average of 10.

Organisation of training

A *BTS* can be earned

▶ Through formal education in a "*Lycée*" or private school for a period of two years, including a period of work in an enterprise of around two weeks the first year and twelve weeks the second year. The real duration varies according to the specialty and is mentioned in the diploma standard.
▶ By alternating periods of training at the training centre and employment in the business; for the apprenticeship route, the duration of training is 1,320 hours.
▶ Through continuing education of variable duration according to the level of the applicant. Recognition of Prior Learning may be obtained at the beginning of the training (in French, this procedure is called "*Positionnement*"), which permits to propose individual courses.
▶ By "*validation des acquis d'expérience* "(*VAE* = for all or some of the units associated with the degree examination). This path requires three years (with a minimum of 1,100 hours per year) of professional experience at the same level and in the same field as covered by the diploma.

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[77] Décret 2011–2014 of 29 December 2011.
[78] Décret 2007–540 of 11 April 2007.
[79] In 2013, 66,000 applicants obtain a BTS. In addition, 6,200 BTS were granted after VAE. This stream represents 31 % of the number of VET diplomas delivered by the Ministry of Education through the VAE process.
[80] See a list at www.sup.adc.education.fr/btslst/.

Courses are divided into three main fields:

► General courses in economics, language, French or science with transversal content for industrial specializations or, separately, for services,
► Theoretical courses related to knowledge associated with the speciality of the diploma,
► Practical courses taught in workshops in the training centre.

The number of hours varies depending on the speciality. The work placement in the enterprise permits to cover the three fields together. What may be learnt in the enterprise is decided with the teachers or trainers responsible for the relationships between the student, the enterprise (represented by a mentor or tutor) and the training centre. The rules are the same for private as well as public establishments. The student has a template book with the assignments and information about his/her progress and results.

Some statistics about BTS

In 2013–2014, 255,000 students were registered to prepare a *"Brevet de Technicien Supérieur"* *(BTS)*. Nine students out of ten were studying in a public *"lycée"* under the Ministry in charge of HE. 20,000 students were studying in an agricultural *"lycée"* under the umbrella of the Ministry of Agriculture and Fishing to prepare a BTS A. Most of those students were holders of *"Baccalauréats technologiques,"* but the rate of *"Baccalauréats professionnels"* holders was increasing (27.4% in 2013 as compared to 21.7% in 2011).

Among those students, 0.6% were preparing another diploma, other than a BTS, which was called *"Diplôme des Métiers d'Art" (DMA)*. It was similar to a BTS, with a two-tier preparation and leading to the same level (level 5 EQF). This type of diploma was specialized in the artistic field (generally handicrafts).

One third of the *Technicien supérieur* sections were relevant to the industrial domain (industrial technologies or production, automation). 50% of the students were studying marketing and sales, finance or accounting. Tourism and aesthetic personal care were very popular among young people, especially girls, but few spaces were available in public "lycées" (which was in accordance to the labour market needs). Private schools provided more opportunities, but with a low chance of successfully obtaining the BTS.

In 2013, 120,500 students graduated with a BTS (a success rate of 70.6%). Very few females graduated in industrial specialities (15%), but they constituted 70% of the BTS holders in the services. 40% of the BTS graduates were specialized in marketing and sales, management or accounting.

b) Main facts about the DUT

The DUT (*"Diplôme Universitaire de Technologie"*) was created in 1966 inside the university system. It was established as a vocational qualification which co-existed with a general route developed to provide certifications at the end of two years of studies after the Baccalauréat. With the Bologna process in France in 2002, the general route and diploma (DEUG –*"Diplôme d'études universitaires générales"*) disappeared in favour of a three-year route to get the *"licence."*[81] The DUT provides 120 ECTS. Its focus is more general than that of the BTS.

The regulation from 2005 indicated that the DUT attested that the owner can hold a technical management function in industry and services.[82] The DUT holder has all the competences necessary to fulfil higher-level functions alone or in a team. The DUT can be earned in 15 *Instituts*

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[81] Regulation of 23 April 2002, modified by a regulation from 3 August 2005.
[82] http://www.legifrance.gouv.fr/affichTexteArticle.do;jsessionid=424F5CCF534F4013C11EBE604B2B9133.tpdjo14v_2?
cidTexte=JORFTEXT000000449466&idArticle=LEGIARTI000006445365&dateTexte=20050813&categorieLien=cid.

Universitaires de Technologie (IUT), which cover 25 different specialities.[83] Holders of a "*Bacca-lauréat technologique*" with a mention of "good" or "very good" are automatically admitted to DUT careers (Table 4). Others are admitted based on examination of a "dossier" by a jury organized by the IUT president. The studies take place over four semesters or two years. Students who have already studied for two years in an HE cycle may take only one year of studies to get the DUT. In all cases, the diploma presented to be admitted must be in the same domain as the desired DUT speciality.

Table 3

Number of students by DUT specialities

Specialities	Number of students
Aide et assistance pour le monitoring et le maintien à domicile	19
Chimie	3,422
Génie biologique	6,562
Génie chimique – génie des procédés	1,113
Génie civil – construction durable (ex-génie civil)	5,047
Génie électrique et informatique industrielle	7,814
Génie industriel et maintenance	1,980
Génie mécanique et productique	7,137
Génie thermique et énergie	2,187
Hygiène, sécurité et environnement	1,863
Mesures physiques	4,548
Packaging, emballage et conditionnement (ex-génie du conditionnement et de l'emballage)	274
Qualité, logistique industrielle et organisation	2,043
Réseaux et télécommunications	2,807
Science et génie des matériaux	1,013
Total du secteur de la Production	**47,829**
Carrières juridiques	2,442
Carrières sociales	3,340
Gestion des entreprises et des administrations	20,076
Gestion administrative et commerciale des organisations (ex-gestion administrative et commerciale)	2,148
Gestion, logistique et transport	2,705
Information – communication	3,812
Informatique	8,881
Métiers du multimédia et de l'internet (ex-services et réseaux de communications)	3,527
Statistiques et informatique décisionnelle	1,108
Techniques de commercialisation	19,912
Total du secteur des services	**67,951**
TOTAL	**115,780**

Source: DEPP 2014

One of the characteristic of the DUT studies is related to the organization of a specific accompaniment of the students by a mentor (or tutor) who is present all along the course of studies. This tutoring occurs during the internships at enterprises, but also in order to help the students define their professional project at the end of the studies. This accompaniment can cover l0% of the study time and can propose specific modules adapted to the student's issue area.

Like with all French diplomas, the preparation for the assessment can be done through formal learning, alternating learning (through apprenticeships), continuing education and through

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[83] See: http://www.iut.fr/formations-et-diplomes/les-specialites/les-specialites-de-dut.html.

"*VAE*". Examinations are organized at the end of each semester. The diploma jury is composed of representatives of the IUT, representatives of the speciality, teachers and professionals. An average of 10/20 over all the diploma units is compulsory to pass the *DUT*. All the formal learning covers around 1,800 hours over two years. In some cases, the tutoring time can be more important, according to the context. The course of studies is organized as shown in Table 5.

Table 4
Timetables of courses with tutor for 4 semesters

Training with a tutor					
Courses	Work with tutor	Lab for language and communication	Practical lab	Study case project	Internship period in enterprise
360 to 410 hours	540 to 610 hours	300 hours	600 hours	300 hours	10 weeks minimum

Source: Regulation from 3 August 2005, consolidated version from 7 July 2013

The content of the learning inputs varies according to each speciality. What is common is the student accompaniment and the focus on communication aspects and individual abilities to learn by oneself and to manage one's own personal development.

▶ Some statistics about DUT

75 universities have currently integrated an "*Institut Universitaire de Technologie*" in France, for a total of 115,800 students. Most of them are recruited from among the general *Baccalauréat* holders (66 %). The others are "*Baccalauréat Technologique*" holders. Very few holders of "*Baccalauréats professionnels*" are admitted. The DUT is relevant to different professional sectors mainly in the industrial and services domains, as described in Table 4.

In 2012, 46,900 students graduated with a DUT (with a success rate of 73 %). 65 % of DUT applicants graduate after two years. A third year of studies is necessary for 12 % to graduate. The success rate is better for the services specialities than the industrial ones (66 % as compared to 60 %).

c) Main facts about the "licence" or "licence professionnelle" degrees

As mentioned before, the "*licence*" is a national diploma delivered by universities accredited to deliver the degree "*licence*". In the 2011 decree, this certification is defined as follows: "The licence attests knowledge and competences acquired in an academic domain or several academic domains. Licence training provides students with knowledge, research experience and scientific methods in this domain."[84] Licence standards are expressed in terms of "competences" and shaped by the Minister in charge of HE in collaboration with several HE committees and professionals involved in the domain.

A "*licence professionnelle*" can also be earned in universities, IUT or even "*Lycées professionnels.*" The duration of the studies is one year. Holders of two-year diplomas are recruited after the Baccalauréat as DUT or BTS, but also as students in general university studies related to a licence curriculum. Applicants are supposed to provide an application "*dossier*" and will usually

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[84] Decree of 1 August 2011.

have an interview with the teaching team. The conditions for admission are presented at the level of each establishment preparing the "*licence professionnelle*" and a direct link is often established with a specific DUT or BTS. The studies are divided into two semesters and organized in courses ("*Unités d'enseignement*" – UE), including an internship period of around 12 to 16 weeks. Students get the degree if they achieve an average of 10/20 in the evaluation. This degree consists of 180 ECTS (60 credits in addition to the 120 already held at the beginning of the courses). The teaching methods and evaluation modalities are defined between the members of the teaching team and the students from among several options, based on the local and sector context. They are described in the accreditation request and validated as a "*licence*" or master degree after an audit.

A recent decree[85] goes further in reforming the "licence" degree and encourage teachers to design programmes using a competences-based approach to provide better comprehensibility for the labour market. The name itself of the "*licence professionnelle*" was defined in terms which allow for better comprehensibility by using for the 155 existing terms close to their environment (see Annex 4). The list was published in a decree to ensure this usage.[86] The same decree introduces some changes to the focus to be given to the students' curriculum by providing follow-up with each student under the responsibility of the teaching team. This can be formalized for the *DUT* through a "*Projet Personnel et Professionnel*".

The degree "*Licence Professionnelle*" was created in 2000 and the number of students has been growing since its establishment. 902,000 students were following a "*licence*" curriculum in 2013–2014 and 52,000 were preparing a "*licence professionnelle*," as compared to the 3,600 in 2002.

With the implementation of the Bologna process, masters focused on research coexist with masters with a vocational aim. Since 2011, masters with a mixed goal (research and vocational) have been developed and the number of masters with a research aim is going down. Of the 122,000 masters granted in 2013, 19,000 were focused on research and 60,700 were focused on a professional goal.[87] In 2013, 168,100 students graduated with a licence degree, including 40,900 who obtained a "Licence".

Table 5
The distribution of HE students in 2013–2014

Cursus licence	Licences professionnelles		Licences générales		Total licences	
	Effectifs	Part des femmes (%)	Effectifs	Part des femmes (%)	Effectifs	Part des femmes (%)
Droit, sciences politiques	1,630	72.9	19,878	67.9	21,508	68.3
Économie, gestion	16,897	61.8	17,191	54.3	34,088	58.0
Administration économique et sociale	2,413	62.9	6,027	65.6	8,440	64.8
Lettres, langues et sciences humaines	6,086	63.2	47,367	75.0	53,453	73.6
Sciences	18,803	27.4	25,687	43.0	44,490	36.4

[85] Decree of 22 January 2014.
[86] Decree of 27 May 2014.
[87] In 2011, a new law modified the requirements for teachers' recruitment, making a masters degree compulsory. This increased the number of masters with a professional focus on teaching. They represent 15 % of the number of masters.

(Continuing Table 5)

Cursus licence	Licences professionnelles		Licences générales		Total licences	
	Effectifs	Part des femmes (%)	Effectifs	Part des femmes (%)	Effectifs	Part des femmes (%)
Staps	595	47.7	4,809	36.9	5,404	38.1
Médecine, pharmacie, odontologie	336	72.3	367	75.2	703	73.8
Total	**46,760**	**48.5**	**121,326**	**62.1**	**168,086**	**58.3**

Source: DEPP 2014

d) The main "Ingénieur" titles

The concept of "*Ingénieurs*" schools has existed since the XVIth century for Royal Navy needs, but most of the schools originated in the XIXth century as part of the industrial revolution. The "ingénieurs" aim to increase industrial production through support for the application and development of technology and sciences. Around 230 "*ingénieurs*" schools existed in 2013–2014 and around 137,500 applicants were studying in "*écoles d'ingénieurs,*" about 1.7% more than in 2012–2013. Half of them were in schools under the Ministry in charge of HE. The others were shared between different schools under other ministries (Table 7). Most of them were young men (females constituted about 28%).

Table 6

Distribution of students in "Ingénieurs" schools in 2013–2014

Ministries responsible for Engineering Schools	Number of Students
Internal schools or schools attached to universities	28,400
Other schools of the MENESR	43,037
School under the responsibility of another ministry or local group	18,750
Agriculture, fishing	4,678
Defence	4,288
Industry	4,304
Sea	348
Telecommunications	2,046
Equipment, transport, housing	838
Health	18
Economics and Finance	646
City of Paris	588

Source: DEPP 2014

Admission in such schools is generally open to students having already completed two years of studies after the *Baccalauréat*. 40% are recruited to those schools through general competitions open to applicants coming from preparatory schools (*classes préparatoires aux grandes écoles –*

CPGE)[88] after an intensive curriculum and after two years after the *"Baccalauréat"*. Only the more successful *Baccalauréat* holders are admitted there. 13 % of newly recruited students are BTS or DUT holders.

The *"ingénieur"* title or diploma[89] is earned in five years after the *"Baccalauréat"*. As in universities, programmes are developed by teaching teams and are accredited after a quality insurance process described in this document, including an audit by the *"Commission des titres d'ingénieurs CTI)."* In the middle of the 2000's, the commission implemented an important quality assurance process, setting down some of the main principles as a common base to all programmes. Programmes provide theoretical and scientific support. A special place is given to foreign languages and some linguistic exams such as the TOEIC or TOEFL are compulsory to obtain the diploma.

Those studies can be done through an alternate route and the diploma can be obtained through *VAE*.[90] Whatever the route, this diploma provides 300 ECTS and a masters degree.

During the three-year cycle, students are required to do internships. During the first semester, they generally have to do a non-skilled work internship for two weeks and write a report about the organization and the main management system they have observed. At the end of the second semester, they have to do a skilled work internship for 6 to 8 weeks. In the second year of study, they have to do another internship of the same length with management responsibilities, and in the third year, they have to do a 5-month internship. One of those last two internships has to be in a foreign country. After each internship, they have to write a report and defend it in front of a jury. As for the DUT, *"ingénieurs"* students also have tutored and lab courses, and they may prepare some case studies in groups of 3 to 4 students. The attitude towards team work in the group is an evaluation criterion.

In 2012, 37,000 *"ingénieur"* titles were granted and 33,600 students graduated from business and management *"grandes écoles."*

▶ About business and management schools

These schools appeared at the end of the 19th century and the beginning of the 20th century. They were set up to ensure the development of commerce and management competences in enterprises. Programmes are provided by teaching teams. They give an important place to languages, tutored courses, labs, case studies based on group work, and internships. Internships in foreign countries are compulsory and education institutions develop many partnerships with foreign institutions to promote exchanges of teachers and students.

In 2013, 134,200 students were registered in 195 business and management schools. 90 % of those students had had a formal initial training. 43 were recruited after a two-year programme such as CPGE, DUT or BTS. These business and management schools had a private status or were linked to Chambers of Commerce. They were accredited by the Ministry in charge of HE to deliver a licence or a master.

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[88] Around 83,500 students are registered in Classes préparatoires aux grandes écoles (CPGE). 65 % are in the scientific stream, the others in the economic and commercial streams. 93 % were recruited after a general "Baccalauréat." After the completion of two years in public or private schools, they participate in a competition to enter a three-year programme leading to a *"titre d'ingénieur."*

[89] In France, the term "ingénieur" is not legally protected. The title "ingénieur" is a national diploma and is considered as a masters degree only if the title is obtained in an accredited establishment.

[90] The *"ingénieur"* diploma is the first national diploma which can be obtained through non-formal or informal learning outcomes validation since 1934. This process permits workers with a team management role but without the title to get the same wages as those in the same role with the diploma who have studied in an *"ingénieur"* school.

e) Continuing education and VAE in H-VET

Since 1984 ("*Savary Law*"), universities have had a specific continuing education mission which includes alternating learning (partly in university, partly in enterprises). The option of shorter curricula has been available to some individuals since 2004.[91] Institutions of continuing education have been regulated by a new Law since 2007,[92] which provided real autonomy to those institutions, permitting partnerships with other institutions and with funding stakeholders.

Since 2002, a law has given individuals the right to obtain a qualification through a procedure named "Validation des acquis d'expérience" (*VAE)*. *VAE* can be translated as non-formal and informal learning recognition and validation.

f) About qualifications granted through continuing education and VAE

In 2012, 10 % of the certifications delivered in HE public establishments were delivered after a continuing education or a VAE process. Universities, "ingénieurs" schools and CNAM had trained 478,200 adults through continuing education. They indicated that they had granted 82,500 credentials through continuing education. 83 % were in the form of a DUT (9 %); licence (46 %, including 14,000 *licences professionnelles*) or Masters (33 %, including 7,200 masters with a professional aim) degrees.[93] The others had a local status (university diploma), whose level was not indicated. In the same year, the "ingénieurs" schools granted 900 titles through the continuing education route, and the CNAM[94] granted around 5,200 certifications.

In 2013, 34,200 individuals requested a *VAE* to obtain an HE diploma. 20,800 were examined by a jury and 13,800 validations were granted.

Table 7

Distribution of national qualifications delivered by VAE in HE public institutions

Type of qualification	%
DUT	5.4
Licence	7.1
Licence professionnelle	39.2
Diplôme d'ingénieur	1.6
Master	42.8
Doctorat	0.2
Autres diplômes et titres inscrits au RNCP	3.7
Total	100.0

Source: DEPP 2014

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[91] Law of 4 May 2004 about life-long professional learning and social dialogue. The individual right to education aims to allow any employee to acquire 20 credit hours of training per year, which can be accumulated over six year for a total of 120 hours.
[92] Law # 2007–1199 from 10 August 2007 about the rights and responsibilities of universities (aka LRU law), which allows the universities to develop continuing education, particularly though the establishment of foundations.
[93] 6,000 "*Diplômes d'accès aux études universitaires*" (diplomas for access to university studies) were granted at the level 4 EQF for people who did not have a *Baccalauréat* or another equivalent diploma.
[94] The *Conservatoire National des Arts et Métiers* (National Conservatory of the Arts and Trade), created at the end of the XVIIIth century, is a public H-VET institution under the Ministry in charge of HE. Its training is focused on continuing education and social progress, especially for workers or job seekers. It has 100,000 students a year.

(The "Ministerial Statistical Office for Education" is part of the Evaluation, Forward Planning and Performance Department (Direction de l'évaluation, de la prospective et de la performance – DEPP) and is under the authority of the Minister for Education. The office's statistical coverage includes all levels of public and private education — from kindergarten to "baccalauréat".)

► Inclusion in the labour market

A communiqué from the Minister in charge of HE from the 18th December 2013[95] shows a rather good inclusion of HE diploma holders in the labour market. Since 2010, the Ministry in charge of HE has developed an important policy focused on investments from each HE institution to set up observatories in all the universities to monitor the inclusion of the students and alumni in the labour market. As mentioned before, the idea of these qualifications was to give graduates an opportunity to go on to further studies, but also to enter the labour market (scheme 9).

Figure 2
The outcomes of HE diplomas
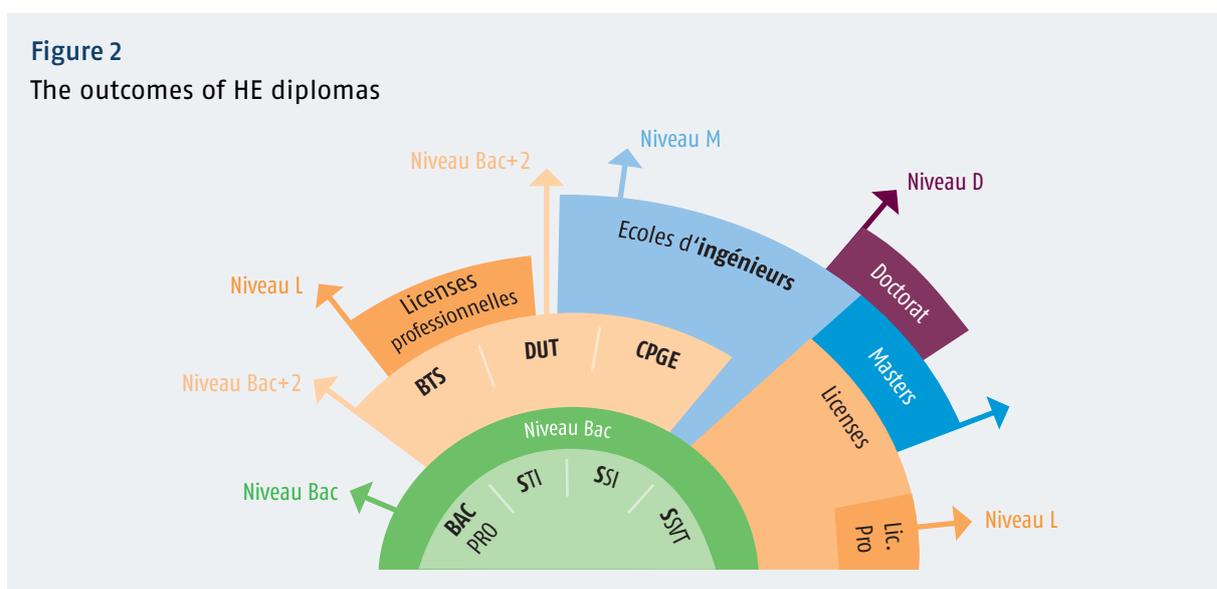
Inclusion in the labour market is as follows:

- ► 90 % for Masters degree holders, 91 % for holders of the "*licences professionnelles*", and 88 % for holders of the DUT;
- ► However, there are some differences based on the specific specialities. Inclusion is at about 97 % in the computer domain, 95 % in the civil engineering domain, and 94 % in process engineering or electronics. The rate is weaker for the social or human sciences.
- ► University graduates tend to hold management positions, often in middle management. That is the case for 87 % of Masters degree holders, 73 % of holders of the licences pro, and 59 % for holders of the DUT. For 90 %, their positions are stable and full time.

Professional bodies are also involved in the system of continuous professional training. This system is based on the duty of businesses and industry to participate in the funding of continuous professional training for employees and on the right of such employees to be trained during working hours.

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[95] This *"communiqué"* is based on an enquiry from 2012. See: http://www.enseignementsup-recherche.gouv.fr/cid75937/publication-des-resultats-de-la-4e-enquete-sur-l-insertion-professionnelle-des-diplomes-de-l-universite.html.

As such,

- ▶ They contribute to drawing up diplomas, especially to design the objectives of diplomas target in terms of activities and competencies and to design the certification standards related for to the diploma in terms of assessment and performance criteria expected from the applicants.,
- ▶ They are represented on examination panels,.
- ▶ They host young people into the workplace and train them, including through the payment of a tax called "taxe d'apprentissage".

Further, social partners and unions that are representative of employees and employers are involved in setting objectives and priorities for the continuous professional training of employees.

1.3 Comprehensive description of education programmes and qualifications on the tertiary level

Notification for this chapter

For this chapter, the description of the DUT Hygiene Safety and Environment (HSE) has been chosen to facilitate the understanding of this type of HVET qualification content. Since 2005, all DUTs have to be designed with the same structure, and since July 2013, all DUTs have been updated in accordance with the new standard. Each DUT is described according the same template named "*Programme Pédagogique National (PPN)*," presenting the activities and competences on which the diploma focuses. Information is included about the different support activities (projects, internships, etc.) to be developed during the 4 semesters in relation with the professional aspects. A study programme is detailed by semester and each study unit (or course) is summarized, including its goal and content. Some elements of those PPN are shown in this chapter for the DUT HSE. The *DUT Génie électrique et informatique* and the *DUT Gestion des enterprises et des administrations* have the same structure as the DUT HSE, but their curricula have different options in the semesters 3 and 4. This specificity is too complex to be explained in a few pages. For this reason the DUT HSE, which is more simple because is does not have the options, has been chosen here as the example to describe the HVET diploma standard.

- ▶ *DUT* Hygiène, sécurité, environnement (HSE)/*DUT* Hygiene, safety, environment (*DUT* (HSE)[96]

The DUT Hygiene, safety, environment (DUT HSE) was recently modified, as were most of the DUTs, in order to be in conformity with new approaches for H-VET development.[97] This DUT is positioned at the level III NQF and 5 EQF. It is offered in 19 "*Instituts Universitaires de Technologie" (IUT*) all over France. This DUT programme was designed by the "*Commission Pédagogique Nationale – CPN)*". The content of the programme established in 2010 was kept.[98] Only the organization of the learning pathway changed.

The aim of this DUT is to prepare students to be higher-level technicians able to understand the different aspects of risk management and prevention related to health, safety at work and the management of environmental protection. The main competences to be developed and assessed at the end of the training are as follows:

- ▶ Identify and evaluate risk,
- ▶ Implement appropriate prevention methods,
- ▶ Verify that hygiene and safety supports are present and efficient,

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[96] An example of a corresponding BTS is presented in Annex 2.
[97] Decree of 19–6–2013.
[98] See: http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000448223.

- ▶ Update the workers involved with knowledge about risks and prevention,
- ▶ Organize and update material and human resources in case of accidents,
- ▶ Analyse feedback information from work experience to develop a permanent efficient approach,
- ▶ Help the managers to be aware of and respond to civil responsibilities and to understand the possible penalties that can be incurred.

1,863 students are currently preparing an HSE DUT. 28 % are female. As with most of the industrial specializations, females are under-represented except in the area of biology. They are the majority in the social and services specializations.

▶ Organisation of the Training

Admission in this DUT HSE is open to students who hold some relevant *Baccalauréat,* such as a *Baccalauréat Technologique,* which is relevant to the industrial section (STI), laboratory section (STL), business administration section (SAE) or economic section (ES).

The complete formal training takes 4 semesters. 1,500 hours are focused on the vocational aim and 300 hours are devoted to additional modules according to individual needs and accompaniment, especially in order to plan and implement the so-called *"Projet personnel et professionnel PPP"* (individual and professional project), which will be described further.

The training is divided into three pedagogical aspects:

- ▶ "Cours Magistraux" (CM) or lecture (20 %)
- ▶ *"Travaux dirigés" (TD)* or tutorials (35 %), in groups with no more than 26 students
- ▶ *"Travaux pratiques" (TP)* or practice in the lab, in groups with no more than 13 students; enterprise visits, internships in an enterprise (45 %). The internship in an enterprise – *"Stage en enterprise"* – is not limited, but must be at least 10 weeks. Each pedagogical aspect is distributed over the 4 semesters, with a precise time table (see Table 8).

The distribution of the course units ("*Unités d'enseignement*" – UE) is presented over the 4 semesters in Table 8. The detailed themes developed in the courses are described in Annex 2. The content of each course is precisely defined, with information about the objectives, methods, process to be used and evidence to be provided by students.[99]

Over the four semesters, students develop towards their learning outcomes according to three progressive levels:

- ▶ Awareness of the HSE problematic; acquisition of basic knowledge, main tools and methods in order to understand phenomena in the HSE domains.
- ▶ Acquisition of added competences and specific knowledge about practices used in the HSE domains under a teacher's tutorship,
- ▶ Access to autonomy in practices related to global risk management.

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[99] http://www.ac-versailles.fr/public/upload/docs/application/pdf/2014-02/dut_hse.pdf.

Table 8

Distribution of courses by pedagogical aspects over 4 semesters

UE	Thèmes	EP (Thème) hors projets tuteurés	CM (heures)	TD (heures)	TD (heures)	Langues, expression, communication			Projets tutorés
						CM (h)	TD (h)	TP (h)	(h)
UE 11	T11	88	10	34	44				
UE 12	T12	65				5	14	46	
	T13	50	20	14	16				
	T14	30	4	10	16				
UE 13	T15	60	12	18	30				
	T16	115	15	36	64				
UE 14	T17	36	8	8	20				80
	T18	20				4	12	4	
UE 21	T21	79				5	24	50	
	T22	80	26	42	12				
UE 22	T23	80	16	28	36				
	T24	90	14	40	36				
UE 23	T25	179	29	54	96				
UE 24	T26	20				2	6	12	80
UE 31	T31	61				5	16	40	
	T32	37	5	14	18				
	T33	90	20	30	40				
UE 32	T34	54	12	18	24				
	T35	89	19	36	34				
	T36	52	14	18	20				
UE 33	T37	20				4	12	4	80
	T38	130	36	46	48				
UE 41	T41	70	16	28	26				
UE 42	T42	35				5	12	18	60
UE 43		Stage (10 semaines)							
UE 44	T43	170	46	60	64				
		1800	322	532	646	30	96	174	
							300		300

Élémentaires	300		352	628	820		Projets tutorés	300
			20 %	35 %	45 %			

A presentation of activities and competences related to this DUT is presented in Annex 3 and a presentation of the training modules is presented in Annex 4.

▶ Professional immersion

The DUT programme is characterized by an important student follow-up to favour the student's inclusion in the labour market after the DUT. Three main initiatives were implemented and reinforced with the latest HE policies:

1. The individual and professional project
2. The vocational project with a tutor
3. The internship in an enterprise, leading to a report assessed by a jury in an internship defence

1. The individual and professional project/"Projet personnel et professionnel" (PPP)

Throughout the training, students have to develop their own individual project in order to prepare for their inclusion in the labour market when they complete their studies. This project also helps their personal development and gives a better knowledge of each student's competence for professional purposes. The project is presented with the following specific goals:

▶ To get a better understanding of the industrial environment and the economic sectors where the HSD technicians will work after their studies,
▶ To acquire a better knowledge of the jobs related to hygiene, safety and environment,
▶ To know how those jobs may be evaluated,
▶ To know how they could be included professionally in the different economic sectors in which they can be recruited.

The PPP is developed over the 4 semesters:

▶ The first semester is to discover the business environment and the skills required (in a job profile; to know the "*métier*").
▶ The second semester is dedicated to a personal *"bilan,"* which validates the project draft.
▶ At the end of the third semester, the validation of the pathways chosen takes place to lead to the professional project.
▶ During the fourth semester, the internship in an enterprise takes place, which permits to validate the post-DUT project.

2. The vocational project with a tutor: "Le projet tutoré"

This project is implemented between October and March during the second year of the studies. The follow-up is organized in a specific place inside the IUT, but it could be external in some enterprise or institution. The tutor is a member of the teaching team and provides methodological help to the students to design their project. The tutor supervises the final assessment.

This project takes half a day every week and aims to:

▶ Apply the concepts and methods transmitted during the teaching time,
▶ Develop work methods such as enquiries, questionnaires, and research in libraries and on websites,
▶ Discover the professional environment and its constraints.

For example, subjects could be:

▶ A job description,
▶ A website updated in an HSE department,
▶ The development of a training session about the safest work environment for students,
▶ The design of a flyer about energy savings for consumers.

When the project is completed, the students have to provide a defence examination in front of a jury composed of the tutor, professionals involved in the project and a teacher. Students have to explain how they proceeded, what they have observed and what comments they have.

3. The internship period in an enterprise

The internship in an enterprise takes place at the end of the two years of studies, from April to June. The duration of the internship is at least 10 weeks. It is up to the students to find an enterprise, but the *IUT* helps them by providing some suggestions based on their ongoing contacts with local economic stakeholders. The internship is focused on two main goals:

▶ To reinforce the enterprise structure and services,
▶ To provide a professional experience to students before they leave school, and in the process provide them with an update of knowledge.

The internship deals with one or several topics related to environmental problems, the prevention and management of risks at work, or the application of rules and norms. A topic could involve several practical actions at the collective or individual level.

Some examples of topics for internships related to *DUT* HSE[100] are:

▶ Analysis and methodology related to risks at work and in the industrial context,
▶ Work station ergonomics,
▶ Acoustics studies,
▶ Implementation of safety plans,
▶ Industrial waste management.

Students are welcomed by the host enterprise and helped with their integration into the work team. The enterprise ensures that there is follow-up for the student's research and provides technical support and a review of outcomes at the end the internship. During the internship, a member of the teaching team follows the student's development through a visit to the enterprise hosting the student, provides help with the internship report and gives feed-back on the report. Students explain in their report how they proceeded and what they have learned. The report is also presented to the enterprise where the internship took place.

The internship defence is done in front of a jury composed of the teacher, the tutor, and professionals involved in the project. The defence takes around 40 minutes: 20 minutes for the report presentation and 20 minutes to answer the jury's questions. The jury generally deliberates for around 10 minutes.

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[100] See example of reports about such topics: http://ensegid.bordeaux-inp.fr/uploads/DeveloppementDurable/Audit_dechets.pdf.
http://hse.iut.u-bordeaux1.fr/lesbats/epnhse/rap.pdf.

▶ Learning outcomes evaluation

The evaluation guidelines for learning outcomes indicate[101] that evaluations are implemented through regular and ongoing control under the responsibility of the *IUT* direction. An examination is held for each course (or "*unité d'enseignement*"). Only students who get an average mark are considered successful. The value of each course for the *DUT* HSE is defined in Annex 3. To obtain the complete diploma, students must have an overall average of 10/20. To advance from one semester to the next, students also need to have this average.

▶ DUT HSE preparation through the alternating route

Like all university diplomas, the *DUT* can be obtained through an "alternating" route (the French approach to a dual system). The alternating route is covered by two types of work contracts: the apprenticeship contract, where the training occurs in an accredited training centre (*Centre de formation d'apprentis* – CFA) and the professionalization contract. The *DUT* can be earned through both, but as can be seen in Table 9, the organization and regulations are different.

Table 9

Comparison between two alternating contracts

	Apprenticeship contract	Professionalization contract
Objectives	Provides a training opportunity for young people between 16 and 25 which leads to a qualification	Provides a training opportunity for young people and job seekers which does not always lead to a qualification
Duration	24 months, but extension sometimes possible to 36 months	6 to 12 months, but extension sometimes possible to 24 months
Type of enterprise	Private or public	Only private
Organization	50 % in CFA 50 % in enterprise	25 % minimum in training centre 75 % in enterprise
Wages in terms of SMIC %	1st year of study 16–17 years old: 25 % 18–20 years old: 41 % + 21 years old : 53 % 2nd year of study 16 –17 years old: 37 % 18 –20 years old: 49 % + 21 years old : 61 %	1st year of study 16–17 tears old: 30 % 18–20 years old: 50 % + 21 years old : 65 % 2nd year of study 16 –17 years old: 45 % 18 –20 years old: 60 % + 21 years old : 75 %
Advantages for the employers	Exemption from fiscal and social security. Funding: 1,553 Euros if the young person is less than 18 years old and 1,860 Euros if the young person is older, + 7.62 Euros/h for 200 h of training	Exemption from social security for young people below 20 years old and for job seekers over 45 years old

Only 7 IUTs offer the DUT HSE through the alternating route using apprenticeship contracts or "professionalization contracts." The organisation of the courses is supposed to be subject to a specific contract between the university (accredited as a CFA – Training Centre for Apprentices), the enterprise and the trainee. Training in a CFA is generally around at least 400 hours each year. The courses are divided by semester according to a specific schedule.

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[101] See: http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000027665252&dateTexte=&categorieLien=id.

Semester 1	Introduction to risk management Methods and tools applied Technological sciences applied Projects
Semester 2	Introduction to risk management Methods and tools applied Technological sciences applied Projects
Semester 3	Protection of belongings and persons in their environment Prevision and prevention of technological risks and environment Projects Added modules
Semester 4	Management of technological and environmental risks Projects Added modules

The evaluation of the learning outcomes is organized in the same way as for the initial formal training, with an examination at the end of each semester, project reports and an internship experience in an enterprise.

This kind of educational programme is very much appreciated by enterprises as well as trainees. Nevertheless, alternating education contracts are currently not easy to find for many different reasons, including the economic crisis, which is weakening economic activity and making it a priority for employers to keep their workforce instead of being involved in training.

4. Developments and main reforms in the last few years, current political debates

The 17 January 2002 law can be considered as the starting point determining the current VET landscape and driving the new issues observed nowadays for H-VET. This law introduced a non-formal and informal learning outcomes recognition and validation (*"Validation des acquis d'expérience" – VAE*) leading to all VET and HE qualifications. At the same time, this law created the *"Commission Nationale de la Certification Professionnelle" (CNCP)*, which is in charge of collecting information about qualifications through the VET qualifications directory (RNCP) and in charge of developing NQF and of referencing to EQF.

The basic aim of this innovation is to allow a greater number of citizens access to certification (over one third of the French population does not have a professional qualification). Henceforth, gaining such certification may be the result of a programme of training or of professional experience, and may also be the result of a combination of training and experience. Decree 2002–795 of 3 May 2002 provides the necessary means to introduce educational leave to gain certification to validate prior learning. Two decrees are in the pipeline for publication in order to define the conditions governing the funding of validation procedures.

VAE had to be developed in order to make practical experience understandable through an evaluation of non-formal and informal learning outcomes. *VAE* leads to an official qualification. Non-formal and informal learning is not delivered through a linear and progressive pedagogy, as in formal learning. Applicants can combine the different elements (knowledge, skills and competences/attitudes) of learning by doing and learning by reflecting on what they do, how they do it, and with what tools, methodologies and process they do it. The French approach is based on the principle that it is possible to learn outside of formal education with the same outcomes which are expected in formal education, if the qualification is based on a work profile. The pro-

cedure developed supposes that the applicant is able to explain how and why he is able to do the same activities as another applicant with a qualified certification.

The *VAE* innovation has an important impact on the conceptualization and pedagogy of educational programmes, putting professional issues at the centre of the student's career. The reforms related to the 2002 Law and the different legal texts for its implementation are referenced in articles 133 to 146, which introduce three fundamental innovations:

▶ Innovation for HE and H-VET

The main innovations in HE, and by extension in H-VET, were made in 2002 with the Bologna process implementation in all universities in France. This reform meant an important change in the conceptualization of programmes with semester cycles, ECTS and the organization of degrees. Before 2002, there were some general degrees granted after 2 years of studies. Only the DUT remained of these degrees. The BTS became part of the H-VET in 2007. Before, it had been a two-year course of study after the *Baccalauréat* diploma, but it had been considered as related to the post-secondary sector.

Before 2010, few laws made the inclusion in the labour market a priority for HE and H-VET. Those laws only required institutions to do some opportunity analysis before creating a new diploma or degree and to set up a students' inclusion observatory in each institution. The latest "*decree*" organized the classification of diplomas related to the "*licence*" and "*Masters*" degrees to have a better view of the HE offer and to help with guidance.[102]

Since 2010, each HE has to set up an inclusion observatory to verify whether the studies and diplomas on offer correspond to the labour market needs. This requires the implementation of systematic enquiries, whose results are published each year.[103] A new, related committee called the "*Comité Sup Emploi,*" set up in December 2013,[104] has the following missions:

- ▶ Anticipate skills and training offers to be developed in the near future, especially in the digital and computer domains
- ▶ Prepare action plans to develop tutored alternating training and internships
- ▶ Implement HE as a lifelong learning methodology,[105] making the HE and H-VET learning more multidisciplinary in content and embedding it in professional aims.

▶ Innovation in the DUT development

Innovation for the DUT was introduced in 2005 with an important reform, with a more recent modification in July 2013.[106] Those reforms modify the objectives, the timetable, the assessment methods, and the teaching and evaluation methods. Those changes were especially apparent with the introduction of the student follow-up and tutoring support, which were not formally part of the programme before 2005. The "*Projet Personnel et Professionnel (PPP)*" was introduced to avoid drop-outs. A third year was authorized to permit to students who had not succeeded after two years to obtain their diploma. Follow-up was introduced to promote inclusion in the labour market.

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[102] Decree of 22 January 2014.
[103] See the latest results: http://www.enseignementsup-recherche.gouv.fr/pid24624/taux-d-insertion-profession nelle-des-diplomes-de-l-universite.html.
[104] http://www.enseignementsup-recherche.gouv.fr/pid24843-cid75601/installation-du-comite-sup-emploi.html.
[105] Under the Law of 22 July 2013.
[106] See Official Bulletin on the 25 July 2013.

At the end of 2013, all the 24 *DUT* specialization programmes were revised, with the introduction of the new principles defined in 2005[107] and with the latest rules developed in January 2013. All programmes integrate the *"PPP,"* but they also include two main new aspects:

- ► Activity and competence standards,
- ► A complete training standard describing all relevant courses (UE) and modules.

Those principles are directly driven by the professional orientation impulse in HE policies, which promote:

- ► A pedagogy based on technology drivers,
- ► Student follow-up throughout the studies through *"PPP"*,
- ► Tutoring in concrete vocational projects and internships,
- ► Taking into account economic issues such as entrepreneurship, normalization, economic intelligence, etc.

New rules define the *DUT* delivery. They integrate the lifelong learning principle, providing the opportunity to get 120 ECTS covered through cumulative units. So the *DUT* career is composed of:

- ► A major unit which provides guaranteed core skills in the relevant professional domain,
- ► Additional modules to complete the students' careers based on their aim: professional inclusion or further studies.

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[107] Decree of 3 August 2005.

Part 2: NQF

In France, qualifications can be granted by a lot of different providers. This decision was officially taken after the Second World War. At this period, the government allowed all ministries, chambers of commerce and industry, craft organizations, agricultural organizations and different private providers to develop curricula and set up their own qualifications systems with their own pedagogical methodologies according to their economic domains and the type of learners they encountered.

In this context, VET was considered as a specific route which existed parallel to the general one. Higher education was ensured by universities, which include in France almost all public institutions and engineering institutes, most of them under the responsibilities of different ministries, and the higher education schools linked to the Chambers of Commerce.

This situation is still ongoing. Since the 1970s, branches of schools have been added and they have developed lifelong learning approaches (currently called continuing education) and their own qualifications systems. All this causes general confusion and a sense of complexity, generating a need for comprehensibility and regulations. This can be considered as the origin of the NQF.

▶ *Background, issues and developments*

The need for comprehensibility and regulations emerged at the end of the 1960s. The re-building of the country provided a lot of initiatives corresponding to the socio-economic demand. But the dynamics of technological progress demonstrated already a need for re-conversion among some categories of workers and announced the risk of an important rise in unemployment in the following decades. An important consultation with social partners was set up in 1968 (VET agreements – *Accords de Grenelle*[108]"related to this topic led to the two main laws published on 16 January 1971: one related to the implementation of principles and rules for continuing education regulation and development, the other related to VET, creating the Technical Committee for Certification (Commission Technique d'Homologation) in charge of the classification of all the additional Ministry of Education qualifications according to a 6-level framework designed by an inter-ministerial group with social partners. Descriptors were developed to classify those qualifications within the Ministry of Education VET framework. This decision was taken because this Ministry used to design the qualifications it delivered in order to provide pathways with hierarchical work organisations corresponding to the main categories of workers.

Those two 1971 laws together form the basis for the approach to vocational education in France. The power to issue certifications is shared by many stakeholders, but their value and comprehensibility are defined by national committees made up of representatives of the State and of social partners. A 1971 inter-ministerial and inter-professional commission (called the Technical Committee for Certification) was in charge of listing them. Qualifications granted at the end of a curriculum are the same, regardless of the route used to prepare for them (formal, non-formal or informal). Those two principles were still valid in 2013.

The 1969 framework was used with several aims. Its first goal was statistical, in order to support VET policies and training plans. It also structured comprehensibility and financial resources for the initial training and for job seekers' needs. It was also a regulation tools used by the Technical Committee for Certification in order to define the social currency of the qualifications granted. At the same time, those levels were articulated to another grid listing 47 training specialities related to vocational or general domains.

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[108] http://travail-emploi.gouv.fr/IMG/pdf/Constat_de_Grenelle.pdf.

This 1969 framework is still used and corresponds to the current NQF framework, with some changes which appeared in the middle of the 1990s and reduced the framework from 6 to 5 levels. The first draft mixed the levels I and II, which were the highest levels. Two levels, V bis and VI, had existed before to denominate the lowest levels. The increase in the number of qualified workers due to the advances of VET in both initial training and continuing education, as well as apprenticeships, made the two lowest levels disappear at the initiative of social partners who decided that the lowest level of qualification must be level V to consider a citizen as a qualified worker. On the other hand, the development of Higher Education increased the number of students and obliged a separation between the two levels I and II to distinguish between them.

In 1994, the 47 training specialities were updated and a new grid with 96 specialities described them and classified them in 4 domains: the general domain, the agricultural and industrial domain, the commercial and services domain and the sport and leisure domain.

In 2002, the 17 January Law, also called the Social Modernisation Law, created the National Commission for Vocational Certification ("*Commission Nationale de la Certification Professionnelle*" – CNCP), which replaced the Technical Committee for Certification with the same function, but with added roles especially in the creation of the National Directory of Vocational Certifications ("*Répertoire National des Certifications Professionnelles*" – RNCP). The directory uses the 1990s 5-level framework and the 96 training specialities nomenclature to classify them. The Law indicated that the new Commission would have to update those two classification frameworks. The CNCP implemented the RNCP, integrating VET and HE qualification descriptions, but the task to update the frameworks is currently still in progress.

The referencing to the EQF was done starting in October 2010 and following this scheme:

Figure 3
Referencing the French NQF to the EQF

1969 list		ECF grid
I – Doctorate grade	→	8
I – Master grade	→	7
	→	6
III	→	5
IV	→	4
V	→	3
Not applicable		2
Not applicable		1

Source: CNCP

This structure stresses the goal pursued by the framework as a tool to provide comprehensibility for labour market inclusion. Two kinds of qualifications are not integrated in the framework: the "*Brevet des Collèges*" and the *Baccalauréat* with its general options. They are considered as prerequisites to go on to higher education and as of no value to enter the labour market. This is not the case for degrees delivered in HE, which are all defined by the Ministry in charge of HE with a vocational goal. Since 2002, a great investment has been made to really lead to a design that would not cause reluctance from stakeholders due to the academic dimension of the degrees. This approach is clear in the new laws since 2007, which have been reforming the HE to get a

better fit with the Bologna process. This provides for labour market observatories to monitor the inclusion of students in the labour market and for new quality criteria in the accreditation process to ensure comprehensibility within the labour market.

As mentioned above, the French NQF structure is based on the comprehensibility of the qualifications in relation to the work positions to which their holders may aspire. To date, 5 positions were identified and so 5 levels structure the qualifications framework. This design is more and more in doubt, especially with the changes which appeared in the hierarchical organisation of enterprises involved in the global economy. This is why firm recruiters use the duration of studies as a way to understand level I and II qualifications (designating the *"licence"* as *Baccalauréat* + 3 years of study, the *"Masters"* as *Baccalauréat* + 5 years of study and the *"Doctorate"* as *Baccalauréat* + 8 years of study).

The lack of reform related to the 5-level framework currently generates great confusion in the French qualifications landscape. The 2002 law reforming the degrees delivered by the universities did not concern the other qualifications systems offered by other training providers, who are not allowed to grant degrees. The use of the number of ECTS and the label of ECTS are apparently key to designating their qualifications as equivalent to degrees and are hence key to their comprehensibility on the education market. This approach is new in a country where qualifications regulation is generally done under the umbrella of the State umbrella and at the national level.

Since 1969, the so-called *"learning outcomes"* must include 3 elements: knowledge, skills and attitudes. This approach is often expressed in the French formula: *"savoir, savoir-faire et savoir-être"*. The combination of those 3 elements is representative of what is called in French "competence". The introduction of the 3 descriptors used with the EQF are part of the equivalency with the EQF descriptors. So the working group in charge of the referencing to the EQF re-read the NQF definitions of levels against the EQF descriptors, but kept the first formula used with a combination of the 3 elements, without separating them. This option was chosen to insist on the combination which is needed.

▶ *NQF and links to other European developments and tools (QF EHEA, ECTS, ECVET — Q7)*

All qualifications registered in the RNCP are described according to the certificate supplement Europass format, even degrees. The implementation of the RNCP was managed at the same time as the Europass.

The Certificate Supplement can be printed directly from the RNCP database. The CNCP used the 2005–2006 consultation about the EQF and the Leonardo Project (EQF net testing developed in 2006–2008) to involve all stakeholders and CNCP members and partners in disseminating the EQF principles. Since 2003, universities have used ECTS to describe the degrees they deliver. A specific working group was set up to make a linkage between the VET and HE qualifications systems integrated in the French NQF. Applying the same principles and concepts is particularly difficult with stakeholders who are not used to collaborating and who need a lot of time. The implementation of the ECVET is only at the experimental stage, although French institutions were involved in the European working group in charge of the dissemination of this system.

▶ *Stage of development/implementation of the NQF and next steps*

For the French stakeholders, the NQF has clearly been implemented since 2002 and the RNCP is the official tool used to provide descriptions of qualifications in terms of desired competencies and a classification through the 5-level framework and the grid of 96 training specializations. It is considered as an integrated framework whose main purpose is to provide comprehensibility of

the content of qualifications and of their currency for both the education sector and labour market stakeholders.

Since 2002, HE qualifications are defined in accordance with the Bologna process through 3 main degrees: "licence", Masters and doctorate. The "licence" is referenced to the NQF at level II and the other two are referenced to level 1.

The referencing to the EQF was an opportunity to take on the task of revising the current 5-level framework, but this change impacts the education system as well as the work classifications set through collective agreements, branch by branch. As mentioned above, the French NQF is used to provide comprehensibility of the education content for the labour market. So the classification was not done according to the training content or its duration, but according to the worker competences the qualification may provide. So the next step planned with the NQF reform, a new up-to-date framework, is still in progress.

Conclusion

Over the decades, the VET and H-VET structure has changed a lot, following two main drivers around the conceptualization of the qualification levels and the meaning of the certifications, and shaped by the social partners' involvement.

▶ *Conceptualisation of qualifications levels*

The conceptualization of qualification levels has been described above in its formal and institutional aspects. To apply this the levels formula meant a very important investment by the qualifications providers. This investment has led to a new approach to the design of qualifications, which appeared at the beginning of the 1990s. Up until then, qualifications had been defined as the result of a training process. Examinations at the end of the curriculum were held to verify that the applicants had understood the transmitted learning inputs well.

At the beginning of the 1990s, the Ministry of Education in charge of VET qualifications granted under its responsibility changed this paradigm, defining that the examination had to prove that applicants have the ability to do specific activities at a specific level of autonomy and responsibility, as described in the 5-level framework. Now the qualification design process begins with job descriptions and definitions of the activities that the qualification holder is expected to be able to carry out, moving from there to competences (in terms of learning outcomes necessary to carry out those activities). On this basis, a certification standard is designed as the core support for the qualification and becomes the reference used to develop different training curricula.

Depending on the applicants involved and the routes they follow, such an approach permits the development of modalities for the recognition and validation of non-formal and informal learning outcomes [the "*Validation des Acquis Professionnels*" (VAP) in 1992 and then "*Validation des Acquis de l'Expérience*" (VAE) in 2002].

This approach was followed by all ministries for their own qualification systems and it became compulsory in 2002 for all qualifications providers. This design methodology was disseminated by the National Commission for Vocational Certification ("*Commission Nationale de la Certification Professionnelle*"– CNCP).

▶ *The role of the social partners*

The professional bodies provide the necessary linkage between education and the labour market. They verify and oversee the implementation of the levels descriptors during the conceptuali-

zation process for qualifications, monitor the accreditation process and help with the assessment at the end of the applicants' learning journey as jury members.

They are the drivers behind all reforms to the VET system, including formal, non-formal and informal learning routes, and laws in this area follow agreements with social partners. Their role is very significant. Unions especially make great investments to be up-to-date with the education domains and to provide proposals and inputs to decisions for all economic sectors and workers of all statuses. The weakness of worker representation at the federal level of negotiations is often seen as one of the weaknesses of policy making, although the content of their proposals

Annex 1 Evolution of HE diplomas delivered

[1] Évolution du nombre des principaux diplômes de l'enseignement supérieur universitaire
(France métropolitaine + DOM)

		Droit, sciences politiques	Sciences économiques	AES	Lettres	Sciences	Staps	Médecine, pharmacie	Ensemble
Licences professionnelles	2005	704	6 856	1 080	3 221	11 674	273	101	23 909
	2006	829	9 405	1 520	3 963	13 847	335	191	30 090
	2007	1 034	11 152	1 804	4 494	15 601	342	488	34 915
	2008	950	12 787	2 013	4 826	16 304	399	386	37 665
	2009	1 196	13 762	2 446	5 216	17 013	495	392	40 520
	2010	1 251	15 248	2 438	5 804	18 509	588	397	44 235
	2011	1 461	15 968	2 507	5 918	18 602	555	367	45 378
	2012	**1 630**	**16 897**	**2 413**	**6 086**	**18 803**	**595**	**336**	**46 760**
Licences générales	2005	10 085	7 095	4 140	35 991	19 691	5 698	-	82 700
	2006	17 267	12 174	6 557	59 539	25 254	7 323	54	128 168
	2007	17 441	13 314	6 576	57 741	25 567	6 427	166	127 232
	2008	17 934	14 635	5 929	54 948	24 375	5 474	170	123 465
	2009	18 035	15 529	6 066	52 761	24 235	4 716	250	121 592
	2010	18 971	16 493	5 782	46 970	24 518	3 933	329	116 996
	2011	20 023	17 860	5 755	46 036	24 775	4 140	370	118 959
	2012	**19 878**	**17 191**	**6 027**	**47 367**	**25 687**	**4 809**	**367**	**121 326**
Masters professionnels	2005	7 218	12 314	739	8 229	10 081	591	689	39 861
	2006	11 291	18 791	1 604	14 759	13 929	895	902	62 171
	2007	11 637	20 722	1 891	15 565	13 853	843	815	65 326
	2008	11 033	20 715	1 826	15 761	13 986	979	811	65 111
	2009	11 040	21 427	1 205	15 304	12 075	987	728	62 766
	2010	10 982	20 127	1 212	15 184	10 906	1 046	689	60 146
	2011	10 372	19 080	1 217	20 705	11 322	1 447	776	64 919
	2012	**10 306**	**18 422**	**1 046**	**18 229**	**10 650**	**1 101**	**911**	**60 665**
Masters recherche	2005	2 449	1 177	118	4 645	7 608	144	457	16 598
	2006	4 342	1 682	48	9 259	8 373	192	490	24 386
	2007	4 150	1 456	60	9 660	7 282	199	411	23 218
	2008	3 584	1 204	82	8 981	7 738	184	360	22 133
	2009	3 420	1 048	50	8 245	7 368	154	384	20 669
	2010	3 077	963	47	8 621	5 653	162	386	18 909
	2011	2 958	823	49	9 813	5 440	169	323	19 575
	2012	**2 880**	**891**	**4**	**8 497**	**5 219**	**175**	**336**	**18 002**
Masters indifférenciés	2005	186	35	-	51	299	10	66	647
	2006	447	211	-	1 012	1 207	12	96	2 985
	2007	487	373	-	1 267	2 708	23	162	5 020
	2008	1 777	1 519	19	1 355	2 226	25	148	7 069
	2009	2 337	2 982	303	2 978	3 930	142	182	12 854
	2010	3 818	5 780	394	5 783	8 149	275	349	24 548
	2011	4 722	7 659	389	15 319	10 729	855	458	40 131
	2012	**5 191**	**8 544**	**576**	**15 470**	**12 197**	**829**	**570**	**43 377**
Doctorats (y c. HDR)	2005	710	477	-	2 571	6 048	86	485	10 377
	2006	682	561	-	2 883	6 582	83	630	11 421
	2007	796	685	-	3 040	6 793	95	597	12 006
	2008	889	619	3	3 091	7 082	84	588	12 356
	2009	867	663	1	3 035	7 437	98	601	12 702
	2010	921	746	4	3 084	7 511	101	516	12 883

Source DEPP 2014

Annex 2

Source: Areté 2013 creating the BTS

https://www.legifrance.gouv.fr/affichCodeArticle.do?cidTexte=LEGITEXT000006071191&
idArticle=LEGIARTI000027865568; accessed: 01.08.2016

About the equivalent BTS offer related to the DUT *Hygiène, sécurité et environnement* « is actually reformed. Two BTS will be implemented: The BTS des Métiers des services à l'environnement open since September 2014 and the BTS « *Santé et sécurité au travail*"(Health and security at work in project for September 2015. Both will be structured in the same way. As only the first one is known, description will be developed only for it.

The new BTS is implemented named "Métiers des services à l'environnement (MSE)" which replace another BTS named BTS « Hygiène, propreté, environnement ».

The owners are prepared to organize and realize services relayed to the life and environment care. This BTS as all BTS provide 120 ECTS. It can be prepared through initial formal route, alternating route and VAE. Admission is mainly focused to people owning:

▶ Bac professionnel Hygiène Propreté et Stérilisation (ex-bac pro hygiène et environnement),
▶ Bac pro Gestion des Pollutions et Protection de l'Environnement (GPPE),
▶ Bac S (general scientific)
▶ Bac Technologiques STI2D, Bac STMG, Bac STL.

This admission is done after a selection based on a dossier and motivation letter.

Main competences aimed:

▶ Develop and realise provisions of services according to needs expressed in specifications,
▶ Implement, organize and manage appropriate technical solutions,
▶ Insure the follow up of the services provisions and set maintenance operations,
▶ Manage the operationnal teams.

This BTS owners could be recruited in different economic sectors as : cleaning and hygien activities, waste or sanitation.

Duration of the training : 2 years

▶ Training program

Training domains	Horaire Week hours First year	Week hours Second years
Compulsory training		
Communication et techniques de management	2	3
Sciences et technologie des systèmes	5	4
Technologies professionnelles	8	6
Système Qualité, Sécurité, Environnement	2	3
Connaissance des milieux professionnels	3	–
Gestion économique et développement de l'activité	1	2
Langues vivantes	2	2
Sciences physiques et chimiques	2	2

Training domains	Horaire Week hours First year	Week hours Second years
Biologie, microbiologie et écologie appliquées	5	3
Projet professionnel	–	5
Facultative training		
Langue vivante étrangère II	1	1
TOTAL (hors LV2)	30	30

During the first year, applicants have to do 2 internships with 2 to 3 weeks and during the second year, they have to do 6 to 8 weeks internship.

Examination

Épreuves du BTS MSE	Coefficient	Duration	Type
ÉPREUVES OBLIGATOIRES			
Langue vivante étrangère	2	–	CCF [*]
Etude scientifique et technologique: – Chimie – biologie – Sciences physique et sciences et technologies des systèmes	2,5 2,5	2 H 30 2 H 30	Ecrit Ecrit
Organisation, management et développement de l'activité	5	–	CCF [*]
Projet professionnel	5	45 mn	Oral
Soutenance du rapport de stage	4	45 mn	Oral
ÉPREUVE FACULTATIVE			
Langue vivante étrangère II		20 mn	Oral [a]

[*] CCF: Contrôle en Cours de Formation

Annex 3 Activities and competences standard

Activités et compétences spécifiques	
Actuvutés	Compétences associéeqs
1 – Analyse des risques	(1a) Identifier et repérer les dangers (1b) Évaluer et hiérarchiser les risques technologiques, professionnels et environnementaux (1c) Choisir et mettre en oeuvre les méthodes d'analyse (1d) quantitative/qualitative des risques Effectuer une veille réglementaire et normative
2 – Métrologie et analyse des données	(2a) Choisir une instrumentation appropriée (2b) Maîtriser la calibration et l'utilisation des appareils de mesure (2c) Mettre en oeuvre et réaliser des campagnes de mesure (2d) Analyser les données d'une campagne de

Activités et compétences spécifiques	
Actuvutés	**Compétences associéeqs**
	mesures en fonction d'indicateurs éventuels ou de valeurs guides associées
3 – Mise en place d'une démarche de prévention des risques	(3a) Associer un risque à une réglementation (3b) Concevoir et mettre à jour les documents réglementaires (document unique d'évaluation des risques, études d'impact et de dangers, protocoles de sécurité, plans de prévention, permis feu,…) (3c) Savoir déterminer des indicateurs (3d) Concevoir et planifier la démarche de prévention des risques dans une vision interdisciplinaire, globale, intégrée et d'amélioration continue (procédés industriels, activités de travail, écosystèmes,…) (3e) Former et informer les parties prenantes (salariés, populations, organisations syndicales, employeurs,…) sur les problématiques en santé, sécurité et environnement (3f) Appréhender et justifier les actions de prévention sur des bases scientifiques, technologiques, économiques et juridiques (3g) Appliquer les éléments techniques, humains et organisationnels de la révention (3h) Développer et utilis er des moyens informatifs pour accompagner une politique HSE (formation, procédures, signalétiques, affichage,…) (3i) Mettre en œuvre un plan de prévention · (3j) Contrôler la réalité et l'efficacité des dispositifs et des contrôles mis en place (3k) Tirer parti des retours d'expérience
4 – Développement d'une politique HSE durable	(4a) Porter, implanter, promouvoir une démarche HSE en adéquation avec les principes du développement durable et de la responsabilité sociale e environnementale (4b) Conseiller sur l'acceptabilité des risques (4c) Identifier et mobiliser les différents acteurs de la santé au travail, de la protection de l'environnement et des populations en lien avec leurs attributions (4d) Appréhender l'organisation territoriale de la prévention des risques et des moyens associés (4e) Conseiller et alerter le chef d'établissement face aux responsabilités civiles et pénales liées au domaine HSE
5 – Participation à la gestion des crises et des situations d'urgence	(5a) Maîtriser les moyens techniques, humains et organisationnels des secours au sein d'un organisme (5b) Appréhender l'organisation territoriale des dispositifs d'intervention en cas d'accident (5c) Rédiger des procédures d'urgence et/ou des plans d'intervention et de continuité d'activité
Activités et compétences générales	
1 – Pilotage et gestion d'un projet	(1a) Appliquer des méthodologies de conduites de projet dans un contexte particulier (1b) Appliquer des méthodes de résolution de problèmes
2 – Communication et information	(2a) Promouvoir une culture citoyenne de l'entreprise (2b) Développer et utiliser des moyens informatifs (2c) Connaître les règles de signalétique (2d) Rédiger un rapport (2e) Maîtriser les différents supports d'information écrite et orale (2f) S'exprimer et communiquer en langues

Annex 4 Modules and studies units

Tableau synthétique des modules et des Unités d'Enseignement (UE) par semestre

UE	Thème	Réf. Module	Nom Module	Coef. Module	Total Coef.	Volume CM	Volume TD	Volume TP	Volume Étudiant par UE
Semestre 1									
UE11 Introduction à la gestion des risques	T11 Santé, Sécurité au travail, Environnement, Développement Durable	M1101	Introduction à l'évaluation et à la maîtrise des risques, concepts et vocabulaire	1,5	6	2	10	12	24
		M1102	Santé sécurité au travail et introduction au Document Unique	1,5		2	10	12	24
		M1103	Environnement, gestion des risques et protection des milieux	1,5		2	10	12	24
		M1104	Premier secours (PSC1)	1,5		4	4	8	16
UE12 Méthodes et outils pour la gestion des risques	T12 Méthodes et outils de communication	M1201	Anglais : culture générale	2	9	3	8	24	35
		M1202	Techniques de communication et culture générale : enjeux de la communication	2		2	6	22	30
	T13 Aspects juridiques et économiques des organisations	M1203	Introduction au droit et à la normalisation	2		14	8	8	30
		M1204	Gestion de l'entreprise	1		6	6	8	20
	T14 Mathématiques	M1205	Outils mathématiques	2		4	10	16	30
UE13 Sciences et techniques pour la gestion des risques	T15 Biologie humaine et écosystèmes	M1301	Biologie et physiologie Humaine	2	10	4	10	16	30
		M1302	Écosystèmes et pollution	2		8	8	14	30
	T16 Sécurité des produits et des installations	M1303	Structure de la matière et propriétés des produits	1,5		3	6	16	25
		M1304	Thermodynamique et Thermochimie	1,5		4	10	16	30
		M1305	Chimie appliquée	1,5		4	10	16	30
		M1306	Mécanique et énergétique appliquées à la sécurité	1,5		4	10	16	30
UE14 Projets : Outils	T17 Conduite de projets	M1401	Gestion de projets	1	5	6	4	8	18
		M1402	Outils informatiques	1		2	4	12	18
		M1403	Projet tutoré : domaines HSE (80 heures)	2					
	T18 Projet professionnel et personnel	M1404	Projet personnel et professionnel : découverte des métiers et des environnements professionnels et initiation à la démarche de projet	1		4	12	4	20
			Total Semestre 1	30	30	78	146	240	**464**

UE	Thème	Réf. Module	Nom Module	Coef. Module	Total Coef.	Volume CM	Volume TD	Volume TP	Volume Étudiant par UE
Semestre 2									
UE21 Méthodes et outils appliqués à la gestion des risques	T21 Méthodes et outils de communication	M2101	Anglais : monde de l'entreprise	1,5	7	1	10	24	35
		M2102	Techniques de communication et culture générale : esprit critique et culture générale	1,5		4	14	26	44
	T22 Aspects juridiques de la gestion des risques	M2103	Droit du travail et droit de la sécurité sociale	1,5		10	16	4	30
		M2104	Responsabilités civile, pénale et administrative	1,5		10	16	4	30
		M2105	Droit de la santé et de la sécurité au travail	1		6	10	4	20

UE	T	M							
UE22 Sciences et techniques appliquées à la gestion des risques	T23 Sciences biologiques et humaines appliquées	M2201	Toxicologie et microbiologie appliquées	2,5		8	12	20	40
		M2202	Physiologie, psychologie, ergonomie du travail	2,5	9	8	16	16	40
	T24 Chimie et rayonnements dangereux	M2203	Chimie de la combustion	2		4	16	16	36
		M2204	Réactions chimiques dangereuses	1		4	14	12	30
		M2205	Rayonnements ionisants et non ionisants	1		6	10	8	24
UE23 Technologies de la gestion des risques	T25 Technologie des machines et de la construction, physique appliquée	M2301	Outils mathématiques et de physique appliqués	2		4	10	24	38
		M2302	Technologie des installations électriques	2	9	6	12	20	38
		M2303	Mécanique des fluides, résistance des matériaux	1,5		4	10	16	30
		M2304	Vibrations et acoustiques	1,5		5	10	20	35
		M2305	Technologies de BTP et du Génie civil	2		10	12	16	38
UE24 Projets : Méthodologie	T26 Conduite de projets	M2401	Projet tutoré : métiers HSE (80 heures)	3	5				
		M2402	Projet personnel et professionnel : formalisation du projet - mieux se connaître et préparer son stage	2		2	6	12	20
			Total Semestre 2	**30**	**30**	**92**	**194**	**242**	**528**

			Semestre 3						
UE31 Protection des personnes et des biens dans leur environnement professionnel	T31 Méthodes et outils de communication	M3101	Anglais : vocabulaire technique	2		1	10	24	35
		M3102	Techniques de communication et culture générale : communiquer en milieu professionnel	1,5		4	6	16	26
	T32 Aspects méthodologiques de l'évaluation des risques	M3103	Méthodes d'analyse de la sécurité des systèmes	1	10	3	6	6	15
		M3104	Évaluation et maîtrise des risques professionnels	1		2	8	12	22
	T33 Environnement des situations de travail	M3105	Facteurs d'ambiance	1,5		8	10	12	30
		M3106	Ergonomie	1,5		4	10	16	30
		M3107	Psychologie du travail	1,5		8	10	12	30
UE32 Prévision et prévention face aux risques technologiques et environnementaux	T34 Sécurité nucléaire, radiologique, biologique, chimique et explosion (NRBCe)	M3201	Risque biologique, radiologique et radioprotection	1,5		8	12	12	32
		M3202	Risque chimique	1		4	6	12	22
	T35 Sécurité des installations et des équipements	M3203	Sécurité incendie	2,5	10	6	14	18	38
		M3204	Sécurité des installations et des équipements de travail, risque d'explosion (ATEX)	1,5		9	14	8	31
		M3205	Sécurité électrique	1		4	8	8	20
	T36 Protection de l'environnement et Développement Durable	M3206	Droit de l'environnement	1		8	8	4	20
		M3207	Évaluation et maîtrise des risques environnementaux	1,5		6	10	16	32

UE	T	M		ECTS					
UE33 Projets : Mise en œuvre et modules complémentaires	T37 Conduite de projets	M3301	Projet tutoré : cas d'étude (80 heures)	2					
		M3302	Projet personnel et professionnel : préparer son parcours post-DUT	2		4	12	4	20
	T38 Modules complémentaires	M3303C	Aspects pratiques de la mise en sécurité des installations, risques et accidents industriels	2	10	10	18	16	44
		M3304C	Maîtrise des rejets et des pollutions : analyse de cas	2		13	14	16	43
		M3305C	Maîtrise de la santé sécurité au travail : analyse de cas	2		13	14	16	43
			Total Semestre 3	**30**	**30**	**115**	**190**	**228**	**533**
			Semestre 4						
UE41 Gestion des risques technologiques et environnementaux	T41 Aspects organisationnels, réglementaires et techniques du risque environnemental	M4101	Démarche environnementale	2		6	10	4	20
		M4102	Risques technologiques et installations classées	2	6	6	10	14	30
		M4103	Risques naturels	2		4	8	8	20
UE42 Projets : suivi et retour d'expérience	T42 Conduite de projet	M4201	Anglais : démarche HSE	2,5		3	4	8	15
		M4202	Techniques de communication et culture générale : culture professionnelle et rédaction	2,5	6	2	8	10	20
		M4203	Projet tutoré : mise en œuvre du projet (60 heures)	1					
UE43 Stage	T43 Stage	M4301	Stage (10 semaines minimum)	12	12				
UE44 Modules complémentaires – 2	T44 Modules complémentaires	M4401C	Adaptation à l'emploi technicien HSE	1,5		10	18	16	44
		M4402C	Organisation de la sécurité civile	1,5	6	12	14	16	42
		M4403C	Utilisation d'un référentiel environnemental	1,5		12	14	16	42
		M4404C	Utilisation d'un référentiel de santé sécurité au travail	1,5		12	14	16	42
			Total Semestre 4	**30**	**30**	**67**	**100**	**108**	**275**
			Total Formation		**120**	**352**	**628**	**820**	**1800**
					ECTS	**20%**	**35%**	**45%**	**100%**

- Enseignement présentiel : 1800 h dont :

    Anglais : 120h
    Expression-communication : 120h
    Projet personnel et professionnel (PPP) : 60h

    Modules complémentaires : 300h

- Projet tutorés : 300 h
- Stage : 10 semaines

Source: Ministère de l'enseignement supérieur et de la recherche, 2013. http://www.enseignementsup–recherche.gouv.fr

Annex 5 DUT Génie électrique et informatique industrielle

Source PPN GETT 2013

Dans l'activité …	… le titulaire du DUT GEII est capable de…
Réalisation de systèmes électriques ou électroniques autonomes ou dédiés au contrôle-commande d'ensembles pluritechnologiques	• mettre en œuvre les composants (fonctions) électroniques de base (analogique, numérique) pour constituer un sous-ensemble : les choisir, les associer • associer entre eux des sous-ensembles (électriques, électroniques) aussi bien sur le plan fonctionnel que sur le plan électrique • valider le bon fonctionnement d'un sous-ensemble, d'un ensemble (mesure) • utiliser un outil de CAO électronique (schématique, placement, routage) • choisir et mettre en œuvre une technique de production pour un

	équipement électronique ou électrique, et en faire la recette
Installation et maintenance des systèmes électriques ou électroniques autonomes ou dédiés au contrôle-commande d'ensembles pluritechnologiques	• respecter la documentation de constructeurs • diagnostiquer un dysfonctionnement • identifier les ressources nécessaires à la résolution du dysfonctionnement • résoudre un dysfonctionnement
Développement de petits systèmes embarqués (limité aux cas à complexité modérée)	• modéliser un système dans son environnement • conduire une démarche de développement logiciel (analyse, algorithme, codage, test) • utiliser un outil de développement croisé • utiliser un langage de description matérielle des circuits (conception, simulation) • intégrer ensemble matériel et logiciel
Développement d'applications d'automatisme	• élaborer les spécifications de l'installation automatisée en fonction du cahier des charges • choisir les composants d'automatisme appropriés • réaliser l'analyse fonctionnelle de l'installation et la décliner en un programme d'automatisation • situer l'automatisme dans son environnement côté pilotage : système automatisé de production (bases de données), réseaux de communication
Test, qualification des systèmes électriques ou électroniques autonomes ou dédiés au contrôle-commande d'ensembles pluritechnologiques	• choisir le matériel de contrôle ou d'essais pour vérifier la conformité vis-à-vis d'une spécification technique • définir les procédures et les méthodes de tests et réaliser les analyses de non-conformité des produits • analyser les résultats de mesures, diagnostiquer les causes de dysfonctionnement et effectuer les modifications de mise en conformité du produit • analyser les architectures matérielle et logicielle des moyens de tests et des bancs de test fonctionnels et in situ
Exploitation d'un système asservi pluritechnologique (process continus)	• prendre en compte la modélisation d'un système industriel et évaluer les performances statiques et dynamiques d'un système analogique ou numérique simple • mettre en œuvre et paramétrer un régulateur industriel
Réalisation d'études de veille technologique	• repérer et décrire toute évolution scientifique et technologique • s'adapter aux évolutions des métiers • sélectionner les informations de manière pertinente (notamment sur Internet)

Training with tutoring

Formation encadrée				Formation dirigée	
Cours magistraux (CM)	Travaux dirigés (TD)	Langue, expression, communication (TD ou TP)	Travaux pratiques (TP)	Projets tutorés	Stage en entreprise
324 heures	528 heures	300 heures	648 heures	300 heures	10 semaines mininum

Repartition by training domains (Themes)

b. Tableau synthétique des modules et des Unités d'Enseignement (UE) par semestre

Le programme des 3 premiers semestres de la formation se décline en 3 thèmes, qui font chacun l'objet d'une UE par semestre :

- Thème 1 : Composants, systèmes et applications,
- Thème 2 : Innovation par la technologie et les projets,
- Thème 3 : Formation scientifique et humaine.

Les compétences attendues pour un diplômé sont construites au fur et à mesure de la formation en combinant acquis académiques (théoriques et pratiques, majoritairement dans les thèmes 1 et 3) et projets dans lesquels l'étudiant apprend son futur métier (majoritairement dans le thème 2). Les thèmes sont déclinés pour chaque semestre en UE selon la progression suivante : Initiation en S1, Développement en S2, Approfondissement en S3 et Renforcement en S4.

Le dernier semestre comporte 3 unités d'enseignement :

- UE41 : Stage
- UE42 : Innovation par la technologie et les projets - Renforcement
- UE43 : Formation scientifique et humaine - Renforcement

Ces thèmes se répartissent comme suit sur les 4 semestres :

Enseignements	S1 Initiation	S2 Développement	S3 Approfondissement	S4 Renforcement	Total
	heures	heures	heures	heures	heures
Thème 1 : Composants, systèmes et applications	240	240	240		720
Thème 2 : Innovation par la technologie et les projets	150	135	150	180	615
Thème 3 : Formation scientifique et humaine	120	135	120	90	465
(UE41 : Stage)					
Total Heures encadrées	**510**	**510**	**510**	**270**	**1800**

DUT Gestion des entreprises et des administrations

Source PPN 2013

Three options:

= Gestion comptable et financières (GCF)

6 Gestion des ressources humaines (GTH)

Management des organisations (GMO)

► **Première année**

Le Diplôme Universitaire de Technologie spécialité Gestion des Entreprises et des Administrations est une formation s'étalant sur deux années universitaires (4 semestres).

Pendant ces 4 semestres, l'étudiant doit:

- ► Acquérir des connaissances générales et techniques
- ► Maîtriser des méthodes de travail (individuel et en équipe)
- ► Développer son autonomie et sa prise d'initiative
- ► Accéder à une expérience professionnelle.

La première année permet une acquisition progressive des connaissances et des méthodes de travail universitaire dans le domaine de la gestion.

Les bases acquises en première année permettent également une mise à niveau d'étudiants venant de différents baccalauréats.

On retrouve deux unités d'enseignements principales :

- ► **UE 1 Environnement des organisations**
  [Communication, Langues vivantes, Bureautique, Economie, Droit]
- ► **UE 2 Outils et techniques de gestion**
  [Management, Comptabilité, Fiscalité, Maths-Stats-Probas, Marketing, GRH, Contrôle de gestion, Finance]

Le programme détaillé se trouve ici et a été revu à la rentrée 2013, pour mieux prendre en compte à la fois la réforme des baccalauréats et l'évolution des métiers.

Tableau des coefficients aux semestres 1 et 2

		Semestre 1	Coef.
UE 1	**UE 1.1 : Environnement des organisations – Introduction**		
	M 11 01	Expression-Communication, éléments fondamentaux	2
	M 11 02	LV1 Anglais	2
	M 11 03	LV2	1
	M 11 04	Environnement numérique d'information et de communication	2
	M 11 05	Projet Personnel et Professionnel (Approche des métiers)	1
	M 11 06	Economie	2
	M 11 07	Introduction au droit	2
	M 11 08	Psychologie sociale et sociologie des organisations	2
	M 11 09	Adaptation aux publics étudiants et aide à la réussite (en TP)	1
		TOTAL UE1	15
UE 2	**UE 1.2 : Outils et techniques de gestion – Introduction**		
	M 12 01	Droit des obligations	2
	M 12 02	Introduction au management	2
	M 12 03	Comptabilité financière	3
	M 12 04	Initiation à la fiscalité et TVA	2
	M 12 05	Mathématiques pour la gestion et statistiques	3
	M 12 06	Marketing	2
	M 12 07	Adaptation aux publics étudiants et aide à la réussite (en TP)	1
		TOTAL UE2	15
		TOTAL S1	30

		Semestre 2	Coef.
UE 1	**UE 2.1 : Environnement des organisations - Approfondissement**		
	M 21 01	Expression-Communication, information et argumentation	2
	M 21 02	LV1 Anglais	2
	M 21 03	LV2	1
	M 21 04	Environnement informatique	2
	M 21 05	Projet Personnel et Professionnel (Identification des compétences métier)	1
	M 21 06	Economie	3
	M 21 07	Institutions publiques françaises et européennes	1
	M 21 08	Conception et méthodes d'enquête	1
	M 21 09	Adaptation aux publics étudiants et aide à la réussite (en TP)	1
		TOTAL UE1	**14**
UE 2	**UE 2.2 : Outils et techniques de gestion - Approfondissement**		
	M 22 01	Droit des affaires	3
	M 22 02	Gestion des ressources humaines	2
	M 22 03	Travaux d'inventaire et analyse des documents de synthèse	3
	M 22 04	Fiscalité des personnes physiques	1
	M 22 05	Calcul et analyse des coûts	2
	M 22 06	Probabilités	2
	M 22 07	Mathématiques financières	2
	M 22 08	Adaptation aux publics étudiants et aide à la réussite (en TP)	1
	M 22 09	Projet tutoré (60 heures)	
		TOTAL UE2	**16**
		TOTAL S2	**30**

C'est en deuxième année que les parcours de chacun peuvent se différencier. Les informations sur les différentes options se trouvent ci-dessous.

► Les options de seconde année

L'étudiant choisit entre trois options: Gestion Comptable et Financière (GCF), Gestion et Management des Organisations (GMO) ou Gestion des Ressources Humaines (GRH).

GCF pour se diriger vers les métiers de la comptabilité, du contrôle de gestion, de l'audit, de la finance.

GMO pour se diriger vers les métiers de **gestionnaire polyvalent** (compétences dans les domaines logistique, commercial, juridique, fiscal, financier et comptable).

GRH pour se diriger vers l'ensemble des **métiers des ressources humaines**: formation, recrutement, paie, etc.

Tableau des coefficients Gestion Comptabilité Finances

		Semestre 3	Coef.
	UE 3.1 : Management des organisations		
	M 31 01	LV1 Anglais	2
	M 31 02	LV2	1
	M 31 03	Economie	1
UE 1	M 31 04	Droit du travail	1
	M 31 05	Droit des affaires approfondi	1
	M 31 06	Fiscalité des personnes morales	1
	M 31 07	Analyses statistiques pour la gestion	1
	M 31 08	Stratégie d'entreprise	1
	M 31 09 C	Méthodologie de gestion de projet	1
	M 31 10 C	Logiciels métiers	1
	M 31 11 C	Simulation de gestion	1
		TOTAL UE1	**12**
	UE 3.2 : Outils de la Gestion comptable et financière		
	M 32 F 01	Expression-Communication des organisations de la GCF	2
	M 32 F 02	Système de gestion de bases de données de la GCF	2
UE 2	M 32 F 03	Projet Personnel et Professionnel GCF	1,5
	M 32 F 04	Gestion financière	3
	M 32 F 05	Calcul et analyse des coûts	2
	M 32 F 06	Comptabilité approfondie	2
	M 32 F 07	Révision comptable	1,5
	M 32 F 10	Projet tutoré (120 heures)	4
		TOTAL UE2	**18**
		TOTAL S3	**30**

		Semestre 4	Coef.
	UE 4.1 : Environnement et outils de la GCF		
	M41 01	Expression-Communication professionnelle	1
	M41 02	LV1 approfondissement professionnel	1,5
	M41 03	LV2	1
	M41 04	Economie	1
	M41 05	Projet Professionnel Personnalisé	0,5
	M41 06	Système d'information de gestion	1
UE 1	M41 07	Contrôle de gestion et Gestion prévisionnelle	1
	M41 08 C	Droit administratif	1
	M41 09 C	Applications professionnelles statistiques	1
	M41 10 C	Etudes de cas pratiques	1
	M41 F 11 C	Gestion de la trésorerie et diagnostic financier	1
	M41 F 12 C	Spécificités fiscales et comptables des sociétés	1
	M41 F 13 C	Tableaux de bord de gestion	1
	M41 F 14 C	Logiciel de gestion de la paie	1
		TOTAL UE1	**14**
	UE 4.2 : Mise en situation professionnelle		
UE 2	M42 01	Projet Tutoré (120 heures)	4
	M42 02	Stage Professionnel (au moins 10 semaines)	12
		TOTAL UE2	**16**
		Total tronc commun	
		Total option	
		TOTAL S4	**30**

Tableau des coefficients Gestion Management des Organisations

		Semestre 3	Coef.
U E 1		**UE 3.1 : Management des organisations**	
	M 31 01	LV1 Anglais	2
	M 31 02	LV2	1
	M 31 03	Economie	1
	M 31 04	Droit du travail	1
	M 31 05	Droit des affaires approfondi	1
	M 31 06	Fiscalité des personnes morales	1
	M 31 07	Analyses statistiques pour la gestion	1
	M 31 08	Stratégie d'entreprise	1
	M 31 09 C	Méthodologie de gestion de projet	1
	M 31 10 C	Logiciels métiers	1
	M 31 11 C	Simulation de gestion	1
		TOTAL UE1	**12**
U E 2		**UE 3.2 : Outils de la Gestion et du management des organisations**	
	M 32 M 01	Expression-Communication des organisations de la GMO	2
	M 32 M 02	Système de gestion de bases de données de la GMO	1,5
	M 32 M 03	Projet Personnel et Professionnel GMO	1,5
	M 32 M 04	Diagnostic financier GMO	1,5
	M 32 M 05	Création d'entreprise	1,5
	M 32 M 06	Calcul et analyse des coûts	1,5
	M 32 M 07	Marketing opérationnel	1,5
	M 32 M 08	Gestion opérationnelle des ressources humaines	1,5
	M 32 M 09	Gestion de la qualité, de la logistique et de la production	1,5
	M 32 M 10	Projet tutoré (120 heures)	4
		TOTAL UE2	**18**
		TOTAL S3	**30**

		Semestre 4	Coef.
	UE 4.1 : Environnement et outils de la GMO		
	M41 01	Expression-Communication professionnelle	1
	M41 02	LV1 approfondissement professionnel	1,5
	M41 03	LV2	1
	M41 04	Economie	1
U E 1	M41 05	Projet Professionnel Personnalisé	0,5
	M41 06	Système d'information de gestion	1
	M41 07	Contrôle de gestion et Gestion prévisionnelle	1
	M41 08 C	Droit administratif	1
	M41 09 C	Applications professionnelles statistiques	1
	M41 10 C	Etudes de cas pratiques	1
	M41 M 11C	Gestion appliquée à un secteur d'activité	1
	M41 M 12C	Droit de la concurrence	1
	M41 M 13C	Tableaux de bord de gestion	1
	M41 M 14C	Gestion des achats et des ventes	1
		TOTAL UE1	**14**
U E 2	**UE 4.2 : Mise en situation professionnelle**		
	M42 01	**Projet Tutoré (120 heures)**	4
	M42 02	**Stage Professionnel (au moins 10 semaines)**	12
		TOTAL UE2	**16**
		Total tronc commun	
		Total option	
		TOTAL S4	**30**

Tableau des coefficients Gestion Ressources Humaines

		Semestre 3	Coef.
	UE 3.1 : Management des organisations		
	M 31 01	LV1 Anglais	2
	M 31 02	LV2	1
	M 31 03	Economie	1
U E 1	M 31 04	Droit du travail	1
	M 31 05	Droit des affaires approfondi	1
	M 31 06	Fiscalité des personnes morales	1
	M 31 07	Analyses statistiques pour la gestion	1
	M 31 08	Stratégie d'entreprise	1
	M 31 09 C	Méthodologie de gestion de projet	1
	M 31 10 C	Logiciels métiers	1
	M 31 11 C	Simulation de gestion	1
		TOTAL UE1	**12**
	UE 3.2 : Outils de la Gestion des ressources humaines		
	M 32 H 01	Expression-Communication des organisations de la GRH	2
	M 32 H 02	Système de gestion de bases de données de la GRH	2
U E 2	M 32 H 03	Projet Personnel et Professionnel GRH	1,5
	M 32 H 04	Droit du travail approfondi	3
	M 32 H 05	Diagnostic financier GRH	1,5
	M 32 H 06	Gestion administrative des ressources humaines	2
	M 32 H 07	Gestion des emplois et des compétences	2
	M 32 H 10	Projet tutoré (120 heures)	4
		TOTAL UE2	**18**
		TOTAL S3	**30**

		Semestre 4	Coef.
U E 1		**UE 4.1 : Environnement et outils de la GRH**	
	M41 01	Expression-Communication professionnelle	1
	M41 02	LV1 approfondissement professionnel	1,5
	M41 03	LV2	1
	M41 04	Economie	1
	M41 05	Projet Professionnel Personnalisé	0,5
	M41 06	Système d'information de gestion	1
	M41 07	Contrôle de gestion et Gestion prévisionnelle	1
	M41 08 C	Droit administratif	1
	M41 09 C	Applications professionnelles statistiques	1
	M41 10 C	Etudes de cas pratiques	1
	M41 H 11C	Tableaux de bord sociaux	1
	M41 H 12C	Pratique des relations sociales dans l'entreprise	1
	M41 H 13C	Gestion de la paie	1
	M41 H 14C	Gestion du recrutement et de la formation	1
		TOTAL UE1	**14**
U E 2		**UE 4.2 : Mise en situation professionnelle**	
	M42 01	Projet Tutoré (120 heures)	4
	M42 02	**Stage Professionnel (au moins 10 semaines)**	12
		TOTAL UE2	**16**
		Total tronc commun	
		Total option	
		TOTAL S4	**30**

advances social and economic progress.

FRANK MCMAHON

Case Study on Higher Vocational Education and Training at EQF-Levels 5 to 7 in Ireland

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List of Abbreviations

CAO	Central Applications Office
CIT	Cork Institute of Technology
DIT	Dublin Institute of Technology
EQF	European Qualifications Framework
ETB(s)	Education and Training Board(s)
FAS	Irish National Training and Employment Authority (dissolved)
FE	Further Education
HE	Higher Education
HEA	Higher Education Authority
HEI(s)	Higher Education Institution(s)
IBEC	Irish Business and Employers' Confederation
KCFE	Killester College of Further Education
MAMF	Mechanical Automation and Maintenance Fitting
NFQ	National Framework of Qualifications
NQAI	National Qualifications Authority Ireland (merged into QQI)
OECD	Organisation for Economic Co-operation & Development
QQI	Quality and Qualifications Ireland
RPL	Recognition of Prior Learning
SOLAS	Further Education & Training Authority
UCC	University College, Cork
UCD	University College, Dublin
UL	University of Limerick
VEC(s)	Vocational Education Committee(s) (since merged into ETBs)
VET	Vocational Education and Training

Part 1: Tertiary and Further Education

1.1 The Irish Education System

The Irish education system may be analysed in terms of the ages of participants, commencing with the education of young children.

Early Childhood/Pre-school: While the compulsory school age in Ireland is 6, virtually all 5-year-olds and approx. 40 % of 4-year-olds attend primary school. All forms of pre-primary education are optional and are delivered for the most part outside the formal education system by a diverse range of private, community and voluntary interests. The Department of Education and Skills funds some specific pre-primary services in areas such as urban disadvantage. In addition, the Department of Children and Youth Affairs funds a free Pre-School Year scheme for all children between the ages of 3 years 2 months and 4 years 7 months. The vast majority of children of that age group take advantage of the scheme, as evidenced by the OECD Education at a Glance (2014) report, which found that 97 % of Irish 4-year-olds are participating in education, whereas the EU average is 89 %.

Primary Education: The Irish constitution, enacted in 1937, includes a provision that "the state shall provide for free primary education". For historical reasons, most primary schools are state-aided parish schools, although this pattern is changing. The state pays the bulk of the building and running costs, but a local contribution is made towards the running costs. Teachers' salaries are paid by the state. Some parents opt to send their children to a private primary school. Primary education consists of an eight-year cycle, after which pupils transfer to a post-primary school at the age of twelve.

Post Primary Education: This sector comprises secondary, vocational, community and comprehensive schools. Secondary schools are privately owned and managed. Vocational schools are state-established and administered by Education and Training Boards (ETBs), while community and comprehensive schools are managed by Boards of Management of differing compositions. Post-primary education consists of a three-year Junior Cycle followed by a two or three year Senior Cycle, depending on whether the optional Transition Year is taken. The Transition Year provides an opportunity for students to experience a wide range of educational inputs, including work experience, in a year that is free from formal examinations. At the end of the final two years of the Senior Cycle, students take one of three programmes, each leading to a State Examination; the traditional Leaving Certificate, The Leaving Certificate Vocational Programme or the Leaving Certificate Applied.

▶ The Leaving Certificate, taken at 17 or 18 years of age is available in more than 30 subjects, of which students are required to take at least five. Normally students take 7 or 8 subjects, including English, Irish and Mathematics. This is the normal route from secondary education to higher education.
▶ The Leaving Certificate Vocational Programme (LCVP) is similar to the traditional Leaving Certificate, with a concentration on technical subjects and some additional modules which have a vocational focus. This route does not normally lead to higher education.
▶ The Leaving Certificate Applied Programme (LCAP) is a self-contained two-year course for those students who are not adequately catered for by the other Leaving Certificate programmes. It is a person-centred course involving a cross-curricular approach rather than a subject-based structure.

In 2013, there were 55,572 candidates who took the Leaving Certificate examination, of whom 37,096, just over two thirds of the total, took the traditional Leaving Certificate examination while 15,671 took the LCVP and 2,805 took the Applied examination (Expert Group on Future Skills Needs, 2014, page 51).

Further Education and Training (FE and T): This covers education which occurs after second level schooling, but which is not part of the third level system. Full-time programmes in this sector include Post-Leaving Certificate programmes, Vocational Training Opportunities Scheme and Youthreach, while part-time programmes include Back to Education Initiative, Adult Literacy and Community Education. Traditionally, much of this provision was organised by Vocational Education Committees (VECs) in each county and city, but the large number of providers was rationalised in 2013. Now 16 Education and Training Boards have replaced the 33 VECs. In addition, a new agency, SOLAS, was established to take responsibility for the provision of programmes. In launching the new agency in October 2013, the Minister for Education and Skills said that "SOLAS will be tasked with ensuring the provision of 21st century high quality Further Education and Training programmes which are responsive to the needs of learners and the requirements of a changed and changing economy." Apprentice Education and Training and Traineeships are also part of the FE and T provision.

Higher Education: According to the Department of Education and Skills website, "higher education is provided by 7 universities, 14 Institutes of Technology, including the Dublin Institute of Technology, and 7 Colleges of Education. In addition, a number of other third level institutions provide specialist education" (DES, 2014). These specialist institutions include the Garda (Police) College, the Military College, the Royal Irish Academy of Music, the Law Society and the Pontifical University. In all, there are 44 HEIs that receive state funding, in addition to many private institutions. The number of HEIs is likely to decline in the near future as the government is encouraging the merger of institutions. Institutes of Technology which are seeking re-designation as Technological Universities are required to merge, and already three such groupings have sought re-designation, involving seven IoTs; thus there will be a reduction by four in the number of HEIs. There is also a plan for the merger of Colleges of Education (teacher training colleges).

1.2 Tertiary and Further Education

▶ Post Leaving Certificate (PLC) programmes

FE courses include so-called Post Leaving Certificate (PLC) programmes. There are currently 1,871 such programmes (Qualifax, 2014) and they lead to awards at level 4, 5 or 6 on the NFQ, which is the equivalent of EQF levels 3, 4 and 5. The disciplines involved include Accounting, Computing, Health Care, Film Production, Early Childhood Care, Furniture Design and Making and Sport. Most of the courses are offered by FE colleges operated by ETBs, but there are many other providers, mainly private colleges. Course duration is either one year or two years. Tuition fees are low, approx. 200 to 500 Euro per annum. They are marketed nationally through Qualifax, a database for learners. Total enrolment on these courses was 38,774 in 2011 (ESRI, 2014), of whom the vast majority were in year 1 (many of the programmes are of a one-year duration). The current enrolment represents a decline since 2010. This is due, at least in part, to a continual expansion of opportunities in HEIs, which are generally perceived to be more attractive than FE opportunities.

Progression opportunities are listed for each programme and in some instances they include progression to year 2 of a cognate degree programme. For example, a PLC Advanced Certificate in Business offered at Portlaoise College of Further Education states it was developed in conjunction with Carlow Institute of Technology (ITC) and a successful student may progress to the second year of a programme at ITC (Portlaoise College, 2014). Likewise, a Social Care Advanced programme at Waterford College of Further Education offers the prospect of progression into second year of a Social Studies BA degree (Waterford College, 2014). Such progression opportunities are dependent on the cooperation of the relevant HEI, but progression routes have been encouraged by the NQAI for the past 10 years.

Apprentice Education and Training is also part of the FE and T provision. For many years, the agency FAS, established by the government, had responsibility for all apprentice programmes which operated under the legal umbrella of the Apprenticeship Act, 1959. It established an Apprentice Advisory Committee, which developed the curricula for the programmes. The membership of the Advisory Committee included representatives of the Ministry of Education, Institutes of Technology and the social partners, both trade unions and employers. In fact, the social partners had a majority of places on the committee, so they were in a position to determine the content of the apprenticeship programmes. The training programmes included periods of on-the-job training and periods in Institutes of Technology and in training centres (originally operated by FAS, the Apprenticeship Authority). To gain entry to an apprenticeship programme, a student must first gain employment with a registered employer. Typically, a programme will involve four periods of work in an industry setting and three periods of study in an Institute of Technology (state-funded higher education institutions) or a Training Centre.

Table 1

Typical Structure of an Apprenticeship Programme

Phase	Location	Duration
1	Industry	20 weeks
2	Training Centre	20 weeks
3	Industry	40 weeks
4	Institute of Technology	11 weeks
5	Industry	26 weeks
6	Institute of Technology	11 weeks
7	Industry	12 weeks

For many years, the Training Centres were run by FAS, the Apprenticeship Authority (since 2013, replaced by SOLAS), but in the recent reorganisation, it was decided that the Training Centres will henceforth be owned by the Education and Training Boards.

Successful completion of an apprenticeship programme leads to the award of an Advanced Certificate, which is at level 5 or 6 on the NFQ and equivalent to EQF Level 4 or 5.

The number of trades for which there are formal apprenticeship programmes is much more limited in Ireland than in some other countries, such as Germany. Currently, there are 26 trades designated under the act; these are grouped under the headings Construction (8 trades), Electrical (6 trades), Engineering (6 trades), Motor (5 trades) and Printing (1 trade) (Department of Education and Skills, 2013, page 57).

In 2004, there were 28,050 trainees registered on these courses (SOLAS 2, 2014), but with the general economic problems and in particular the problems in the construction industry, the number enrolled declined to 7,150 in 2013. It has since recovered somewhat, but is still a long way from its peak.

Table 2

Apprentice Education and Training in Ireland

Year	First year enrolments	Total enrolled
2004	8,239	28,050
2008	3,765	26,150
2012	1,434	8,850
2014 (August)	1,890	7,483

Some of those who complete an apprenticeship subsequently progress to a degree programme. This was most evident in the case of Electrical apprentices, for whom there is a designated pathway into a Level 7 NFQ degree (Ordinary Bachelor Degree) in Electrical Engineering. From there, they may progress to a Level 8 (Honours Bachelor Degree), also in Electrical Engineering.

Those who complete other apprenticeships are more likely to pursue higher education programmes in Business subjects, as they may well be self-employed and see the need for expertise in Business disciplines. However, as they do not rely on their apprentice qualification to gain entry to the Business programme, there are no statistics on the number who progress.

► Traineeships leading to a NFQ level 6 award

In addition to Apprenticeships, there are some Traineeships, which share many of the characteristics of apprenticeships but are not designated by the Apprenticeship Act, 1959. These programmes are developed by industry and delivered by industry in conjunction with Training Centres, but without the participation of Institutes of Technology. They lead to the award of an NFQ award at levels 4, 5 or 6. There were at least 20 such traineeship programmes in areas such as Beauty Therapist and Legal Secretary supported by FAS (fore-runner of SOLAS), but only two of them (Software Developer and IT Support Specialist) led to awards at NFQ Level 6 (EQF level 5) (Source: SOLAS 3 during interview by this author, October 2014). While FAS was responsible for Apprentice training, it indicated that it was happy to co-operate with employers for the implementation of new Traineeships. The current discussions on greatly expanding the number of designated Apprenticeships may make Traineeships irrelevant.

National Framework of Qualifications: Awards in Irish Further and Higher Education at or above NFQ Level 6: (Source: QQI website at www.qqi.ie)

All awards in Tertiary and Further Education are made in the context of the Irish National Framework of Qualifications. The major awards available at or above Level 6 may be briefly described as follows:

► Advanced Certificate (NFQ Level 6/EQF Level 5)

The Advanced Certificate is normally awarded after completion of a programme in Further Education such as some Apprenticeships (4 years) or a Post-Leaving Certificate (2 years). The Advanced Certificate is not regarded as a Higher Education award, but there are articulation agreements that enable recipients of some such certificates to progress to Higher Education programmes, sometimes with advanced standing (e. g. admission to second year).

▶ **Higher Certificate (NFQ Level 6/EQF Level 5)**

The Higher Certificate is normally awarded after completion of a programme of two years duration (120 ECTS credits). Entry to these programmes is generally for school leavers (with Leaving Certificate) and those with equivalent qualifications. The Higher Certificate is an intermediate qualification within the Bologna First Cycle.

▶ **Ordinary Bachelor Degree (NFQ Level 7/ EQF Level 6)**

The Ordinary Bachelor Degree is normally awarded after completion of a programme of three years duration (180 ECTS credits). Entry to a programme leading to an Ordinary Bachelor degree is typically for school leavers and those with equivalent qualifications. In addition, there are transfer arrangements in place across higher education and a number of programmes of one year duration leading to the Ordinary Bachelor Degree for holders of the Higher Certificate. The Ordinary Bachelor Degree is compatible with the Bologna First Cycle descriptor, though holders of this award do not generally immediately access programmes leading to Second Cycle awards in Ireland.

▶ **Honours Bachelor Degree (NFQ Level 8/ EQF Level 6)**

The Honours Bachelor Degree is normally awarded following completion of a programme of three to four years duration (180–240 ECTS credits), although there are examples of longer programmes in areas such as architecture, dentistry and medicine. Entry to a programme leading to an Honours Bachelor degree is typically for high achieving school leavers and those with equivalent qualifications. In addition, there are transfer arrangements across higher education, and a number of programmes of 1-year duration leading to Honours Bachelor Degrees for holders of the Ordinary Bachelor Degree. The Honours Bachelor Degree is a Bologna First Cycle qualification

▶ **Higher Diploma (NFQ Level 8/ EQF Level 6)**

The Higher Diploma is normally awarded following completion of a programme of one year duration (60 ECTS credits). Entry to a programme leading to a Higher Diploma is typically for holders of Honours Bachelor Degrees, but can also be for holders of Ordinary Bachelor Degrees. It is of note that the Higher Diploma is typically in a different field of learning than the initial award. The Higher Diploma is a qualification at the same level as completion of the Bologna First Cycle.

▶ **Master's Degree (NFQ Level 9/ EQF Level 7)**

There are two types of Master's Degree in Ireland: taught Master's Degrees and research Master's Degrees. The taught Master's Degree is awarded following the completion of a programme of one to two years duration (60–120 ECTS credits). Entry to a programme leading to a taught Master's Degree is typically for holders of Honours Bachelor Degrees. In some cases, entry to such programmes can be permitted for those with Ordinary Bachelor Degrees or equivalent. Research Master's Degree programmes are typically of two years duration (120 ECTS credits), though not all such programmes are credit rated. The Irish Master's Degree is compatible with completion of the Bologna Second Cycle.

▶ **Post Graduate Diploma (NFQ Level 9/ EQF Level 7)**

The Postgraduate Diploma is normally awarded following completion of a programme of one year duration (60 ECTS credits). Entry to a programme leading to a Postgraduate Diploma is typically for holders of Honours Bachelor Degrees in a cognate area, but can also be for holders

of Ordinary Bachelor Degrees. The Post-graduate Diploma is an intermediate qualification within the Bologna Second Cycle.

▶ **Doctoral Degree (NFQ Level 10/ EQF Level 8)**

An Honours Bachelor Degree is normally required for entry to a doctoral programme. In some disciplines, a Master's Degree is also preferred. Normally those entering a doctoral programme with an Honours Bachelor Degree initially register for a research Master's Degree or provisional doctoral candidature. Upon successful completion of this initial stage, the candidate acquires full doctoral candidature. Doctoral programmes are between three and four years in duration. Varying doctoral programmes now exist, including professional and performance/practice based doctorates. The Irish Doctoral Degree is compatible with completion of the Bologna Third Cycle.

▶ **Higher Doctorate (NFQ Level 10/ EQF Level 8)**

This award largely recognises excellent and distinguished contributions to learning. It may be used for career progression to advanced levels of academia and research. This award is never based on a provider's programme and, as such, is not subject to validation, but is assessed by the awarding body for each individual provider. Normally, the learner already holds a first doctorate or equivalent for some period of time prior to becoming a candidate for the higher doctorate. The Irish Higher Doctorate is compatible with completion of the Bologna Third Cycle.

1.3 Typical pathways to further and teriary education

Most students go directly to higher education from post-primary school (secondary school). Applications for higher education are made to the Central Applications Office for virtually all programmes in all HEIs and places are allocated on the basis of the score achieved in the School Leaving Certificate, an examination conducted nationally each June.

HEIs keep some places, typically around 20 %, to be filled by alternative routes such as mature students (over 23 years of age), students with a disability, students from socio-economic deprived backgrounds and students who have undertaken a Further Education course after the Leaving Certificate. The number of students who sought and gained a place in higher education as a result of completing a Further Education (VET) programme are as follows:

Table 3

FETAC Award holders applying to enter higher education

Year	Applicants with FE award	Offers	Acceptances with FE award	Total HE acceptances
2001	2,093	955	615	36,625
2005	5,165	2,102	1,049	38,175
2009	11,255	2,699	1,721	45,586
2013	15,767	8,051	3,031	46,169

Source: Central Applications Office statistics supplied by the CEO

The table above indicates rapid growth in the number of students who seek to use Further Education as a pathway to higher education and a substantial growth in the number who achieve that goal – up almost 400 % in a twelve-year period. Nevertheless, it still constitutes less than

7 % of entrants to higher education. The HEA has proposed that a target of 10 % of entrants to HE should come from the FE sector by 2016 (SOLAS, 2014, page 29).

Table 3 above may understate the number of FET award holders who progress to higher education. A study conducted by QQI concluded that just over 5,000 students who received a major FETAC award in 2009 were registered in a HEI in the academic year 2009–10 (Dempsey et al, 2013). There are several reasons why the latter figure is higher than the CAO estimate of the number who progressed:

▶ The CAO figure relates to full-time programmes in HEIs, but the FETAC study covered all programmes, including part-time programmes;
▶ It is possible for a FETAC award holder to have a Leaving Certificate that ensured entry to higher education without recourse to his/her FETAC award and accordingly he/she may not have referred to the FETAC award when applying to the CAO;
▶ A mature student may be admitted to HE on the basis of maturity rather than his/her FETAC award.

▶ Access routes to higher and further education in Ireland

The chart that follows sets out the main routes through the Irish education system, including the routes to higher education and to further education. Whilst most students proceeding to HE do so directly from secondary school, there are routes to HE via FE.

The types of FET programmes taken by those who subsequently progress to HE is of interest. The largest grouping by far is those who study programmes in the area of Engineering and Construction, an area for which there are formal Apprenticeship programmes that lead to a FETAC award. A summary of the findings of the QQI study of progression of 2009 FETAC award recipients is set out in Table 4 below:

Table 4

FETAC Major Award Recipients 2009 who progressed to HE in 2009–10

FETAC Award	Number	% of those who progressed to HE
Humanities, Arts, General, Education	741	15 %
Social Sc, Business, Law	900	18 %
Science	178	4 %
Engineering, Manufacture, Construction	1,998	39 %
Agriculture	129	15 %
Services	347	7 %
Total	5,079	100 %

(Source: Dempsey et al, 2013)

The 5,079 who were registered in a HEI in 2009/10 were among the 28,000 who received a FETAC major award in 2009. A further 6,000 of the awardees progressed to a second FET programme in 2009/10, while 11,000 were in employment and 7,000 received unemployment assistance. It is possible that some people were counted twice; for example, one person could be in employment and also registered for a part-time programme in a HEI.

Figure 1
Irish education system
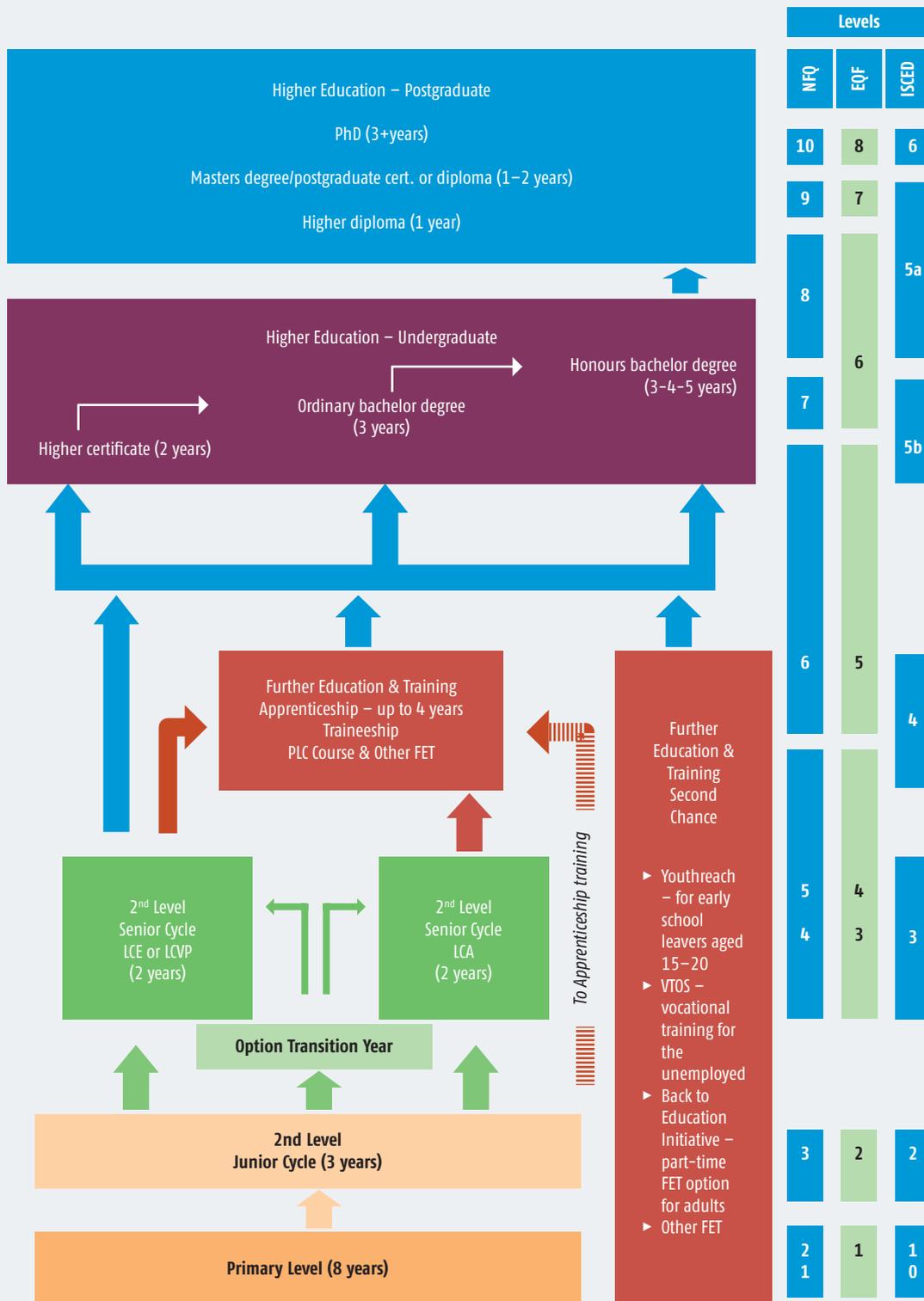
Source: Monitoring Ireland's Skills Supply, 2014, SOLAS.ie

1.4 Image and value of VET

The image and standing of education in Ireland has been consistently high. There has been strong growth in the number of people entering higher education, where there is now a participation rate of approx. 65 %. The emphasis of government economic policy has been on the development of high-tech industries such as ICT and Pharmaceutical Manufacturing, and new degree and higher degree programmes have been developed in higher education to meet the needs of those industries. Intermediate level skills (level 5 and 6 in NFQ) and lower level skills (levels 1–4 in NFQ) have received much less attention, so that paradoxically Ireland has one of the highest rates of graduates in the OECD in the age group 25 – 34, but also scores below average in literacy and numeracy. The success of school leavers in gaining places in higher education is celebrated in all the public media each August, but FET attracts no such publicity.

The report on Further Education and Training in Ireland published in 2014 by the Economic and Social Research Institute reviewed the status of FET relative to HE. It concluded that there was a strong consensus that FET was seen as having a lower status than other parts of the educational system, especially higher education. Terms repeatedly used to characterise the sector included "the poor relation" and the "Cinderella sector". FET was seen as the second-best option for those who failed to get into higher education (ESRI, 2014).

SOLAS in its Further Education and Training Strategy (2014) concluded "that the standing and esteem in which FET is held by Irish society stands in contrast to the higher esteem in which higher education is held by learners and parents alike". It is seeking to address this problem in its new strategy. As part of its mission, it sees itself as assisting "individuals to progress to higher education who otherwise could not directly do so" and another important role is "to provide second chance education for the many individuals who have not completed second level education" (SOLAS, 2014). Further details of the SOLAS strategy are given in section 4.4.

▶ Review of Apprenticeship Training in Ireland, December 2013

An important review of Apprenticeship Training was announced by the Minister for Education and Skills in May 2013 under the chairmanship of the Head of the Labour Court. It issued a report in December 2013 (DES, 2013). Among its conclusions was that "[a]pprenticeships should be enterprise led with a key role for employers in identifying occupational standards and in shaping the content of the curriculum in collaboration with education and training providers" (Department of Education and Skills, 2013).

The report sought "the full input and engagement of employers, trade unions, education and training providers and professional bodies in the process." It further recommended that all programmes should be subject to the quality assurance arrangements of QQI. It noted that, while many apprentices progressed to degree courses, "the progression opportunities should be made far more transparent".

The report noted the "significant scope to expand apprenticeships into a wide range of business sectors such as ICT, Retail, Hospitality, Business Administration, Medical Devices, Sport and Leisure, Childcare and Social Care, Financial Services, Accounting, Hairdressing and Beauty Care Sectors". If the proposed expansion of apprenticeships enjoys the support of both employers and trade unions (and that appears to be the case), then it is likely to proceed. When this is implemented, it will take Ireland much closer to the German model, which the report claims is being implemented in many European countries. In June 2015, the Apprenticeship Council published a report on the New Apprenticeship Programme Proposals in which it stated that 86 submissions were received. Following evaluation by the Council, 25 proposed programmes were selected for detailed development. Of the 25 programmes, 8 were in the area of Manufacturing and Engineering, 6 were in Tourism and Sport, 5 were in Financial Sevices, while the remainder

were in IT, Transport or Business Administration. While most of the proposals envisaged awards at EQF levels 4 or 5, there were some proposals (approx. 25 %) for awards at level 6 and one proposal for an award at EQF level 7. At the time of writing, the proposals are still being evaluated. If approved as submitted, the new apprenticeship programmes would be in non-traditional areas and in some case at a higher level of award than was hitherto the case.

The key role envisaged for employers is illustrated by the comment that "[a]pprenticeships would not be successful unless there was a strong commitment from employers to identify occupational needs, recruitment and payment of apprentices and joint collaboration with education and training providers in programme delivery". It was recommended that employer-led consortia should identify the occupations which were considered by them to be suitable for apprenticeships" (p. 84). The review recommended the establishment of an Apprenticeship Council (whose responsibilities included curriculum development) with a membership to include representatives of SOLAS, HEA, DES, QQI and *representatives of business and trade unions sufficient to ensure an enterprise led approach*" (p. 8). Clearly, it is envisaged that employers and unions will effectively control the content of apprentice training programmes.

1.5 Governance/main institutions

DES: The Department of Education & Skills is the government department responsible for education policy at all levels. Generally it chooses to allow other agencies to implement the policy, such as the Higher Education Authority and SOLAS for higher education and further education respectively. Both the HEA and SOLAS are funded via the Department of Education and Skills and they acknowledge the pre-eminence of the Department in determining overall policy.

ETBs: In July 2013, 16 Education and Training Boards replaced 33 Vocational Education Committees and are responsible for education and training and youth work. They operate second level schools, further education colleges and adult and FE centres delivering education and training programmes.

HEA: The Higher Education Authority is the statutory planning and policy development body for higher education and research in Ireland. It is also the funding authority for the universities, the institutes of technology and some other designated institutions.

HEIs: HEIs in Ireland include seven universities, 14 institutes of technology, seven colleges of educations (teacher training) and some specialist institutions and many private colleges. A total of 45 institutions, including private HEIs, recruit students for higher education programmes via the Central Applications Office.

QQI: Quality and Qualifications Ireland was established in 2012 by the merger of four existing agencies, Further Education and Training Awards Council, Higher Education and Training Awards Council, Irish Universities Quality Board and the National Qualifications Authority. QQI now performs the duties previously performed by the four agencies it subsumed, including the development of awards and standards, quality assurance for further and higher education, the development and maintenance of a national framework of qualifications, the recognition of awards from other jurisdictions, the validation of education and training programmes and the review of providers of education and training.

SOLAS: It was established in 2013 as the Further Education and Training Authority of Ireland. It is responsible for funding, planning and coordinating training and further education programmes.

1.6 Role of social partners e. g. employers' associations and trade unions in VET

The social partners play a role in most higher education and further education institutions. Under the 1997 Universities Act, there is a provision for representatives of the social partners on the Governing Body of most universities, with the notable exception of Trinity College, Ireland's oldest university (more than 400 years old). It argued successfully that its model of governance should not be required to change from its traditional model. As well as representatives of business and trade unions, there is a provision for representatives of the world of the arts and culture. In addition to the membership on Governing Bodies, universities have Industry Liaison Committees which allow the viewpoint of industry to influence the content of degree programmes.

The Dublin Institute of Technology has a provision for five members of the Governing Body (out of 20 members) to be nominated by business and professional bodies. Other institutes of technology have similar provisions for representation on their governing bodies. The relatively strong representation of industry ensures that its interests are reflected in decisions about the nature and content of higher education programmes.

Trade Unions are represented on Governing Bodies of HEIs, but only to the extent of representing members of the unions who work in the HEIs.

In the Further Education sector, the board of SOLAS has representatives of both employer bodies and trade unions. Traditionally, both employer bodies and trade unions play a strong role in determining the content of Apprentice programmes as outlined on page 6 above. Education and Training Boards are governed mainly by elected members of local authorities and thus reflect the strength of the various political parties.

In addition to the role of the social partners in the governance of institutions, employers and representatives of professional bodies also play a major role in the Quality Assurance process in many institutions, but more so in institutes of technology than in universities. For example, every programme taught in IoTs is assessed by a panel of experts which must include external academics and at least one representative of the profession. The panel to assess a degree in Mechanical Engineering will include at least one professor of Mechanical Engineering from a university and a senior Mechanical Engineer from industry. After the programme is validated, two external examiners are appointed, one of whom is a practising Mechanical Engineer. The external examiners monitor the implementation of the programme and the standards achieved by the students. In addition, it is common practice to include an industry-based practitioner on interview boards for the appointment of academic staff. So this three-pronged approach – membership of the validation committee, service as an external examiner and membership of staff selection committees – together ensures, as far as possible, that programmes in institutes of technology are responsive to the needs of the labour market.

Surprisingly, employers play a less active role in the validation of FE programmes. Until recently, the validation of programmes was the responsibility of FETAC (since it merged into QQI), and its procedures were largely paper-based. Providers were required to sign off on certain regulations, and there was some external verification, but there was no panel visit and no role for employers, unless they were specifically invited. Since the formation of the QQI, the approach to quality assurance is being re-thought and the new system that emerges may have some of the characteristics of the former HETAC approach, i. e. including visits by a panel which includes industry personnel.

On 15 October 2014, SOLAS, HEA and QQI simultaneously published on their websites an invitation to employers, large and small, to participate in an online survey to express their views on the quality of graduates emerging each year from Irish further and higher education institu-

tions. The survey was a partnership between the HEA, SOLAS and QQI and was the first to be undertaken on this scale. The survey was developed by a steering group which included the Department of Education & Skills, Industrial Development Authority, Chambers of Commerce, Irish Business and Economic Confederation, Enterprise Ireland, Expert Group on Future Skills Needs and Irish Small & Medium Enterprises, among others. It is hoped that the results will be used to inform policy direction across further and higher education. The fact that the three statutory bodies, SOLAS, HEA and QQI, came together to launch the survey and the fact that so many significant players participated in the steering group is a clear indication of the wish to hear the views of industry on the attributes of graduates.

2 Education Programmes and Qualifications at EQF Levels 5–7

2.1 Admission requirements

Admission to all tertiary level programmes is based mainly on performance on the school Leaving Certificate (high school diploma). Each programme has minimum entry requirements specified by the institution offering the programme, e. g. Grade C or higher in Maths and English plus a pass in at least four other subjects. There is some provision for entry as a mature student (over 23 years of age) or via a Further Education programme.

There is a Central Applications Office (CAO) owned by the universities and a DIT which acts as the single point to which all potential students send their applications and which matches students to places based on the student's performance on the school Leaving Certificate. The CAO acts for 44 institutions which is virtually all of the higher education sector in Ireland. It does not act on behalf of Further Education colleges or their programmes. Further Education colleges recruit students directly and Apprentices are recruited by employers and are subsequently registered by SOLAS.

2.2 National definitions: tertiary, vocational, dual, professional

Tertiary education is defined as the sector of education provided by universities, institutes of technology, colleges of education and other specialist colleges. The term "vocational education" was used for many years to indicate a sector of education that was technical/ technology-based and offered programmes at the second level and above. In recent years, the term Further Education has been used, probably to overcome the negative image of the term "vocational education." It occupies a position between secondary school and higher education. The term "dual" is not used in Irish education. The term "professional" is used to describe programmes that lead to a particular profession, such as law or accountancy.

2.3 Duration

Tertiary education programmes offered by the universities are generally 3 or 4 years for a Bachelor degree (Arts and Business degrees can be either 3 or 4 years, Engineering and Science degrees are usually 4 years, Medicine and Architecture degrees are longer). Master's degrees are generally one calendar year in duration (3 semesters, involving the two normal semesters plus the summer months following the second semester).

Tertiary education programmes offered by institutes of technology are similar in duration, but they also offer short cycle programmes two years in duration leading to a Higher Certificate. The FE sector offers programmes that are vocational in character and lead to awards at various EQF levels, mainly level 3 or 4, but some lead to an award at EQF level 5. These programmes include apprenticeships, PLCs and traineeships.

2.4 Places of learning

There are 7 public universities in Ireland, 14 institutes of technology (including the DIT, which has a unique position in that it is an awarding body), 6 recognised colleges of universities, 7 colleges of education (teacher training colleges) and some specialist colleges. In all, there are 44 HEIs that receive public funding. In addition to the public HEIs, there are some private colleges that offer degree programmes, mainly in Business and Computer Studies. They recruit students via the CAO and their programmes lead to awards made by QQI.

Further Education is organised by 16 Education and Training Boards (ETBs) which operate on a geographical basis. They offer programmes through FE colleges, and most of the programmes are not classified as being within the EQF levels 5–7 (they are at level 4). There are some programmes (including Post-Leaving Certificate programmes) which are at EQF level 5. Apprenticeship programmes are not based at a single place of learning, but involve periods of on-the-job training, training centres and institutes of technology.

2.5 Learning in practice

One of the features of many HE and FE (VET) systems is that employers are actively engaged in the provision of the programme, either as initiators of the programme or as providers of work experience which is a part of the programme. In Ireland, several HEIs utilise the second of the two approaches in that they put a particular emphasis on work placement as an integral part of degree programmes.

Details of the approaches taken by four Irish HEIs are given in section 3 below. At a more general level, the approach of HEIs is that such internships are a compulsory feature of the programme and must be satisfactorily completed before the student can progress in the programme. Usually, internships or placements occur in year 3 of a 4-year programme, or occasionally there are internships in both year 2 and year 3. It is rare for internships to occur in the final year.

Internships have long been a feature of medical courses and in that profession, they often occur after the final examination but before the graduate qualifies for registration. The duration of internships in HE varies between 3 months and 1 year, but most commonly they are around 6 months in Irish degree courses other than medical degrees. In apprenticeships, the period spent in industry is typically almost two years and thus constitutes two thirds of the total duration of the programme.

2.6 Qualifications: titles, EQF levels, labels as vocational, professional, academic

The most common Irish titles which correspond to EQF levels 5 to 7 are:

EQF Level	Irish NFQ Level	Award Titles
5	6	Higher Certificate (Higher education award) Advanced Certificate (Further education/VET award)
6	7 8	Ordinary Bachelor Degree Honours Bachelor Degree Higher Diploma in Education
7	9	Master's Degree Postgraduate Diploma
8	10	PhD Doctorate

The label "vocational" is rarely used in relation to higher education awards. Instead, it is commonly used to describe Further Education awards which are awards with a strong technical or vocational (as opposed to academic) bias. In terms of the National Framework of Qualifications, Further Education awards are made at Level 4, 5 and 6 which correspond to EQF levels 3, 4 and 5, respectively. There is some provision for holders of Further Education awards to progress to Higher Education programmes in universities and institutes of technology. Usually such progression involves access to year 1 of a Bachelor degree programme, where they will sit alongside students who have progressed directly from secondary school after the successful completion of the School Leaving Certificate examination. The label "Professional" is used to describe some higher education programmes which relate clearly to a particular profession such as Accountancy, Law and Engineering.

2.7 Focus of the education programmes

The focus of most programmes in higher education in Ireland is towards the labour market and the jobs that students of the programmes may obtain after they graduate. The extent to which the above statement is true varies somewhat from discipline to discipline and from institution to institution as illustrated by the following examples:

Programmes in Medicine, Dentistry, Pharmacy and Veterinary Medicine at the Bachelor degree level are offered in universities only and are very much geared towards meeting the requirements for registration for the relevant profession on graduation. The same is true of Bachelor degrees in Nursing, Optometry, and Physiotherapy offered in various HEIs.

Engineering degrees are mainly either 4-year Bachelor Honours degrees or 3-year Ordinary Bachelor degrees. Chartered Engineering (CE) status (available after completion of a 4-year Honours degree until recently and now requiring a Master's degree for admission) is deemed important, so programme providers must adhere to the requirements of Engineers Ireland, which controls the awarding of CE status.

Many Business degrees also grant exemptions from some stages of the process to become an accountant, so again, HEIs need to adhere to the requirements of the Accountancy bodies (there are several). Education Colleges qualify graduates to become Primary school teachers provided they follow the approved syllabus. There are Higher Diplomas in Education offered by universities to holders of Bachelor degrees who wish to qualify to become secondary school teachers. The focus of such Higher Diplomas is totally on teaching careers and it is difficult to envisage anyone taking such a programme unless they wish to become a teacher.

Science degrees include both honours degrees in a single discipline, e. g. Physics or Chemistry, and applied sciences degrees in areas such as Environmental Health. There are many career-focussed degree courses in Journalism and Media Studies. There are some areas where the goal of a particular job is not as evident. Students who pursue an Arts degree (and the BA degree in UCD has the single biggest in-take of any degree programme in Ireland) may subsequently opt for a career as a secondary school teacher by taking a Higher Diploma in Education. However, while pursuing the Arts degree, there is no obvious influence of any particular prospective job.

2.8 Quantitative relevance

Table 5 below sets out the number of whole-time equivalent students enrolled in higher education programmes in public HEIs in selected years, together with the number of whole-time equivalent academic staff and the ratio of academic staff to students. The decline in the staff to student ratio was caused by the efforts to curb expenditures during a period of fiscal austerity and it is a cause of concern from the point of view of quality.

Table 5

Higher Education Whole-time Equivalent Students and Staff: Student Ratio

	2007/08	2010/11	2012/13
WTE Student Numbers full-time + part-time /2	158,057	177,329	181,308
WTE Academic Staff	10,100	9,697	9,297
Ratio Staff to Students	1:15.6	1:18.3	1:19.5

Source: HEA Report on Higher Education System Performance, 2014

It is followed by Table 6, which shows the number of graduates from all Irish HEIs and FE Colleges in the year 2012, analysed on the basis of NFQ levels.

Table 6

Summary of Awards by NFQ Level, 2012

	NFQ 5	NFQ 6	NFQ 7	NFQ 8	NFQ 9/10	Total
QQI–FETAC	24,560	7,410	–	–	–	31,970
Institutes of Technology	–	2,630	7,910	10,240	2,260	23,040
Universities	–	2,300	1,690	18, 820	14,800	37,610
Total	24, 560	12,340	9,600	29,060	17,060	92,620

Source: Expert Group for Future Skills Needs (2014, p.51)

The awards at NFQ level 5 include many PLC, apprenticeship, traineeships and vocational training awards. The awards at NFQ level 6 include both Higher Certificates awarded by IoTs and universities and Advanced Certificates awarded for some PLCs, apprenticeship programmes and some traineeships. The awards at NFQ level 7 and NFQ level 8 include the Bachelor degrees at Ordinary and Honours levels, respectively, awarded by universities, IoTs and other HEIs. The awards at NFQ levels 9 and 10 include the Master's degres, Postgraduate Diplomas and PhDs awarded by universities, IoTs and other HEIs.Table 7 gives a summary of awards analysed by the field of education in which they were granted.

Table 7

Summary of Awards by Field of Education, 2012

Field	NQF 5 EQF 4	NQF 6 EQF 5	NFQ 7 EQF 6	NFQ 8 EQF 6	NFQ 9/10 EQF 7/8	Total
General	130	310	–	–	30	470
Education	–	80	–	1,800	2,990	4,870
Humanities and Arts	2,760	1,000	1,020	5,860	1,990	12,630
Social Science, Business & Law	3,230	2,440	2,320	8,560	5,710	22,260
Science & Computing	990	770	1,240	3,450	2,080	8,530
Engineering & Construction	450	3,010	2,340	3,480	940	10,220

(Continuing Table 7)

Field	NQF 5 EQF 4	NQF 6 EQF 5	NFQ 7 EQF 6	NFQ 8 EQF 6	NFQ 9/10 EQF 7/8	Total
Agriculture & Veterinary	1,820	1,470	310	360	130	4,090
Health & Welfare	12,160	1,660	1,240	4,880	2,900	22,840
Services	3,020	1,590	1,100	670	310	6,690
Total	24,560	12,330	9,570	29,060	17,080	92,600

Source: Expert Group for Future Skills Needs (2014, p. 51)

Note: the table above relates to awards made by public institutions including universities, colleges of education and institutes of technology. It does not include awards made as a result of programmes studied at private colleges.

If one analyses the number of awards in Table 7 above, one can see that there were over 8,000 awards granted at NFQ levels 5 – 8, inclusive, in each of the groupings Humanities & Arts, Social Science, Business & Law, Science & Computing, Engineering & Construction and Health & Welfare, but the percentage of alumni that progresses to a higher degree differs greatly from discipline to discipline. For example, many more progress in Science than in Engineering, perhaps because Engineering has traditionally been focussed on advancement in industry. There are also many who progress to Master's degree in Business, but not so many who complete a Doctorate.

It was noted earlier (in Table 3) that more than 3,000 entrants to HE came via an FE award. The table below indicates the fields to which holders of FET awards moved in their transfer to higher education.

Table 8
Analysis of Acceptances of Offers based on FETAC results, 2013

Course Group	Female	Male	Total
Arts/Social Science	620	246	866
Science/Agriculture	187	187	374
Education	68	6	74
Business	392	430	822
Engineering/Tech	55	472	527
Art & Design	103	72	175
Law	28	23	51

Source: CAO Chief Executive in correspondence with this author, 2014

The three main fields are Arts/Social Sciences, Business and Engineering/Technology. It is interesting that two of the fields show a huge discrepancy between male and female participation. Engineering is hugely dominated by male students, while Arts/Social Science is almost as dominated by female students; of the three fields, only Business comes close to an equality of numbers.

2.9 Financing

Higher Education and Further Education (VET) in public institutions is largely financed by the state. Irish and other EU nationals enrolling in higher education institutions pay a maximum of 2,500 Euro per annum, even though the cost of providing the programmes is an average of 10,000 Euro per annum. Some programmes such as Engineering, Medicine and Veterinary Science cost a great deal more (up to 30,000 Euro per annum). Thus, the state subsidises the cost by at least 75 %. In addition, many students are exempted even from the 2,500 Euro per annum on the basis of low family income. On the other hand, students from outside the EU are liable to pay the full fees, often 10,000 Euro per annum and sometimes considerably more.

Costs for FE programmes are much lower and generally do not involve a fee for the students (apart from a €200 registration fee). The exception to this are non-EU students, who pay a fee of €3,650, which has been reckoned to be the cost of providing the programme. That figure, which has been unchanged for quite some time, would suggest that the cost of providing FE programmes is less than half the cost of HE programmes.

3   Programmes at EQF levels 5–7 with practical learning phases

3.1 Practical Learning Phases

Irish HEIs and FE colleges have been developing increasing involvement with their local communities in recent years. A survey in 2011 indicated that 75 % of respondents felt that their HEI has strong connections with the local community and that senior management were supportive (Campus Engage, 2011). At a historic ceremony in Dublin Castle on 16 June 2014, the presidents of 22 HEIs, including all the universities and IoTs, signed a charter committing them to continue to promote civic and community engagement in their institutions. This will involve community-based learning, volunteering, the opening of campuses to local communities and partnerships with relevant stakeholders to address local and regional development.

Some domains of higher education have a long history of involving practical learning phases including medicine, teacher training, business studies and engineering. In recent years, the Ministers of Education of Europe have been meeting in the Bologna Process and have encouraged an enhanced role for employers in working with HEIs in the development of curricula.

One of the features of many VET systems is that employers are actively engaged in the provision of the programme either as initiators of the programme or as providers of work experience which is a part of the programme. In Ireland, several HEIs utilise the second of the two approaches in that they put a particular emphasis on work placement as an integral part of degree programmes. This will be illustrated by examples with respect to two major disciplines, Business Management (3.4 below) and Engineering (3.5 below). However, before proceeding to those examples, below are some general approaches to liaison with industry which show the extent to which Irish HEIs interact with industry.

▶ University of Limerick (UL)

UL is a relatively young university, founded in 1971 as a National Institute of Higher Education. It was re-designated as a university in 1989. From the beginning, it has fostered what it terms Cooperative Education under which all students, regardless of the discipline, undertake relevant work experience normally eight months in duration. This policy involves the placement of about 2,000 students every year, most of them in Ireland, but about 30 % internationally. Their experience has been that most of the employers who take students on placement also employ UL graduates.

The placement scheme includes all teaching degrees; students enrolled in undergraduate teaching degrees complete two teaching practice assignments, while those enrolled in Graduate Diplomas complete one assignment. The academic assessment of students on teaching practice is regarded as a critical aspect and is at the core of the teaching practice process. UL has a network of over 1,600 employers and the university promotes the work placement programme to employers by indicating that it gives the employer the opportunity to vet potential graduates first-hand over an extended period in a real work environment.

▶ University College, Cork (UCC)

UCC is one of Ireland's oldest universities, having been founded as one of the Queen's Colleges in the mid-19th century. At UCC, a number of undergraduate and postgraduate courses have an integrated Work Placement Programme. These placements are organised by the Careers Service in most instances, but some, such as the Business Information Systems degree, are managed directly by the relevant academic department. The UCC website lists 19 programmes which include a placement, of which three are Master's degree courses, while the remainder are undergraduate courses.

UCC has committed itself in its Strategic Plan 2013–17 to continue "to work to provide a world-class student experience through … improving placement opportunities so that all UCC students have the opportunity to develop the generic and transferable skills needed for effective engagement in the workplace and society". When the university underwent an institutional review in 2012–13, the reviewers reported that "the Careers Office provides a high level of service to students that was greatly valued". The lengths of the placements vary somewhat in different disciplines, but generally they are 24 weeks (April to September) in the College of Science and Engineering and approximately the same in the College of Business and Law. The timing of the placement (April to September) minimises the disruption of the academic year, as most of the placement period falls in the students' summer vacation period.

▶ Dublin Institute of Technology (DIT)

DIT traces its origins back to 1878, when the employers helped to found a college to provide education and training for their employees. Thus, originally all the students were part-time students, generally released by their employers to attend classes. Now DIT is one of the largest HEIs in Ireland and has its own awarding powers to make awards up to the PhD. It has long fostered the idea of work placements, which its web-site defines as "a period of work-based learning related to an academic course as an integral part of an undergraduate programme".

The School of Hospitality Management and Tourism in DIT has a Work Placement as an integral part of all its undergraduate programmes. The school cites the benefits of this approach as "providing the opportunity for students to put theory into practice and to develop new skills which will better equip them for employment". Employers who offer a work placement "will benefit from the extra resource of new ideas and a fresh approach while investing in the workforce of the future". The placements are co-ordinated by a Placement Office which seeks to maximise learning opportunities and offer support to both student and employer. An additional benefit to the school is that academic staff members, who visit the students on placement and discuss their progress with employers, are thereby kept up to date with the latest developments in industry. Prior to the commencement of a placement, employers receive a set of Guidelines with information on mentoring, contact with the School, visits (by school staff to students), assessment and appraisal. The duration of the placements is either 6 months (on a 4-year Level 8 degree) or 3 months (on a 3-year Level 7 degree).

▶ Cork Institute of Technology (CIT)

CIT is a relatively young institution, though it has absorbed some older colleges. It has shown a particular interest in the involvement of employers in the educational process and has led two major projects on related themes:

- ▶ Education in Employment;
- ▶ Roadmap for Employment-Academic Partnerships.

The projects were funded by the Strategic Innovation Fund administered by the Higher Education Authority (HEA), and both projects were carried out by consortia of HEIs led by CIT and involving UCC, DIT and many others (15 HEIs in all). One of the outputs from the projects were publications including the following:

- ▶ Beyond Big Business for Student Work Placement: a Guide for Family Businesses and Community and Voluntary Groups, UCC, REAP and HEA.
- ▶ Beyond Big Business for Student Work Placement: a Guide for Placement Practitioners, UCC and REAP.
- ▶ Sheridan, I and Linehan, M (2011). Work Placements in Third-Level Programmes, CIT.

The Sheridan and Linehan report provides a very detailed analysis of work placements in Ireland, including the characteristics of good quality placements, the benefits of such arrangements and the concerns of academic staff and others that need to be addressed.

CIT currently places more than 800 students per annum in workplace situations. It also involves employers in final year projects for both undergraduate and postgraduate programmes.

In the current project, the author offered to work with the leaders of the research in BiBB to choose education programmes which have a practical learning phase for a detailed analysis and description. Those chosen by BiBB are an Apprentice programme and a Post-Leaving Certificate programme (both in FE), and Business Management and Engineering (both in HE).

3.2 An Apprenticeship programme: Mechanical Automation

Currently, there are 26 designated Apprenticeship programmes which operate under the supervision of SOLAS, the FE and the Apprenticeship Authority. To illustrate the teaching approach, the content and the roles of the different organisations (including employers) involved, one example has been chosen: Mechanical Automation and Mechanical Fitting (MAMF). This section is based on the MAMF document produced by SOLAS (2013).

▶ Programme title: MAMF

Admission requirements: The minimum age at which one can commence an apprenticeship is 16 years. The minimum educational requirements are 5 passes in the Junior Certificate (a national examination operated by the Department of Education & Skills after 3 years of secondary education) or equivalent.

Prospective apprentices must first obtain employment with a SOLAS approved employer.

Award: On successful completion of their apprenticeship, a NFQ level 6 (EQF level 5) Advanced Certificate is awarded by QQI.

Progression opportunities: Routes of progression are being established by QQI for all awards, including Level 6 Advanced Certificates, but are not yet published.

Programme design: All apprenticeship programmes are standards-based, written as learning outcomes and structured in a modular format.

Programme structure: The MAMF programme follows the usual apprentice format of phases with the employer interspersed with phases Off-the-Job. The particular arrangements for MAMF are as follows:

Table 9

Structure of the MAMF Apprenticeship Programme

Phase	Location	Duration
1	Employer	Minimum 12 weeks
2	Training centre	20 weeks
3	Employer	Minimum 26 weeks
4	Institute of Technology	10 weeks
5	Employer	Minimum 26 weeks
6	Institute of Technology	10 weeks
7	Employer	Minimum 12 weeks

While the total duration of all phases is a minimum of 116 weeks, in practice the apprenticeship takes approx. 4 years because of gaps between phases and apprentices' holiday periods.

Duties and responsibilities of employers: Employers must comply with the statutory obligations under the Industrial Training Act, 1967, the Labour Services Act 1987- 2009 and any Apprenticeship rules (which may apply from time to time). They are expected to train the apprentice in the required On-the Job aspects of the apprenticeship and to provide the apprentice with the opportunities to practise new skills. Consequently, they are required to employ a suitably qualified craftsperson to act as workplace assessor with responsibility for training, marking assessments, recording and processing assessment checklists and On-the-Job schedules as specified by SOLAS.

Employers are expected to ensure that all the On-the-Job assessments are fairly conducted and are recorded and submitted to SOLAS. They must release the apprentice(s) for the Off-the-Job phases.

Funding arrangements: During the On-the-Job phases the apprentice is paid the normal apprentice wage rate by the employer. While attending the Off-the-Job phases, the apprentice is paid an allowance by SOLAS.

▶ Content of MAMF Phases

Phase 1 (with employer):

The purpose of this phase is to provide apprentices with introductory training as they learn and practise basic skills in the workplace which are developed further throughout their apprenticeship.

Phase 1 is divided into four sections consisting of

- ▶ Induction training
- ▶ Introduction to Health and Safety
- ▶ Introduction to Tools & Equipment
- ▶ Introduction to Basic Skills

At the end of each section, the manager/verifier in the company must sign a statement with respect to each apprentice certifying that the assessments have been successfully completed. In addition, there are five common modules on Health & Safety Awareness, Introduction to Learning to Learn, Introduction to ICT, Employment Legislation Awareness and Environmental Awareness. The five common modules are made available to the apprentices through e-learning. Each module contains a built-in self-assessment and is designed so that the learner cannot progress through the modules unless the self-assessments – in the form of multiple-choice tests – are successfully completed.

Phase 2 (in Training Centre):

This phase consists of 8 modules starting with Introduction and General Workshop Skills and continuing with Turning, Milling, Thermal Processes, Plant & Machine Maintenance, Fluid Power Systems, Introduction to CNC and Introduction to Abrasive Wheels. It is intended that the 8 modules should be completed in the order they are listed.

Each module consists of a number of learning units which describe:

▶ The skills to be developed
▶ The key learning points for the integrated practical and knowledge elements
▶ Examples of exercises to be conducted at the end of the learning unit.

The information given for each module is very detailed and includes both the content of the module and the estimated number of hours to be allocated to each unit of each module. The learning outcomes of each module are detailed and include the standards which the apprentice should achieve. Thus, it is not surprising that the document describing MAMF runs to over 700 pages.

Phase 3 (with employer):

Phase 3 consists of 11 assessments, of which the apprentice must complete 5. The assessments are:

▶ Bracket Fabrication
▶ Stepped Pin, Bush or Sleeve
▶ Milling Machine Competence
▶ MMA Welding
▶ Oxy-Acetylene Welding
▶ Plant Investigation/Reporting
▶ Component Unit Replacement/Alignment
▶ Pipework Fabrication/Installation
▶ Replace/Checkout Power System Components
▶ Computerised Maintenance/Production System Components
▶ Lifting Project

For each of the 11 assessments, the activity, the conditions and the standards to be achieved by the apprentices are specified.

Phase 4 (in Institute of Technology):

This phase lasts for 10 weeks in an institute of technology and involves the completion of seven modules as follows: Bench Fitting, Milling, Thermal Processes, Plant, Machine Maintenance & Electrical, Automation & Control and CNC Programming, Operations & Communications.

Like in phase 2, each module consists of a number of learning units which describe:

- ▶ The skills to be developed
- ▶ The key learning points for the integrated practical and knowledge elements
- ▶ Examples of exercises to be conducted at the end of the learning unit.

The objectives of each module are analysed with respect to the activities the apprentice should be able to perform, the conditions under which he/she should be able to complete the activity and the standards to which the activity should be completed.

Phase 5 (with employer):

Each apprentice is required to pass 5 of the 9 assessments listed below:

- ▶ Bench Fitting: integrating multi-part workpieces to predetermined accuracy, fit and finish
- ▶ Turning – Thread Cutting: turn mild steel components incorporating machine cut threads
- ▶ Taper Turning: turn tapers on mild steel components
- ▶ Milling Slots: mild steel components having slots, tee/slots and dovetails
- ▶ Thermal Processes: cut, prepare steel components and weld mild using MIG/MAG process
- ▶ Service and Maintenance of Machine Tools
- ▶ CNC: Design operational sequencing programmes for CNC machining centre
- ▶ Power Systems/Fault Finding: diagnose and repair faults
- ▶ Service and Overhaul: Service and overhaul plants and machinery.

▶ Phase 6 (in institute of technology):

This phase lasts for 10 weeks and consists of five modules: Manufacturing Processes, Integrated Automation & Control, CAM, CAD & Computing, Plant and Machine Diagnostics, and Thermal Processes.

Again, each module consists of a number of learning units which describe:

- ▶ The skills to be developed
- ▶ The key learning points for the integrated practical and knowledge elements
- ▶ Examples of exercises to be conducted at the end of the learning unit.

There are detailed lists of the contents of each module and the activities that apprentices should be able to accomplish at the end of the module, the conditions under which they should be able to do them and the standards to be achieved.

Phase 7 (with employer):

Each apprentice is required to pass 5 of the 10 assessments listed below:

- ▶ Surface Grinding: surface grind workpieces to predetermined accuracy and finish
- ▶ Eccentric Turning: turn eccentric components
- ▶ Milling/Simple Indexing: divide head setup and component machining
- ▶ TIG Welding: weld stainless steel/aluminium components
- ▶ Plant Servicing and Maintenance: service and repair faults in plant/machinery
- ▶ Cylindrical Grinding: precision grinding of shafts/bushes/bores
- ▶ System Servicing: service flexible manufacturing systems
- ▶ Component Design: design/draw components/mechanical units
- ▶ Design and Fabrication: fabricate basic machine/product handling system
- ▶ Service Fluid Power System: servicing, maintenance of a fluid power system and recording of work done in a maintenance log.

3.3 A Post-Leaving Certificate programme: Data Networking

For more than 10 years now, FE colleges have provided Post-Leaving Certificate (PLC) programmes. These programmes are meant to prepare students for careers in industry or services. While most such programmes are one-year programmes that lead to awards at EQF level 4, there are some two-year programmes that lead to level 5 EQF awards. To illustrate this, and to explore the links with industry, one example has been chosen: Data Networking (CISCO) at Killester College of Further Education, Dublin. The college operates under the aegis of the City of Dublin Education and Training Board.

Programme details:

Programme title: Data Networking (CISCO)

Duration: The total programme extends over two years full-time, but one can leave with a certificate after one year

Entry requirements: There are no formal admission requirements, but generally the college looks for a Leaving Certificate (either the traditional Leaving Certificate, or the LCVP or LCAP – see page 6 for details). A certain knowledge of Mathematics is required, either as evidenced by the Leaving Certificate or by an aptitude test on application. It is not necessary to be employed when applying for admission. The programme has tended to attract slightly more mature candidates (aged 20 to 30) rather than 18-year-olds.

A maximum of 24 students are recruited into year 1 annually. A feature of the recruitment has been the high proportion of non-Irish nationals who apply (generally these are resident in Ireland at the time of application).

Costs/fees: Students pay a fee of 500 Euro for year 1 and 450 Euro for year 2, unless they are exempt from fees because of socio-economic disadvantage. This is substantially less than equivalent fees in HEIs.

Awards: Students who successfully complete year 1 will be awarded a level 5 NFQ QQI certificate. Students who successfully complete year 2 will be awarded a QQI level 6 NFQ Advanced Certificate In Computer Network Technology. In addition to the QQI awards, students are prepared for the CISCO examinations, which may be taken elsewhere in Dublin (they are online examinations).

Programme content, year 1

10 modules are offered, including a placement in industry. Students must pass at least 8 of the modules, including the placement, to qualify for the certificate

Programme content, year 2

10 modules are offered, including a placement in industry. Students must pass at least 8 of the modules, including the placement, to qualify for the certificate.

Industry placement

Students must find their own placement in the computer industry, but if they are unable to do so, then the college may assist. The duration of the placement is one day per week plus one week full-time in industry. The work to be undertaken in industry is assigned by the employer. Generally, students are not paid for the work they do in industry during the placement. However, students may opt to remain in the placement during the summer months between the first and the second year, and the college encourages such work. In that event, they may be paid.

It was the policy of the college that students were visited by a staff member during the placement, but this is no longer the case because of cutbacks in the college budget. Students are contacted by their college tutor by phone.

Assessment of placement

Students are assessed on their performance during the placement. Each student is required to write a log book which describes their industry experiences on a week-by-week basis. The log book should commence with a description of how they got the job.

At the end of the placement, the employer writes an assessment of the student and sends it directly to the college. The employer's assessment and the student's log book are assessed by a college staff member and a mark is assigned.

15 credits are assigned for the placement (the credit system being used is based on 120 credits per annum).

Progression

Students have a choice at the end of year 1 to continue their studies or to go into industry; most students opt to continue. At the end of year 2, students may opt to transfer to a degree programme in an Institute of Technology. The college has arranged advanced entry into year 2 of computer-related degree programmes in Institute of Technology, Blanchardstown and in the DIT, provided the student achieves good grades. In the past 6 years, 57 % of the students who completed year 2 progressed to degree programmes, 30 % went into employment, while the remaining 12 % were unaccounted for (perhaps they emigrated).

3.4 Business Management programmes operating close to industry

Progression of Higher Certificate holders to degree programmes

Students leaving secondary school and aspiring to gain a degree in Business Management will often choose to enrol in a Higher Certificate programme in the DIT with a view to progressing to a degree programme. This is evident from the statistics on CAO points for enrolling in DIT higher certificate programmes, which are often well in excess of 300 points. That same points score would gain a place in a Business degree in most Institutes of Technology, but students are attracted by the reputation of the DIT Business College. In 2014, DIT sought 80 students for the higher certificate in Business Management, but ended up enrolling 170 students.

The success rate of students making the transfer to a degree programme is very high.

Work placement in programmes

Six of the DIT college's Honours Bachelor degree programmes involve a placement in industry as part of the programme. These are:

- ▶ Bachelor of Business & Management
- ▶ Bachelor of Retail and Services Management
- ▶ Bachelor of Human Resource Management
- ▶ Bachelor of Business Computing
- ▶ Bachelor of Logistics and Supply Change Management
- ▶ Bachelor of Marketing

A total of 330 places in industry are involved each year and all are paid placements (the college will not place a student in an unpaid placement).

Details of placements

Each of the six programmes listed above is a 4-year programme leading to an Honours Bachelor degree. In all but one of the programmes, the placement takes place in the second semester of the third year. Thus, students have completed two and a half years of academic study before they go on placement and the College of Business maintains that this ensures they are of value to employers.

By having the placement in the second semester and continuing the placement through the summer, the College is able to achieve a 6-month placement. This applies to four of the programmes listed and in each case, 30 ECTS credits are earned by the successful completion of the placement. The two programmes that differ from this approach are the Marketing degree (15 weeks in first semester of year 3) and the Business & Management degree (5 months in second semester of year 3 plus the summer).

It is the policy of the College that all students are assigned an academic mentor for the placement and this mentor will visit the student at least once during the placement. During the visit, the mentor will discuss progress with the student and with the industry supervisor.

Each student is required to maintain a log or journal of his/her progress and to have this log book signed by the supervisor each week. When the academic mentor visits, the log book will be discussed by the student and the mentor.

Role of companies

The College has a database of companies willing to take students on placement. This database is maintained by a Placement Office in the College, and from time to time new companies are added and some leave the database.

When a company decides to take a student, it determines the role the student will play. It discusses this role with the Placement Office and it is the policy of the Placement Office to get the company to produce a written Job Specification to bring certainty to the process. The company designates one of its staff to be the Placement Supervisor, and this person is responsible for the smooth operation of the placement, including (a) ensuring that the student is following the agreed job specification; (b) signing off the student's weekly log of what they have been doing; (c) meeting the student mentor when he/she visits and (d) completing the student assessment form at the end of the placement.

Assessment of placements

The student is assessed on the basis of two documents, the Log Book showing the activities and analysis of issues on a weekly basis and a Placement Assessment Form completed by the supervisor and discussed with the mentor.

Programmes without industry placement

There are other programmes that do not include a placement in industry, including Accounting & Finance, Business & Law, Economics & Finance and International Business & Languages (with either French, German, Spanish, Italian or Chinese). A feature of the International Business & Language programmes is that the student must spend year 3 in a university in a country in which the language is spoken, so this does not leave room for an industry placement.

There are no work placements in Master's degrees in the College of Business, as the duration of the programmes (one calendar year) does not allow space for such placements.

Relationship with Accountancy Bodies

This relationship is seen as vital by the college management. The Accountancy bodies set the standards for the study of that subject and accordingly, it is vital that the programmes are aligned with those standards. Since many students aspire to become accountants, their interests are best served by ensuring the students receive appropriate exemptions when they undertake professional accountancy examinations. Such exemptions result in a shortening of the time the graduates must serve before achieving membership of the accountancy body for which they are studying.

Programmes of DIT College of Business in whose design industry is involved

There are several programmes at the post-graduate level in whose initiation and content development industry has played a key role. These include:

1. **International Selling Programme:** Designed in conjunction with Enterprise Ireland, a state agency to promote Irish enterprises. The programme is offered leading to a Postgraduate Diploma or Master's degree (both are at Level 9 in NFQ, Level 7 in EQF).
2. **Ericssons/ITC Ireland Programme:** Leading to a Master's degree in Applied Software Technology, it recruits 40 to 50 students per annum and, on successful completion, each graduate is guaranteed a two-year job contract at Ericssons. In addition to the job guarantee, Ericssons pays all the costs of providing the programme.
3. **Management and Aeronautical Services:** Leading to a BSc degree in conjunction with the Irish Air Corps.
4. **BBS Retail Management:** In conjunction with Musgrave, Supervalu and Centra (supermarket groups).
5. **5. International Business Development programme:** Leads to a Postgraduate Diploma or a Master's degree. This programme is run in conjunction with IBEC and taught during the summer months for 110 students who are involved in export activities. Each student gets a salary with an Irish company and is based in Europe, the US, Japan or another key export market. Another version of the programme is being developed in conjunction with Tourism Ireland for 30 participants.
6. **Master's Degree and Post-graduate Diploma in Technology and Innovation Management:** With ICT Ireland for part-time students. Supported by Intel and Hewlett-Packard. Approx. 20 students per annum.
7. **Master's degree and Post-graduate Diploma in Software Product Management:** In conjunction with the Irish Software Association. The programme recruits 25 students per annum
8. **IAPI/DIT Advertising and Digital Communications programme:** Run in conjunction with the Institute of Advertising Practitioners in Ireland. The IAPI co-delivers this part-time post-graduate programme, which leads to the award of a Postgraduate Diploma (level 9 on NFQ). Most of the lecturers are working in the Advertising industry. The programme involves attendance at classes each Tuesday evening, Thursday evening and Saturdays (all day) for a calendar year.
9. **Postgraduate Diploma in Financial Services:** Offered in conjunction with Summit Finuas Network (a national network of partner associations and companies operating in international financial services in Ireland).
10. Programmes with the Marketing Institute of Ireland:

Three programmes are offered:

▶ Executive Master's degree in Marketing, which leads to the award of an MSc in Marketing.
▶ Conversion course in Marketing for non-Business graduates, leading to a Postgraduate Diploma.
▶ Digital Marketing and Analytics, which leads to an MSc degree. Attendance is required two evenings per week and Saturdays over a 16-month period. The programme is delivered by leading marketing academics and digital marketing practitioners and requires each student to complete a company-based project in the final semester.

The Marketing Institute pays the lecturers on these three programmes, but the award given on successful completion of the programme is a DIT award.

In addition to the list above of programmes that lead to a major award, there are fourteen other collaborations that lead to minor awards such as a Continuing Professional Development certificate. The examples of collaboration with enterprises by a single institution are given to illustrate the closeness of at least some Irish HEIs to industry and the labour market with respect to Business Management programmes.

3.5 Engineering education operating close to industry

Degree programmes in Engineering include 3-year programmes in Engineering Technology leading to an Ordinary Bachelor degree (NFQ level 7) and 4-year programmes in Engineering leading to an Honours Bachelor degree (NFQ level 8). While traditionally the 4-year degree was the academic qualification required to attain Chartered Engineering (CE) status, this has changed recently, so that a Master's degree is now required by those seeking CE status. Master's degrees generally require a further calendar year of studies, in which 90 ECTS are earned.

There are pathways from Apprentice programmes for Electricians to Engineering Technology degrees, from there to Engineering Honours degrees and thence to Chartered Engineering status. These pathways are offered in CIT and DIT.

Two pathways from Apprenticeships to degree programmes have been available in recent years:

(a) Those who have completed the Apprenticeship programme and who have the school Leaving Certificate could take a bridging course during the summer and then gain direct entry to year 2 of the Ordinary Bachelor degree. The bridging course included modules on Mathematics, Electric Circuits, Autocad and ECDL (European Computer Driving Licence). There were 30 students per annum using this route, but this has declined in recent years to about 6 per annum.

(b) The Electricity Supply Board (a state-owned company, the main supplier of electricity in Ireland) sponsored students who had completed the first two years of the Apprenticeship programme for Electricians to transfer to year 2 of the Ordinary Bachelor degree. After completing the Ordinary Bachelor degree, students could then proceed to the Honours Bachelor degree and Master's degree if they wished. Approx. 30 students per annum used this route. This usually involved a 2-year programme including bridging studies in Maths and Physics plus a Master's degree.

Both the above schemes are in danger of falling into disuse as the number of people starting Apprenticeships has decreased sharply in recent years, to about 20 % of the peak levels.

Placement/Internship in Engineering Education Programmes

While programme designers are strongly influenced by the requirements of Engineers Ireland, the latter body makes no requirements for student placement in the bachelor or master's degrees it accredits. It does, however, require graduates to develop specific competences which are related to practice in industry before it grants CE status. These competences can be acquired during work in industry following graduation.

Some engineering programmes include a mandatory period in industry as part of the Honours bachelor degree programme and the case study chosen to illustrate this is the College of Engineering and Architecture at University College, Dublin.

▶ University College, Dublin (UCD)

UCD is Ireland's largest university and has a long history in the provision of Engineering programmes. Traditionally, honours degrees in engineering were 4-year programmes and that degree was required for admission to Chartered Engineer status. However, in the light of an amended requirement of a Master's degree for admission to Chartered Engineer status, UCD has amended its provision of Engineering programmes to a Bachelor (3-years) plus Master's (2-year) format. While this format of 3 + 2 is very common in continental Europe, it is very uncommon in Ireland.

As part of the new structure of degrees, UCD has introduced a mandatory internship in the second semester of the first year of the Master's degree. The duration of this internship is approx. 8 months from January to September, thus encompassing the second semester plus the summer vacation. These placements are organised by the relevant school within the college, but it is possible for a student to find his/her placement, which must be approved by the school. The student can earn 30 ECTS credits for the placement.

To support internships, UCD has established a support office headed by a Head of Internships; this service is part of the Registrar's Office. There is also a Steering Committee chaired by the Deputy Registrar and a Forum of all internship managers. In addition, each college or school can allocate duties to either academic staff members or administrators to support student internships. It is estimated that approx. 800 students go on internships each year. In the case of Engineering, there is an Internship Manager for the college, which has five schools of engineering.

Generally, students are paid for the placement, but that is not mandatory. The placement earns credits for the student and usually involves an assignment and a report by the student, but can also involve the maintenance of a diary. The assessment of the student's performance is carried out by faculty members based on the assignments and report. It would cause problems for the school if the assessment were carried out by industry personnel, as the rules of the university state that those undertaking assessments of student work must be trained to do so.

UCD has drawn up a standard Internship Agreement, which can be used by any school. It sets out the rules governing internships and includes

- ▶ Responsibilities of the host (employer)
- ▶ Intellectual property rights
- ▶ Student discipline
- ▶ Employer's liability insurance (must be provided by the employer).

The agreement must be signed by the employer, the student and UCD. In addition, there is a Student Internship Acceptance Form, which the student must sign and which sets out in greater detail the duties and responsibilities of the student. There has been a rapid increase in the number of internships undertaken by UCD students in recent years, and so the university has produced a

policy document entitled Internship/Work Practice Experience: Guidelines and Good Practice, which has been approved by the Academic Council of UCD. While initially approved in 2007, the document was updated in May 2014.

Most internships take place in Ireland, but it is permissible to have an overseas internship, provided the relevant School approves it. The experience of the university is that employers prefer students in their penultimate years (final year students are too pre-occupied with their final exams). Increasingly, employers see the internship as part of a recruitment policy; if the student does well, quite often a job offer follows when the student completes the final year.

Role of companies in the curriculum development process for Engineering

There are no examples of industry as the initiator of a programme, but most universities have an Industry Liaison Committee which influences programme development at the bachelor and master's degree level. Industry directly influences the professional development of Engineering graduates who are seeking CE status, as candidates must acquire competences specified by Engineers Ireland.

These competences are

4. Design Skills: Deepened technical understanding of Design and Experimentation;
5. Project Management: Involvement in multidisciplinary projects;
6. Commercial Awareness: Exploration of the various steps between idea and reaching the marketplace; Business Planning and Technology Transfer.

All these competences can be developed in the world of work rather than academia. It is estimated that a period of approx. 4 years working in industry is required to develop the competences.

International Recognition of Engineering Qualifications

The Bologna Process has been making progress in advancing the international recognition of academic awards, including Engineering qualifications, since 1999. However, progress has been slow and the international recognition of professional engineering qualifications has long been divided between the Washington Accord countries (including the US, Canada, the UK, Ireland, Japan, India and Korea) and the FEANI countries (32 European countries). In recent years, there has been a project to produce a certification for engineering that would encompass all countries in Europe and some outside Europe. This project has resulted in the formation of the European Network for Accreditation of Engineering Education (ENAEE).

ENAEE quality assurance agencies and accreditation agencies are expected to award the EUR-ACE certificate to an engineering degree programme which has reached certain educational standards. To date, thirteen agencies are participating in the EUR-ACE scheme: ASIIN (Germany), CTI (France), the Engineering Council (UK), Engineers Ireland, AEER (Russia), OAQ (Switzerland), KAUT (Poland), ANECA (Spain), FINEEC (Finland), QUACING (Italy), ARACIS (Romania), MUDEK (Turkey) and Ordem dos Engenheiros (Portugal). While these are important agencies with a wide geographical spread, they by no means reach all engineering graduates in Europe. Some countries have refused to participate because the status of the network is that of a private company, albeit a not-for-profit company.

4   Developments and main reforms in the last few years and current political debates

4.1 National Strategy for Higher Education, 2030

The government established a Higher Education Strategy Group chaired by Dr. Colin Hunt, an industrialist, and gave it responsibility for the development of a strategy for higher education. It reported in 2011, at a time of severe constraints on government finances. Its main recommendations included:

- ▶ Higher education students should have an excellent teaching and learning experience with state-of-the-art resources;
- ▶ HEIs should put in place systems to capture feedback from students;
- ▶ There should be clear routes of progression and transfer, as well as non-traditional entry routes;
- ▶ All HEIs must ensure that all teaching staff are both qualified and competent in teaching and learning;
- ▶ Investment in R & D should be increased;
- ▶ Engagement with the wider community must become more firmly embedded in the mission of HEIs;
- ▶ There should be system-wide collaboration between HEIs and smaller HEIs should merge;
- ▶ Technological universities may be established;
- ▶ The funding base should be broadened through reform of student financing, including a direct student contribution based on an upfront fee with a deferred payment facility (Strategy Group, 2011).

4.2 Technological universities

Arising from the recommendations of the Hunt Report, the government initiated a process whereby Institutes of Technology could merge and seek re-designation as a Technological University for the merged entity. A detailed process was designed to assess any applications received, including criteria for such universities. At the time of writing (October 2014), two groups have successfully passed phase 1 of the process. These are a merged group in Dublin of DIT with the IoTs in Blanchardstown and Tallaght, and a merged group in the south west involving CIT and Tralee IoT.

4.3 Mergers of support organisations and education institutions

A merger of agencies supporting higher and further education has taken place. Four agencies (Irish Universities Quality Board, Higher Education and Training Awards Council, Further Education and Training Awards Council and the National Qualifications Authority of Ireland) have merged to form Quality and Qualifications Ireland.

There are proposed mergers of institutes of technology, including the two mentioned above. Other groupings of IoTs are also in discussions about possible mergers and applications to be designated as Technological Universities.

Teacher training colleges are being asked to merge with each other and with universities under a plan devised by an International Review Panel which reported in July 2012.So the scene that will likely emerge in the next three years is a higher education sector with a greatly reduced number of institutions

4.4 SOLAS

A new agency named SOLAS has replaced FAS as the agency with responsibility for apprentice-ships and the co-ordination of FE. In 2014, SOLAS published its strategic plan (SOLAS, 2014). It has defined its overall aim as being to develop a world-class integrated system of FET which will promote economic development and meet the needs of all citizens. Five high level strategic goals were set out:

▶ Skills for the economy (needs of learners, jobseekers, employers and employees);
▶ Active inclusion of people of all abilities, with special reference to literacy and numeracy;
▶ Quality provision (high quality education & training programmes);
▶ Integrated planning and funding on the basis of objective analysis and needs;
▶ Standing of FET (a valued learning path to employment, career, personal and social options).

The Department of Education & Skills (DES) accepted the strategic plan proposed by SOLAS, and more recently, DES published an Apprenticeship Implementation Plan (Department of Education and Skills, 2014). This plan was summarised into 10 Key Implementation Actions, start-ing with the appointment of a National Apprenticeship Council in Quarter 3 of 2014. The new Council was announced on 18 November 2014. It is chaired by the Chief Executive of the Elec-tricity Supply Board and includes 14 other members, of whom seven are employer representa-tives, two are trade union representatives, five are representatives of education bodies and one is a senior staff member of SOLAS. Subsequent steps include a review of existing apprenticeships and a call for proposals for new apprenticeships later this year. These activities (the SOLAS stra-tegic plan and the DES Apprenticeship Implementation Plan) arise out of the Review of Appren-ticeships which was described in Section 1.4 of this report (see page 15).

4.5 Financing of FE and HE

The financing of HE and FE is a topic of current debate. In 1997, the government introduced vir-tually free HE at the undergraduate level, but since then, the increased number of students com-bined with an economic crisis have made the policy unaffordable. The Hunt Report (2011) rec-ommended a broadening of the financial base for HE through student financing, including a new form of direct student contribution. In July 2014, the Minister for Education & Skills appointed an Expert Group chaired by former trade union leader Peter Cassells on Future Funding of Higher Education. This group is expected to report by the end of 2015.

5   Conclusions

Ireland is seeking to introduce a number of reforms, including the introduction of technological universities, a reduction in the number of support agencies and a wider spectrum of apprentice-ships. The higher and further education systems are being increasingly aligned with the needs of the economy, as evidenced by the changes being introduced and the letter sent by the Minister for Education and Skills to the chairman of the HEA on 30 May 2013, setting out the key objec-tives of the higher education system for the period 2014–16:

▶ To meet Ireland's human capital needs across the spectrum of skills by engaged institutions through a diverse mix of provision across the system and through specifically targeted initia-tives.
▶ To promote access for disadvantaged groups and to put in place coherent pathways from sec-ond level education, from further education and from other non-traditional entry routes.

In a report to the Minister for Education & Skills by the HEA, which sets out how the key ele-ments of the National Strategy can become a reality, it is recommended that "[t]he Department of Education and Skills should without delay begin the process of putting in place the arrange-ments for integrated strategic planning between the Further Education and Higher Education sectors" (April 2013).

Part 2: National Framework of Qualifications

1   Introduction: Awards

The Irish National Framework of Qualifications was launched in October 2003. It had been preceded by the establishment in 2001 of a special agency, the National Qualifications Authority of Ireland (NQAI), which was given the responsibility for the establishment and maintenance of an NFQ. In the period 2001 to 2003, the NQAI had engaged in widespread consultations with all relevant bodies that might be affected by the new NFQ.

The types and expected learning outcomes of national awards made by further and higher education institutions at the undergraduate and postgraduate level are described in the National Framework for Qualifications (NFQ) (www.nfq.ie). The Framework has ten levels, which include awards made by schools, further and higher education, and training institutions. Awards in the NFQ are nationally and internationally recognised and are underpinned by legislative quality assurance arrangements. There are overarching level indicators at each of the 10 levels of the Framework, with associated sub-strands of knowledge, skills and competences appropriate to the achievement of an award at each of these levels. The NFQ is aligned with the Bologna Framework (Qualifications Framework for Lifelong Learning (EQF).

▶ Education and Training Awards

There are two overall classes of awards in the NFQ: Major and Non-Major. Major awards are the principal class of awards made at each level. They have a larger volume and breadth associated with them than non-major awards. There are sixteen Major award-types included across the ten levels of the Framework, including eight higher education and training award-types at levels 6 – 10. There are three classes of non-major awards: minor, special purpose and supplemental. Non-major award types facilitate the provision of a wide range and variety of programmes. The volume associated with higher education and training awards is expressed in terms of the allocation of European Credit Transfer and Accumulation System (ECTS) compatible credit. The equivalent system for VET (ECVET), which has been much discussed at the European level, has not yet been implemented.

Access to initial higher education and training is largely on a competitive basis following successful completion of the School Leaving Certificate examinations. Access may also be gained through a range of alternative progression mechanisms, including those for mature entrants (23+), for holders of further education and training awards or through the recognition of prior learning.

1.1   Which education sectors/qualifications are covered?

All education and training awards are covered by the NFQ. It was an important decision of NQAI that there should be no distinction between education awards and training awards. Hence, the awards in the framework cover all awards made in Ireland.

1.2   Are there other separate qualification frameworks, e. g. for higher education ?

No, there are no separate qualification frameworks for sectors. All FET awards are within the range of levels 1 – 6, while all HE awards are within the range of levels 6–10. The framework facilitates the progression of learners from lower levels to higher levels. The one level where there is overlap is level 6, the highest level for FE awards and the lowest level for HE awards.
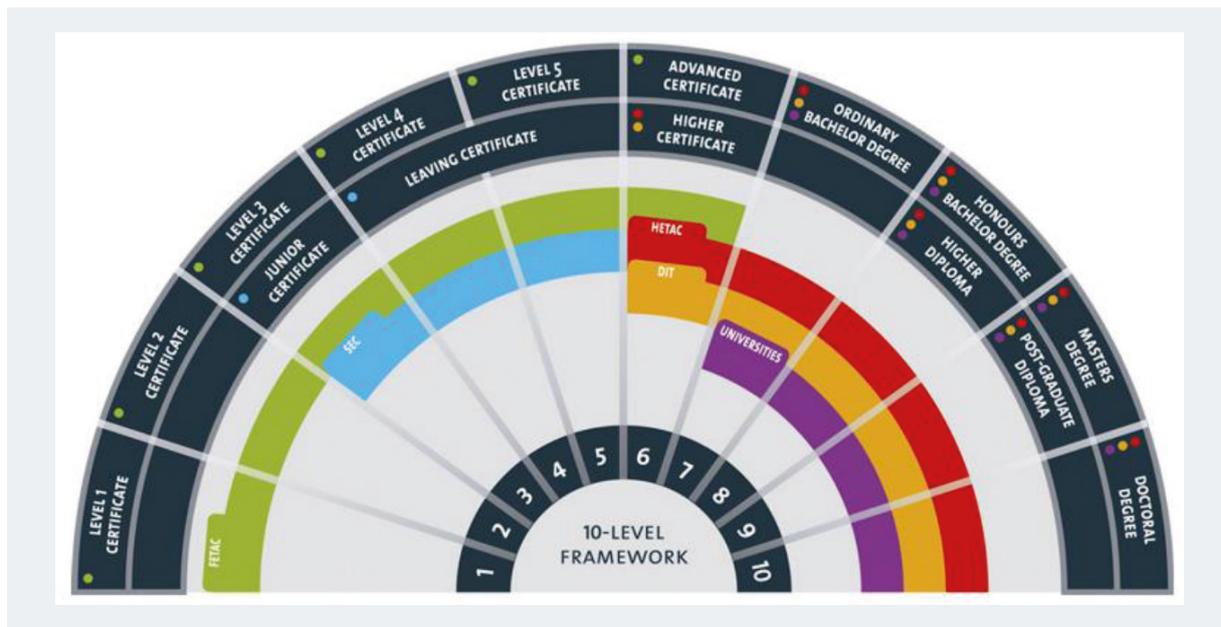
2   European Referencing

In 2006, the Irish NFQ was deemed compatible with the EHEA (Bologna) framework following its review by a panel of experts. It was the first framework in the EHEA (Bologna Process) to be deemed compatible. In 2009, the Irish NFQ was deemed compatible with the EQF following a review by a panel of experts. Again, it was the first in Europe to be deemed compatible.

Since the NFQ was devised, many counties in the Bologna Process have devised their own frameworks and the EQF was adopted. There will be a major review of the NFQ in 2016.

3   Structure of the NFQ

a. **Number of levels:** 10 levels. When the NFQ was established, there were virtually no models on which it could be based. Since then, the EQF and many countries have opted for 8 levels, and the number of levels is likely to be an issue for the NFQ when it is reviewed in 2016.
b. **Types of descriptors:** They are based on learning outcomes, using 8 sub-strands of knowledge, skills and competences.
c. **Features of levels:** Levels 1 – 5 include all school examinations and some further (vocational) awards. Levels 6 – 10 include all higher education awards and the upper level of further (vocational) education awards.

4   Legal form and legal impact

The framework enjoys a legal status based on the Qualifications (Education and Training Act), 1999. There is no direct legal impact for the individual learner. Rather, the 1999 Act operates at the system level and creates obligations for the institutions which provide programmes leading to awards.

5   Main political objectives

(a) Facilitate inclusive Lifelong Learning.
(b) Improve quality and relevance of education to the labour market and society.

One step being taken by QQI in this respect is the updating of its policy on the alignment of professional qualifications with academic qualifications. This should lead to an increase in the number of professional qualifications (e. g. Accountancy and Legal qualifications) in the framework.

6   Link to other national strategies

The framework is linked to the national skills strategy. It is also linked to the national strategy for higher education and the national strategy for further education and training (VET).

7   Inclusion of informal or non-formal learning

Both formal and non-formal learning outcomes can be recognised in the NFQ. All HEIs were required by NQAI to produce a policy on the recognition of non-formal learning. These policies are subject to revision by QQI based on the 2012 Act under which NQAI was subsumed into QQI. However, there are no immediate plans to require HEIs to modify their Recognition of Prior Learning (RPL) policies.

8   Connection to the labour market

When the NFQ was being developed in the period 2001 -2003, NQAI consulted with representatives of the labour market. Following the launch of the NFQ in October 2003, workshops were held around the country to familiarise the labour market with the new NFQ.

In June 2013, QQI sought submissions from social partners on the appropriateness of its draft strategy statement. A response from IBEC indicated that 70 % of its members had indicated that accreditation of an award was significant when assessing the value of an award. This suggests a high level of connection between the NFQ and the labour market.

9   Role of social partners

Representatives of the social partners (employers, teachers' unions, students' unions, professional associations) were consulted and served on the consultative committee alongside representatives of educational institutions. The NQF has sought to encompass all awards, both education and training awards, and to include awards of public HEIs and private HEIs on an equal basis. Historic awards, i. e. awards made before the NFQ was published, have been included in the framework.

10   Quality assurance mechanisms

QQI and Irish HEIs have implemented the European Standards and Guidelines for Quality Assurance. The guidelines for external Quality Assurance were pursued by all awarding bodies and are now being pursued by QQI.

11   Public communication

It has become common for academics to refer to a "Level 8 degree" or a "level 9 programme". But it is not usual to include the NFQ level on the parchment issued by universities and other higher education awarding bodies. Recently, QQI has taken a decision that it will include both the NFQ level and the EQF level on all parchments it issues from January 2015 on. This will apply to both Further Education and Higher Education awards made by QQI.

Information about the level of the programme is also included in the Diploma Supplement and Certificate Supplement to which every graduate is entitled. Practice in regard to the Diploma Supplement varies in Ireland, with some HEIs issuing a hard copy to every graduate to-

gether with the degree parchment, some issuing electronic copies which the graduate can print and some HEIs issuing the document only when requested.

12 Current political debates

NQAI was merged with three other agencies (Irish Universities Quality Board, Higher Education and Training Council and Further Education and Training Council) to form Quality and Qualifications Ireland (QQI), which was launched in November 2012. QQI now has responsibility for the maintenance of the NFQ.

Currently, activation policies for export markets, e. g. international students recruited for Irish HEIs and Irish partnerships with foreign HEIs, are a hot topic. This follows recent controversy surrounding foreign students registered in language schools who are allegedly enrolled to be able to live and work in Ireland, not to study.

The labour market relevance of education and training for apprentices and further education programmes is being assessed by SOLAS, the new authority for FET.

Sources/References

Apprenticeship Council (2015) Report on New Apprenticeship Programme Proposals, Department of Education and Skills, Dublin, June 2015

Bologna Process – Ireland, at http://www.eurireland.ie/programmes/bologna-process.128.html

Campus Engage (2011) Survey of civic engagement activities in higher education in Ireland, at www.tcd.ie/community/assets/pdf/National%20Civic%20Engagement%20Survey.pdf

CIT, Beyond Big Business for Student Work Placement, a Guide for Family Businesses and Community and Voluntary Groups, Cork, 2011

CIT, Beyond Big Business for Student Work Placement, a Guide for Placement Practitioners, Cork, 2011

Dempsey, R, O'Neill, R, and Tickner, N, Where do FETAC (QQI) award holders go?, QQI and Department of Education & Skills, Dublin, 2013

Department of Education and Skills, Review of Apprenticeship Training in Ireland, Dublin, 2013.

Department of Education and Skills, Apprenticeship Implementation Plan, Dublin. Accessed at www.education.ie/en/Publications/Education-Reports/Apprenticeship-Implementation-Plan.pdf on 21 October, 2014

DES, The education system, accessed at www.education.ie/en/The-Education-System/Higher-Education/ 6 November 2014

European Credit Transfer System (ECTS), at http://ec.europa.eu/education/lifelong-learning-policy/ects_en.htm

European Network of Information Centres/National Academic Recognition Information Centres (ENIC-NARIC), at www.enic-naric.net

European Qualifications Framework (EQF) Portal, at http://ec.europa.eu/eqf/home_en.htm

Eurydice – Eurypedia: The European Encyclopedia on National Education Systems, at http://eacea.ec.europa.eu/education/eurydice/eurypedia_en.php

ESRI (authors S McGuinness, A Bergin, E Kelly, S McCoy, E Smyth, E Whelan and J Banks), Further Education and Training in Ireland: Past, Present and Future, Research Series No. 35, Economic & Social Research Institute, Dublin, 2014

Expert Group on Future Skills Needs, Monitoring Irelands Skills Supply, SOLAS, Dublin accessed at www.skillsireland.iemedia/15082014 on 7 November 2014

FAS, Annual Report 2013, Dublin, 2014

Higher Education Authority, Higher Education System Performance, Dublin, 2014

McMahon, F, Further Education in Ireland in Elsner, P, Boggs, G and Irwin, J, Community Colleges, Technical Colleges and Further Education Programs, Washington DC, 2008

National Framework of Qualifications (NFQ), at www.nfq.ie.

OECD, Education at a Glance 2014, Paris, 2014

Portlaoise College of Further Education, accessed at www.portlaoisecollege.ie on 14 November 2014

Qualifax, The National Learners database, accessed at www.qualifax.ie on 15 November 2014

QQI Awards in the NFQ, at www.qqi.ie

Sheridan, I and Linehan, M, Work Placements in Third-Level Programmes, Cork, 2011

SOLAS, Mechanical Automation and Maintenance Fitting Curriculum, Dublin, 2013

SOLAS, Further Education and Training Strategy 2014 -19, Dublin, 2014

SOLAS 2 Statistics of Apprentice Enrolments, Dublin, 2014

SOLAS 3, Meeting with Ray Kelly, Manager for Dublin Region, October 2014

Strategy Group, National Strategy for Higher Education to 2030, Department of Education and Skills, Dublin, 2011

Sweeney, John, A Strategic Review of Further Education and Training and the Unemployed, Department of Education and Skills, Dublin, 2013

Waterford College of Further Education, accessed at www.wcfe.ie on 16 November, 2014

Svein Kyvik, NIFU Nordic Institute for Studies in Innovation, Research and Education

Tertiary vocational education and training in Norway

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Part 1: Tertiary education in Norway

1.1 The Norwegian education system

▶ Primary and secondary education and the pathway to tertiary education

Primary and lower secondary education encompass education for children aged 6 to 15 and grades 1 to 10. All children and young people have a right and obligation to complete primary and lower secondary education, and are entitled to upper secondary education. *Upper secondary education* normally provides three years of general education, which leads to the *Higher Education Entrance Qualification*, or four years of vocational education and training after the 10-year compulsory education. The norm for apprenticeship training is two years of vocational schooling in upper secondary education, followed by two years of practical training in industry or a public institution, before completing the craft or journeyman's examination at the end of the four years.

Of the pupils who embark on upper secondary education, a slightly higher percentage choose a vocational programme. However, almost 30 percent of the VET pupils switch from their vocational programme to a third year of supplementary studies qualifying for entrance into higher education. This year comprises the six core subjects Norwegian, English, Mathematics, Natural Sciences, Social Sciences and History.

For those following the vocational route, there are three other opportunities for transition to higher education:[109]

1. After completion of a craft or journeyman's certificate:
   (a) One-year course in the six core subjects; or
   (b) Direct admission to certain specially-designed programmes, notably in engineering.
2. Applicants aged 23 or above with at least five years' work experience and/or education, and who have successfully passed a course in the six core subjects.
3. Based on individual assessment of relevant formal, informal and non-formal qualifications for applicants aged 25 and above who do not meet the general entrance requirements.

▶ Tertiary education

Tertiary education and training is provided by three types of institutions:

▶ Vocational colleges (EQF level 5)
▶ University colleges (EQF levels 6–7)
▶ Universities and specialized university institutions (EQF levels 6–7)

Tertiary vocational education has a duration of between half a year and two years and is oriented towards a specific vocation. This sector was formalized in 2003 with the passing of the *Act Relating to Tertiary Vocational Education*. The programmes build on upper-secondary education or equivalent prior learning and work experience, but are not defined as higher education. They are supposed to provide a competence that can be directly applied in occupational life. Tertiary vocational education is based on tripartite cooperation at national and regional levels, involving employers' and workers' unions. In 2014, more than 16,000 students attended 110 public or private vocational colleges. The county authorities offer technical and maritime programmes as well as health work programmes. Private providers offer many different programmes in the areas of creative, commercial, service, media and ICT studies.

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[109] *VET in Europe. Country report 2012 Norway*. The Norwegian Directorate for Education and Training; *Spotlight on VET Norway*. CEDEFOP 2014.

Figure 1

The Norwegian education system 2014
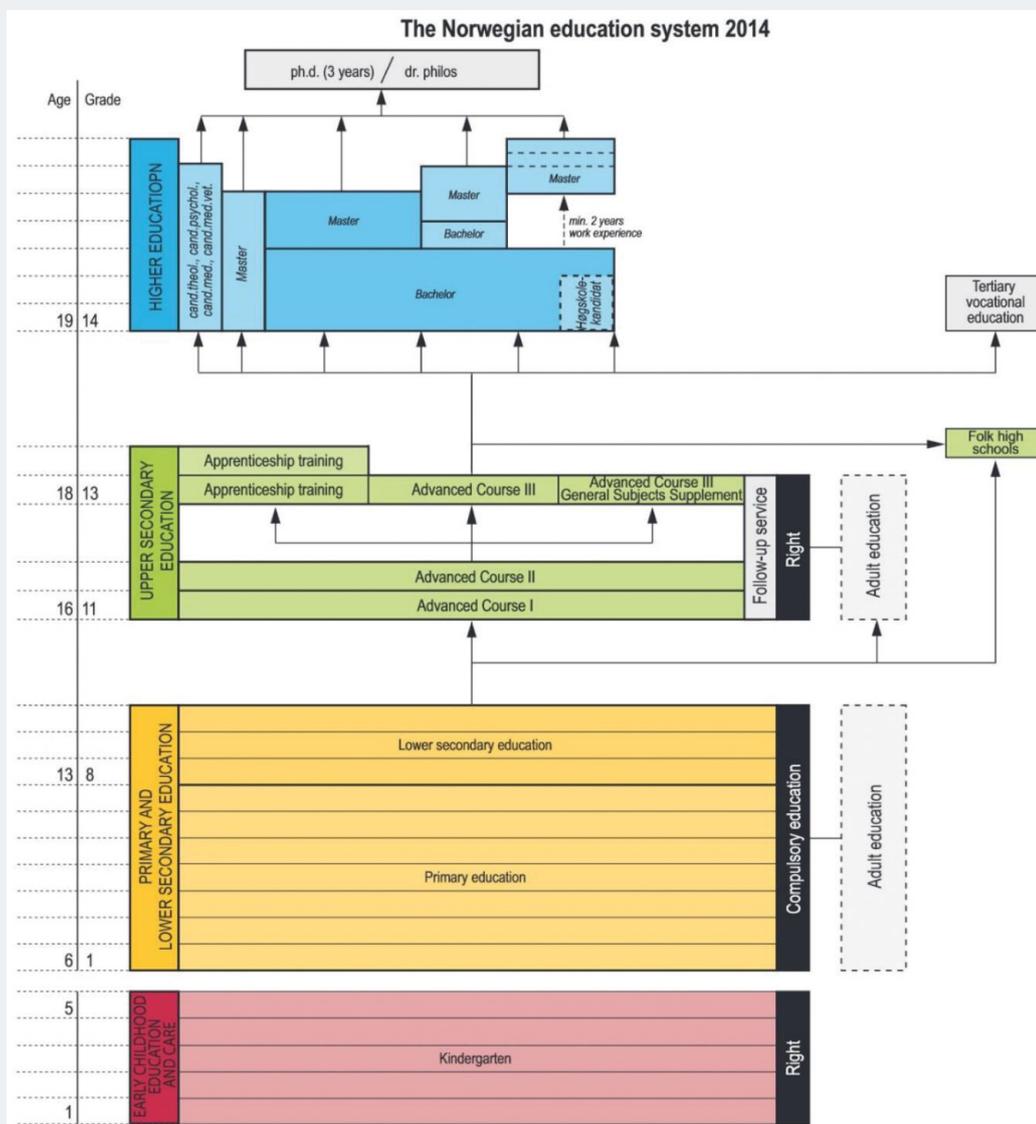
Source: Facts about education in Norway 2015. Statistics Norway.

University colleges predominantly provide vocational and professional education at a bachelor's level in teacher training, preschool teacher training, nursing, engineering, social work, economics and business administration, but also offer many Master programmes (and several doctoral programmes). In 2014, 20 state university colleges had about 95,000 students. In addition, about 23,000 students attended other public and private colleges.

Universities (8) and *specialized university institutions* (9) have about 135,000 students and offer academic bachelor and Master programmes, as well as professional programmes on EQF level 7. Some universities also offer bachelor programmes in various professional studies.

Universities, specialized university institutions, and university colleges are regulated by the common *Act Relating to Universities and University Colleges*.

There is a fairly high level of student mobility across university colleges and universities, due to the establishment of a flexible transition system, which is rather unique in the international

context. Some higher education programmes admit applicants without the *Higher Education Entrance Qualification*. Admission to these programmes is based on a relevant craft or journeyman's certificate or upper secondary vocational qualifications. This is called 'the vocational pathway'. In particular, many graduates from technical colleges enrol in engineering programmes at university colleges.

► The image and value of tertiary VET

In Norway, vocational education and training has a relatively low status compared to Germany. This is a recognized problem in upper-secondary school, which can be traced back to a number of historical conditions: the late industrialization and the low status that industry and training in technical disciplines had during the nation building process; the structure of Norwegian industry dominated by small companies at a low technological level; and the reform of upper-secondary education in the 1960's, where general education received a more prominent position than vocational training (Høst 2010).

Hence, tertiary vocational colleges constitute a marginal education sector (16,000 students) in comparison to higher education (240,000 students). A governmental committee set up to examine the tertiary vocational education sector (NOU 2014:14) has recently proposed that the government should put much more emphasis on developing this sector to make it a clearer alternative to higher education. Reasons put forward are, among others, that there is a need in society for more qualified labour at this level, and that many young people should choose this alternative to higher education.

With regard to the issue of vocational training and practice-requirements in higher education programmes, two opposite trends can be observed. On the one hand, theoretical knowledge has gained ground in professional programmes at a bachelor's level over time, at the expense of practical training. This change relates to the removal of work practice as a requirement for admittance into a programme as well as to the reduction of practical training within the study period (Kyvik 2009). This development, known as academic drift, is part of an international tendency to upgrade vocational training to higher education through a shift from a craft model with an emphasis on learning through experience, to a more academic curriculum (Smeby 2015).

On the other hand, in recent years colleges and universities have established a range of alternative work-based bachelor and Master programmes to cover a demand for further education by employees in the public and private sector. An example is a workplace-based bachelor programme in preschool teaching. Several colleges offer four-year part-time programmes directed at assistants in kindergartens wanting to become preschool teachers. The programmes are workplace-based and the kindergarten represents an important learning arena. Another example is the Master of Management provided by *BI Norwegian Business School*. This is an online experience-based part-time Master degree for people who are at work.

In addition, several ordinary bachelor and Master programmes have recently introduced a practice period as part of the curriculum to enhance the employability of their candidates. An example is the Master programme in cultural heritage offered by the *Norwegian University of Science and Technology*. The programme includes an eight-week trainee period, with a further two-week period of complementary work and report-writing.

► Governance of tertiary education

The Ministry of Education and Research has the responsibility for tertiary education. This part of the education system is regulated by two acts: the Act Relating to Tertiary Vocational Education and the Act Relating to Universities and University Colleges.

Higher education falls directly under the responsibility of the Ministry, while Norway's 19 county authorities are responsible for most of the funding and supervision of public vocational schools. Most of these colleges are, however, private.

NOKUT (Norwegian Agency for Quality Assurance in Education) is responsible for quality assurance of all higher education and tertiary vocational education and the accreditation of institutions and programmes. NOKUT's mechanisms include controls of the institutions' internal quality assurance systems and all educational provision for compliance with national quality standards. A main difference between the types of institutions is related to their self-accreditation rights. Universities can offer study programmes at all levels without accreditation by NOKUT, while university colleges must apply for accreditation for Master and PhD programmes. Every programme in vocational colleges must be recognized by NOKUT.

Vocational colleges have close tripartite cooperation with national and regional authorities as well as social partners. At the national level, cooperation has been organized in the National Council for Vocational Colleges since 2010. This council is an advisory body for the Ministry of Education and Research, with representatives for the vocational education sector, employees' and employers' organizations, and students. Higher education institutions have also been asked to set up a consultative council for cooperation with relevant social partners.

1.2 Programmes and qualifications on EQF levels 5–7

▶ Degrees

In 2003, Norway introduced three-year bachelor programmes, two-year Master programmes, and three-year PhD programmes, with some exceptions, according to the recommendations given in the Bologna Declaration.

Some Master programmes are based on relevant work experience in addition to academic specialization in the bachelor degree. Such programmes are called experience-based Masters, and their scope can be either two years (120 ECTS credits) or one and a half years (90 ECTS credits). A relevant example is the *Executive Master of Management* at BI Norwegian Business School. Another example is the *Master in Technology and Operations Management* at the University of Stavanger.

▶ Programmes in tertiary vocational colleges (EQF level 5)

Vocational education programmes offered by tertiary vocational colleges include programmes varying between 6 months and 2 years for:

- ▶ Building and Construction
- ▶ Electricity and Electronics
- ▶ Technical and Industrial Production
- ▶ Maritime Education
- ▶ Arts and Crafts
- ▶ Health and Social Care
- ▶ Media and Communication
- ▶ Agriculture, Fishing and Forestry
- ▶ Restaurant and Food Processing
- ▶ Service and Transport

Technical colleges are the most important, offering two-year training courses to students who have completed upper-secondary education or have a minimum of five years of work experience within a given trade. Ca. 60 percent of the students have a craft or journeyman's certificate, ca. 30 percent have passed the general requirements for entrance to higher education, and ca. 10

percent are admitted based on an examination of individual vocational competence require-
ments. There are no practice requirements in these programmes, because most of the students
have worked in industry for some years.

In fact, the majority of the students in tertiary vocational colleges have work experience.
About 60 percent of the students are over 25 years of age, and 40 percent are over 30 years. In
particular, technical and health care colleges function more as further education institutions for
adults than as a direct educational step between upper secondary school and working life.

A study on practices in vocational colleges published by NOKUT (Storm 2012) found great di-
versity in the use and organization of practice placements, which are, in general, adapted to stu-
dents' particular course work and prior work experience. No more than 15 percent of all tertiary
vocational education programmes have practice placements with supervision at a workplace
outside the school. One reason for this is that some colleges aim at the further education of stu-
dents who already have a long work experience. Some of these programmes are designed as
part-time studies in which students are required to work part-time and undertake project assign-
ments at the work place. Most commonly among these programmes, practice constitutes be-
tween 20 and 30 percent of the curriculum. Healthcare is the subject area that has the most
practice. The study concluded that there was no cause for concern over the general quality of
education in the practice placements of tertiary vocational education. Rather, the different prac-
tice arrangements were regarded as being well suited to meet the needs of both students and
society for enhanced competence in different niches of the education market.

However, a recent study indicates that the labour market relevance of these courses varies
widely. While graduates from technical colleges easily find relevant work, graduates in media
studies, business studies, and the humanities and arts run a great risk of being unemployed, un-
deremployed, or overqualified for the job (Støren & Waagene 2015). The primary reason is that
the competition for available jobs is harsh due to the large number of bachelor-holders in these
areas.

The governmental committee set up to examine the tertiary vocational education sector (NOU
2014:14) has suggested to introduce mandatory practice periods in all programmes included in
this sector, using a wide definition of the notion of practice. The committee mentioned specifi-
cally that undertaking relevant projects in cooperation with the workplace should count as prac-
tical training.

▶ Programmes in university colleges (EQF level 6–7)

University colleges provide many professional and vocationally oriented bachelor programmes,
as well as many Master programmes, which have relatively few students each (Kyvik 2008). The
following six bachelor programmes are the most important in terms of student numbers:

Engineering

Three-year bachelor degrees in engineering are offered throughout the country at many univer-
sity colleges, most dominantly within the fields of construction, chemistry, electronics and infor-
matics, though many others also exist. There are no practice requirements, but the project work
for the bachelor thesis is commonly undertaken in industry. The projects are usually a tripartite
cooperation between the student, the teacher and the workplace, and the topic of the bachelor
thesis is often proposed by the enterprise.

Teacher training

Many university colleges offer four-year teacher training programmes. Candidates can be awarded the bachelor degree after three years if the programme meets the requirements for a bachelor degree set out in the regulations for the university college. Teaching qualifications for primary and lower secondary school can only be achieved after four years. The curriculum includes recurrent practice periods in school classes of, in total, 20–22 weeks.

Preschool teacher training

Many university colleges also offer three-year preschool teacher training programmes. Practical training in kindergartens takes 20 weeks.

Nursing

Nurse training at a bachelor's level is provided by many colleges. Clinical practice forms 60 weeks of the 3-year programme, 50 of which are clinical practice placements and the other 10 weeks are used for in-school preparation, laboratory practice, etc. (practice related studies). Nurses must apply for certification from The Norwegian Registration Authority for Health Personnel, which has the sole authority to license health care personnel.

Further education courses are provided in subjects such as psychiatry, cancer care, operation nursing, intensive nursing, paediatrics, midwifery, geriatrics and management. The entry requirements for such courses vary; they can either be a completed bachelor degree or a combination of a bachelor degree and a certain number of years of work experience as a nurse. Usually these specialization courses take between one and two years, and there is a tendency towards these courses becoming Master programmes.

Social work

There are bachelor programmes in Social work, Child Care Work and Social Education. Social Education prepares the students for work in the services for persons with intellectual impairments. There are 12 institutions giving bachelor courses in Social Work, 11 in Child Care Welfare and 12 in Social Education. Practice requirements amount to 18 weeks.

Economics and administration

Many university colleges offer two-year programmes in economics and administration (and confer the title of university college graduate). There are also three-year bachelor programmes. Generally, there are no practice requirements.

▶ Programmes in universities and specialized university institutions (EQF level 6–7)

Bachelor and Master degrees

The universities offer a very diverse range of bachelor and Master degree programmes in the fields of natural sciences, social sciences and the humanities.

Five-year programmes of professional study

These programmes (integrated master degrees) are most common in the following subject areas: pharmacy, fisheries science, informatics, engineering, law, odontology, teacher training and economics.

Six-year programmes of professional study

These programmes lead to special degrees in medicine (cand.med.), veterinary medicine (cand.med.vet.), psychology (cand.psychol.) and theology (cand.theol.).

Generally, ordinary bachelor and Master programmes do not have practice periods, while the five- and six-year programmes of professional study include practical training according to the requirements given in rules and regulations in order to obtain licensing as a medical doctor, psychologist, etc.

Some universities (primarily new universities) also offer bachelor programmes in various professional studies.

▶ Further education programmes

Further education programmes lead to new formal qualifications at university and university college level (programmes for which ECTS credits are awarded). In particular, there are many further education programmes in healthcare subjects, e.g. in oncology nursing. Some further education programmes require relevant work experience in addition to a bachelor degree.

Under the *Working Environment Act*, all employees are entitled to full or partial leave for up to three years in order to attend organized courses of education, ranging from short courses to a PhD.

1.3 Tertiary level programmes that include practical training

Norway has not developed dual VET-programmes, but practical training is a mandatory element of the curriculum of many different programmes.

We may distinguish between (at least) six types of programmes that include practical training:

1) Vocational college programmes with practice periods (health care studies are the best example).
2) Ordinary professional bachelor programmes with practice periods as part of the curriculum as a requirement for becoming a licensed professional worker (nursing is the prominent example).
3) Ordinary professional bachelor programmes where the bachelor project (bachelor thesis) should be undertaken in an industrial company (e.g. mechanical engineering).
4) Ordinary academic bachelor and Master programmes with a practice period in order to enhance the employability of candidates (e.g. Master programme in cultural heritage).
5) Workplace-based bachelor and Master part-time programmes (e.g. workplace-based pre-school teacher education and Master of Management).
6) Five- and six-year programmes of professional study.

From a European comparative perspective, two types of programmes are interesting: two-year technical programmes provided by vocational colleges and three-year bachelor programmes in engineering, which offer students not holding the higher education entrance qualification admission based on a craft or journeyman's certificate, and which require that the students undertake a project (bachelor thesis) in an industrial company as part of the third-year curriculum.

The technical college programme presented in this report is *Building and Construction* at Telemark Vocational College (Annex 1).

The bachelor programme in engineering presented in this report is *Electrical Power Engineering* (for applicants with certificate of completed apprenticeship) at Telemark University College (Annex 2).

1.4 Developments and main reforms

In Norway, previous reforms of the tertiary education system have been directed at establishing distinct educational sectors with different aims and purposes, while at the same time building bridges across the sectors, in particular to enhance possibilities for student transfer. The boundaries between these sectors have, however, not been commonly agreed upon, and repeated discussions have taken place on how the tertiary education system should be organized (Pinheiro & Kyvik 2009).

► The relationship between vocational colleges and university colleges

There has been some disagreement whether tertiary vocational education should be offered within separate institutions or within university colleges. In 2001, the Ministry of Education and Research proposed in a white paper to Parliament that the university colleges should take a greater degree of responsibility for shorter vocational programmes. The discussions of the proposal in the parliamentary committee for educational affairs highlight the political disagreement about the status of vocational education in Norway. The Labour Party representatives argued that short, vocational programmes should be the responsibility of the university colleges, which have the capacity and competence to implement them. In contrast, the Liberal/Conservative majority stressed the need for a vocational education sector to become an alternative to higher education. In order to maintain and further develop the variety of educational programmes beyond upper secondary schooling, a formal three-level education system should be developed to meet the diverse goals and purposes. As a result of the discussions in Parliament, the Act relating to Tertiary Vocational Education was passed in 2003.

This issue was revitalized with the implementation of the National Qualifications Framework and the referencing process to the EQF. Representatives of the vocational college sector wanted this sector to become part of higher education, but did not succeed. The result of the strong disagreement was that tertiary vocational education is referred to level 5 in the EQF, but that it is divided into two sublevels to distinguish two-year programmes from shorter courses (Elken 2015).

VET programmes in tertiary vocational colleges generally do not provide access to higher education. However, there are some exceptions. Within certain two-year technical programmes, the craft certificate qualifies for enrolment in bachelor programmes in engineering. In these cases, the two-year technical programme is regarded as equivalent to the first year of the three-year engineering programme. This VET pathway thus leads to a bachelor degree specifically adapted to students who hold a trade or journeyman's certificate.

Some of the two-year technical colleges have now developed courses at the level of higher education, following accreditation by NOKUT. Their main motive is to attract more students, but also to pave the way for an institutional change of status to higher education. This development can be regarded as an institutional drift process which contributes to a less clear division between the vocational college sector and the higher education sector (Bakken 2013).

► The relationship between university colleges and universities

In all countries with a binary higher education system, the question of how the relationship between the university and college sectors should be organised and regulated has been a recurrent topic of discussion (Kyvik 2004). The majority of Western European countries have chosen to uphold the separation between a university and a college sector. Still, in some countries attempts have been made to bring the sectors closer to one another. Norway is arguably the country in which the boundaries between the two sectors have become most blurred, and the binary system is gradually breaking down.

Three principal processes have been at work to bring the two higher education sectors closer to each other: *academic drift* in the college sector, *vocational drift* in the university sector, and *cross-sector coupling* attempts enforced by the government and the Bologna Process (Kyvik 2009). Together, these processes have reduced differences between colleges and universities and led to a blurring of boundaries. Academic drift in the college sector has been the most powerful of these driving forces.

In Norway, structural and cultural differences between the college sector and the university sector have been radically diminished and even eliminated in a number of areas through rule harmonisation. The two sectors were regulated by a common act in 1995; teaching in the state colleges was supposed to be research based, and the university academic career structure and reward system was implemented in the colleges. In particular, the introduction of a common academic career system contributed to undermining the intended division of labour between universities and state colleges. In addition, international impulses have been important for the harmonisation policy, particularly those brought about by the Bologna Process in European higher education, introducing a common degree system across the two fields.

The introduction of joint bachelor's and Master's degrees has led to a considerably shorter period of study for a university degree, and also to a demand for Master's degrees on top of the bachelor's degrees in the college sector. This development has reduced differences between the university and college sectors, and the arguments for abolishing the divide have become stronger, as in the UK in the years preceding the introduction of the unified system. However, there has been a fear that the academisation of the college sector will eventually lead to uniformity of higher education programmes, inhibiting the intended development of functional differentiation between universities and colleges.

In 2004, the government decided that colleges that fulfil certain minimum standards could apply for accreditation to receive university status, and three colleges have now obtained this status. Many of the other colleges have since been discussing how they can obtain university status, either by themselves, by merging with other university colleges to create larger entities, or by merging with a university (Kyvik & Stensaker 2013). In 2013, a new government took office proclaiming that too many study programmes were below a critical mass of teachers and students, and that many university colleges were too small to meet future requirements. The Minister of Education and Research stated that he intended to make structural changes by forcing all universities and colleges to come up with suggestions as to with which other institution(s) they might merge. The governmental initiative led to a dynamic process within the universities and colleges as well as between institutions in the various regions. By the end of this process, ten institutions had come up with a provisional agreement to merge in 2016. This means that most of the universities will now provide first-cycle professional education programmes.

1.5 Conclusion

More than a decade ago, with the formalization of the tertiary vocational education sector in 2003, the government declared that the time was ripe to develop a range of short vocational programmes to meet the needs of society and young people. However, apart from the two-year technical colleges, most of these programmes have not succeeded in attracting many students. Entering higher education has been far more attractive. This trend is partly due to what happens in upper secondary education. Although slightly more pupils initially choose the vocational route than the general education route, almost 30 percent of the VET pupils switch from their vocational programme to a third year of supplementary studies qualifying for entrance into higher education.

The government (Ministry of Education and Research 2009, Ministry of Education and Research et al. 2009) as well as stakeholders in industry (in particular the Confederation of Norwegian Enterprise) have increasingly emphasized the importance of higher education institutions developing programmes that are relevant for working life. The demands of society, more so than those of universities, colleges and students, should guide priorities in higher education. However, as long as most candidates have been obtaining a job relevant to their education, which has been the case in Norway, there has been no need for a major change in higher education provision.

Still, we may observe a trend towards introducing practice elements in the curricula of some higher education programmes with no tradition of this type of training. Nevertheless, there are no plans to develop dual programmes like in Germany, Switzerland and Austria. Instead, the educational models that combine theory and practice include professional bachelor programmes with limited practice periods, academic Master programmes with short practice periods, and workplace-based bachelor and Master programmes where employees study part-time. In addition, the bachelor project (the bachelor thesis) in engineering programmes is typically undertaken in an enterprise and counts as practice relevant training.

Part 2: National qualifications frameworks

2.1 Background for the introduction of the NQF in Norway

The work on the Norwegian Qualifications Framework is a continuation of the Bologna Process and the European Qualifications Framework (EQF) process.[110] Norway started the process of considering a national qualifications framework for higher education in 2003. Legal authority for introducing a framework was incorporated into the *Act Relating to Universities and University Colleges* in 2005, and the work to develop a national qualifications framework for higher education was initiated the same year.

In 2006, the Ministry of Education and Research started working to establish a national qualifications framework for all levels. A consultation process was initiated establishing a broadly composed reference group comprising representatives of the Ministry, the Norwegian Agency for Quality Assurance in Education (NOKUT), the Norwegian Association of Higher Education Institutions and the student organizations. In addition, a diverse reference group was appointed. It included representatives of institutions of higher education, tertiary vocational colleges, upper secondary schools, the Norwegian Association for Adult Learning, the Norwegian Agency for Lifelong Learning, the Norwegian Registration Authority for Health Personnel (SAFH), employer and employee organizations, the Union of Education Norway, the Norwegian Association of Researchers, the Norwegian Centre for International Cooperation in Education, and the Ministry of Trade and Industry.

Based on international developments, when it became increasingly clear that the other European countries in the EEA were going to develop national qualifications frameworks as the basis for referencing their national systems to the EQF, it was decided in 2009 that a proposal for a comprehensive national qualifications framework was to be prepared for Norway as well, and that this would form the basis for referencing the Norwegian levels of qualifications to the EQF.

2.2 The implementation of the NQF

By the end of 2012, the universities and university colleges were supposed to have prepared learning outcome descriptors for all education programmes, disciplines and courses. Furthermore, since autumn 2014, applications for the recognition of new tertiary vocational education programmes have to contain learning outcome descriptors.

Moreover, competences acquired outside the formal education and training system, through formal, non-formal or informal learning, can be assessed in relation to existing subject curricula, national curricula and programme descriptions, and this can lead to a shorter educational pathway to an approved diploma with an assigned level in the NQF.

Legal authority for the NQF is provided for in the Education Act, the Tertiary Vocational Education Act, and the Act Relating to Universities and University Colleges. All diplomas, craft/journeyman's certificates and certificates of competence issued by approved authorities must refer to the NQF/EQF.

Responsibility for national coordination of further work will rest with the Ministry of Education and Research. The Norwegian Agency for Quality Assurance in Education (NOKUT) is the national coordinator for the EQF. It is also the agency responsible for inspection and accreditation of tertiary education programmes in relation to the NQF and for their referencing to the Bologna framework and the EQF.

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[110] This text is based on the latest version (April 2014) of the document: *The Norwegian Qualifications Framework for Lifelong Learning (NQF)*, adopted by the Ministry of Education and Research on 15 December 2011.

2.3 The level structure of the NQF

The EQF contains eight levels, and the overarching framework of qualifications for the European higher education area contains three levels, with the possibility of intermediate qualification levels. The Norwegian education and training system, with the relevant legislation, was used as the basis for the number of levels. The connection between the Norwegian and the two European qualifications frameworks is made through the referencing process and the self-certification process.

The Norwegian framework consists of seven levels (see Table 1). Level 1 has been kept open in order to make the system easier to understand in relation to the EQF. This level is not described, and no qualifications are placed here. Therefore, the national qualifications framework starts with Level 2: Competences from primary/lower secondary school. Level 3 is partially completed upper secondary education and training, Level 4 is completed upper secondary education and training, Level 5 is completed tertiary vocational education, Level 6 is the first cycle of higher education (bachelor), Level 7 is the second cycle of higher education (Master) and Level 8 is the third cycle (PhD). The qualification 'university college graduate' (2 years of study) is described as an intermediate level in Level 6. The top three levels relate to the three upper levels in the overarching framework of qualifications for the European higher education area and the three upper levels of the EQF.

The EQF descriptors are generic at each level, with descriptions that do not distinguish between competences achieved through studies and competences achieved through vocational training. As described in Part 1, Norwegian upper secondary education is divided between programmes for general studies (qualifying for entrance to higher education) and vocational study programmes. Norway has therefore drawn up separate learning outcome descriptors for general studies and vocational qualifications. The learning outcome descriptors are worded so that both are placed at the same level in the national qualifications framework and can thereby be referenced to the same EQF level. Admittance to tertiary vocational education can be based on both sets of learning outcome descriptors from upper secondary education.

Furthermore, Norway has adopted two sets of learning outcome descriptors for tertiary vocational education, called Tertiary Vocational Training 1 (which includes programmes of 0.5 to 1.5 years duration) and Tertiary Vocational Training 2 (which includes two-year programmes).

Table 1
The level structure and inclusion of programmes in the Norwegian qualifications framework[111]

Level	Qualifications	Qualification certificate
Level 1	No qualifications at this level	
Level 2	Competences from primary/lower secondary school	Certificate of primary and lower secondary education
Level 3	Partially completed upper secondary education and training	Certificate of partially completed upper secondary education and training
Level 4a	Completed upper secondary vocational education – Subject related skills and vocational competences	Craft/Trade certificate Journeyman's certificate
Level 4b	Completed upper secondary school – higher education entrance requirement	Certificate of upper secondary education

[111] The table is based on The Norwegian Qualifications Framework for Lifelong Learning (NQF), April 2014.

(Continuing Table 1)

Level	Qualifications	Qualification certificate
Level 5	Tertiary vocational training 1	Certificate of tertiary vocational education (0.5 – 1.5 years)
Level 5	Tertiary vocational training 2	Certificate of tertiary vocational education (2 years)
Level 6	Part of Bachelor: Higher education of shorter duration	Certificate – university college graduate
Level 6	Bachelor (1st cycle)	Bachelor's degree diploma
Level 7	Master (2nd cycle)	Master's degree diploma Diploma – Master's degree in law Diploma – cand. med. vet. Diploma – *cand. med.* Diploma – cand. psychol. Diploma – cand. theol.
Level 8	Ph.D. (3rd cycle)	Diploma – Ph.D. Diploma – *dr.philos.* Diploma – artistic research programme

In the document "The Norwegian Qualifications Framework for Lifelong Learning" (2014), the learning outcome descriptors are summarized as follows:

Knowledge: Knowledge is understanding of theories, facts, concepts, principles and procedures in a discipline, subject area and/or profession.

Skills: The ability to apply knowledge to complete tasks and solve problems. There are different types of skills: cognitive, practical, creative and communicative.

General competence: General competence is the ability to use knowledge and skills in an independent manner in different situations in study and work contexts, by demonstrating the ability to cooperate, the ability to act responsibly, and a capacity for reflection and critical thinking.

References

Act Relating to Tertiary Vocational Education (2003).

Act Relating to Universities and University Colleges (2005).

BAKKEN, P. (2013): *Institusjonell dynamikk i høyere utdanning og fagskolesektoren* (Institutional dynamics in higher education and the tertiary education sector). Oslo: NOKUT.

BRØYN, I.B.; DE LEON, A.N.: GULBRANDSEN, Å.P.; SJONER, A.M.; SØRENSEN,L.S. (2015): *Arbeidslivets skole? En studie av samarbeidet mellom tekniske fagskoler og lokalt næringsliv*. Oslo: Universitetet i Oslo.

ELKEN, M. (2015): Development of national qualifications frameworks and use of the EQF – experiences in three European countries. Unpublished paper.

Entrepreneurship in Education and Training (2014): Ministry of Education and Research.

Facts about Education in Norway (2015): Statistics Norway.

Fagskolene på Østlandet (2015): *Forprosjektet "Yrkeshøyskolen Øst"*. Hovedutvalg Oppland 6. mai 2015.

HAGEN, S.T.; HAGEN, C. (2014): Recruiting engineering students directly from vocational school. Paper presented at *Nordic Fields of Higher Education Conference*, Oslo 8–9 October, 2014.

Høst, H. (ed.) (2010): Continuity and Change in Norwegian Vocational Education and Training (2). Oslo: NIFUSTEP.

Ministry of Education and Research (2009): *Utdanningslinja*. St.meld. nr. 44 (2008–2009).

Ministry of Education and Research, Ministry of Local Government and Regional Development, Ministry of Trade and Industry (2009): *Entrepreneurship in Education and Training – from compulsory school to higher education 2009–2014*.

Pinheiro, R.; Kyvik, S. (2009): Separate but connected. Bridging the divide across Norway's tertiary education sector. In: Garrod, N.; Macfarlane, B. (Eds.): *Challenging boundaries. Managing the integration of post-secondary education* (pp. 47–58). New York: Routledge.

Kyvik, S. (2004): Structural changes in higher education systems in Western Europe. *Higher Education in Europe*, 29, 393–409.

Kyvik, S. (2008): The non-university higher education sector in Norway. In: Taylor, J.S.; Ferreira, J.B.; Machado, M.L.; Santiago, R. (eds.): *Non-university Higher Education in Europe* (pp. 169–189). Dordrecht: Springer.

Kyvik, S. (2009): The dynamics of change in higher education. Expansion and contraction in an organisational field. Dordrecht: Springer.

Kyvik, S.; Stensaker, B. (2013): Factors affecting the decision to merge: The case of strategic mergers in Norwegian higher education. *Tertiary Education and Management*, 19, 323–337.

Smeby, J.C. (2015): Academic drift in vocational education? In J.C. Smeby & M. Sutphen, *From Vocational to Professional Education* (pp. 7–25). London: Routledge.

Spotlight on VET Norway. CEDEFOP 2014.

Storm, I. (2012): Praksis i fagskoleutdanningene (*Practice in tertiary vocational education*). Oslo: NOKUT.

Støren, L.; Waagene, E. (2015): Fagskoleutdanning – relevant for arbeidsmarkedet? (*Tertiary vocational training – relevant for the labor market?*) (Unpublished paper).

The Norwegian Qualifications Framework for Lifelong Learning (NQF). Adopted by the Ministry of Education and Research on 15 December 2011.

VET in Europe. Country report 2012 Norway. Norwegian Directorate for Education and Training.

Vocational Education and Training in Norway (2014). Norwegian Directorate of Education and Training.

Annex 1: Two-year Programme in Building and Construction, Telemark Vocational College

This study programme is designed according to the National plan for two-year technical vocational college education in Building and Construction (latest version 15 May 2015). In order to ensure a national standard and quality of these programmes, the National Council for Technical Vocational Education develops and maintains a common framework curriculum. The development of the specific study plans is, however, the responsibility of the various colleges, in cooperation with representatives of enterprises in the region. There is no practice period in this programme, because most students have practical work experience, but the major student project is undertaken in an enterprise. The purpose of the programme is to qualify students for jobs as project leaders and middle managers which can be responsible for the planning and coordination of building projects. The programme also qualifies for jobs in public administration and for jobs as private consultants in the building and construction sector.

▶ Admission requirements

This programme is available for students who have completed upper-secondary education, or have a minimum of five years of work experience in a relevant trade. A majority of the students have a craft or journeyman's certificate.

▶ Teaching and learning methods

Various teaching and learning methods are used in the instruction: Classroom teaching, instruction in the use of various computer tools, and project-based group work in the college and in enterprises. As part of the programme, the students undertake a practical project in the last semester of the two-year programme in a private or public enterprise. The college organises field trips to local enterprises, and guest lecturers from business and industry are invited to teach in the programme.

▶ Relevance of the programme

The vocational college cooperates closely with local private and public enterprises; first and foremost in student projects, in which the students are supposed to solve concrete and relevant problems in the enterprises. A recent study of the relationship between the programme in Building and Construction and local enterprises indicates that the enterprises are satisfied with the outcome of these collaborative projects; they are regarded to be useful for both parts (Brøyn et al. 2015). The candidates, many of whom have a job to return to, obtain relevant jobs usually as project leaders and middle managers in the building and construction sector.

▶ Learning outcomes

The National plan for two-year technical vocational college education in Building and Construction includes a detailed description of expected learning outcomes according to the general guidelines for the national qualifications framework in Norway. This document (13 pages) has a general part describing the learning outcomes of the programme under the headings of knowledge, skills and general competences. In addition, the document has separate learning outcome descriptions for each of nine different study subjects.

▶ Policy discussions

The technical vocational colleges have recently raised a discussion about whether a two-year study period is sufficient to qualify their students for jobs as project leaders and middle manag-

ers. The requirements for holding such jobs, as expressed by enterprises and national curriculum guidelines, have increased over time. Hence, the programme has become more school-based than it used to be, and there is a need for more practical training within the framework of the programme. The colleges thus argue that there is a need for a three-year practically oriented bachelor programme, particularly in Building Management, as an alternative to the more theoretically oriented bachelor programme in engineering (Fagskolene på Østlandet 2015). This initiative is supported by the building and construction sector, particularly because the enterprises value the competence of project leaders holding a craft certificate.

The colleges now plan to apply for accreditation of such a programme with NOKUT (Norwegian Agency for Quality Assurance in Education). In addition to pointing to the challenge of training students for leadership jobs within a two-year period, the expansion of the training period to three years and the accreditation of a bachelor programme is regarded to be an important step to enhance the status of vocational tertiary technical education, the colleges themselves, and the candidates.

Annex 2: Bachelor Programme in Electrical Power Engineering, Telemark University College (for applicants with certificate of completed apprenticeship)[112]

Electric power engineering concerns the production, transportation, distribution and consumption of electric energy. The study programme presents a broad introduction to topics in electric power engineering. Electric power engineers are especially qualified for work in the areas of energy supply, electrical contracting, electrical engineering industry and suppliers to these.

The study programme is designed according to the General Plan for Engineering Education set by the Ministry of Education on 3 February 2011. There is no practice period in this programme, but most students have a relevant trade certificate and work experience. In addition, the bachelor thesis is usually undertaken in cooperation with an enterprise.

Duration: Three year(s), ECTS: 180, Expected work load: 1,600 hours for 60 credits each academic year. This is equal to ca. 27 hours per credit.

▶ Admission requirements

Applicable vocational upper secondary school with an apprenticeship in a company and trade certificate, or:

Applicable vocational/trade certificate after completed three-year schooling, with at least 12 months of on-the-job training after completed certificate.

▶ Teaching and learning methods

Various teaching methods are used in the instruction: classroom teaching, laboratory instruction, and the use of computer tools. The Bachelor's degree programme at the Faculty of Technology is project-oriented in that many of the courses are conducted as projects. This pedagogical method gives students greater responsibility for their own learning as well as experience with problem analysis, seeking information and problem solving. Work is done in groups, often in close cooperation with local businesses. The study programme also includes field trips to local industrial facilities. Guest lecturers from business and industry are invited to deliver lectures.

The student's dissertation should be anchored in the courses the candidate has taken in the previous five semesters. Candidates will integrate previously acquired knowledge and demon-

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[112] This text is drawn from the English language webpages of Telemark University College.

strate their ability to acquire new knowledge in solving an engineering problem. This work will demonstrate the candidate's ability to work independently in a team. It is particularly important that the dissertation is viewed in a holistic perspective. It should be based on real social and business issues, or research. In other words, it should be linked to business activities in the private or public sector, research activities of the college, or other aspects of an engineer's work.

It is possible to select the option of taking the Student Business Venture course instead of writing a dissertation based on an engineering question. This will give the candidate an opportunity to develop capabilities in innovation and entrepreneurship. In the Student Business Venture course, the candidate will develop and implement a business idea and start, operate and close a business venture.

▶ Relevance of the programme

This programme was started in 2002 as a pilot project to recruit engineering students not holding the Higher Education Entrance Qualification, but with a relevant trade certificate. After twelve years of operation, this and other similar vocational route programmes at Telemark University College are regarded as successful. In general, the students who have been trained as apprentices are more dedicated and motivated than those with three years of general education in upper secondary school, and they are attractive on the labour market. Retention has never been lower than 78 percent, which is significantly higher than the 50 percent for ordinary bachelor engineering programmes in Norway (Hagen & Hagen 2014).

▶ Internationalization

The Faculty of Technology emphasizes the candidate's opportunities for completing parts of their studies abroad and they endeavour to develop professionally relevant and qualitatively effective learning arenas. Engineering studies offer a comprehensive programme for international activities. Apart from teacher exchanges, research and cooperation with regard to the development of modules and curricula, the faculty offers a student exchange programme for students who wish to pursue part of their regular Bachelor's degree abroad. The student exchange agreements are linked to international networks and bilateral agreements. Students enrolled in Bachelor's degree programmes in engineering may enter into agreements with foreign universities for one or two semesters.

▶ Learning outcome

A candidate who has successfully completed the 3-year Bachelor's degree programme in Electric Power Engineering will have achieved the following overall learning outcomes defined in terms of knowledge, skills and overall competences:

Knowledge

The candidate:

Has extensive knowledge that provides an overall systems perspective of engineering in general, with specialization in electric power. The candidate has knowledge of electric and magnetic fields, and broad knowledge of electrical components, circuits and systems.

Has basic knowledge of mathematics, natural sciences – including electro-magnetism – and relevant social sciences subjects and economics, and how these can be integrated into problem solving within the field of electric power engineering.

Has knowledge of engineering's history and development with an emphasis on electric power engineering, the engineer's role in society and the consequences of the development and use of technology.

Is aware of research and development within their own discipline, as well as relevant methods and ways of working within the subject of electric power.

Is able to update his/her knowledge within the field of electric power engineering through information gathering, contact with specialists within the field and practical experience.

Skills

The candidate:

Is able to apply knowledge and relevant results from research and development to address theoretical, technical and practical problems in the field of electric power, and is able to justify his/her choices.

Has digital skills within the field of engineering, is able to work in laboratories specific to the field, and is able to master methods of measurement, troubleshooting methodology, and the use of appropriate instruments and software, as a basis for targeted and innovative work.

Is able to identify, plan and carry out professional engineering projects, assignments, tests and experiments, both independently and in teams.

Is able to find, evaluate, use and refer to information and technical material and present it so that it sheds light on an issue.

Is able to contribute to creativity, innovation and entrepreneurship through participation in the development, quality assurance and implementation of sustainable and socially beneficial products, systems and solutions.

General competences

The candidate:

Has knowledge of environmental, health, social and economic impacts of products and solutions within the field from an ethical viewpoint and with a long-term perspective.

Is able to communicate knowledge of the subject of electric power to different kinds of audiences, orally and in writing, in Norwegian and English, and is able to demonstrate the importance and benefits of electric power engineering.

Has knowledge of low and high voltage environments in relation to the current regulations.

Is able to contribute to the development of good practices by participating in discussions in the field and sharing his/her knowledge and experience with others.

Sabine Tritscher-Archan, Kurt Schmid

Vocational Education and Training on EQF-Levels 5 to 7 in Austria

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Abbreviation	German denomination	English denomination/explanation
AHS	allgemeinbildende höhere Schule	secondary academic school (higher general education school) – junior cycle and senior cycle
BAG	Berufsausbildungsgesetz	Vocational Training Act
BAKIP	Bundesanstalt für Kindergartenpädagogik	kindergarten teacher training college
bfi	Berufsförderungsinstitut	Vocational Training Institute
BHS	Berufsbildende höhere Schule	VET college
BMBF	Bundesministerium für Bildung und Frauen	Federal Ministry of Education and Women's Affairs
BMF	Bundesministerium für Finanzen	Federal Ministry of Finance
BMG	Bundesministerium für Gesundheit	Federal Ministry for Health
BMHS	Berufsbildende mittlere und höhere Schulen	VET schools and colleges
BMS	Berufsbildende mittlere Schule	VET school
BMWFW	Bundesministerium für Wissenschaft, Forschung und Wirtschaft	Federal Ministry of Science, Research and Economy
BRP	Berufsreifeprüfung	examination providing access to higher education for skilled workers and graduates of three- and four-year full-time VET schools
CET	Weiterbildung	continuing education and training
CVET	berufliche Weiterbildung	continuing vocational education and training
EQR/EQF	Europäischer Qualifikationsrahmen	European Qualifications Framework
FH	Fachhochschule	university level study programmes of at least three years' duration with vocational-technical orientation; university of applied sciences
FHStG	Fachhochschul-Studiengesetz	Fachhochschule Studies Act
GE	Allgemeinbildung	general education
HE	Hochschulbildung	higher education
HEI	Hochschulische Einrichtung	higher education institution

ibw	Institut für Bildungsforschung der Wirtschaft	Institute for Research on Qualifications and Training of the Austrian Economy
IHS	Institut für Höhere Studien	Institute for Advanced Studies
ISCED	International Standard Classification of Education	International Standard Classification of Education
IVET	berufliche Erstausbildung	initial vocational education and training
LAP	Lehrabschlussprüfung	apprenticeship-leave examination
LFI	Landwirtschaftliche Fortbildungs- institut	Institute of Agrarian Education and Training
LLL	Lebenslanges Lernen	Lifelong learning
NQR/NQF	Nationaler Qualifikationsrahmen	National Qualifications Framework
öibf	Österreichisches Institut für Berufsbildungsforschung	Austrian Institute for Research on Vocational Training
PH	Pädagogische Hochschule	university colleges of teacher education
PTS	Polytechnische Schule	prevocational school
SBP	Studienberechtigungsprüfung	higher education entrance examination
VET	Berufsbildung	vocational education and training
WB	(berufliche) Weiterbildung	continuing (vocational) education and training
WIFI	Wirtschaftsförderungsinstitut	Economic Promotion Institute of the Economic Chambers

Part 1: Tertiary Education

1.1   Short description of the education system, including VET

▶ Definition and understanding of tertiary education in the national context

In Austria, the term **tertiary education** is understood as synonymous with **academic education** (i. e. research-oriented education). It comprises bachelor's, master's and PhD degree pro-grammes[113] at universities, *Fachhochschulen* (FHs, universities of applied sciences) and *Pädago-gische Hochschulen* (PHs, university colleges of teacher education). To be able to understand this synonymous use, it is necessary to be familiar with the structure of the Austrian education sys-tem (cf. Fig. 1), which is characterised by a pronounced qualification-oriented initial vocational education and training (IVET) system on the upper secondary level and, in an international com-parison, a narrow and mainly academically oriented higher education (HE) sector. In the formal system, vocational education and training (VET) is primarily located on the upper secondary level. The tertiary sector focuses on academic, research-oriented education. The establishment of the FH sector (in the mid-1990s) and PHs (from 2005 onwards), which inherently have a vo-cational focus, has changed little in terms of this dichotomous attribution of educational objec-tives and tasks. Both FHs and PHs are formally (classification in ISCED[114]) and in the perception of society located on the academic higher education level.[115]

As academic education and the tertiary level are closely related, there **is hardly any under-standing** in Austria of non-HE-based **tertiary vocational education**. This term has not gener-ally been used either.[116] In countries with clearly higher study rates ("mass education systems"), the higher education sector is typically more differentiated, both in terms of content-related de-signs, training times and objectives and in their referencing to educational classifications. In the perception of the public and in the self-image of the tertiary sector, vocational qualifications in these countries are therefore seen as a part and a task of the higher education sector. In these countries, tertiary education thus does not necessarily and not exclusively imply academic/ research-oriented education.

Another reason why non-HE-based vocational education after upper secondary education is not perceived as tertiary education is connected with the fact that it is often provided in the **non-formal education sector** (i. e. outside schools and HE institutions, that is: outside the formal system).[117] This not only causes a certain fragmentation of the educational programmes, but also leads to undercoverage of the sector in official education statistics, as the qualifications acquired

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[113] In some study programmes (such as law, pharmacy, theology), the previous degrees *Magister*, *Diplomingenieur* and *Doktor* are still awarded.

[114] International Standard Classification of Education. This article mainly uses the ISCED 2011 version as it portrays the Austrian education system better than the 1997 version. The differences between ISCED 97 and ISCED 11 can be found in the Appendix.

[115] At the same time, they are in strong competition with universities – not only in terms of demand by students, but also regarding their position and perception as educational establishments. In this connection it is remarka-ble and systemically logical that they orient themselves mainly towards universities and try to reach their posi-tion: This can be seen, for example, in their self-image [as educational establishments with a research mandate/ goal], in their efforts to also obtain the right to award doctoral degrees or in the classification they are seeking for their graduates in the labour market [particularly in the public sector, as civil servants with an A-post]. The virulence of this competitive situation becomes clear in the Y architecture of the NQF/EQF (National Qualifications Framework/European Qualifications Framework), which is unique in the international context. According to this architecture, the Bologna qualifications from *Fachhochschulen* and universities form their own strand at Levels 6 to 8. Universities, by contrast, have their own self-image with related conceptions of how to define themselves/ distinguish themselves from other higher education establishments.

[116] Since the beginning of the NQF implementation process, however, this concept has been increasingly used in order to describe formal (i. e. legally regulated) and non-formal (i. e. not legally regulated) qualifications at lev-els 5 to 8 which are acquired outside the higher education sector.

[117] VET programmes provided in the formal sector after the upper secondary level (e. g. *Meisterschule* [master craftsperson school], cf. Fig. 1) are also not considered to be "tertiary" education.

there are not assigned to any ISCED level – independent of whether they are legally regulated qualifications (such as financial accounting, police training programmes, master builder, etc.) or not legally regulated qualifications (such as HR development, project management, specialist technology, etc.). Lower visibility has the result that these programmes and qualifications are often less known and less valued by society.

When using ISCED as the basis for defining tertiary vocational education, it comprises programmes in Austria which are provided at institutions of the **formal education system** (outside the academic sector) (i. e. in the last two years of five-year *berufsbildende höhere Schulen* [BHSs, colleges for higher vocational education],[118] at *Kollegs* [post-secondary VET courses], and *Meisterschulen* [master craftsperson schools], *Werkmeisterschulen* [industrial master colleges] and *Bauhandwerkerschulen* [building craftsperson schools]). Master craftsperson examinations or qualifying examinations, which do not require any previous compulsory attendance of programmes (although voluntary preparatory courses are offered by continuing education and training institutions), are also part of tertiary vocational education. Together, these programmes/qualifications form ISCED 2011 Level 5. In terms of qualifications and on account of the age at which the learners begin, healthcare and nursing programmes can also be counted as tertiary vocational education. Due to their formal entry requirements,[119] they are formally allocated to ISCED 2011 Level 4, however.[120] Also not included in ISCED, but still counting as tertiary vocational education, are vocationally-oriented programmes offered in the **non-formal sector**, such as in *Fachakademien* (specialist colleges) or *Berufsakademien* (colleges of advanced vocational studies), in the *Sicherheitsakademie* (Security Academy), etc.

As a consequence and weakness of the current system it can be noted, among other things, that there is a "pronounced segmentation of the post-secondary sector" (Schneeberger et al. 2013, 84) in the final years of the *berufsbildenden höheren Schulen* (BHSs, colleges for higher vocational education)[121] and in the special forms of BHSs – into adult education on the one hand and the higher education sector on the other. This results in suboptimal structures in terms of lifelong learning because a "**low willingness to recognise qualifications and, in particular, to enable their accumulation** can be observed in Austria. This concerns the interfaces between BHSs, FHs and universities" (ibid.). Previous specialist qualifications are therefore frequently not recognised[122] and the new access pathways to tertiary academic tracks for holders of initial vocational education and training (IVET) qualifications without the matriculation or the matriculation and diploma certificate (with the *Berufsreifeprüfung*, relevant specialist professional experience, etc.) are also only rarely used. This was recently highlighted by the OECD review of post-secondary vocational education and training in Austria (see Musset et al. 2013, 48), among other publications.

▶ Description of the typical pathway from upper secondary to tertiary education

Attendance at institutions in the **tertiary academic education sector** usually requires the higher education entrance examination (matriculation exam or matriculation and diploma

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[118] In principle, BHSs are counted as belonging to the upper secondary level. Due to their educational objective – that is: acquisition of a vocational qualification on a higher level and the HE entrance qualification – years 4 and 5 are considered to be post–secondary, i. e. they are classified as ISCED 5B.
[119] The minimum access requirement is passing tenth grade.
[120] Current efforts are additionally pursuing the goal that, in the future, qualified nurses will only be trained at *Fachhochschule* level. Programmes on basic care (nursing, care assistance) will continue to be provided at specific healthcare schools or *berufsbildende mittlere Schulen* (BMSs, schools for intermediate vocational education) with a duration of one year. Cf. ORF on 14.11.2014.
[121] More precisely in years 4 and 5 – see also Overview 2.
[122] See Heffeter und Burmann (2014), Lachmayr und Mayerl (2014), and Schmid et al. (2014).

exam).[123] This can be acquired at the upper secondary level at *allgemeinbildende höhere Schulen* (AHSs, academic secondary schools) or at BHSs (cf. Fig. 1). In the *Fachhochschule* sector, it is also possible to take up study without the higher education entrance examination by furnishing proof of relevant specialist professional qualifications (i.e. the apprenticeship diploma or completion of a *berufsbildende mittlere Schule* [BMS, school for intermediate vocational education] or other specific professional qualifications) and, where required, passing additional exams. However, not many learners take advantage of this option (cf. also the text above).

Until some years ago, access to HE-based studies was not subject to any prerequisites beyond the higher education (HE) qualification. In recent years, however, higher education institutions (HEIs) have been granted more possibilities to arrange access. *Fachhochschulen,* in particular, apply such admission procedures and tests, but they are also now established in some university disciplines (medicine, education, etc.).

Recent statistics reveal that two thirds of all holders of the matriculation or matriculation and diploma certificate take up HE-based study within three years of completing their school education (cf. Statistics Austria 2014). Among AHS graduates, the share of those who continue their education pathway with an HE study programme is especially high at roughly 89 %. Although BHS graduates already boast a qualification that is relevant for the labour market and for starting a professional career, almost 57 % still take up an HE-based study.

In addition to the AHS matriculation exam and the BHS matriculation and diploma exam, the general HE qualification can also be acquired by taking the *Berufsreifeprüfung* (BRP) exam. This BRP exam targets graduates of the dual system, of three- and four-year BMSs and of *Gesundheits- und Krankenpflegeschulen* (schools for healthcare and nursing), who already have a vocational qualification. The BRP comprises four partial exams (German, mathematics, one modern language, and a specialist area); its successful completion gives unrestricted access to HE-based studies.

Restricted access to HE-based studies is obtained by passing the *Studienberechtigungsprüfung* exam, which provides access to one group of HE study programmes. This exam usually comprises five partial exams which are laid down by a decree of the respective rectorate.

Whereas the tertiary academic sector boasts homogeneous structures and relatively uniform access requirements, the **tertiary vocational sector** is much more heterogeneous. Access requirements are similarly complex. Whereas attendance of *Kollegs* requires the general HE entrance qualification, for example, the master craftsperson exam only requires full legal age. In the non-formal sector, access requirements are even more differentiated as they are specified autonomously by the respective provider. Frequently, however, relevant (specialist) IVET qualifications and professional practice are required.

▶ Image and value of VET and Higher VET

VET plays a major role in Austria. This shows not only in the large variety of professionally qualifying programmes offered by the VET and CET systems (cf. also Fig. 1); its attractiveness also reflects in participant figures: Some 80 % of all students at the upper secondary level are attending a vocational programme (full-time school-based or dual).

The importance of **tertiary vocational education** needs to be seen in a differentiated manner. Whereas programmes in establishments of the formal education sector are definitely recognised as important, those in non-formal educational institutions are often less valued. They are also less valued compared to **tertiary academic education**. Universities, HEIs and FHs enjoy a high

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[123] For some higher education programmes such as in the arts or those related to sport/physical exercise, supplementary/admission exams are additionally foreseen.

reputation; therefore graduates of these institutions are valued differently in society from graduates of tertiary vocational programmes.

Linked to the establishment of the National Qualifications Framework (cf. Part 2), which aims to portray qualifications from all educational contexts, is the objective of creating more parity of esteem between tertiary academic and tertiary vocational education. The basis for classification should no longer be the place of learning or the access requirements (as with ISCED), but the learning outcomes, i.e. what learners are qualified for (knowledge, skills, competence). Above all, the NQF is intended to create higher visibility and thus also more recognition for qualifications from the non-formal sector based on the NQF allocation.

▶ Governance/main institutions

The governance structure in VET is very complex. Establishments in the **formal education sector** fall into the spheres of responsibility of different ministries (e.g. full-time school-based VET – Education Ministry; company-based training in the apprenticeship system – Economics Ministry; programmes at *Gesundheits- und Krankenpflegeschulen* – Health Ministry). The respective CET institutions themselves are responsible for VET in the **non-formal education sector,** but are obliged to observe legal framework conditions when teaching formal qualifications.

The supreme authority for HEIs is the Federal Ministry of Science, Research and Economy.[124] The governance structure and governance mechanisms at HEIs differ between the university and *Fachhochschule* sector, however. A new governance system for **public universities** (with autonomy for the HEIs) with three-year performance agreements and global budgets was introduced jointly by the universities and the Federal Government in 2004.[125] The governance of the **Fachhochschulen** and **private universities** is different insofar as these need to subject themselves to an accreditation procedure. Since 2012, the Agency for Quality Assurance and Accreditation Austria has been responsible for this (previously this was the *Fachhochschule* Council). At *Fachhochschulen*, mixed funding is common.[126]

▶ Role of social partners

Social partnership[127] plays an important role in Austria. Social partners have a major influence on political consensus-building and decision-making. In the VET sector, they cooperate in the following areas:

▶ In the area of VET schools, they are entitled to express their opinion about drafts of school legislation, curricula, etc. Furthermore, they are active in educational counselling and career guidance and they support cooperation between VET schools and the business sphere.

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[124] The Federal Ministry of Education and Women's Affairs is responsible for *Pädagogische Hochschulen*, however.
[125] Universities are, for the most part (some three quarters of overall revenues), funded by the Federal Government. Each of them receives a global budget, which is composed of the basic budget (as specified in a performance agreement) and the formula-based budget (determined on the basis of indicators).
[126] As part of capacity-based educational funding, up to 90 % of the ongoing operating costs and personnel expenses per student (the costs of teaching) are paid by federal funding (standard cost scheme); these calculations do not include the costs of infrastructure and research funding. Other sources of funding are the provinces, municipalities, as well as companies and interest groups. Limited liability companies (GesmbHs) often own *Fachhochschulen* and function as *Fachhochschule* providers. In addition, some institutions levy tuition fees (Österreichischer Wissenschaftsrat 2012, p. 34).
[127] Social partnership is a cooperative system between employers' and employees' associations. On the employers' side, they include the Federal Economic Chamber, the Chamber of Agriculture and, as a special case, the Federation of Austrian Industry with its voluntary membership. On the employees' side, they include the Chamber of Labour and the Austrian Trade Union Federation.

Figure 1

The Austrian initial and continuing education and training system

1 Final apprenticeship examination
2 Diploma examination
3 Final examination
4 Matriculation examination
5 Matriculation and diploma examination

General higher education entrance qualification

Vocational education and training

General education

Primary and secondary level I

* Formal qualifications = qualifications regulated by law, e.g. health and safety expert
** Non-formal qualifications = qualifications not regulated by law, e.g. expert for human resources development

Source: ibw

▶ In the apprenticeship training sector, they take the initiative to set up new or modify existing apprenticeships due to their membership on the advisory boards for apprenticeships at the federal and provincial level. In addition, they are invited to co-design the curricula of *Berufsschulen* (part-time vocational schools). As part of sector-specific collective agreement negotiations, they also set the level of apprenticeship remuneration. Administrative tasks[128] are carried out by the regional apprenticeship offices, with extensive self-administration on the employers' side (Austrian Federal Economic Chamber or WK).

▶ In the HE sector, the Chamber of Labour and the Economic Chamber as well as their educational institutions are also involved in maintaining *Fachhochschulen*.

▶ Although they are not obliged to do so, many universities and *Fachhochschulen* send their curricula to the social partner institutions and ask them for their opinion.

▶ The large CET establishments of the Federal Economic Chamber (Institute for Economic Promotion, WIFI), of the Chamber of Labour and Austrian Trade Union Federation (Vocational Training Institute, bfi) and of the Chamber of Agriculture (Institute of Agrarian Education and Training, LFI) play a major role in CVET. Moreover, social partners create financial incentives for CET (such as the educational vouchers of the AK) and are engaged in targeted lobbying to provide additional resources (such as the education bonus and training allowance).

1.2   Education programmes and qualifications on the EQF level 5 to 7 (ISCED-97 5A and 5B)

The following table gives an overview of programmes and qualifications in tertiary academic and vocational education. The following must be noted:

▶ In Austria, no valid allocation of qualifications to the National Qualifications Framework exists to date (cf. Part 2). Therefore ISCED 2011 was used for categorisation.

▶ For allocation to the categories "tertiary" and "vocational," please note the information in chapter 1.1. The term "tertiary" is used for "academic education" (bachelor, master/*Magister/Diplomingenieur*, PhD/doctorate) based on the Austrian understanding of the term, whereas educational programmes on the upper secondary level are seen as "vocational". It needs to be taken into account that tertiary academic education also contains vocational contents even though, according to the law, it is considered pre-professional training.

▶ The term "dual" – for learning arrangements with alternating places of learning (company, school/HEI) – is used only in connection with apprenticeship training in Austria.[129] In terms of their content, however, programmes in healthcare and nursing as well as the social occupations can also be characterised as dual (they consist of around 60% practical and 40% theoretical training). Although most BHS students need to do mandatory work placements (cf. text below), these types of schools provide full-time school-based VET, for which the term "dual" is neither common nor appropriate in terms of content. At the HE level there are also programmes of which practical professional experiences form an integral part (such as at *Pädagogische Hochschulen*). For these programmes the term "dual" is not used either in Austria.

▶ The table only contains legally regulated (i.e. formal) qualifications which are assigned to an ISCED level. These can be acquired in a formal educational context (i.e. at schools and HEIs) or in a non-formal educational context (i.e. at CET establishments). The table does not include legally regulated qualifications without any classification in ISCED or not legally regulated (non-formal) qualifications.

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[128] Examination of the suitability of training companies, recording of the apprenticeship contracts, organisation and implementation of apprenticeship final exams, and handling of subsidisation payments for training companies.
[129] Although there are also (a few) "dual study programmes" provided at *Fachhochschulen* (cf. text below), "dual training" in the Austrian meaning of the term refers only to apprenticeship training.

Table 1

Tertiary vocational and tertiary academic programmes (ISCED 2011)

ISCED 97 programme	Access requirements	Duration	Place(s) of learning	Work place-ment	Focus	Relevance	Funding
ISCED–2011 level 5							
Master craftsperson school (*Meisterschule*), Master craftsperson course (*Meisterklasse*)	Vocational qualification, minimum age 18	Two to four semesters	School	No	Labour market		Public
Part-time industrial master college (*Werkmeister*) and building craftsperson school (*Bauhandwerkerschule*)	Relevant specialist professional qualification – BMS or apprenticeship certificate	Four semesters	School; CET establishment	No	Labour market	Part-time industrial master college (WM): In Austria, there are more than 50 WM programmes with some 3,700 employed students.	Public
College for higher vocational education (*berufsbildenden höhere Schule, BHS*)	Entitlement to access from year 3 of BHS	Two school years (years 4 and 5) [(1)]	School	YES *	Labour market/HE entrance qualification	Some 24,000 graduates a year (54 % of all holders of the matriculation and diploma certificate)	Public
BHS Kolleg	HE entrance qualification (matriculation and diploma certificate); for technical *Kollegs* also successful completion of a relevant four-year BMS	Four to six semesters	School	YES, analogous to BHS	Labour market	Some 1,850 graduates a year (4 % of all holders of the matriculation and diploma certificate)	Public
CVET university course (matriculation level)	HE entrance qualification (matriculation certificate)	Two to four semesters	University	no	Labour market	Some 5,500 graduates a year**	Private
Bachelor's programme	HE entrance qualification (matriculation certificate)	Three years	University, university of applied science (FH), university colleges of teacher education (PH)	YES, compulsory at FH ***	Labour market or higher qualification	Some 28,000 graduates a year (52 % of all tertiary qualifications)	Public, partly private (tuition fees)

(Continuing Table 1)

ISCED 97 programme	Access requirements	Duration	Place(s) of learning	Work placement	Focus	Relevance	Funding
Master's programme	Completed Bachelor programme	At least two years	University, FH	YES, mostly only optional	Labour market or higher qualification	Some 23,000 graduates a year (44 % of all tertiary qualifications)	Public, partly private (tuition fees)
CVET university course (post-graduate)	Completed study programme or equivalent qualification	Four semesters	University		Labour market		Private

(1) In the public perception, BHS (years 4 and 5) is not classified as belonging to the tertiary sector. The current ISCED 2011 classification on Level 5 ("short-cycle tertiary education") as well as the employment areas/functions of BHS graduates, however, justify inclusion in Overview 2 – in particular from an international comparison perspective.

* Mandatory work placements have been specified for all BHS forms except *Handelsakademie* (HAK, college of business administration, where internships are however compulsory). For details, see further below.

** These figures also include post-graduate CVET university courses.

*** In FH bachelor's studies, at least one mandatory work placement needs to be completed. Work placements are also possible in FH master's studies, but they are not the rule. The specific conditions governing work placements (such as the practical contents the work placement covers or the time-lines for completion) are determined individually by the respective *Fachhochschule*. In most cases it is common practice to spend an entire semester on the work placement.

Source of graduate figures: Statistics Austria

▶ Mandatory work placement at BHS

Students of most BHSs (and of some BMSs) are obliged to complete one or several paid periods of compulsory work placement in occupation-specific companies during their summer holidays. In some cases, the school year is shortened a little for this purpose (such as at *Schulen für Tourismus* [schools of tourism]). The compulsory work placement pursues the following objectives:

▶ Applying and implementing the knowledge acquired at school in practice (not least to enhance motivation for occupation-related theory)
▶ Getting familiar with the requirements of the world of work and acquiring work ethics such as punctuality, reliability, responsibility, etc.
▶ Strengthening social and communicative competence: contact with superiors, colleagues, clients, learning teamwork, etc.
▶ Encouraging personal development: possibilities to have success and recognition as well as to deal with failures
▶ Intensifying contacts with the economy and potential later employers
▶ Stronger focus on, and first steps in, the world of work
▶ Experiencing employment.

As a rule, the work placement is a normal employment relationship to which all labour legislation provisions apply. According to the training agreement provisions, the trainee is obliged to perform appropriate practical activities in line with the curriculum for a certain period which is specified by the curriculum or law. The skills and knowledge acquired by the Student in occupation-related practical subjects should be complemented by company-based work (AK 2013). The framework conditions and legal provisions (such as concerning working hours, remuneration, aspects related to social, labour and fiscal legislation, restrictions, etc.) can be found in AK 2013.

▶ Schools with mandatory work placements

In the following, those BHS school forms are listed for which compulsory work placements are foreseen. In most cases, analogous regulations apply to BMSs.

Höhere technische Lehranstalt **(HTL, college of engineering):** Mandatory work placement stipulated in the curriculum: At least eight weeks at a time when there are no lessons, before the beginning of year 5. At **technical** *Kollegs,* <u>one</u> period of work placement of the same length is stipulated as well.

Handelsakademie **(HAK, college of business administration):** <u>No</u> mandatory work placement foreseen, although Students can complete an optional work placement. Instead, the "training firm" is stipulated as compulsory in the curriculum.
Training firm: Three to four hours per week in the third grade.
Optional work placement: If possible, four weeks before entering year 5.

Kolleg für Berufstätige **(post-secondary VET course for people in employment) at HAKs:** <u>No</u> mandatory work placement foreseen; instead, the "training firm" is stipulated as compulsory in the curriculum.
Training firm: Two hours per week in the first and second semester.

Höhere Lehranstalt für Mode und Bekleidungstechnik **(college of fashion and clothing technology):** Mandatory work placement stipulated in the curriculum.
Mandatory work placement: Four weeks between years 3 and 4 or between years 4 and 5.

Höhere Lehranstalt für Tourismus **(college of tourism):**
Mandatory work placement stipulated in the curriculum.
Mandatory work placement: A total of eight months before entering year 5.

Kolleg für Tourismus **(post-secondary VET course in tourism):**
Mandatory work placement stipulated in the curriculum.
Mandatory work placement: A total of twelve weeks before entering the third semester.

Höhere Lehranstalt für wirtschaftliche Berufe **(college of management and services industries):** Mandatory work placement foreseen in the curriculum.
Mandatory work placement: Twelve weeks between years 3 and 4.

Kolleg für wirtschaftliche Berufe **(post-secondary VET course in management and services industries):** Mandatory work placement stipulated in the curriculum.
Mandatory work placement: Eight weeks between the second and third semester.

Land- und forstwirtschaftliche höhere Schulen **(colleges of agriculture and forestry):** In the various area specialisations, several mandatory work placements are specified. Their duration varies between four and 14 weeks, depending on the area of specialisation and the phase of training.

Bildungsanstalt für Kindergartenpädagogik **(kindergarten teacher training college) and** *Bildungsanstalt für Sozialpädagogik* **(college of social pedagogy):** For these educational establishments, <u>one</u> mandatory work placement is stipulated in the curriculum.
Mandatory work placement: Eight weeks, distributed over the individual grades according to the curriculum. In addition, three weeks of summer internship in the third grade and three weeks of summer internship in the fourth grade.

1.3 Education programmes and qualifications on the tertiary level with practical learning phases

Tertiary vocational education is characterised by its **proximity to the labour market** and **companies**. In the programmes belonging to this sector, the focus is on imparting to the learners those specialist competences which can be used directly in the labour market (keyword: employability). Another major educational objective is to consolidate key competences, such as the ability to work in teams, to deal with conflict, entrepreneurial spirit, etc. Therefore it is vital to **involve companies** or their **representatives** in the entire "lifecycle" of a qualification (from the needs analysis and curriculum design to training and assessment). This involvement can take several forms:

▶ Before a programme is introduced, **needs analyses** are often carried out. These give indications of which contents should be incorporated into the training, which level should be targeted and how much potential interest there would be in graduates.

▶ Companies and sector representatives are also involved in the **curriculum design**. Often the social partners are, for example, sent curriculum drafts so they can discuss them and submit their comments.

▶ Companies play a significant role in the **training** as well – such as by providing trainers or due to the involvement of company representatives in discussions, "fireside chats", lectures, etc. In part-time programmes, real-life scenarios from company practice are frequently integrated into the classroom to ensure as much practice orientation as possible. Practical learning phases, which either alternate with theoretical instruction or are held afterwards in block form, have also been incorporated into some educational programmes (cf. dual programmes at *Fachhochschulen*, text below).[130] Many programmes are organised on a part-time basis (especially in the non-formal education context) or are held informally at the workplace; practical learning phases are then not required.

▶ In **assessment procedures** (i.e. final examinations), company representatives are also frequently involved through their participation on examination committees. In project works, which often form part of assessment procedures, topics of relevance for practice are also regularly covered in cooperation with companies.

▶ When **evaluations** are conducted to improve programmes/qualifications, companies are also usually involved.

For the following three programmes/qualifications, the specific role of **companies** in the qualification process is explained:

▶ **Master craftsperson examination**: The master craftsperson exam leads to a formal, i.e. legally regulated qualification which is awarded by the office responsible for the master craftsperson exam. This office acts in the sphere of competence delegated to it by the Ministry of Economy. Completion of a programme is not a prerequisite for sitting the exam. However, some CET institutions (i.e. in the non-formal educational context) offer preparatory courses, which are not compulsory but are attended by the majority of exam candidates. Alongside

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[130] Other examples of programmes with alternating theoretical and practical phases are programmes in kindergarten teacher training and social pedagogy. As part of these two programmes, during the school year, practical phases are held in training kindergartens and social institutions. However, both programmes are situated at the upper secondary level, even though years 4 and 5 of these five-year schools are assigned to Level 5 according to ISCED 2011 (cf. Fig. 1). In healthcare and nursing programmes (ISCED 4B), the share of practical learning phases is especially high. These schools are always set up near hospitals where these practical phases are implemented. The basic training for the police force (not covered in ISCED), which is held in one of ten training centres of the *Sicherheitsakademie* (the VET and further training establishment of the Ministry of the Interior), takes 24 months, 19 months of which comprise specialist theoretical training. Five months provide a practical introduction to the day-to-day work at a police station.

these courses, preparatory courses are also offered in the formal education sector in the form of *Meisterschulen* (master craftsperson schools) and
Meisterklassen (master craftsperson courses). The exam must be taken in the office responsible for the master craftsperson exam in all cases.

▶ *WIFI-Fachakademie* **(WIFI specialist college)**: This training provided by the Institute for Economic Promotion or WIFI (the CET establishment of the Austrian economic chambers, i. e. non-formal educational context) is a prerequisite for acquiring the (not legally regulated) qualification *Fachwirt/Fachwirtin* and *Fachtechniker/Fachtechnikerin*.

▶ **Dual study programmes at *Fachhochschulen***: *Fachhochschulen* are in principle assigned to the tertiary academic sector (cf. chapter 1.1). Nevertheless, they are characterised by a pronounced orientation towards the world of work. At some (a few) locations in Austria, dual or on-the-job study programmes are offered.

▶ Master craftsperson exam

Short description

The qualification *Meister* (or master craftsperson) can be acquired in Austria by taking the **master craftsperson exam**. This can currently be taken for 80 skilled crafts (as of February 2015),[131] for which the master craftsperson exam is considered one variant for access to the trade (i. e. for setting up a business).[132] The exam, for which an exam fee of around EUR 700 needs to be paid, comprises **five modules**: Three modules relate to the respective skilled craft (and are therefore subject matter exams), the fourth module consists of the IVET trainer exam (which entitles graduates to train apprentices), and the fifth is the entrepreneurial exam. The only prerequisite for sitting the master craftsperson exam is *de jure* **full legal age** (age of 18). But *de facto* all exam candidates hold a relevant specialist professional qualification, usually an apprenticeship diploma, and relevant specialist practical experience. Furthermore, a part of subject module exams 1 and 2 is waived for candidates with a relevant specialist apprenticeship diploma. There is no statistical information about the qualifications held by master craftsperson candidates or about how long they are active in practice before taking the exam.

Facts and figures

Overall, there are only very few **facts and figures** available about the master craftsperson exam at the national level. Although some figures have been published about passed or failed module exams, no statistical statements can be made about the annual number of awarded certificates, for example. On the initiative of the Austrian Federal Economic Chamber, however, the current situation regarding available data will be improved in the future,[133] on the one hand, to be able to make evidence-based decisions about the master craftsperson exam and, on the other hand, to obtain a better basis for allocating the master craftsperson qualification its spot in the National Qualifications Framework (NQF, cf. Part 2).

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[131] According to the *Gewerbeordnung* (Trade, Commerce and Industry Regulation Act), skilled crafts are regulated trades, i. e. people who register a trade are obliged to furnish a *Befähigungsnachweis* (certificate of competence). Therefore these individuals are also called *gewerblicher Meister* (master craftsperson in a trade). This qualification differs from the *Werkmeister* (industrial master) qualification – holders of this qualification mainly work in industrial enterprises.

[132] By way of an ordinance of the Federal Minister of Economy, it is specified for every skilled craft which alternative VET programmes/qualifications can be used to take up a trade.

[133] In January 2015, the Statistics Department of the Austrian Federal Economic Chamber sent out a proposal for the systematic collection of data related to the master craftsperson exam to the offices responsible for the master craftsperson exam.

The master craftsperson qualification is also only insufficiently covered by the international classification of education **ISCED**. This qualification is not included in the UOE[134] data collection because it does not come under formal education (cf. also the text below). But it is taken into account where the educational attainment of the population is presented[135] because it is not relevant for that purpose whether qualifications have been acquired in the formal, non-formal or informal educational context. Under the categories *Meisterschulen* and *Meisterklassen* in the classification of school forms (cf. also the text below), the master craftsperson exam is assigned to **ISCED Level 5** (ISCED 2011). It needs to be highlighted, however, that the majority of master craftsperson exam candidates do not attend *Meisterschulen* or *Meisterklassen,* but preparatory courses in CET institutions (cf. the text below). These are not covered by national or international education statistics.

Programmes

Completion of the master craftsperson exam is **not** preceded by any **compulsory training**. CET establishments (i. e. institutions in the **non-formal educational context**), however, offer part-time **preparatory courses**, which are attended by the majority of exam candidates. The main providers of such courses are the CET establishments of the social partners: the Institute for Economic Promotion (WIFI) of the Austrian economic chambers and the Vocational Training Institute (bfi) of the Chamber of Labour and Austrian Trade Union Federation. The duration and content of these courses and the course material are not regulated in a uniform manner throughout Austria – it is the responsibility of the respective establishment itself to design these courses. The courses alone, for which participants need to pay tuition fees, do not lead to any qualification – they are intended solely as a preparation for the exam, which must be taken at the responsible regional office for the master craftsperson exam (i. e. in the home province of the exam candidate).

In the **formal educational context**, (non-compulsory) **preparatory courses** for the master craftsperson exam are also offered in the form of *Meisterschulen* and *Meisterklassen*. These are special forms of engineering and crafts schools (BMSs, cf. Fig. 1) and last one to two years. They are offered in day form and free of charge for participants. *Meisterschulen* are currently (as of February 2015) set up for 15 specialist areas (such as "wood turners", "handicrafts and design", "millers, bakers, and cake and pastry bakers"),[136] *Meisterklassen* are only offered for "tailors, ladies' clothing". A prerequisite for attendance of a *Meisterschule* or *Meisterklasse* is a relevant initial qualification (such as an apprenticeship diploma or a certificate from a BMS or BHS). *Meisterschulen* and *Meisterklassen* are completed either with a final exam which replaces parts of the master craftsperson exam or with the entire master craftsperson exam, which is held at the school location in cooperation with the office responsible for the master craftsperson exam.

The role of companies

The nine **offices responsible for the master craftsperson exam** throughout Austria are each active in a sphere of competence delegated to them by the Ministry of Economy. They are located in the economic chambers of each province. The proximity of the offices responsible for the master craftsperson exam and the representatives of the economy reflect the closeness of this qualification to **companies**. These play a major role throughout the lifecycle of this qualification.

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[134] UOE = Unesco, OECD and Eurostat
[135] However, the qualifications *gewerblicher Meister* and *Werkmeister* are presented under one heading, which makes it impossible to make any statistical statements about the master craftsperson qualification in isolation.
[136] Cf. http://www.abc.berufsbildendeschulen.at/de/search.asp?query=Meisterschule (accessed on 21.2.2015).

The candidates for the master craftsperson qualification acquire most of their knowledge and skills informally, i.e. **on the job**. Following acquisition of an initial vocational education and training qualification (most often an apprenticeship diploma), graduates work for some years[137] as skilled workers in skilled crafts enterprises, where they are equipped with the necessary "tools" for the master craftsperson exam. Without this **informal practical training**, which *de jure* is not required for sitting an exam, it is almost impossible to pass the master craftsperson exam. Companies also play a major role as part of **preparatory courses** (both in the non-formal and the formal sector). Many lecturers in these courses come directly from practice and are therefore able to bring their know-how and competences to the classroom. The preparation does not comprise any practical phases alternating with theoretical phases because the non-formal preparatory courses are provided in tandem with practical work anyway and because they also contain practical subject-related elements (workshop instruction, project work, etc.).

Regarding the **organisation of the master craftsperson exam**, companies play a key role through their professional representation in the Economic Chamber. For every master craftsperson exam, subject experts draw up an examination regulation valid nationwide which lists the exam contents for the three subject modules. In addition, subject experts are also represented on the **exam committee** for the oral exam sections.

Labour market and further learning

Master craftspersons enjoy a **good reputation** on the labour market. To show clearly to the outside world that a company owner or a managing director has successfully completed the master craftsperson exam according to trade, commerce and industry legislation, they are permitted to use the terms *Meister/Meisterin* and *Meisterbetrieb* together with their name and in the company name. These companies are also entitled to use a quality label in the course of trade which designates the respective company as a *Meisterbetrieb*.

Regarding **further learning pathways**, master craftspersons can gain access to universities and *Fachhochschulen* by taking the *Berufsreifeprüfung* exam or BRP. At many *Fachhochschulen*, master craftspersons are also admitted to relevant specialist study programmes directly (i.e. without a BRP certificate). In principle, master craftspersons can apply for admission to bachelor's degree courses at Austrian *Fachhochschulen;* often they, however, need to complete additional courses (such as in English and mathematics).

Master craftspersons can **teach occupation-specific practice** at BMSs and BHSs as well as at part-time vocational schools.

Current discussions and developments

In current discussions concerning the preparation of a **National Qualifications Framework** (NQF, cf. Part 2), most advocate assigning the master craftsperson qualification to Level 6. This aims to express the equivalence of the master craftsperson qualification with the bachelor's degree. At the same time, those responsible are aware that further steps are required in terms of quality assurance (such as the standardisation of course contents and materials, precise specifications for examiners, etc.) to strengthen the master craftsperson qualification on Level 6. It is also necessary to bring the currently available data up to date (cf. the text above).

Another topic under discussion is the **direct access** of master craftsperson exam graduates **to the tertiary sector**. In recent years, there have been repeated demands to establish equivalence

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[137] Based on information provided by the offices responsible for the master craftsperson exam, these are mostly between three and eight years.

of the master craftsperson certificate at least in relevant subject-specific studies with the matriculation certificate/matriculation and diploma certificate as an HE access requirement.

In December 2013, due to a complaint, the Constitutional Court decided to abolish **regulation** of the former skilled craft *Berufsfotograf* **(professional photographer)**. This means that a regulated trade became an unregulated one, which no longer requires a certificate of competence for setting up a business. Those who are responsible for the master craftsperson qualification now fear that the decision of the VfGH could also have an impact on other skilled crafts because certain political groups are demanding a further liberalisation of the *Gewerbeordnung* at the same time.

▶ WIFI-Fachakademie (WIFI specialist college)

Short description

The *Fachakademie* is offered by the **Institute for Economic Promotion** (WIFI) in currently seven area specialisations (as of February 2015): Applied Computer Science, Automation Engineering, Manufacturing Engineering and Production Management, Interior Design, Construction and Product Design, Marketing and Management and also Media Informatics and Media Design. The non-formal (not legally regulated) programme whose graduates are awarded the title **Fachwirt/Fachwirtin** or **Fachtechniker/Fachtechnikerin** qualifies graduates for employment as skilled workers and middle management, in particular in SMEs.

Facts and figures

The **number of graduates** of this quantitatively rather small qualification has declined overall in the last ten years (from 348 in 2004 to 146 in 2014). All in all, the programme has seen about 2,400 graduates between 2004 and 2014. This programme (and the qualification awarded) is not included in the **official education statistics** based on ISCED as it is offered in the non-formal educational context and leads to a qualification that is not legally regulated.

Programmes

The training, which is offered **part-time**, lasts **four semesters** and comprises a minimum of **1,000 study units**. The precise number of lessons depends on the area of specialisation and the location where the training is held. The **prerequisites** which learners have to fulfil to attend a *Fachakademie* also differ between area specialisations. In most cases, an initial vocational qualification (apprenticeship diploma, BMS certificate) and some practical experience or relevant specific previous knowledge (e. g. in IT) is required. Before admission to a *Fachakademie*, an admission interview is held with the programme management.

In terms of contents, the *Fachakademie* aims to teach or deepen existing knowledge and skills in the respective area of specialisation. In addition, learners are taught the fundamentals of business management. The provider institution is responsible for the detailed design of the curriculum.

The **assessment procedure** for candidates to acquire the qualification depends on the area of specialisation. Usually it comprises a project, a written exam and an oral exam before an exam committee. The **project work** is carried out over a longer period and is usually started as early as the third semester. For this work, the exam candidates need to prove their ability to autonomously create concepts and show their entrepreneurial capacity by solving a subject-specific problem. This problem should have a direct relation to practice; it should be possible to implement the approaches and solutions developed by the candidates as part of their work in a company. In the five-hour **written exam,** the candidates need to prove their knowledge and answer

questions related to company management. In the **oral exam**, which is held before an exam committee, the candidates need to present their project work and answer questions related to their respective area of specialisation.

The role of companies

The *WIFI-Fachakademie* is strongly geared towards practice. The **curricula** of the individual area specialisations have been compiled in cooperation with practitioners. Furthermore, many of the **lecturers** are experts from companies and teach contents that can be applied immediately at work. Teaching is practice-oriented – in the form of case studies and projects that are implemented jointly with companies. The learners do not complete any practical phases at companies because the programmes are provided in tandem with practical work anyway. Representatives of companies are also involved in the *WIFI-Fachakademie* as **examiners**.

Labour market and further learning

The graduates of the *Fachakademie* are very much in demand in the labour market (according to information provided by WIFI) on the middle management level. But their final certificate does not qualify them for direct access to the tertiary sector. However, it replaces the entrepreneurial exam and the IVET trainer exam. In addition, it also replaces the specialist area exam as part of the overall *Berufsreifeprüfung* exam, which gives graduates unrestricted access to HEIs.

▶ Dual study programmes at Fachhochschulen

Short description

In Austria, *Fachhochschulen* are assigned to tertiary academic education despite their vocational orientation (cf. chapter 1.1). In these institutions, which were set up in 1993, students can acquire bachelor's and master's degrees in **full-time or part-time studies**. In full-time bachelor's programmes, most of which have a duration of three years, mandatory work placements of between twelve and sixteen weeks are foreseen. They aim to help ensure, as much as possible, a smooth transition from the higher education sector to the labour market. In addition to the above-mentioned modalities, so-called **dual programmes** are also offered in which theoretical and practical phases alternate. However, they are relatively rare in Austria – currently (as of February 2015), only four programmes are designed this way. The funding of *Fachhochschulen* is largely public. Some programmes levy tuition fees of some EUR 370 per semester.

Facts and figures

The number of students in dual programmes was 1,242 in the academic year 2013/14 (cf. Table 2-A in the Appendix). Despite a largely positive development in the last ten years, student figures remain overall at a relatively low level. Around 1,200 graduates were counted in the academic year 2012/13 in one of the three (at the time) dual programmes.

Programmes

Those responsible for the respective programme also determine the way the **dual structure is organised**. Usually, students spend their first year solely at the respective *Fachhochschule,* as they are provided with a sound basic education in their discipline. Afterwards, practical and theoretical phases alternate at certain intervals, e. g. three-month intervals. Students conclude a training agreement with the company and are typically paid for their work. In the practical phases, students work on subject-specific projects in which they need to implement in practice the theoretical contents they have been taught. The topics and contents of these projects need to

be coordinated with the teachers at the *Fachhochschule* at the beginning of the practical phase to ensure they fit in precisely with the curriculum.

The role of companies

In these dual programmes, **companies** are important **education and training partners**. They also play a very similar role in (full-time) study programmes where work placements lasting several weeks are mandatory. In general, companies are frequently involved in teaching at *Fachhochschulen*, for instance in the form of **cooperation projects**. However, they are not only involved in teaching, but also in **needs assessments** and **curriculum design**.

Labour market and further learning

It can be assumed that graduates of (dual) *Fachhochschule* programmes are very much in demand in the labour market. But there are no empirical findings available (yet) on this subject. Practical phases and work placements make the transition from the HE sector to the labour market easier because companies and students are able to become familiar with each other. In addition to direct labour market entry, graduates of master's degree programmes also have the possibility to acquire a **PhD degree** at a university.

Current discussions and developments

To date, the potential of "dual study programmes" as an attractive and additional form of tertiary training cannot be assessed. In principle it can be expected, however, that the Austrian company landscape with its pronounced SME structure will set limits to a stronger expansion of "dual study programmes".

1.4 Developments and main reforms in the last few years; current political debates

The particular structure of the Austrian education system (cf. chapter 1.1) gives rise to educational policy discussions during which reforms are regularly demanded – triggered particularly by European developments (introduction of a three-tier qualification system at HEIs, implementation of a National Qualifications Framework).

One aspect that is repeatedly raised in this context is the still rather **rigid access to the HE system**. Only holders of a *Reifeprüfung* certificate (i.e. either a matriculation certificate from AHS, a matriculation and diploma certificate from BHS, or an external certificate without compulsory prior school attendance in the form of the *Berufsreifeprüfung*) or of a *Studienberechtigungsprüfung* fulfil the major admission criterion for studying at a tertiary establishment. Although it is possible in principle for holders of a vocational qualification to take up study at *Fachhochschulen* (after passing an admission exam), statistics reveal that this option is hardly ever used. The *Reifeprüfung* certificate is still firmly rooted in the public perception as a decisive step towards higher qualifications. In a parallel trend, education and training programmes with the aim of "only" acquiring a qualification are not enjoying such great popularity. The introduction of the *Berufsreifeprüfung* in 1997, which enables graduates of IVET pathways (apprenticeship training, BMSs, *Gesundheits- und Krankenpflegeschulen*, etc.) to get access to higher education institutions, was an attempt to enhance the permeability to the tertiary sector and consequently also to improve the attractiveness of these IVET pathways.

The fact that this has only been successful to a limited extent is mainly connected with the **focus of the tertiary sector** on primarily academic, research-oriented education (cf. also 1.1). This education sector – which is narrowly defined in the international comparison – frequently does not offer graduates of vocational programmes (from the IVET and the CET system) ideal "connection options". In public discussions, however, tertiary programmes are perceived as

higher qualifications. Therefore the track from *Reifeprüfung* to the tertiary sector is very attractive for many learners.

Labour market demand, on the other hand, is much wider and more heterogeneous. Although tertiary education graduates are in demand in the labour market, graduates of higher vocational tracks not allocated to the tertiary sector in a formal sense also have good (frequently even better) career opportunities. The range of higher vocational programmes on offer is highly varied (in terms of providers, qualifications, quality assurance measures, etc.). This variety – as positive as it might be, on the one hand – also poses a problem of low transparency and a lack of clarity. Consequently, educational policy discussions more and more often call for a "**joint umbrella**" for these programmes and qualifications. The relevant model is Switzerland, where vocational higher qualification programmes have been combined into one separate education segment which exists side by side with the "classic" tertiary academic sector and is termed the *Tertiär-B-Bereich* (tertiary vocational sector). This indicates to an even greater extent the equivalence of these two sectors. Such an institutionalisation of **tertiary vocational education** could also enhance the visibility of qualifications obtained in this education sector in Austria. It would also be in line with the OECD recommendation of integrating VET into tertiary education while maintaining its specific orientation and, on that basis, fostering the further expansion of tertiary education in a balanced relationship between academic and vocational programmes.

Another topic of educational policy discussions in Austria is how to design this "balanced relationship". To date it has been the declared goal of educational policy-makers to increase the number of study places at tertiary institutions and hence the tertiary graduation rate. However, it has come to light that the competences of tertiary education graduates from some disciplines cannot always be used in the labour market and/or do not meet the requirements of the economy. Higher unemployment rates and precarious employment relationships testify to this mismatch. In order to continue to be attractive for students, study disciplines have therefore made the first steps to integrate the **teaching of "labour market-oriented competences"** into their curricula. The continual **expansion of the *Fachhochschule* sector**, which – although allocated to tertiary academic education – is vocationally oriented, and the introduction of the (vocational) bachelor qualification also testify to a certain **"professionalisation of academic education"**. At the same time, there are tendencies towards the **"academisation of VET"**. *Pädagogische Akademien* (teacher training colleges), for example, where school teachers used to be trained in a type of dual system, were converted into *Pädagogische Hochschulen* (university colleges of teacher education) in 2007. This conversion pursued the objective of offering a tertiary education pathway which is standard in international comparison, but with fewer elements related to professional practice and more academic and knowledge-based contents. Similar plans have been made in the field of healthcare and nursing programmes (cf. also footnote 8).

At present, many educational policy considerations have the **implementation of the National Qualifications Framework** (NQF, cf. Part 2) in mind. This framework aims to be comprehensive, covering qualifications from all educational areas – general education, VET, HE, CET. The goal is that it is not the place of learning (i.e. the schools, the HEIs, the CET establishments) or the learning context (i.e. formal education at schools/HEIs, non-formal education at CET establishments) which is decisive for allocating them to one of the eight levels, but rather the learning outcomes – that is, what learners know and are able to do by the end of the learning period. This aims to indicate equivalence in principle, at every level, between the "field of study" (in general education and academic/science-oriented programmes) and the "field of work" (in vocational programmes). The NQF with its learning outcome approach would then be better than the international classification of education ISCED at portraying the Austrian qualification landscape. ISCED builds on so-called "input criteria", according to which educational programmes and qualifications are classified based on access requirements, the duration of pro-

grammes, the age of learners, etc. Even if the latest ISCED version (ISCED 2011) does more justice to the Austrian education system than ISCED 1997 (cf. Appendix), incomprehensible assignments still occur due to input-based classification (such as the master craftsperson qualification on Level 5 in ISCED 2011, whereas in connection with the NQF, most people advocate for Level 6 for this qualification). In addition, the NQF also comprises qualifications which to date have not been covered by statistics and have remained **"blank areas"**. All qualifications that are not legally regulated ("non-formal qualifications") and that are, in their majority, acquired outside schools and HEIs (i. e. in CET establishments) are not covered in ISCED and are therefore not taken into consideration in international comparisons.

An NQF-induced understanding of "higher qualifications" in the sense of the equivalence indicated above and of the continuum between the field of work and field of study could also be a first step towards overcoming separations between education segments. These thoughts have given rise to educational policy discussions and first approaches towards establishing *Berufsakademien* (vocational academies) and a "bachelor professional" degree. Based on existing qualifications of tertiary vocational education (such as master craftsperson exams, *Fachakademien*, *Werkmeisterschulen* and other adult education qualifications), higher qualification modules in areas such as company management, human resources and project management could lead to a "bachelor professional" degree (see WKO 2012 and Mayr und Schmid 2014).[138]

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[138] This would be a horizontal qualification starting from the field of work towards "academic" education. The suggested qualification would therefore be situated between the master craftsperson certificate (in the field of work) and a bachelor of science (in the field of study) and consequently be a "linking pin" or a hybrid qualification between tertiary vocational and tertiary academic education. Since credits are awarded for qualifications acquired in CVET towards a bachelor qualification within the meaning of the Bologna process, this would truly create a bridge between the tertiary vocational and tertiary academic sector (cf. also Mayr and Schmid 2014).

Part 2: National Qualifications Framework

2.1 Short introduction

Date of implementation

The need to create a National Qualifications Framework (NQF) corresponding to the European Qualifications Framework (EQF) was already specified in the Government Programme of the last legislative period (2008 – 2013). Nevertheless, this plan still needs to be implemented in concrete terms. At the level of civil servants and experts, major preliminary work has been done since then, but the ministries with the main responsibility (education and science/research) have not yet shown the political will to follow up. In addition, the legal basis in the form of an NQF law has not yet been created (cf. also 2.4).

Background

The impetus to set up an NQF came from the Recommendation of the European Parliament and of the Council on the establishment of the European Qualifications Framework (EQF), which was adopted in April 2008. Three years previously, the majority of participating establishments had already been calling for the establishment of an NQF in a broad consultation process.

Sectors/qualifications covered, link to other frameworks

The NQF aims to portray qualifications from all education sectors (school, apprenticeship training, higher education, continuing education and training) independent of whether they are legally regulated or not (which means it will include formal and non-formal qualifications). Sectoral qualifications frameworks are not planned – the NQF is conceived as a comprehensive framework. Solely HE qualifications of the Bologna architecture will be represented in a separate framework which will, however, be connected with the NQF (Y model, cf. 2.3).

2.2 Status of the European referencing process to EQF

In June 2012, the EQF Advisory Group presented the Austrian EQF Referencing Report to the European Commission. The report must be understood as "inventory taking" because the concrete implementation of the NQF is still outstanding. At the core of the report are the level descriptions (descriptors) for the eight NQF levels and the "reference qualifications" defined for the respective levels (cf. also 2.3).

2.3 Structure

The design of the Austrian NQF is very closely connected with the EQF. The NQF will – like the EQF – comprise a total of eight levels. This number has been considered as appropriate in studies conducted about the implicit levels of the Austrian education system and in NQF pilot projects carried out in various sectors (such as construction, electro, healthcare, etc.). During the NQF consultation, most participants also advocated this number of levels.

With respect to the structure, the Austrian NQF follows the Y model (cf. Table. 2): Levels 6 to 8 are divided into two parts. The qualifications allocated to these levels have different descriptions. Whereas the Bologna qualifications bachelor, master and PhD are assigned on the basis of the Dublin descriptors, the classification of all other qualifications on Levels 6 to 8 is based on the NQF descriptors. Levels 1 to 5 are also defined via the NQF descriptors.

Table 2

Structure of the Austrian NQF – Y model (reference assignments)

3rd cycle – PhD Level (university)	NQF Level 8
2nd cycle – Master Level (university, FH)	NQF Level 7 (qualifying examination for master builders, engineering offices and the civil engineers' qualification)
1st cycle – Bachelor Level (university, FH)	NQF Level 6 (master craftsperson qualification)
NQF Level 5 (BHS qualification, BAKIP**)	
NQF Level 4 (apprenticeship diploma, BMS qualification, AHS matriculation certificate*)	
NQF Level 3 (certificate obtained at *Hauswirtschaftsschule* [secondary home economics school, two-year course])	
NQF Level 2 (certificate obtained at *polytechnische Schule* [prevocational school], *Haushaltungsschule* [secondary home economics school, one-year course])	
NQF Level 1	

Notes:
* classification under discussion (cf. 2.8)
** BAKIP is the kindergarten teacher training college

Originally, the EQF descriptors were planned to form the basis for the allocation of Austrian qualifications to the NQF. In the course of consultations, however, a "translation" of the EQF descriptors to the national context was demanded to make the abstract descriptions more easily understandable and to make the assignments easier. Subsequently, an NQF manual was written which explained the EQF descriptors, among other things. These explanations then resulted in specific NQF descriptors, which are now used for the classification.

To illustrate the NQF descriptors even further, reference qualifications were assigned to the levels. These are selected qualifications from the Austrian qualification landscape and serve to illustrate and more easily understand the requirements connected with the levels. As "qualification cornerstones", these qualifications aim to provide an aid for orientation and make it easier to allocate additional qualifications. They were the result of the previously implicit educational hierarchy of the Austrian qualification landscape. In the course of discussions with experts on the occasion of the NQF pilot projects, there was broad consensus on the level assignment of the reference qualifications.

2.4 Legal form and legal impact

An NQF law is intended to create the legal basis for the NQF. This law is currently (as of October 2014) being developed and aims to contain the cornerstones of the NQF (goals/non-goals of the NQF, classification criteria, the NQF bodies and their tasks, allocation process, etc.). This law intends to express clearly that the NQF is an exclusively orienting framework that aims to create transparency. The NQF will not have any regulating function, which means that no rights can be derived from the referencing to levels (such as regarding access to professions, access to education programmes, grading into salary brackets, etc.).

2.5 Main political objectives

The NQF is connected with the objective of creating more transparency and better comparability of qualifications and education systems in Europe and also at the national level through learning outcome orientation. Subsequently the goal is to enhance the transnational mobility of learners and employees in a qualitative and quantitative sense. An additional objective is to improve the permeability of the Austrian VET and CET systems by encouraging recognition and credit transfer processes. Another major objective of the NQF is to express equivalence in principle between general/academic education and vocational education and training.

2.6 Link to other national strategies

The establishment of an Austrian NQF is one of twelve strategic objectives that are mentioned in the Lifelong Learning (LLL) Strategy. The LLL Strategy the federal government adopted in June 2011 underlines the necessity of encouraging or creating mechanisms for the recognition of non-formally and informally acquired competences. The NQF is also mentioned as a catalyst in this connection. The strategy for the "establishment of the European Credit system for Vocational Education and Training" is also linked to the NQF development. One joint objective of the two transparency initiatives is the stronger orientation of qualification descriptions towards learning outcomes, which will lead to more mobility and enhanced permeability.

2.7 Inclusion of informal or non-formal learning outcomes

The NQF aims to enable the classification of formal qualifications (i.e. legally regulated qualifications acquired at schools, HEIs and CET establishments) and non-formal qualifications (i.e. not legally regulated qualifications from CET establishments). In addition, it aims to make informally acquired competences more visible in order to enable credits to be awarded for them which can be used to acquire formal or non-formal qualifications.

In the course of the NQF development, three "corridors" (fields of work) were formed, which focus on the different types of qualifications.

- ▶ Corridor 1 deals with the classification of legally regulated qualifications;
- ▶ Corridor 2 deals with the assignment of non-formally acquired qualifications;
- ▶ Corridor 3 focuses on methods to enhance visibility of learning outcomes acquired based on informal learning processes.

These three corridors were set up to take account of the differing structures and complex distribution of competence in the individual areas. Work in the corridors is carried out alongside regular exchanges of information and experiences.

2.8 Connection to the labour market

In principle, the NQF will cover qualifications from all educational contexts and areas. The NQF will not only portray vocational qualifications but also qualifications from the general education/academic sector. Therefore the NQF descriptors always include "field of work and field of study". This means that the NQF is not a "labour market instrument" but aims to help make the education landscape overall more transparent.

The general education/academic sector, however, has expressed reservations concerning the NQF allocation. Thus, for example, the *Reifeprüfung* certificate acquired at AHS is mentioned as a reference qualification for Level 4 (cf. 2.3). The Education Ministry's unit that is responsible for this qualification, however, has spoken out against any classification of the AHS *Reifeprüfung* for the time being. As discussions at present solely focus on assigning vocational qualifications,

the NQF has a stronger labour market orientation. However, the NQF does not have a regulating effect (such as with respect to labour market access, cf. also 2.4), but only an orienting function.

2.9 Role of social partners in the development process

For the development of the NQF, a combination of a top-down and a bottom-up approach was chosen. The goal from the beginning was to put the design and implementation of the NQF on the foundation of a broad consensus of key stakeholders of the national qualification landscape. Social partners have played a significant role in this connection and continue to do so. They have been involved from the beginning in the NQF development process through their representatives in the central NQF bodies (NQF steering group, Corridor 2 strategy group). In addition, they have been lead partners in various NQF pilot projects and have also issued a comprehensive statement during the NQF consultation process.

2.10   Quality assurance mechanisms/establishment of new institutions

Quality assurance is one of the key themes in the course of NQF allocation. The NQF will only meet with acceptance as a transparency instrument if the information connected with NQF allocation is reliable. Therefore qualification owners are required to describe their qualifications in detail when applying for allocation. This description comprises the learning outcomes connected with a qualification as well as the applied assessment procedure which – upon positive completion – leads to the acquisition of a certificate. The application form that is included in the NQF manual is the same for all qualifications, independent of the educational context (formal, non-formal) in which they have been acquired.

However, there is one difference in terms of the referencing procedure: The owners of legally regulated qualifications (such as ministries, provincial governments) can submit their applications directly to the responsible NQF body, whereas the owners of qualifications without any legal basis need to contact one of the quality and validation bodies (QVSs). They have the tasks of examining applications for NQF compatibility, assessing the appropriateness of level assignment, and ensuring the validity of information. The reason why QVSs are involved is that the range of programmes in the non-formal education sector is very heterogeneous and complex so that the responsible NQF body would not be able to guarantee that it can examine the quality and validity of applications. The formal qualification sector, by contrast, is restricted by legal regulations in the design of programmes.

2.11   Public communication/level indication in certificates

The deadline mentioned in the EQF recommendation, according to which certificates of all programmes allocated to the NQF need to indicate the NQF level by 2012, could not be met in Austria because, from a formal perspective, the NQF does not yet exist.

2.12   Current political debates, latest developments

As many stakeholder groups (such as social partners, among others) have repeatedly urged the competent ministries to express their political declaration of intent to establish an NQF, the process has been given new momentum since June 2014. Currently work is ongoing on formulating the NQF law in detail (cf. also 2.4). It can be expected that the draft law will be submitted to the National Council by the end of this year. This would mean that, in a first step, the referencing of formal qualifications could begin in 2015. In a parallel development, the structural prerequisites for allocating non-formal (not legally regulated) qualifications (cf. 2.10) will probably be created in order to classify them as quickly as possible in the NQF as well.

Appendix

▶ ISCED 1997 v. ISCED 2011

ISCED is currently being revised. What does this mean for the classification of tertiary vocational programmes in Austria?

ISCED 2011 differs from the previous version ISCED 97 in that the basic classification structure now comprises eight instead of six levels. In Levels 0 to 4, only marginal changes in the classification of education and training programmes can be observed. Essential for Austria is the separation of BHS: The first three BHS grades are classified as 3B. This means they are on the same level as apprenticeship training and BMS. **The fourth and fifth grades of BHS will be rated as ISCED 5B in the future** (cf. Overview 1). This means they are classified **in the same way as** *Kollegs, Meisterschulen* **and** *Werkmeisterschulen, Akademien* **(postsecondary VET colleges) and CVET university courses with a maximum duration of two years.** This new classification thus takes into account ongoing criticism – because previously the regular BHS form was classified as Level 4A and *Kollegs* as 5B, although both programmes pursue the same educational objective and the formal qualification is identical.

In ISCED 2011, the "classic" tertiary sector now comprises three instead of two levels and therefore reflects the Bologna structure of higher education. Level 6 is composed of bachelor's programmes (and various short studies), Level 7 of master's programmes (as well as diploma programmes and postgraduate CVET university courses), and finally Level 8 of (postgraduate) doctoral programmes.[139]

From Austria's perspective, the extent to which ISCED Level 5 can or will be classified as tertiary vocational education at all is still open. In the official ISCED document (UNESCO 2012), **Level 5** is termed **short-cycle tertiary education.**[140]

The comparison between the two ISCED versions reveals that, on the one hand, the higher qualifying education segment (from the level of the *Reifeprüfung* certificate upwards) has now been differentiated even more (from previously three to four or, including Level 4, even to five levels) and, on the other hand, that this is connected with a range of new classifications aiming to attempt to correct inconsistencies of the former classification system.

ISCED 2011 not only reflects the Bologna structure more appropriately, however. It can, in general, be interpreted as a response of international comparative education classifications/ statistics to IVET learning times, which have clearly increased over recent decades, and to higher qualification trends (educational expansion), in conjunction with a more diverse range of programmes. This has made it necessary to cover the higher qualifying education segment in particular in a more differentiated manner.

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[139] Due to the separation of bachelor's programmes (and short studies) from master's/diploma studies, in the future it will also be easier to determine the extent to which the bachelor's programmes are successful as true initial tertiary degrees, i. e. the extent to which they are accepted by students as well as in the business sphere. It remains to be seen whether the higher education area in Austria will develop in a similar way to Anglo-American countries (structuring into undergraduate and graduate study segments).

[140] From Austria's perspective it is also remarkable that ISCED 4 now represents, in a way, a "special category" for school-based healthcare programmes. In addition, the *Berufsreifeprüfung* and vocational *Statutschulen* (these are private schools which do not correspond to any public [legally regulated] school type) have been allocated to Level 4.

Table 3

Referencing of academic/general education, vocational training and higher education programmes (tertiary vocational programmes highlighted in grey) starting from the upper secondary level based on ISCED 97 and ISCED 2011

ISCED 97	Education programme	ISCED 2011
3A	Allgemeinbildende höhere Schule, upper cycle	3
3A	Allgemeinbildende höhere Schule for people in employment	
3A	Upper secondary academic *Statutschule* (including international schools) from year 9	
4A	Berufsbildende höhere Schule, grades 1–3	
3B	Berufsbildende mittlere Schule	
3B	Land- und forstwirtschaftliche mittlere Schule (school of agriculture and forestry)	
3B	Apprenticeship (dual training)	
3C	Training of teachers of physical education and sport	
3C	*Polytechnische Schule* (prevocational school)	
–	*Realschule* (secondary modern school), years 9–10	
3C	Haushaltungsschule, Hauswirtschaftsschule and other short programmes	
3C	Course in nursing	
–	Emergency medical technician course; paramedics: professional module	
–	Courses for medical masseurs and therapeutic masseurs	
4B	Schule für Gesundheits- und Krankenpflege	4
4C	Specialist training in qualified healthcare and nursing	
3C	Vocational *Statutschule* and programmes (unless assigned elsewhere)	
–	Berufsreifeprüfung	
5B	Meisterschule	5
5B	Werkmeister- und Bauhandwerkerschule	
5B	Kolleg	
5A/B	Akademie, IVET	
4A	Add-on course	
4A	Berufsbildende höhere Schule for people in employment	
4A	Höhere berufsbildende Schule, grades 4–5	
4C/5B *	CVET university course (matriculation level)	
5A	Bachelor's programme	6
5A	Short study programme	
5A	Master's programme	7
5A	Diploma programme	
5A	CVET university course (postgraduate)	
6	PhD programme (postgraduate)	8

* 4C for courses shorter than 2 years; 5B for longer courses
Notes: Destination: typical further educational/career pathways as a consequence of the programme design
A...further "general education" (share of VET < 25 %)
B...VET (share of VET at least 25 %)
C...occupation-specific labour market entry

Source: Statistics Austria, ibw-research and representation, http://www.statistik.at/web_de/static/isced_xls_-_bildungsklassifikation_023241.xls (11.08.2014)

The combination of a new classification structure and Austrian allocations/classifications gives a remarkable picture here: According to UNESCO, tertiary education starts with Level 5 (i.e. "short cycle tertiary education"). In the Austrian classification version, this level comprises the final years of BHS, *Kollegs*, *Akademien* as well as *Meisterschulen* and *Werk-meisterschulen*, i.e. education and training tracks which in this country – according to widespread interpretation and public perception – are not counted as belonging to the HE sector.

Figure 2

The IVET and CET systems in Austria according to ISCED 97
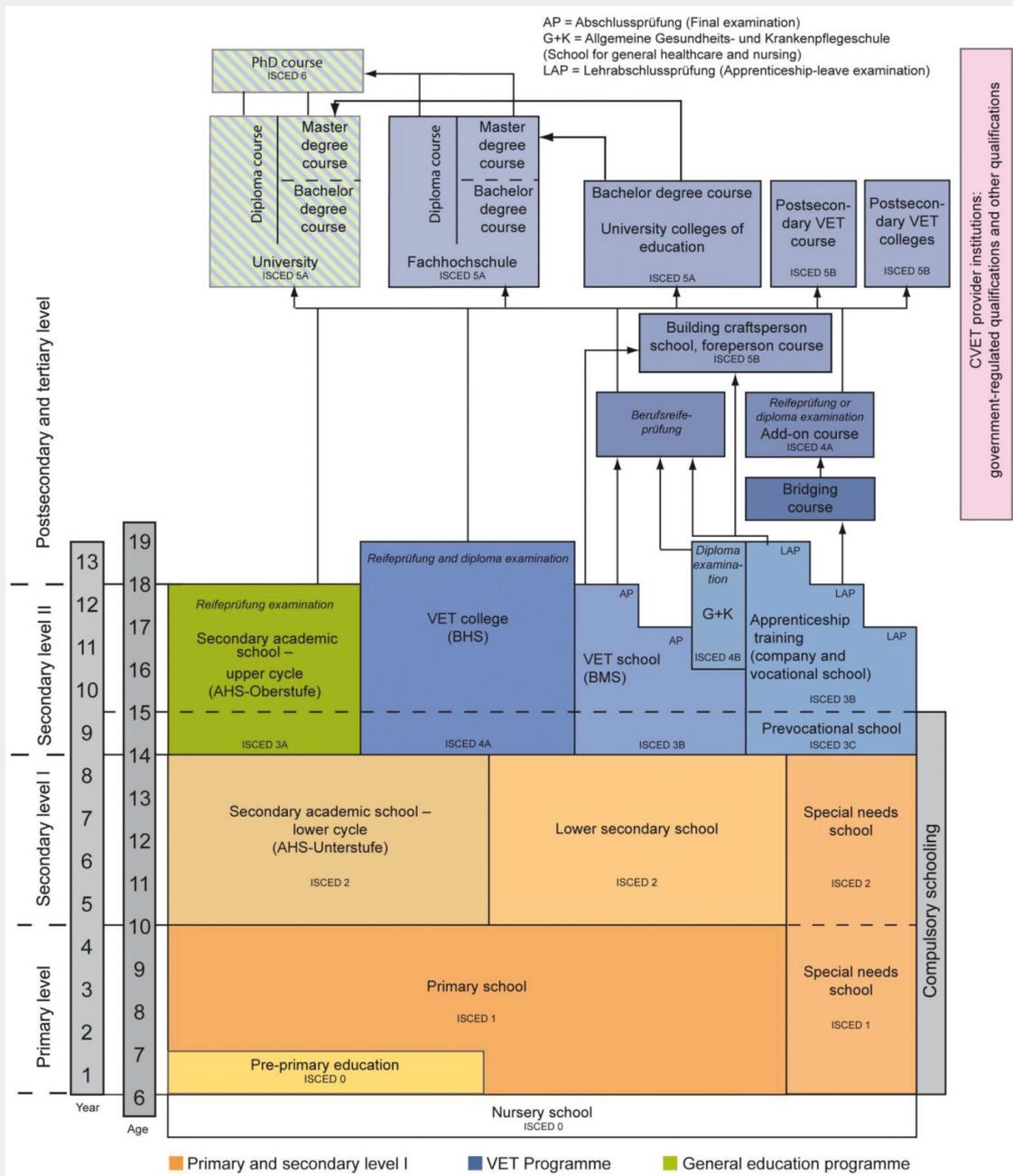
Source: ibw

Table 4

Dual FH programmes: Enrolled degree programmes, enrolled degree programmes of students admitted for the first time, and degrees, by FH provider, in a comparison over time 2003/04–2014/15

Academic year	FH Upper Austria Materials and Process Engineering (bachelor's degree programme)[1]	FH Vorarlberg Electrical Engineering (dual study course)[2]	FH JOANNEUM Graz (Styria) Production Technology and Organization[3]	FH Salzburg Information Technology & Systems Management[4]
Enrolled degree programmes				
Academic year 2003/04	0	0	118	572
Academic year 2004/05	0	0	175	589
Academic year 2005/06	0	0	241	570
Academic year 2006/07	56	0	240	598
Academic year 2007/08	128	0	241	599
Academic year 2008/09	179	0	237	611
Academic year 2009/10	251	0	214	672
Academic year 2010/11	291	0	205	581
Academic year 2011/12	295	0	212	632
Academic year 2012/13	267	0	239	623
Academic year 2013/14	290	0	308	644
Winter semester 2014/15	158	30	134	342
Enrolled degree programmes of students admitted for the first time				
Academic year 2003/04	0	0	30	91
Academic year 2004/05	0	0	32	83
Academic year 2005/06	0	0	35	87
Academic year 2006/07	28	0	31	112
Academic year 2007/08	41	0	28	101
Academic year 2008/09	34	0	36	94
Academic year 2009/10	68	0	30	122
Academic year 2010/11	65	0	31	146
Academic year 2011/12	48	0	39	145
Academic year 2012/13	55	0	48	140
Academic year 2013/14	74	0	63	151
Winter semester 2014/15	63	30	32	137
Number of awarded degrees				
Academic year 2003/04	0	0	0	47
Academic year 2004/05	0	0	0	77
Academic year 2005/06	0	0	27	63
Academic year 2006/07	0	0	19	66
Academic year 2007/08	0	0	35	72

(Continuing Table 4)

Academic year	FH Upper Austria Materials and Process Engineering (bachelor's degree programme)[1]	FH Vorarlberg Electrical Engineering (dual study course)[2]	FH JOANNEUM Graz (Styria) Production Technology and Organization[3]	FH Salzburg Information Technology & Systems Management[4]
Academic year 2008/09	20	0	30	50
Academic year 2009/10	26	0	25	158
Academic year 2010/11	29	0	22	87
Academic year 2011/12	59	0	23	102
Academic year 2012/13	53	0	20	98
Total number of degrees	**187**	**0**	**201**	**820**

[1] Sum total of bachelor's and master's progr.
[2] Sum total of bachelor's progr.
[3] Sum total of diploma and bachelor's progr.
[4] Sum total of diploma, bachelor's and master's progr.

Source: Statistics Austria, database query STATCube, date of query 02.03.2015

Bibliography

AK (2013): Pflichtpraktikum [Mandatory Work Placement]. Vienna.

BMBF (2014): ECVET. Europäisches Leistungspunktesystem für die berufliche Bildung. Grundlagen der Umsetzung in Österreich und Maßnahmenkatalog 2014–2016. [ECVET. European Credit System for Vocational Education and Training. Fundamentals of Implementation in Austria and Catalogue of Measures 2014–2016.] Vienna. Download: www.ecvet-info.at/sites/default/files/downloads/2014-04-07_strategiepapier_ecvet_in_at__final.pdf (retrieved on 14.10.2014).

BMUKK und BMWF (2011): Austrian EQF Referencing Report. Vienna. URL: https://ec.europa.eu/ploteus/sites/eac-eqf/files/AT_EQR_Zuordnungsbericht.pdf; accessed: 01.08.2016.

Duales Studium in Österreich [Dual Studies in Austria] (n. d.): www.studieren.at/duales-studium (retrieved on 24.2.2015).

Heffeter, Brigitte/Burmann, Christoph (2014): Erleichtern ECVET und Bildungsstandards in der Berufsbildung die Durchlässigkeit an der Schnittstelle HAK – weiterführende Ausbildung, insbesondere im tertiären Sektor? [Do ECVET and Educational Standards in VET Facilitate Permeability at the Interface between Colleges of Business and Further Programmes, particularly in the Tertiary Sector?] Study conducted by the corporate consulting company Heffeter. URL: https://www.hak.cc/files/attachments/service_attachments/Endbericht%20DLP_HAK.pdf

Lachmayr, Norbert/Mayerl, Martin. (2014): Anrechnungspraxis und -potenziale von Lernergebnissen aus humanberuflichen höheren Schulen im hochschulischen Sektor. [Recognition Practice and Potential of Learning Outcomes from Colleges of Social and Services Industries in the Higher Education Sector.] Vienna: öibf. URL: www.oeibf.at/db/calimero/tools/proxy.php?id=15114

Luomi-Messerer, Karin (2013): Anwendungsmöglichkeiten von ECVET im Kontext der Pflichtpraktika im BMHS-Bereich. [Possibilities of Applying ECVET in the Context of Mandatory Work Placements in the Area of Schools for Intermediate Vocational Education and Colleges

for Higher Vocational Education.] Vienna. URL: http://3s.co.at/sites/default/files/uploaded-documents/ecvet-praktikum_endbericht_201309019.pdf (retrieved on 20.2.2015).

Luomi-Messerer, Karin/Lengauer, Sonja (2009): Der Nationale Qualifikationsrahmen im Bereich Tourismus. [The National Qualifications Framework in the Tourism Industry.] Ergebnisse eines Pilotprojektes. [Results of a Pilot Project.] In: Markowitsch, Jörg (ed.): Der Nationale Qualifikationsrahmen in Österreich. Beiträge zur Entwicklung. [The National Qualifications Framework in Austria. Contributions to its Development.] Studies in Lifelong Learning 3. Lit-Verlag. p. 205–225.

Mayr, Thomas/Schmid, Kurt (2014): Berufliche Tertiärbildung. Neue Perspektiven zur Höherqualifizierung für die Erwachsenenbildung. [Tertiary Vocational Education. New Prospects for Improving Qualifications for the Adult Education Sector.] In: Magazin erwachsenenbildung.at, Issue 21/2014. URL: http://erwachsenenbildung.at/magazin/14–21/09_mayr_schmid.pdf (retrieved on 21.10.2014).

Meisterprüfung [The Master Craftsperson Examination] (n. d.): https://www.wko.at/Content.Node/service/Meisterpruefung-auf-WKOat.html (retrieved on 23.2.2015).

Musset, Pauline/Bloem, Simone/Fazekas, Mihály/Field, Simon (2013): A Skills beyond School Review of Austria, OECD Reviews of Vocational Education and Training. OECD Publishing. URL: www.oecd.org/edu/skills-beyond-school/ASkillsbeyondSchoolReviewofAustria.pdf.

OeAD/NKS (2011): Handbuch für die Zuordnung von formalen Qualifikationen zum Nationalen Qualifikationsrahmen (NQR) – Kriterien. [Manual for Referencing Formal Qualifications to the National Qualifications Framework (NQF) – Criteria.] Vienna. URL: https://www.oead.at/fileadmin/lll/dateien/lebenslanges_lernen_pdf_word_xls/nqr/EQR-Zuordnungsbericht/Anhang_4_Handbuch_Simulationsphase_NQR_Kriterien_Annex_Ref_Bericht_DE_EV.pdf; accessed: 01.08.2016 (retrieved on 14.10.2014).

ORF article from 14.11.2014: Bachelor of Science in Nursing. Pflegeausbildung wird akademisch. [Bachelor of Science in Nursing. Nursing Programmes Turn Academic.] URL: http://orf.at/stories/2253775/2253776/ (retrieved on 14.11.2014)

Österreichischer Wissenschaftsrat (2012): Fachhochschulen im österreichischen Hochschulsystem. Analysen, Perspektiven, Empfehlungen. [Fachhochschulen in the Austrian Higher Education System. Analyses, Prospects, Recommendations.] Vienna. URL: www.wissenschaftsrat.ac.at/news/Empfehlung_Fachhochschulen.pdf

Republik Österreich (2011): Strategie zum lebensbegleitenden Lernen in Österreich. LLL 2020. [Strategy for Lifelong Learning in Austria. LLL 2020.] Vienna. URL: https://www.bmbf.gv.at/ministerium/vp/2011/lllarbeitspapier_ebook_gross_20916.pdf?4dtiae (retrieved on 14.10.2014).

Schlögl, Peter (2009): Lernergebnisorientierte Lernniveaus in den nichtärztlichen Gesundheitsberufen – eine ex ante Prüfung auf Machbarkeit und Funktionalität [Learning Outcome-Oriented Learning Levels in Healthcare Professions excluding Doctors – An Ex-ante Test of Feasibility and Functionality]. In: Markowitsch, Jörg (ed.): Der Nationale Qualifikationsrahmen in Österreich. Beiträge zur Entwicklung. [The National Qualifications Framework in Austria. Contributions to its Development] Studies in Lifelong Learning 3. Lit-Verlag. p. 227–240.

Schmid, Kurt (2014): Berufliche Tertiärbildung in Österreich: Bedeutung, "blinde Flecken", Perspektiven. [Tertiary Vocational Education in Austria: Importance, "Blind Spots", Prospects.] In: WISO Sonderheft Vereinbarkeit von Studium und Beruf. WISO-Sonderheft (Wirtschafts- und Sozialpolitische Zeitschrift des ISW), Linz 2014. p. 201–226.

Schmid, Kurt/Gruber, Benjamin/Nowak, Sabine (2014): Anerkennung an der Schnittstelle HTL/HLFS – tertiärer Sektor, ibw-Forschungsbericht Nr. 181 [Recognition at the Interface between Colleges of Engineering/Colleges of Agriculture and Forestry and the Tertiary Sector,

ibw research report no. 181], Vienna. URL: www.forschungsnetzwerk.at/downloadpub/ 1415969193_fb181.pdf

Schneeberger, Arthur/Schmid, Kurt/Petanovitsch, Alexander (2013): Postsekundäre/ tertiäre Berufsbildung in Österreich. Länderhintergrundbericht zum OECD-Review "Skills beyond school". ibw-Forschungsbericht Nr. 175. [Postsecondary/Tertiary VET in Austria. Country Background Report on the OECD Review "Skills beyond School". ibw research report no. 175] Vienna. URL: www.ibw.at/components/com_redshop/assets/document/product/1379 596500_fb175_de.pdf (retrieved on 21.10.2014).

Statistics Austria (2014): Press release "Bildung in Zahlen: Mehr als zwei Drittel der Maturantinnen und Maturanten beginnen ein Hochschulstudium". ["Facts and Figures about Education. More than Two Thirds of Upper Secondary School Graduates Take Up a Higher Education Study.] URL: www.statistik.at/web_de/presse/076353 (retrieved on 21.10.2014).

Tritscher-Archan, Sabine (2008): NQR in der Praxis: Am Beispiel des Baubereichs [The NQF in Practice: By the Example of the Construction Sector]. ibw series of publications no. 141. Vienna. URL: www.ibw.at/de/component/redshop/1-studien/fb141/P253-nqr-in-der-praxis-2008&Itemid=121 (retrieved on 13.10.2014)

Tritscher-Archan, Sabine (2009): NQR in der Praxis. Am Beispiel des Elektrobereichs [The NQF in Practice. By the Example of the Electrical Sector]. ibw research report no. 147. Vienna. URL: www.ibw.at/de/component/redshop/1-studien/fb147/P305-nqr-in-der-praxis-2009& Itemid=121 (retrieved on 13.10.2014).

Tritscher-Archan, Sabine/Loisch, Ursula (2010): NQR in der Praxis am Beispiel von Qualifikationen aus dem kaufmännisch-administrativen Bereich. [The NQF in Practice by the Example of Qualifications in the Business and Administrative Sector.] Vienna. URL: www.ibw.at/de/ component/redshop/1-studien/fb160/P388-nqr-in-der-praxis-2010&Itemid=121 (retrieved on 13.10.2014).

WIFI-Fachakademie (n. d.): www.wifi.at/Karriere/Fachakademien/fachakademien (retrieved on 23.2.2015).

WIFI Österreich: Fachakademien – Jahresverläufe 1994–2014. [WIFI Specialist Colleges – Yearly Trends 1994–2014.] Unpublished presentation.

WKO (2012): Projekt Berufsakademie [The Vocational Academy Project]. Berufsbildung auf Hochschulebene. [VET at HE Level.] Vienna. URL: https://www.wko.at/Content.Node/In teressenvertretung/Aus--und-Weiterbildung/Berufsakademie_Broschuere.pdf (retrieved on 18.1.2015).

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Case study on Higher Vocational Education and Training at EQF-level 5 to 7 in Poland

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Introduction

The presented case study is a part of research project entitled Higher Vocational Education and Training at Levels 5 to 7 in the European Qualifications Framework (H-VET) – comparative analysis of the mapping of qualifications in different countries of the EU, carried out by Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung, BIBB).

The primary goal of the following report was to identify how the Polish approach to professionally oriented HE programmes differs from other countries.

The present case study is a systematic analysis of the tertiary (vocational) education and the Polish Qualification Framework (PQF). It includes context information on the education and vocational education and training system, a short overview of all vocational and academic education programmes on the EQF-levels 5–7, followed by a detailed description of all programmes that encompass practical training parts. The concluding part of the report is dedicated to the development and status-quo of the Polish Qualification Framework (PQF).

The data presented has been developed on the basis of existing law, the referencing report and the self-certification report. It should be noted that this analysis also expresses opinions and points of view of the authors.

The following report analyses a case study of two degree programmes developed with two different profiles, in two different types of HE institutions. The choice of programmes was mainly influenced by two factors. First, both programmes were expected to be representative for their profiles. Secondly, both institutions have participated in the U-Multirank project, which facilitated further access to more complete information about the programmes and institutions.

Part 1: Tertiary Education

According to Polish System of Education, children are obliged to start education at the age of 3 at institutions offering pre-primary programme of education. Afterwards, at the age of 6 or 7 they start next stage of education at primary schools, which allows them to go through consecutive stages of education presented on the diagram below. Upon completing these stages, at the age of 18 or 19, pupils may take *matura* examination. *Matura* examination allows pupils to start the third stage which is called tertiary education. The diagram of each stages of Polish Education System is presented below.

1.1   Description of the education system

Until 2014, primary school was obligatory for 7-year-olds and older; starting in 2015, it will be obligatory for 6-year-old children as well.

Children in Poland are required to continue their education until they are 18. Therefore, graduates of lower secondary school are required to attend an upper secondary school at the age of 15. They have several options:

1. Basic Vocational School (BVS) – A prospective pupil of Basic Vocational School is obliged to complete not only academic training, which is offered by all BVS, but also job-specific training, which is not offered by all BVS in Poland. In order to obtain the job –specific training, the pupils have two options. First, they may try to find an appropriate employer who would offer them job-specific training and then apply to any available BVS. Second option, if a pupil cannot find an appropriate employer, he or she should apply to such BVS which serves the purpose of teaching job-specific skills. Since not all BVS are properly adapted to serve this purpose, such pupils must choose the BV School which is equipped with appropriate laboratories and adapted to teach particular vocation.
2. Technical Upper Secondary School – it combines vocational and general education over four years. The general part is broader than at the Basic Vocational School. Pupils have the opportunity to obtain partial and compound vocational qualifications as at the BVS. The completion certificate of this school (vocational qualifications and general part) allows pupils to take the *matura* examination. There is full and direct progress to Higher Education.
3. General Upper Secondary School provides the opportunity to obtain the certificate of completing upper secondary education. This allows pupils to take a *matura* examination. The General Upper Secondary School is the main stream for young people to HE.

In addition, among the upper secondary schools, the School Education Act mentions:[141]

▶ Post-secondary non-tertiary school, which awards vocational qualifications based on external examinations.
▶ Three-year special school, which prepare pupils with special educational needs (intellectually disabled to a moderate or severe degree or with multiple disabilities) for employment.

A very important aspect of Polish vocational education is that pupils have access to higher education. This is made possible by a general education component implemented in basic vocational and technical schools according to the requirements of the general education core curriculum. Graduates of technical upper secondary school are thus eligible to take *matura* examinations and to subsequently apply to higher education institutions (a *matura* certificate is required). Graduates of basic vocational school may continue their education in general upper secondary school for adults, starting from the second year (2 years of education). After taking the *matura*

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[141] School Education Act of 7 September 1991 (Journal of Laws 2004, No. 256, item 2572 with later amendments) http://isap.sejm.gov.pl/Download?id=WDU19910950425&type=3.

Figure 1

Diagram of the education system in Poland

SECOND CYCLE
magister[1] or magister inżynier[1] − 1,5−2,5 year[3] study programme (90−150 ECTS)

LONG CYCLE
magister[1] −
4,5−6 year[3] study programme
(300−360 ECTS)

FIRST CYCLE
licencjat[2] − 3 year[3] study programme (180 ECTS)
inżynier[2] − 3,5−4 year[3] study programme (210−240 ECTS)

approx. 18

MATURA CERTIFICATE

GENERAL UPPER SECONDARY SCHOOL FOR ADULTS (3 YEARS)

graduates can continue their education at year 2

BASIC VOCATIONAL SCHOOL4 (3 YEARS)

TECHNICAL UPPER SECONDARY SCHOOL4 (4 YEARS)

GENERAL UPPER SECONDARY SCHOOL (3 YEARS)

18
17
16
15

LOWER SECONDARY SCHOOL (3 YEARS)

14
13
12

PRIMARY SCHOOL (6 YEARS)

11
10
9
8
7
6

PRE-PRIMARY EDUCATION (1−3 YEARS)

5
4
3
AGE

[1] Magister, magister inżynier and equivalent − degrees awarded to graduates of second cycle HE programmes
[2] Licencjat, inżynier and equivalent − degrees awarded to graduates of first cycle HE programmes
[3] There is no difference in the duration of study programmes between academic and practical oriented profiles
[4] Institutions belonging to the VET Sector

examination, they can apply to the higher education institutions as well. This ensure full permeability of the school system to HE.

As far as adults are concerned, they can also obtain a *matura* certificate after passing the *matura* examination. They can take the exam after getting a completion certificate for the appropriate type of school for adults. To achieve such a completion certificate, an adult must graduate from the appropriate school or pass equivalency exams (based on informal learning), which are the

part of the external examination system. The organization of those exams is the responsibility of the Central and Regional Examination Boards.[142]

In the Polish system of qualifications, there are[143]

▶ **Full qualifications** that define a level of education and are awarded only by institutions in the formal general, vocational and higher education system after students achieve the appropriate learning outcomes, for example: *matura* certificate, diploma certifying the title of *inżynier*, diploma certifying the title of *magister*;

▶ **Partial qualifications** that can be awarded by institutions within the formal education system and also by those outside the system. They may confirm a substantially lower range of learning outcomes, for example vocational certificates or certificates of completion of non-degree post-graduate studies. Qualifications provides the opportunity of attaining the right to perform specific professional activities (e. g. patent lawyer, radiation inspector) or qualifications that are of significance to specific social or professional communities (e. g. accountant);

▶ **Compound qualifications** that are sets of qualifications consisting of a few partial and/or full qualifications, in a strictly defined way. Compound qualifications are commonly used in regulated professions (e. g. medicine – paediatrician) or to form the occupation in the VET school system, for example for electricians and electrical technicians.

This unique approach has been found to be very useful in assuring the transparency of the "Integrated Qualification System," which is under development.[144]

1.2   Image and value of VET in society and culture

State Schools of Higher Vocational Education were created under the Act of 26 June 1997 on Higher Vocational Schools (Journal of Acts, 1997, No 96, item 590)[145] on the assumption that the education offered would allow the students to obtain first cycle higher education, although education at the second cycle was not excluded. At present, there are 36 public schools of higher vocational education in Poland. Only two of them, in Koszalin and Opole, operate within the territory of academic centres, whereas the others are located from 50 to more than 100 kilometres from the larger academic centres. The official translation of the name into English depends on the institution, but it is often translated as Polish professional higher education institutions. Some of them use the term "professional" in English and some use the term "vocational" or "university of applied sciences" in their name. These institutions offer all types of first cycle qualifications and some second cycle qualifications with the same requirements as the traditional universities. They don't award third cycle qualifications or any other professional certifications.

A new law introduced in 2005[146] covered all types of higher education institutions (public and private), including universities and schools of vocational education. Institutions which use the

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[142] Main goals of the Central Examination Board, School Education Act of 7 September 1991 (Journal of Laws 2004, No. 256, item 2572 with later amendments) http://isap.sejm.gov.pl/Download?id=WDU19910950425&type=3.

[143] 1. Referencing Report – referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework – http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=577
2. GLOSSARY OF KEY TERMS RELATED TO THE NATIONAL QUALIFICATIONS SYSTEM – http://www.kwalifikacje.edu.pl/pl/publikacje/617-slownik-podstawowych-terminow-ksk.

[144] Draft legislation guidelines http://legislacja.rcl.gov.pl/docs//1/234137/234138/234139/dokument121744.pdf
List of institutions invited to consultations http://legislacja.rcl.gov.pl/docs//1/234137/234138/234140/dokument121747.pdf.

[145] See: http://isap.sejm.gov.pl/DetailsServlet?id=WDU19970960590.

[146] Act of 27 July 2005 on the Law on Higher Education (Journal of Laws 2012, item 572 with later amendments) http://www.google.pl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&sqi=2&ved=0CDIQFjAD&url=http%3A%2F%2Fdziennikustaw.gov.pl%2FD2012000057201.pdf&ei=u-SDVKPGIcH1UKPog5AI&usg=AFQjCNHUHIbVQb9SFAgQKPpuYKhdnCdMiA&sig2=T6dRJoai9 gWtqZrSwKPisQ&bvm=bv.80642063,d.d24.

name "vocational" do not have the obligation to carry out scientific research, and such institutions usually provide programmes in the first cycle and sometimes in the second cycle. The same law from 2005 covered the private schools, some of which have developed research and purchased rights to confer a doctoral and also postdoctoral degree (habilitation).

The main driving force of the development of the local schools of higher vocational education was local government, which believed that the emergence of such schools would enhance and stimulate the progress of their entire region.

The economic and demographic situation of the mid-1990s was another important factor which influenced and supported the creation of vocational schools. At that time, three factors came together to create a great unmet demand for HE studies in Poland: a population boom, soaring ambitions of Polish society, and the fact that universities were too slow to adapt to the new expectations of the labour market. The idea of creating state schools of higher vocational education made use of the guidelines for the development of higher education in Poland – namely, the need to set up schools in Poland which would provide practical training, apart from theoretically-oriented academic education.[147]

Vocational institutions of higher education are governed by the same regulations as academic institutions, including the same regulations regarding the accreditation of degree courses. Over many years, not a single vocational school has received a negative assessment, which attests to the fact that the quality of education is well monitored. It is not uncommon for vocational schools to employ academic staff in order to meet the so-called minimum staffing requirements. State schools of higher education generally do not participate in research activities and where they do, it is in the development phase. They do not receive any financial assistance for staff career development, which significantly inhibits the development and improvement of staff qualifications. However, the numbers show an increase in academic teachers whose first place of work is a higher vocational school (54%-77% of any given university).

Currently, higher vocational schools are an important part of regional development. Despite the fact that the number of students is disproportionately smaller than at large academic centres (1,000 or 2,000 in a typical school, compared to 40,000 in a typical university), their region-related activities are visible and significant. As smaller centres, higher vocational schools find it easier to establish partner relations with external stakeholders.

Building a strong relationship with industry also enhances schools' ability to develop their teaching-aids and classroom resources – students of vocational schools are often invited to use the machinery or equipment in the laboratories of a given company. This is an excellent opportunity to equip the graduates with the most up-to-date competences in terms of labour market needs. In addition, universities in most towns and cities have followed up on the idea of practical study programmes aimed at equipping students with professional competences. They are readily taking the opportunity to invite industry representatives into the teaching process – usually as part-time teachers. As a result, it has been possible to develop a secure platform for the exchange of academic and professional experiences beneficial to all parties – students, teachers and industry representatives.

The perception of vocational schools in Poland is, however, very different. On the one hand, such schools are a prominent driving force supporting the development of a region's human capital potential. The feedback received from the companies located in different regions has been very positive; while maintaining the same quality of an employee, companies can develop their

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[147] OECD Reviews of tertiary education, Poland, 2007 http://www.oecd.org/poland/oecdreviewsoftertiaryeducation-poland.htm.

business at a lower expense. Higher vocational schools are an important partner for local governments and play a very active part in the development of the region.

On the other hand, in a time of demographic decline, higher vocational schools are competing with academic centres and gradually enlarging their area of dominance. Higher vocational schools are being discredited by the representatives of some academic societies who disapprove of higher vocational schools as centres offering a lower quality of education, underqualified staff and low scientific potential. It is difficult to generalise that there is a perfect symbiosis between academic and vocational schools in the Polish system of higher education. It is however vital to emphasize that state higher vocational schools are a very important centre of widening participation, so their existence is not only important from the point of view of a small town or the region, but of the entire education system in Poland.

Currently, some professional schools already found their identity, clearly defining their mission as schools focused on professional skills useful for the labour market. Other professional schools are still seeking their identity.

1.3 Governance of education system

In Poland, there are two separate ministries responsible for education: the Ministry of National Education (EQF levels 1 to 4) and Ministry of Science and Higher Education (EQF levels 6 to 8). To ensure the quality of all qualifications awarded in the education system, appropriate quality assurance systems have been implemented. The referencing report states that:

The formal general and vocational education system, regulated by The School Education Act of 7 September 1991 (Journal of Laws 2004, No. 256, item 2572 with later amendments), has a system of pedagogical supervision, which is based on:[148]

▶ evaluating the status and conditions of didactic, developmental and care activities performed by schools, educational facilities and teachers,
▶ analysing and evaluating the outcomes of didactic, developmental and care activities, as well as other statutory activities of schools and educational facilities,
▶ providing assistance to schools, educational facilities and teachers in their work of teaching, child development and pupil care,
▶ inspiring teachers to undertake innovative pedagogical, methodological and organizational activities.

An important role is also played by the external examination system – a key element for ensuring and improving the quality of education and qualifications awarded. The Central Examination Board as well as eight Regional Examination Boards are responsible for organizing external examinations. While taking *matura* examinations, for instance, each candidate takes the same exam at the same time. Exam results are assessed according to uniform criteria and the examiners review the exam results without knowing whose examination they are assessing. The Regional Examination Boards also organize external examinations for (partial) vocational qualifications at upper secondary VET schools. In this case, examinations are organized at different times and places – mainly using the well-equipped school premises.

Higher education, including higher vocational schools, is regulated by the Act of 27 July 2005.[149] Institutions of higher education are directly responsible for the quality of qualifications awarded as well as for the proper development of the study programmes leading to those qualifications. They are legally obliged to constitute an internal quality assurance system.

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[148] Referencing Report – referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework – http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=577 pp 52–53.
[149] Law on Higher Education (Journal of Laws 2012, item 572 with later amendments).

In accordance with the applicable law, HEIs are required to submit to an evaluation by the Polish Accreditation Committee (PAC)[150] – an independent body, financed by the government, which is responsible for assessing higher education institutions. The PAC evaluates quality of education, as well as the qualifications awarded, and provides assessments to the Ministry of Science and Higher Education.

The PAC evaluates programmes and institutions. Programme assessment includes the evaluation of, among others:[151]

▶ whether the learning outcomes determined by the higher education institution for a given study programme are congruent with the descriptors for the given area of study in the National Qualifications Framework for Higher Education,

▶ whether the conditions of studies and the educational process allow for these outcomes to be attained,

▶ whether learning outcomes are correctly validated.

An institutional assessment takes into account the following issues, among others:

▶ the operation and improvement of internal quality assurance systems for education,

▶ the accreditation or certification from foreign institutions obtained by the faculty of the higher education institution,

▶ the results of the previously performed programme evaluations.

In addition to the Polish Accreditation Committee, there are several sectorial committees operating under the umbrella of the Conference of Rectors of Academic Schools in Poland:

▶ Accreditation Commission of Universities of Technology[152] – accrediting agency, which accredits educational programmes at technical universities, gives support for the MOSTECH (national exchange programme for students of technical faculties), helps HEIs to implement internal quality assurance systems and promotes examples of "best practice";

▶ University Accreditation Commission,[153] which creates and implements the standards of education quality at universities, creates an accreditation system for study courses at universities and promotes the Student Mobility Programme (MOST);

▶ Accreditation Committee for Polish University Medical Schools,[154] which defines conditions necessary to conduct undergraduate studies in University Medical Schools as well as accreditation standards for the fields of studies related to health care. It also provides a continuous assessment of the quality of teaching;

▶ Accreditation Committee for Art Schools,[155] which develops educational standards in Art Schools and accredits educational programmes at art schools.

The primary objective of those committees is the continuous improvement of the quality of education. The Polish Accreditation Committee's concern is to check whether the formal requirements are being fulfilled. Accreditations of the sectorial committees are voluntary.

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[150] http://www.pka.edu.pl/en/.
[151] Self-Certification Report of the National Qualifications Framework for Higher Education (2013) Warsaw: Educational Research Institute http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=702.
[152] http://www.kaut.agh.edu.pl/homepage/.
[153] http://www.uka.amu.edu.pl.
[154] http://www.kaaum.pl/.
[155] http://www.akua.art.pl/.

1.4 Understanding of tertiary, vocational, dual education in Poland

▶ Tertiary education

Tertiary education in Poland broadly refers to the Higher Education sector only (Universities and Higher Vocational Schools). The Polish HE system follows the Bologna scheme and most of its programmes consist of two cycles: a three- or four-year first cycle (equivalent to *bachelor)* degree, followed by a two-year second cycle (equivalent to *Master*) degree. Some second cycle (*Master)* degrees are, however, granted after a unique long-cycle programme, lasting between 4 and 6 years (for example, 5 years for pharmacy or 6 years for medicine). Third-cycle *(PhD – doctoral)* programmes are usually completed in 4 years. HE in Poland has not adopted the concept of the "short cycle within the first cycle," which was proposed in the early stage of the development of the Qualification Framework for European Higher Education Area and defined as level 5 of EQF for LLL. Education at the tertiary level is also provided by teacher colleges and higher education institutions in Poland. Examples of such institutions are teacher training colleges (*kolegium nauczycielskie*), foreign language teacher training colleges (*nauczycielskie kolegium języków obcych*) and colleges of social work (*kolegium pracowników służb społecznych*). The level of these qualifications in the Polish Qualifications Framework is not determined yet, as the future of these institutions is not clear. Many of these institutions have declined and some have closed.

▶ Vocational education

Historically, Polish vocational education has experienced considerable change and reform and this reflects the changing social conditions. The change from a centrally planned to a market economy has presented many difficulties in reforming the structure of vocational education.

It turns out that the structure of vocational education in Poland, coming from the centrally planned economy, is difficult to reform. Attempts to adapt this structure to the conditions of a modern information society and the processes of globalization and increased competition in global markets have not been completed successfully.

Previously, vocational education played a significant role in economic policy, which was primarily focused on industrial production. Schools were strongly associated with state-owned enterprises, which defined the qualifications of prospective employees. In the early 1990's, the Polish education system was reformed and vocational education lost its prestige and support from state-owned companies. After privatization, enterprises did not support vocational schools. The new educational policy prioritized the creation of lower cost schools of humanities, which became increasingly popular.

In the late 1990's, the plight of vocational education was exacerbated by a difficult economic situation, which resulted in a decline in production and increasing unemployment. Government spending on vocational education dropped significantly and, on the other hand, enterprises could not afford to train their staff. Additionally, many enterprises that had previously supported vocational schools and provided their graduates with employment had collapsed. Graduates could not find employment. If they did, their wages were very low. As a result, the interest in vocational schools significantly dropped.

In 2012, the government therefore started to implement a reform of vocational education. The aim of the new regulations, the core curriculum for vocational education, was to improve the link between what was offered in vocational education and the needs of the labour market.

The new vocational education core curriculum included 200 school occupations, in which 252 qualifications were distinguished. Most of those occupations embraced one, two or three qualifications. The new core curriculum for vocational education used the term "learning outcomes".

The vocational education core curriculum also described the conditions for conducting vocational education, including practical training.

This new way of understanding occupations learned in schools as compound qualifications comprising one, two or three separate vocational qualifications made it possible to achieve subsequent occupations without having to start the vocational education process "from the beginning." Successive, appropriately chosen qualifications may be added to those already attained.

Figure 2

Attaining successive occupations by adding subsequent qualifications (certificates)
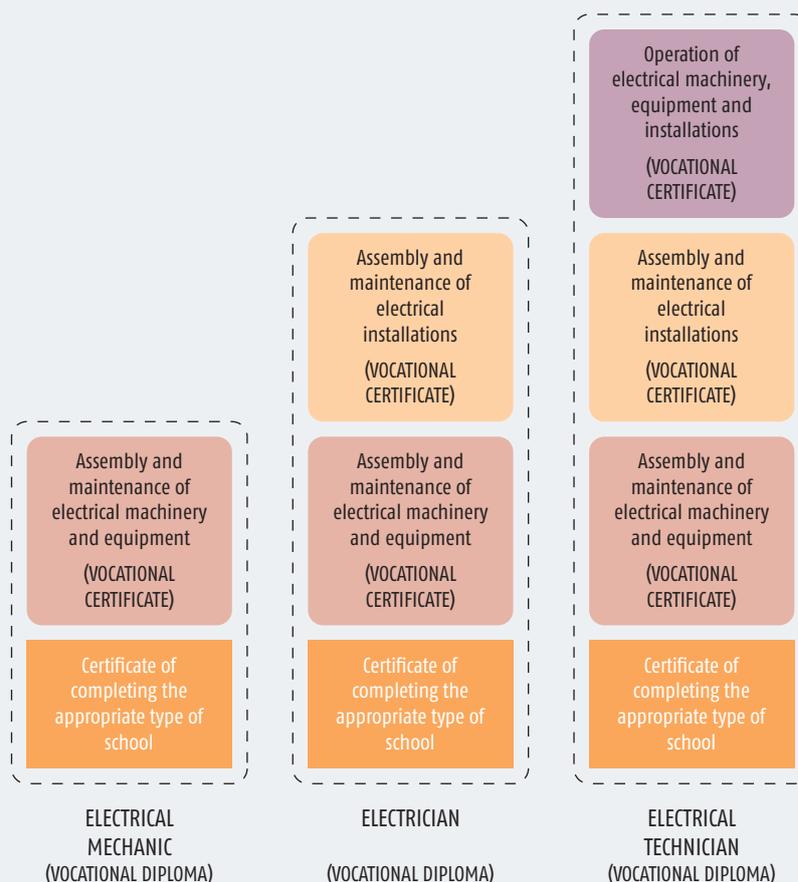
Source: *Referencing Report – Educational Institute*

As far as levels 6–7 of the EQF are concerned, HE institutions are classified by Polish law as either academic (those that are eligible to award third-cycle *(doctoral)* degrees) or vocational (those that do not have the right to award third-cycle *(doctoral)* degrees). The programme profile is not related to the type of institution: an academic higher education institution can offer practically oriented study programmes, while a vocational one can offer academically oriented study programmes. The staff requirements for the practically oriented and academically oriented studies do not differ much. Vocational education is based on academic programmes and academic staff.[156]

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[156] Resolution of the Minister of Science and Higher Education of 5 October 2011 on the conditions of providing degree programmes in a given field and a given level of study (http://isap.sejm.gov.pl/Download;jsessionid= C9BAC3CAA37EB41AF280A366C2F55EF8?id=WDU20112431445&type=2).

The main difference between those profiles is that practically oriented study programmes incorporate additional learning outcomes in the category of skills that can be obtained only through work-related experience (at least three months of practical training at an enterprise or similar experience throughout the study programme). The main goal of this is to show that practically oriented programmes are in fact "better" (at least with regard to the set of skills obtained by the graduate) and equally valuable as the academically oriented ones. There is no obligatory distinction in duration of study programmes between academic and practically oriented profile.

As the concept of practically oriented study programmes is relatively new, established only since 2011, these studies are not generally understood as being typical vocational education. Only the State Schools of Higher Vocational Education, which are focused on practical education adapted to the local labour market needs, are understood in general as vocational education.

▶ Dual education

Dual studies in Western European countries are an extremely attractive form of education that meets the employers' and students' needs, and enterprises in Poland are beginning to express an interest in this mode of study. Unfortunately, among Polish HEIs, dual studies have not proved popular, which seems difficult to explain in the light of rising unemployment.

When the Law on Higher Education Act was being amended, extensive consultations took place, including with labour market representatives, and now special provisions concerning dual studies can be found in the 11 July 2014 amendment to the Act. Dual studies are currently being tested by a few Polish universities, e. g. Poznan University of Technology, Opole University and Poznan School of Logistics.[157]

1.5   Role of social partners in development and governance of VET education on level 3–4 PQF

Collaboration between employers and vocational education in Poland has been very limited and has mainly concerned the organization of internships, but since 2003, the Ministry of National Education has signed several agreements with employers' organizations to intensify cooperation between schools and the economic environment.

Currently (2014), stakeholders and social partners are involved in the process of developing the core curricula in vocational education and training, and they perform specific roles in this process. The core curricula are usually developed in three stages:

1. Preliminary project, which involves a teacher of a given profession, the representative of the academic staff and the employers' representative ,
2. Parallel consultations with other representatives of academic staff and employers,
3. Review provided by 1–2 representatives of employers and 1–2 representatives of teachers.

▶ Description of education programmes and qualifications on EQF levels 5–7

A key element of the modernized qualifications system in Poland is the Polish Qualifications Framework (PQF),[158] which consist of eight levels corresponding to the European Qualifications Framework (EQF). It therefore differs from the traditional seven-stage Polish education system

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[157] To learn more about dual study please follow the links below:
http://studia-dualne.pl
http://www.uni.opole.pl/page/153/ucz-sie-pracuj-i-zarabiaj-studia-dualne-na-uo
http://www.wsl.com.pl/studia-dualne.
[158] Referencing Report – referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework – http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=577.

by introducing the additional level 5. This level is located between the general education (from pre-primary education at level 1 to *matura* examination at level 4) and subsequent stages of higher education (levels from 6 to 8).

At present, there are no full qualifications in the Polish system of education at level 5. However, within the pilot project run by the Educational Research Institute, a number of partial qualifications have been identified that confirm learning outcomes corresponding to level 5. Whether a given qualification can be assigned to level 5 should be decided by the institution responsible for the qualifications register, after having analysed the compatibility of intended learning outcomes with those defined for PQF level 5. The exact regulations concerning the "Integrated Qualification System" will be introduced by a new law.[159]

It should be remembered that level 5 of the PQF is not an empty level, but it is still not treated as tertiary education. The question is whether it should remain like this and why Polish HEIs could not develop programme of studies resulting in qualifications at level 5. The problem requires a serious debate with all of the academic community and other stakeholders.[160]

According to the Act of 27 July 2005,[161] a candidate who would like to study at a HEI should meet specific admission requirements established by the institution and have:

▶ a *matura certificate* – in case they are applying for admission to first-cycle and long-cycle studies;
▶ a *licencjat, inżynier, magister or equivalent degree* – in case they are applying for admission to second-cycle studies.

Specific additional admission requirements including e. g. an aptitude tests in the field of arts and sports or an interview depend on the type of institution or faculty and are defined by appropriate university resolutions.

According to the Act of 27 July 2005 on the Law on Higher Education (Journal of Laws 2012, item 572 with later amendments):

▶ first-cycle studies last at least 6 semesters for a *licencjat* degree (180 ECTS) and at least 7 semesters for a *inżynier* degree (210 ECTS);
▶ second-cycle studies last 3–5 semesters (90–150 ECTS);
▶ long-cycle studies last 9–12 semesters (270–360 ECTS);
▶ postgraduate non-degree studies last no less than two semesters and the study programme should allow the student to obtain at least 30 ECTS;
▶ part-time studies may last one or two semesters longer than the corresponding full-time studies.

The majority of the classes planned in the study programmes take place on the HEIs' campuses. Nevertheless, there are some activities, in particular within the programme of studies at the State Schools of Higher Vocational Education, which take place at the enterprises cooperating with those schools.

The inclusion of compulsory internships in the programmes of studies is regulated by internal university rules. Usually student internships last approximately four or six weeks and must be done during the summer holidays before the last year of studies. This is not only the case of practically oriented study programmes where the obligation of doing an internship is imposed by

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[159] Draft bill guidelines on Integrated Qualification System (version of 1 August 2014) http://legislacja.rcl.gov.pl/lista/1/projekt/234137.
[160] Chmielecka E.: "5-poziom-brakujące ogniwo" [5th level-missing link?] Polish Rectors Foundation, Oficyna Wydawnicza Politechniki Warszawskiej http://www.frp.org.pl/publikacje/Poziom_5.pdf.
[161] The Act of 27 July 2005 on the Law on Higher Education (Journal of Laws 2012, item 572 with later amendments.

state law.[162] Generally, such internships are an integral part of the final semester of study. In order to provide students with the possibility of completing compulsory internships, HEIs often sign agreements with local enterprises. There are, of course, some students who benefit from internships under the Erasmus+ programme. In that case, apart from the financial support from the company, they receive Erasmus grants.

In the Polish qualifications system, there is no distinction between the academic and professional degrees at the levels 6 to 8. The names of the degrees are exactly the same, but the final document or Diploma reflects the profile of the programme (academic or practical). The profile is also visible on the Diploma Supplement that has to be issued to all graduates.

Table 1

Qualifications (full) on level 6 and 7

Name of the qualification	Certificate/degree/ diploma	EQF level	PQF level	professional/academic	Issuing institution
Licencjat and equivalent	Diploma	6	6	depends on the programme of study	HEI
Inżynier and equivalent	Diploma	6	6	depends on the programme of study	HEI
Magister and equivalent	Diploma	7	7	depends on the programme of study	HEI

1.6   Basic quantitative data on HE (level 6 and 7)

In the 2012/2013 academic year, there were 1,676,900 students in Higher Education Institutions (including Higher Vocational Schools), which is 4.9 % less than in the previous academic year. This decline in the number of students has been influenced by demographic change (the population aged 19–24 has been decreasing).

Only 29, or 1 % of all higher education institutions, were public institutions; nevertheless, the latter institutions recorded the highest number of students − 72.6 % of all students.

Public HEIs receive subsidies from the central government for full-time studies, while part-time studies at those institutions and all studies at non-public HEIs are financed mainly by student fees. Higher Education Institutions' total revenues amounted to PLN 20,248.3 million; these revenues mainly came from teaching activity, which accounted for 76.9 % of total revenues in public institutions and for 84.8 % in non-public institutions.

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[162] Resolution of the Minister of Science and Higher Education of 5 October 2011 on the conditions required to conduct studies in a specific field and level of education (Journal of Laws 2011, No. 243, item 1445, with later amendments). http://isap.sejm.gov.pl/DetailsServlet?id=WDU20112431445.

The figure below shows the funding sources for the teaching activity in public HEIs:

Figure 3
Funding sources of the teaching activity in public HEIs

Other
11.9 %

Fees for
teaching
activities
15.5 %

Funds from commune
budget and other
public funds
0.2 %

Subsides
from
government
budget
72.4 %
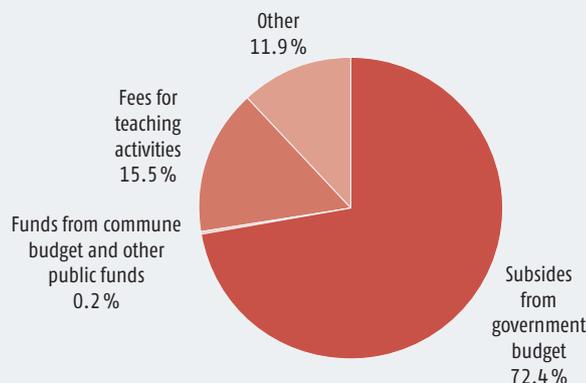
Funding sources for the teaching activity in non-public HEIs are shown in the figure below. Funding for teaching accounted for 84.8 % of these institutions' total revenues.

Figure 4
Funding sources of the teaching activity in the non–public sector

Subsidies
from
government
budget 7.3 %

Other
7.6 %

Funds from commune budget
and other public funds
0.2 %

Fees for teaching
activities 85.0 %
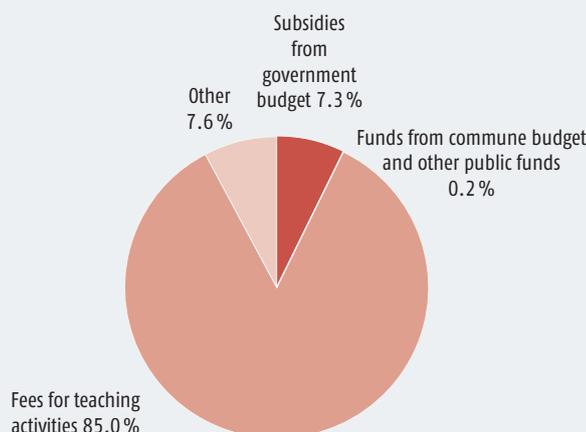
Revenues from research activity are other important sources of universities funding – in public institutions, they account for 15.9 % of total revenues, and in the non-public institutions, just for 3.6 %. Other revenues, i. e. from separate economic activity and from the sale of materials and goods, are of little value.

1.7 Comparison of practically and academically oriented first–cycle study programmes – case study

Learning outcomes of study programmes (for first- and second-cycle qualifications) developed by higher education institutions are based on the level descriptors (learning outcomes) in the National Qualifications Framework for Higher Education.

The resolution concerning the learning outcomes of first- and second-cycle studies for general education and practical profiles was issued by the Minister for Higher Education and defined eight broad areas of study:

1. Humanities
2. Social sciences
3. Natural sciences
4. Life sciences
5. Engineering and technology
6. Medical sciences, health sciences and physical education
7. Agricultural, forestry and veterinary sciences
8. Fine arts.

These outcomes are very general descriptions of knowledge, skills and social competences, further developing the descriptions in the Qualifications Framework for the EHEA that are appropriate for each broad area of study.

The higher education institution (unit offering the studies) are supposed to describe each first- and second-cycle study programme (as well as the long-cycle Master's degree programmes, where such studies are available) according to:

▶ One or more of the eight broad areas of study to which it belongs,
▶ The profile – academic or practical –which it has.

Polish higher education institutions are classified by the Law on Higher Education as either academic (those institutions eligible to award third-cycle or doctoral degrees) or vocational (those institutions that do not have this right). This programme profile is not related to the type of institution: an academic higher education institution can offer practically oriented study programmes, while a vocational one can offer academically oriented study programmes.

The remainder of this section compares two programmes of Mechanical Engineering delivered at two different institutions – Lodz University of Technology and The State School of Higher Professional Education in Elbląg.

Lodz University of Technology (TUL) was created in 1945 and has developed into one of the largest technical universities in Poland. Approximately 21,000 students are currently studying at the university and the educational and scientific tasks of the university are carried out by about 3,000 staff members. It is the fourth best technical university in Poland (according to a Perspektywy and Rzeczpospolita university ranking), a PROStudent university (the title was awarded by the Student Parliament of the Republic of Poland in 2011), the fourth most frequently selected university, according to a Ministry of Science and Higher Education report and the most creative and innovative university in Poland in increasing student employability (this title was awarded by The Academic Information Centre). Unfortunately, data on the success of transfer from study to the labour market is not available for particular study programmes.

The State School of Higher Professional Education in Elbląg has earned a leading position among vocational schools in Poland in the 16 years of its existence. The study programmes have not only been brought up to high standards equalling those of reputable academies, but they also contain 15-week integrated student placements that secure excellent training before the graduates begin their professional lives.

The School participates in the development of the whole region in cooperation with local authorities, other educational institutions and companies in the city, the region and the international neighbourhood. It has considerable influence on the creation of an information society.

Figure 5

Diagram showing how learning outcomes are defined for study programmes based on the level descriptors (learning outcomes) of the NFQ-HE

NATIONAL LEVEL

POLISH QUALIFICATION FRAMEWORK

↓

LEVEL DESCRIPTORS FOR HIGHER EDUCATION

The minister for higher education's resolution defining the learning outcomes of first and second cycle studies for the general education and practical profiles in eight broad areas of study:
- humanities,
- social sciences,
- exact sciences,
- life sciences,
- engineering and technology,
- medical sciences, health sciences and physical education,
- agricultural, forestry and veterany sciences,
- fine arts.

HEI LEVEL

When developing a study programme, the higher education institution should decide about:
- cycle of study programme (first or second)
- one or more of the eight broad areas of study to which it belongs,
- the profile – academic or practical – to which it belongs
and choose the appropriate table describing learning outcomes for the specific field, cycle and profile.

HEI defines learning outcomes for study programmes based on the level descriptions described by ministry resolution.

Table 2
General comparison of the two programmes

Name of education programme and qualification	Mechanical Engineering and Applied Computer Science[1]	Mechanical Engineering[2]
Name of the University	Lodz University of Technology	The State School of Higher Professional Education in Elbląg
Level of qualification	Level 6 of EQF/PQF	Level 6 of EQF/PQF
Qualification awarded	Inżynier	Inżynier
Profile of the programme	Academic	Practical/ vocational
Quantitative data of participants/graduates, development in the last 10 years	2004–2014: number of participants 220; number of graduates 196	2004–2014: number of participants 592; number of graduates 153
Relevance (qualitative information): appreciation/image, current education policy discussions	The most extensive discussion concerning current education policy is related to the professionalization of studies; there is still some concern in the university that first degrees should not be geared too narrowly to short-term needs on the labour market. However, on the whole the move is clearly towards a stronger attention to employment prospects and the acquisition of core, or transversal, skills. The second important point in current faculty policy is related to recognition of prior learning issue. Under the Polish law of 2005, some of the courses included in a study programme can be recognized on the basis of qualifications obtained outside a higher education institution. Particularly a student who documents professional experience or has run a business of their own consistent with a programme of training included in the study programme, can have such training recognized. Below are the forms of activities not included in study programmes for which ECTS can be awarded: ▲ participation in the activities of scientific circles, ▲ participation in a research project, ▲ participation in a project conducted for the needs of industry, ▲ professional work, ▲ vocational qualifications confirmed by certificates, ▲ participation in lectures/ seminars conducted by the representatives of companies, ▲ placement abroad	The programme "Mechanical Engineering "was founded in 1998. From the very beginning, it was a practically oriented programme. Almost all discussions related to the programme revolve around the employability and soft competences of engineers. The school puts special emphasis on developing social skills such as team work, communication in foreign languages, etc. It is also essential for programme providers that graduates should be equipped not only with competences related to their area of studies, but also with generic competences that will allow them to find their place in a wide spectrum of contexts.

(Continuing Table 2)

Name of education programme and qualification	Mechanical Engineering and Applied Computer Science[1]	Mechanical Engineering[2]
Significance of practical learning phases	100 ECTS/240 ECTS Internship 15 ECTS	109 ECTS/240 ECTS Internship 30 ECTS
Forms of integration of practical learning phases: structural/organizational, curricular	▲ Laboratories ▲ Student projects ordered by industry ▲ Internship	▲ Laboratories founded by industry at school ▲ Laboratory facilities located in companies (with open access for students) ▲ Internship
Role of Companies (cooperation partner of the education institution, contractual partner of the learner/student)	Cooperation on the internships, student final project, also consultation on core learning outcomes for the study programme. Some formal contracts have been signed; however, it is usually research-based cooperation in which only one part concerns education arrangements.	Every year, the school signs numerous agreements with companies aimed at the joint organisation of practical learning phases for students. In 2014, 110 conventions of that type were signed. Below some examples of recent agreements: ▲ ALSTOM POWER Sp. z o. o. ▲ FLSmidth MAAG Gear Sp. z o. o. w Elbląg ▲ SIEMENS Industrial Turbomachinery ▲ KROMET Sp. z o. o. ▲ METAL EXPERT Sp. z o. o., Partner Serwis Sp. z o. o., Auto-Postek, Elbląg ▲ DANLUX Orneta ▲ HADM \ ▲ METROTEST ▲ Reiffeisen Agro-Technik Sp. Z o. o. School also employs teachers with professional experience. About 12 of them perform professional activity in industry at the same time. They teach courses like: ▲ Engineering materials, ▲ Design and maintenance of machines, ▲ Advanced manufacturing, ▲ Machinery maintenance, ▲ Design of machines, ▲ Safety at work and ergonomics ▲ Computer Aided Design, ▲ Measurements, ▲ Mechanical vibrations, etc.

(Continuing Table 2)

Name of education programme and qualification	Mechanical Engineering and Applied Computer Science[1]	Mechanical Engineering[2]
High school teacher assistance during the practical learning phase?	University cooperates closely with university high school by providing some practical education for high school pupils. A flow of teachers in the opposite direction does not take place.	School employs teachers from high school; however, their assistance is not linked to the practical learning phase; they teach courses like mathematics and physics.
Assessment	There are several independent examinations or tests at separate points in each subject. Usually, oral and written examinations are held at the end of each semester during the examination session. Students sit examinations on each subject separately. The performance assessment period covers either one semester or one academic year. To successfully complete a semester (or a year), a student must attain the pass mark (at least "satisfactory") for all assessments and examinations in the subjects covered by the curriculum and obtain performance assessment credits for all integrated placements.	The most popular forms of assessment are oral and written examinations and tests. However, curriculum providers intend to implement tools that evaluate knowledge, social skills and competences in various contexts close to typical professional tasks. Below an exemplary list of assessment methods applied for the Mechanical Engineering programme: ▸ Real world case studies ▸ Laboratory Notebook ▸ Question creation ▸ Portfolio
Positioning in the labour market/transfer to other education programmes	Students of Mechanical Engineering acquire the knowledge necessary for the design, construction and operation of mechanical structures, including machinery for industry, processing machines, vehicle engines and engines used to drive and control working machines, refrigeration and air conditioning. They are also educated in the field of mechanical engineering and equipment. Moreover, they gain a basic understanding of broadly understood trade and related economic, financial, legal, organizational and marketing issues. A first-cycle Mechanics and Mechanical Engineering graduate obtains a general education characteristic for mechanical engineering, i. e. the appropriate knowledge and skills in: ▸ General methodology of design and construction, ▸ Methodological foundation and possibilities of computer support for the tasks, ▸ Design, construction, technology and exploitation of machines, ▸ The use of professional computer software in the mechanics and mechanical engineering fields, ▸ Selected issues of information, economic, legal and environmental issues. Graduates who complete the first cycle in Mechanical Engineering can be employed in the following positions: engineers, technologists, exploiters and senior mechanics	The Mechanical Engineering programme aims to prepare graduates to find employment in various areas of machinery and related industries. The graduates are qualified to take up engineering posts as technologists, members of a production management team, machine and device users or machine repair specialists. Employment is also available in business, administration and education at posts which require technological and IT qualifications. The gained knowledge enables them to set up their own business as well as engage in continuing education through second-cycle studies. The graduates are equipped with knowledge and skills in: ▸ design and automation of production processes, ▸ machine parts manufacture and assembly, ▸ machine construction and operation, ▸ machine repairs, ▸ production management, ▸ IT, especially computer aided engineering.

(continuing Table 2)

Name of education programme and qualification	Mechanical Engineering and Applied Computer Science[1]	Mechanical Engineering[2]
	in all industries. The skills acquired during their studies allow them to work in their own manufacturing and/or services company. The high versatility of their training, which includes – in addition to engineering knowledge – science, organization and management, foreign languages, marketing and the humanities, results in a broad range of employment opportunities.	
Financing	The programme is financed from public funds, according to the model described in section 1.6 of this document.	The programme is financed from public funds, according to the model described in section 1.6 of this document.
Latest reforms and developments	2007 – implementation of two cycle study system. 2010 – implementation of new teaching methods based on problem solving and reflective learning (Problem Based Learning, Design Project) 2012 – implementation of new approach towards curriculum design based on learning outcomes according to the Qualification Framework	2007 – implementation of ECTS system 2009 – new specializations geared not only towards competences related to the Mechanical Engineering area of studies, but also towards generic competences that will allow graduates to find their place in a wide spectrum of contexts 2012 – implementation of new approach towards curriculum design based on learning outcomes according to the Qualification Framework 2014 – implementation of new tools for the recognition of competences acquired through informal and non-formal learning

[1] To learn more about the curriculum, please follow the link: http://www.programy. p.lodz.pl/kierunekSiatka.jsp?l=en&w=Mechanical%20Engineering&p=4239&stopien=first-cycle%20programme&tryb=full-time

[2] To learn more about the institution, please follow the link: http://www.pwsz.elblag.pl/faculties.html#ip

The following tables have a comparison of requirements for obligatory internships for students of Mechanical Engineering and Applied Computer Science at the Lodz University of Technology and of Mechanical Engineering at the State School of Higher Professional Education in Elblag. Usually the students find these internship places on their own initiative, with limited support from the institution. The institutions provide many strategic partnerships that provide the contractual links with companies. However, for many internships, only a contract between the student and the company is obligatory.

Table 3

Comparison of requirements for internships

	Mechanical Engineering and Applied Computer Science[1]	Mechanical Engineering
Duration	10 weeks	15 weeks
Number of ECTS	15	30
Evaluation	The internship grade will be determined by a combination of: ▶ The student's final report and self- assessment upon completion of the internship ▶ The supervisor's evaluation of the student's job performance at the end of the internship period	Done by a special commission on the basis of: ▶ Internship certificate ▶ Oral exam – a discussion about the professional activities carried out by the intern at the company ▶ Opinion of the internship supervisor from the company
Training expectations	The student's task is to become acquainted with the organizational structure and the management system of the company/institution. The student should participate in all stages of manufacturing, design and testing conducted in the company/institution. The student should carry out individual or team tests that are related to the field of mechanics and mechanical engineering and that will allow for practical application of the knowledge and skills acquired during the studies in solving simple engineering problems. Engineering tasks should concern the design of machines and their elements, technological processes in the manufacturing of machine elements, tests, and measurements as well as modelling in the field of mechanics. The student should present the results of their work both to professionals and non-professionals.	The internship should involve use and understanding of mechanics, kinematics, thermodynamics, fluid mechanics, heat transfer, materials science, and energy. Mechanical engineering interns should use these skills in various jobs involving manufacturing plants, industrial equipment, machinery, heating and cooling systems, motor vehicles, aircraft, watercraft, robotics, medical devices, and more.

[1]To learn more about these internships, please follow the link: http://www.programy. p.lodz.pl/przedmiot.jsp?l=en&idPrzed miotu=150620&s=8&j=0&w=Mechanical%20Engineering

As mentioned, the key learning outcomes for the study programme are developed on the basis of the Resolution of the Minister for eight broad areas of study and two profiles. Both Mechanical Engineering and Applied Computer Science and the Mechanical Engineering programme belong to the same area of studies, that is, engineering and technology. However, the former has a general academic profile and the latter a practical profile.

The following analysis identifies the differences between the two similar programmes, which are run by two different types of universities and have two different profiles. Table 4 compares the knowledge acquisition categories of the two institutions.

Table 4

Comparison of curriculum learning outcomes − KNOWLEDGE CATEGORY

Descriptor[1] for a first cycle in the engineering and technology area − KNOWLEDGE category: The student has a structured, general knowledge of the key issues characterising the engineering discipline.		
	Mechanical Engineering and Applied Computer Science	**Mechanical Engineering**
Curriculum learning outcomes	▶ has structured and theoretically − based knowledge in the fields of statics, kinematics and dynamics ▶ has an ordered and theoretically founded general knowledge of the analysis of stress and deformations of the structures and machine components of machines and knows different methods of solving issues concerning structural strength ▶ has an ordered and theoretically founded knowledge of the basics of the construction of machines, equipment and technical facilities; the classification of machines and the methods of design calculations ▶ has a basic knowledge of the technical documentation and the description of machine design ▶ has an ordered and theoretically founded knowledge of the automatization of production processes ▶ has an ordered and theoretically founded knowledge of the operating principles and the construction of complex, integrated mechanical-electronic-computer systems ▶ has an ordered and theoretically founded knowledge of thermodynamic processes and flows and the operation of thermal and flow machines ▶ has knowledge of machining of forming, welding technology of materials and foundry and plastics processing ▶ has expanded knowledge of some technical issues related to Mechanical Engineering or related areas	▶ has basic knowledge in the field of statics, kinematics, dynamics and the analysis of stress and deformations of the machine structures and machine components ▶ has structured knowledge of the basics of construction of machines, equipment and technical facilities, ▶ has basic knowledge of thermodynamic processes and flows ▶ has basics methods, techniques and knowledge of the tools and materials used to carry out machine design and simple mechanical systems ▶ has elementary knowledge of computer aided design tools ▶ has elementary knowledge of measurement methods ▶ has general knowledge of manufacturing techniques and design processes ▶ has knowledge of selected machines and mechanical devices; knows and understands the principles of their functioning, structure and construction ▶ has a general knowledge of the operation, diagnosis and machine repair technology
Modules developing desired learning Outcomes	Advanced Materials Science Fundamentals of Programming, Fluid Mechanics and Thermodynamics, Advanced Manufacturing, Computer Aided Engineering Heat Transfer, Materials Science, Measurements	Technical Mechanics Strength of Materials Mechanical Vibrations, Fundamentals of Machine Design, Computer aided design, Chipless machining, Engineering materials, Plastic processing, Technology of machines
Teaching forms	Lectures Laboratories	Lectures Laboratories Laboratories in industry

(Continuing Table 4)

Descriptor[1] for a first cycle in the engineering and technology area – KNOWLEDGE category: The student has a structured, general knowledge of the key issues characterising the engineering discipline.		
	Mechanical Engineering and Applied Computer Science	**Mechanical Engineering**
Assessment forms	Oral and written exams Laboratory reports Calculation	Oral and written exams Laboratory reports

[1] Resolution of the Minister of Science and Higher Education of 2 November 2011 on the National Qualifications Frameworks for Higher Education (Journal of Laws No. 253, item 1520): http://isap.sejm.gov.pl/DetailsServlet?id=WDU20112531520

The above analysis demonstrates that there is no significant difference in developing knowledge learning outcomes for programmes with academic vs. practical profiles. A similar analysis may be carried out at the skills category level:

Table 5

Comparison of curriculum learning outcomes – SKILLS CATEGORY

Descriptor for a first cycle in an engineering and technology area – SKILLS category: student is able to identify and formulate the specifications of simple, practical engineering tasks characteristic of the studied engineering discipline		
	Mechanical Engineering and Applied Computer Science	**Mechanical Engineering**
Curriculum learning outcomes	Student is able to identify and formulate the specifications of simple engineering tasks of a practical nature specific to Mechanics and Mechanical Engineering	Student is able to design the basic parts of machines and mechanical assemblies according to utilitarian and economic criteria; Student is able to perform design documentation; Student is able to design typical processes of machine parts.
Modules developing desired Learning Outcomes	Design of Machine Elements	Technical Mechanics Strength of Materials Mechanical Vibrations Fundamentals of Machine Design Computer aided design Chipless machining Engineering materials Plastic processing Technology of machines
Teaching forms	Project	Laboratories (at the university and company)
Assessment forms	Project made in 3D Learning outcomes 3,4 Endurance simulation, optimization of design	Exams, professional skills test

The Resolution issued by the Minister of Science and Higher Education indicated that there is no significant difference between the practical and academic profiles, as the definitions of the descriptors are very similar. The only major difference is that a practical profile contains three ad-

ditional descriptors in the skills category. This is the most notable difference between the two profiles at the 1ˢᵗ cycle level. Definitions of these descriptors are presented below:

▶ Student has experience related to the maintenance of equipment, facilities and systems typical for the undertaken field of study,
▶ Student has experience in solving practical engineering tasks, gained in a professional engineering environment,
▶ Student has experience in using norms and standards typical for the undertaken field of study.

Curriculum learning outcomes were developed by the educational commission of each department and then approved by the senate of the institution. The development of these descriptors in the Mechanical Engineering Programme at the State School of the Higher Professional Education in Elblag is given in Table 6 below.

Table 6

The development of practical profile descriptors in Mechanical Engineering Programme at the State School of the Higher Professional Education in Elbląg − Part 1

The student has experience related to the maintenance of equipment, facilities and systems typical for the undertaken field of study.		
	Mechanical Engineering and Applied Computer Science	Mechanical Engineering
Curriculum learning outcomes	N/A	The student is able to design a process or mechanical device on the basis of technical and exploitation parameters, The student has experience related to the maintenance of equipment, facilities and systems typical for Mechanical Engineering.
Modules		Specialization modules Internship
Learning/Teaching Forms		Laboratories in companies
Assessment forms		Practical tests, oral exams − discussion about competences acquired throughout the professional activity

Table 7

The development of practical profile descriptors in Mechanical Engineering Programme at the State School of the Higher Professional Education in Elblag − Part 2

Student has experience in solving practical engineering tasks, gained in a professional engineering environment.		
	Mechanical Engineering and Applied Computer Science	Mechanical Engineering
Curriculum LO's	N/A	Student has experience in solving practical engineering tasks, gained in a Mechanical Engineering professional environment.
Modules		Internship
Teaching forms		Company laboratories Professional tasks undertaken at the company
Assessment forms		Professional assessment in company

Table 8

The development of practical profile descriptors in Mechanical Engineering Programme at the State School of the Higher Professional Education in Elblag – Part 3

Student has experience in using norms and standards typical for undertaken field of study.		
	Mechanical Engineering and Applied Computer Science	Mechanical Engineering
Curriculum LO's	N/A	▶ is able to use norms and standards typical for Mechanical Engineering while formulating and solving engineering tasks, ▶ is prepared to work in an industrial environment, and knows the associated safety rules ▶ is able to make a critical analysis of the functioning and the durability of the equipment, object or systems ▶ is able to identify and formulate the specifications of simple engineering tasks of a practical nature specific to Mechanics and Mechanical Engineering and to select and apply the right methods and tools ▶ can design a simple device, object, machine or machine part by using the appropriate norms and standards
Modules		Technical Mechanics Strength of materials Mechanical Vibrations Fundamentals of Machine design Computer aided design Chipless machining Engineering materials Plastic processing Technology of machines
Teaching forms		Lectures Laboratories Laboratories in industry
Assessment forms		Oral and written exams Laboratory reports

▶ General conclusions of this comparison

Based on the analysis above, it is appropriate to note the relevance of both educational profiles not only for the labour market but also from the perspective of the theoretical and practical skills of graduates.

As can be seen in all tables, learning outcomes in the "skills" category are generally more extensive for practically oriented programmes than for academically oriented qualifications. This is mainly because practically oriented programmes incorporate additional learning outcomes in the category of skills. However, the above analysis has shown that similar skills may also be obtained through work-related experience provided by academic programmes (both programmes provide at least one semester of practical training at an enterprise or similar experience).

This analysis also revealed that practically oriented programmes do not involve more training in skills, and the learning outcomes for both profiles are defined so as to be relevant to the labour market.

The learning outcomes for both profiles are formulated in such a way as to guarantee permeability in learning in the higher education system, i. e. the opportunity to undertake academically oriented second-cycle studies upon completion of a practically oriented first-cycle programme. In the practically oriented profile, there are three additional Learning Outcomes, which could suggest that the students have more experience. However, these competences can also be identified in the academic profile – they are not directly defined as core learning outcomes, but they can be expected as outcomes of the internship.

1.8 Developments and main reforms in the last few years, current political debates

The most important reform of Polish education is the implementation of the "Learning Outcomes (LO)" approach to general, initial vocational education, training and higher education. This has changed the paradigm of teaching and learning in formal education. The work on the development of the general core curricula for primary and lower and upper secondary education based on learning outcomes commenced in early 2000 and, as a result of this, all core curricula are now based on a learning outcomes approach. A similar reform was introduced in IVET and starting from 1 September 2012, all core curricula for Basic Vocational Schools and Technical Upper Secondary School were based on learning outcomes. At the same time, vocational (partial) qualifications were introduced; 252 qualifications were developed, together with 200 "school occupations". The implementation of external examinations for qualifications was also introduced. This resulted in major organizational problems for schools involved in external examinations.

As the result of the amendments to the Higher Education Act and the Resolution of the Minister of Science and higher Education on the HE-QF, the learning outcomes approach has been introduced into all degree and non-degree programmes in higher education. The Polish Accreditation Committee changed the accreditation procedures at the same time to adjust it to the new regulations and learning outcomes approach.

Implementation of all these reforms was preceded by a broad information campaign and considerable staff/teacher training.[163] Despite this, there is debate in the academic community on the value of the Learning Outcomes approach. Increasingly, more staff appreciate the value of using learning outcomes, but others view the changes as retrogressive and wish to return to the standards of HE qualifications based on the course content approved at the central level. However, the same concerns were voiced regarding the reform of 2005, which introduced the three cycle system in HE – *bachelor/master/doctorate*. Starting from 1 October 2014, the amendments to the law on HE were implemented. Besides the changes already discussed, regulations were introduced in the area of the recognition of prior learning (RPL). They limit the proportion of the programme content which can be recognized for any individual student, and the percentage of students having learning outcomes recognized from informal learning. An obligation for universities to implement RPL was introduced.

The discussion on the implementation of more labour market oriented programmes has been on the educational agenda for several years,[164] but there has been a lack of agreement on how it

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[163] Chmielecka, E. (ed.), (2009). Autonomia programowa uczelni. Ramy kwalifikacji dla szkolnictwa wyższego [Programmatic autonomy of higher education institutions: Qualifications frameworks for higher education] http://www.nauka.gov.pl/g2/oryginal/2013_05/577acf803ab68698c4639ec62e77cf6a.pdf
Polish Bologna experts team http://www.ekspercibolonscy.org.pl/about.
[164] See: http://www.worldbank.org/en/events/2013/05/15/professionally-oriented-higher-education-conference.

should be achieved. Some proposals have been focused on the establishment of two sectors in HE, the academic one and the vocational one, but experts are unable to agree and propose further development of the concept of both practical and academic study programmes, regardless of the name and status of the institution. A remaining important issue to be resolved is the low mobility of candidates and the geographical distribution of non-university and university sector institutions.

Additional major changes and reforms to the Polish qualifications system are expected when the law on the "Integrated Qualification System"[165] is implemented, which is expected in January 2016. This will introduce the concept of market oriented partial qualifications, which can be developed by any institution and proposed for inclusion within the "Qualifications Registry". The standards for the description of the qualifications have been formulated and will be subject to legal regulations. The concept of the "quality of the awarded qualification" and the quality assurance system has been developed for these qualifications, including the establishment of external independent accreditation bodies. Nearly all such qualifications should be accessible through informal or non-formal learning. These proposed solutions were the subject of very broad consultations with stakeholders starting in 2011.[166] The information campaign has been initiated and the proposed solutions are the subject of pilot implementation. It is foreseen that the implementation of the description and quality standards for these qualifications (market oriented, not IVET partial qualifications) will be gradually transferred to the whole qualification system.

1.9 Conclusions

The comparison of learning outcomes for the two programmes revealed interesting and surprising insights. Before the analysis, the authors were convinced that the two programmes run by two very different institutions would be significantly different. The results of the analysis were surprising, as learning outcomes and many subjects within the curriculum were found to be very similar. On further reflection, there are several factors to consider in assessing the situation. It is possible that the similarity could be due to the fact that the definition of learning outcomes was similar and they had been derived from the same pattern. Up to 2012, study programmes at all institutions (academically and practically oriented) had to follow the same national core curriculum. The law of 2012 changed this.

Perhaps greater differences could be diagnosed on the basis of an analysis of the criteria and methods of verification. Usually these elements indicate the extent of understanding of learning outcomes by the academic staff. However, this issue needs further detailed research and analysis.

It should be emphasised that the above analysis was restricted to only one of the eight broad domains of study determined by the Minister of Higher Education. Comparative analysis within other domains would probably reveal other differences in educational programmes and educational typology.

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[165] Draft bill guidelines on Integrated Qualification System (version of 1 August 2014) http://legislacja.rcl.gov.pl/lista/1/projekt/234137.
[166] See: Report of the Debate "The development of terms of reference for the implementation of the National Qualifications Framework and the National Qualifications Register for lifelong learning": http://www.kwalifikacje.edu.pl/images/download/Downloads/krk_eng_debata.pdf.

Part 2: Polish Qualification Framework

The development of the Polish Qualification Framework commenced in 2006 with the establishment of a working group for the National Qualification Framework for Higher Education under the supervision of the Ministry of Science and Higher Education. This was a pilot for a subsequent project, the project of the development of a qualification framework according to requirements of the European Qualification Framework for Lifelong Learning. This was the genesis of the work on the Polish Qualification Framework. The advantage was the involvement of the experts from the Working Group on the HE NQF. In 2010, the Education Research Institute was tasked with organising a wide range of experts and external stakeholders.

In January 2010, the Prime Minister established the Inter-Ministerial Taskforce for Livelong Learning, including the National Qualification Framework. With this decision, it became clear that the NQF would be the mechanism for the implementation of the lifelong learning strategy. The Taskforce was chaired by the Minister of Education and a sub-group of the Taskforce, the "Steering Committee for the National Qualification Framework," was chaired by the Minister for Science and Higher Education. The following Ministers have representatives on the Steering Committee: Minister of Science and Higher Education, Minister of National Education, Minister of Economy, Minister of Labour and Social Policy, Minister of Regional Development, Minister of Foreign Affairs, Minister of Culture and National Heritage, Minister of Health, Minister of National Defence, Minister of Internal Affairs, Minister of Transportation, Construction and Maritime Economy and Minister of Sports and Tourism.

This involvement of senior ministers reflected the fact that the qualification framework and the modernisation of the qualifications system based on the framework involved nearly all sectors of the country's government. As this was a governmental (inter-ministerial) body, social partners were not involved.

The development of the Polish Qualification Framework was carried out by the project "The development of terms of reference for the implementation of the National Qualification Framework and the National Qualification Register for Lifelong Learning,"[167] co-funded by the European Social Fund of the European Union. The project was directed by the former Vice- Minister of Labour and Social Policy. It was important and assured that the perspective of the labour market on the Qualifications Framework was represented well and a wide range of stakeholders were involved in the consultation process.

The consultation process commenced in 2011, at the first stage of the development of the Polish Qualification Framework. Stakeholders have been meeting regularly and the consultation has had two dimensions – the feedback on the development of the concept of PQF and, secondly, the improvement of the understanding among NQF stakeholders of the learning outcomes approach to the qualifications system and the validation of non-formal and informal learning.[168] Simultaneously, a broad information campaign commenced, and by 2014, hundreds of seminars had been organized on the national and regional level by the Institute of Educational Research. Similarly, the process was reproduced for higher education. A team of Bologna Experts was involved in the information process, together with experts appointed by the Minister of Science and Higher Education.[169] In the year before the implementation of the NQF-HE, more than 16,000 university staff members met on the seminars devoted to the concept of QF and the learning outcomes approach to education and qualification.

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[167] Project carried out by the Educational Research Institute: http://www.kwalifikacje.edu.pl/en/.
[168] Report of the Debate "The development of terms of reference for the implementation of the National Qualifications Framework and the National Qualifications Register for lifelong learning": http://www.kwalifikacje.edu.pl/images/download/Downloads/krk_eng_debata.pdf.
[169] Polish Bologna Experts Team webpage: http://ekspercibolonscy.org.pl/prezentacje.

As the result of the work carried out in the years 2010–2013 and the consultation process, two referencing reports were approved by the "Inter-Ministerial Taskforce for Livelong Learning, including the National Qualification Framework" and then presented to the European Commission (EQF Advisory Group):

1. Referencing Report – referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework,[170]
2. Self-Certification Report of the National Qualifications Framework for Higher Education.[171]

The Polish Qualifications Framework has not been adopted in law; however, the concept was approved in the name of the Polish Government by the decision of the "Inter-Ministerial Taskforce for Livelong Learning, including the National Qualification Framework" with the approval of the Referencing Report. The NQF for Higher Education was legally introduced by the "Resolution of the Minister of Science and Higher Education of 2 November 2011 on the National Qualification Framework for Higher Education.[172]

The Qualification Framework for HE was (partially) regulated by law earlier than the PQF, but both frameworks were developed concurrently, thus assuring consistency between the two frameworks. QF-HE is part of the PQF. It is the lower layer of the description of the learning outcomes in the PQF. The way compatibility is ensured between the PQF and the QF-HE is described in the Self-Certification Report in part 5.1.

During the discussion on the appropriate number of levels, the first proposal was only 7 levels. Traditionally, the Polish education system fits well with a 7-level structure. The discussion on the development of the qualification system resulted in the decision to implement one more level, corresponding to the level 5 of the EQF and the "short cycle within the first cycle" (Bologna Concept) – as proposed during the work on the QF for EHEA. By 2014, there was as yet no decision on the implementation of a full qualification on that level, but the pilot prescription of VET qualifications had shown evidence of a significant number of qualifications fitting well with this level. Despite the fact that the level 5 does not currently exist in HE, the second stage generic descriptors typical for higher education have been developed.

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[170] Referencing Report – referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework (2013). Warsaw: Educational Research Institute.
[171] Self-Certification Report of the National Qualifications Framework for Higher Education (2013). Warsaw: Educational Research Institute http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=702.
[172] http://isap.sejm.gov.pl/DetailsServlet?id=WDU20112531520.

The structure of the PQF is illustrated in the figure below:

Figure 6

The structure of the Polish Qualifications Framework

Source: Referencing Report[173]
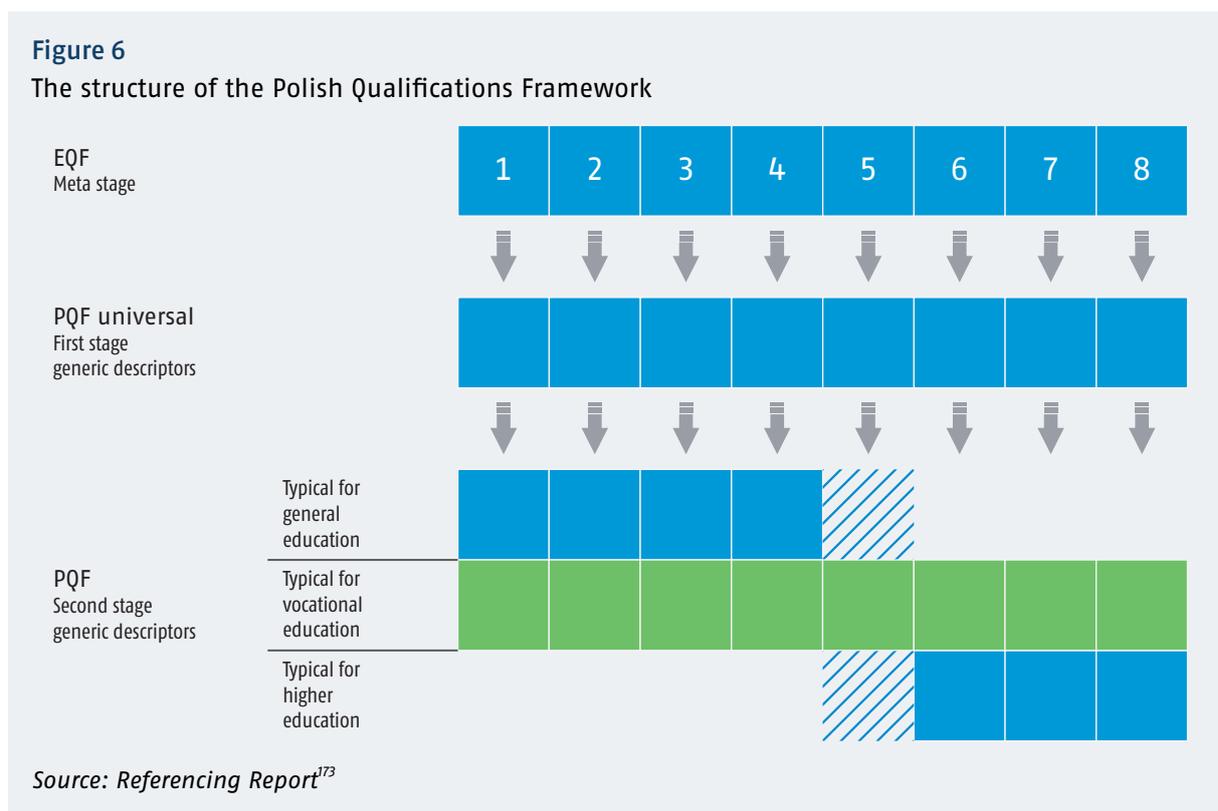
The PQF is described by two stages of generic descriptors. The first one has a universal character for all the sectors of education and qualifications and enabled the referencing of the PQF to the EQF. The second stage generic descriptors were prepared in a way that fit well with the way general education, VET and HE learning outcomes were described. Both stages of level descriptors should be read together. The second-stage level descriptors could be developed further in a way that fits well with the character of the sectorial qualifications. The relationship between the first-stage generic descriptors of the PQF (universal level descriptors), the second-stage generic descriptions typical for higher education (level descriptors for higher education) and their further development into the learning outcomes for the first and second cycles of studies is shown in the figure below.

The learning outcomes for the first and second cycle have been developed for two profiles – "academic" and "practical" – in eight broad areas of study. They are subject to the "Resolution of the Minister of Science and Higher Education of 2 November 2011 on the National Qualification Framework for Higher Education."[174] The third-cycle learning outcomes for the lower layer 2 have been developed, but it was decided not to include them in the legal regulations.

   The implementation of the PQF is expected to be implemented by one legal Act with regulations on the "integrated qualification system". It will include first stage and second stage generic descriptors, including descriptors typical for higher education. Layer 2 first- and second-cycle learning outcomes (for 8 areas of study) were already regulated by the resolution of the minister of HE.

[173] Referencing Report – referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework: http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=577.
[174] See: http://isap.sejm.gov.pl/DetailsServlet?id=WDU20112531520.

Figure 7

The relationship between PQF descriptors (universal level descriptors)
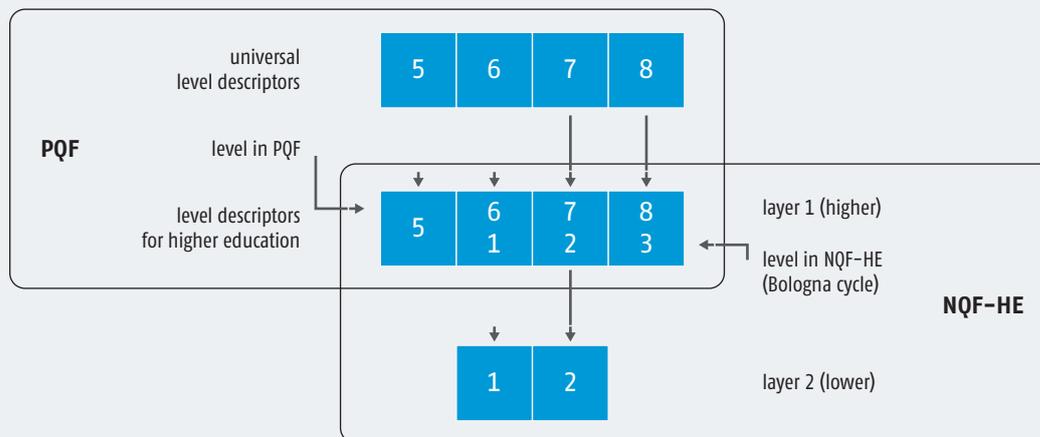
Source: Self–Certification Report – IBE[175]

Bibliography

Chmielecka E. (ed.) (2012): 5-ty poziom-brakujące ogniwo [5th level – the missing link] Warsaw: Polish Rectors Foundation

Chmielecka, E. (ed.) (2009): Autonomia programowa uczelni. Ramy kwalifikacji dla szkolnictwa wyższego [Programmatic autonomy of higher education institutions, Qualifications frameworks for higher education] Warszawa (http://www.nauka.gov.pl/g2/oryginal/2013_05/577acf803ab68698c4639ec62e77cf6a.pdf)

Glossary of key terms related to the national qualifications systems: (http://www.kwalifikacje.edu.pl/pl/publikacje/617-slownik-podstawowych-terminow-ksk)

OECD Reviews of tertiary education (2007): Poland: (http://www.oecd.org/poland/oecdreviewsoftertiaryeducation-poland.htm)

Referencing Report – Referencing the Polish Qualifications Framework for Lifelong Learning to the European Qualification Framework (2013): Warsaw: Educational Research Institute: (http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=577)

Self-Certification Report of the National Qualifications Framework for Higher Education (2013): Warsaw: Educational Research Institute: (http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=702)

List of Legal Acts

Act of 27 July 2005 on the Law on higher education (Journal of Laws 2012, item 572 with later amendments)

Act of 18 March 2011 on amendments to the Act – Law on higher education, the law on academic degrees and titles and on degrees and titles in the arts and on amendments to certain other laws (Journal of Laws, No. 84, item 455 with later amendments)

Act of 15 April 2011 on the school information system (Journal of Laws, No. 139, item 814 with later amendments)

Act of 19 August 2011 r. on amendments to the law on the education system and certain other laws (Journal of Laws, No. 205, item 1206 with later amendments)

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[175] Self–Certification Report of the National Qualifications Framework for Higher Education (2013). Warsaw: Educational Research Institute http://biblioteka–krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=702.

Act of 27 January 2012 amending the law on amendments to the School Education Act and changes to certain other acts (Journal of Laws, item 176)

Resolution of the Minister of Science and Higher Education of 8 August 2011 on the validation of academic degrees and degrees in the creative arts acquired abroad (Journal of Laws, No. 179, item 1067)

Resolution of the Minister of Science and Higher Education of 1 September 2011 on the types of degrees for graduates, conditions of issue and necessary elements of diplomas of completion of study programmes and certificates of completion of non-degree postgraduate study programmes as well as the template for the Diploma Supplement (Journal of Laws, no. 196, item 1167)

Resolution of the Minister of Science and Higher Education of 1 September 2011 on the validation of diplomas certifying completion of higher education acquired abroad (Journal of Laws No. 196 item 1168)

Resolution of the Minister of Science and Higher Education of 5 October 2011 on the conditions of providing degree programmes in a given field and a given level of study (Journal of Laws, No. 243, item 1445 with later amendments)

Resolution of the Minister of Science and Higher Education of 2 November 2011 on National Qualifications Frameworks for Higher Education (Journal of Laws, No. 253, item 1520)

Resolution of the Minister of Science and Higher Education of 4 November 2011 on model learning outcomes (Journal of Laws, No. 253, item 1521 with later amendments)

Resolution of the Minister of National Education of 23 December 2011 on the classification of vocational school occupations (Journal of Laws 2012, item 7)

Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning (OJ C 111, 6.5.2008, pp. 11–18)

Abstract

Im tertiären Bildungsbereich ist in den vergangenen Jahren eine vergleichsweise hohe Dynamik zu beobachten. In zahlreichen europäischen Staaten werden Bildungsgänge eingeführt oder ausgebaut, die sowohl berufliche als auch akademische Elemente beinhalten und teilweise auch zum Erwerb von Doppelqualifikationen führen.

Anhand von Beispielen aus England, Frankreich, Irland, Norwegen, Österreich und Polen werden das Verständnis von „tertiärer Bildung", die Ausgestaltung dieses Bildungsbereichs sowie die Relevanz von arbeitsbasierten Bildungsprogrammen dargestellt. Sie zeichnen sich durch eine Verbindung von theoretischem Lernen in einer Bildungseinrichtung mit Lernen im betrieblichen Arbeitsprozess aus. Es wird deutlich, wie stark der tertiäre Bildungsbereich, der fälschlicherweise häufig mit Hochschulbildung gleichgesetzt wird, von Elementen beruflicher Bildung mitgeprägt wird. Traditionelle Zuschnitte von Berufsbildung und akademischer Bildung öffnen sich und bereichern sich gegenseitig. Die verschiedenen Formen von tertiärer beruflicher Bildung, sei es als Bestandteil von Hochschulstudiengängen oder als eigenständige sog. höhere berufliche Bildung, bleiben dabei allerdings häufig im Schatten der akademischen Bildung. Dieser Bericht entstand im Zusammenhang mit dem BIBB-Forschungsprojekt „Arbeitsbasierte Lernprogramme im tertiären Bildungsbereich – eine international vergleichende Analyse von Modellen und Funktionen" (www.bibb.de/de/24108.php).

The tertiary education sector has observably been developing comparatively dynamically in recent years. Numerous European countries are introducing or expanding educational programmes that contain both vocational and academic elements, which in some cases also lead to the acquisition of double qualifications.

On the basis of examples from England, France, Ireland, Norway, Austria and Poland the understanding of "tertiary education", its structures and the relevance of work-based learning programmes are described. They are characterized by a combination of theoretical learning in an education institution and in-company learning periods. It becomes clear how strongly tertiary education is shaped by elements of vocational education while it is often misleadingly equated with higher education.

Traditional arrangements and designs of vocational and academic education programmes often open up for the benefit of both sectors.

However the different forms of vocational education in tertiary education – be it as important part in higher education programmes or in the sector of so-called higher vocational or professional education - often remains in the shade of the academic education. This report is published in the context of the BIBB-research project „Work-based Learning in tertiary education – an international comparative analysis of models and functions" (www.bibb.de/en/31221.php).

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