Entry to Programmes of Initial Teacher Education

November 2016

Merike Darmody and Emer Smyth

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Abbreviations

AITSL	Australian Institute of Teaching and School Leadership
ATAR	Australian Tertiary Admissions Rank
BOSTES	Board of Studies, Teaching and Educational Standards
CAO	Central Applications Office
COGG	An Chomhairle um Oideachas Gaeltachta and Gaelscolaíochta
CPD	Continuous Professional Development
CSO	Central Statistics Office
D/AHG	Department of Arts, Heritage and the Gaeltacht
DEIS	Delivering Equality of Opportunity in Schools
DES	Department of Education and Skills
EFTA	European Free Trade Association
ETUSCE	The European Trade Union Committee for Education
FETAC	Levels 1 to 6 of this National Framework of Qualifications
GUI	*Growing Up in Ireland* study
HEI	Higher Education Institution
ITE	Initial Teacher Education
LAUSD	Los Angeles Unified School District
MSMK	Mathematics Subject Matter Knowledge
NOKUT	Norwegian Agency for Quality Assurance in Education
PAC	Postgraduate Applications Centre
PCK	Pedagogical Content Knowledge
PME	Professional Master's in Education
RAND	Research and Development, US
SCQF	Scottish Credit and Qualifications Framework
STAT	Special Tertiary Admissions Test
TC	Teaching Council
TEAS	Teacher Education Application Services
UAC	Universities Admissions Centre
UCAS	Universities and Colleges Admissions Service
VA	Value-added
VAKAVA	The National Selection Cooperation Network in the Field of Education, Finland

Executive Summary

There is now an extensive body of research consistently showing that teachers have a considerable effect not only on students' academic progress, but also on their social and behavioural well-being. Consequently, there has been a growing emphasis across many countries on attracting and retaining good teachers. A review of the international literature shows that there is little agreement on how to define a good teacher. Some studies have taken a narrow view, framing it in terms of a teacher's ability to raise student test scores. Others have taken a more comprehensive approach, highlighting the interplay of content knowledge, pedagogical knowledge, communication and interpersonal skills and attitudes, and motivation to teach in making a good teacher. In order to ensure good quality candidates, many countries have introduced various selection mechanisms at the point of entry to initial teacher education in order to identify suitable candidates in terms of both their skills and dispositions. This research has four objectives: (i) it aims to outline current practices in the selection of applicants into initial teacher education (ITE) in Ireland; (ii) to analyse the profile of applicants and entrants; (iii) to place findings from Ireland in an international context and (iv) to indicate the implications of recently proposed changes to entry requirements for future policy and practice regarding ITE entry.[1]

The Use of Selection Criteria on Entry into Initial Teacher Education

The rationale for using selection at entry into ITE is twofold: on the one hand, it helps to identify the candidates considered most likely to succeed in the programme and become good teachers. On the other hand, the process helps to regulate the numbers admitted to colleges of teacher education, and thus is a tool for controlling the number of places available in colleges. Empirical research on the links between the screening of applicants to ITE and their students' outcomes has remained sparse, perhaps reflecting the complexities involved in exploring the issue, particularly in terms of disentangling selection effects (that is, who becomes a teacher) from a range of institutional and social effects that are likely to impact on teacher performance. Although most countries rely on academic criteria in selecting candidates to ITE, countries and regions differ in the other measures used for screening candidates. In some jurisdictions the teaching profession is not very attractive to young people due to lower pay, poor working conditions and lack of prestige. This creates challenges in attracting and retaining teachers. In other jurisdictions there is an over-supply of applicants who compete for the few available places. In addition, there can be an over-supply of teachers

[1] For a more detailed description of the research aims, see Section 1.2 of this report.

in some sectors (e.g. primary or post-primary) and not others as well as a lack of teachers in some subject areas.

For the purposes of this study, eight case-study jurisdictions have been selected to illustrate the different approaches taken to screening candidates to ITE. These case-studies were selected to reflect variation in the level of demand for teacher education places, the relative prestige of the teaching profession and the kinds of criteria used to select students into ITE programmes. The countries covered are: Australia (New South Wales); Austria; Canada (Ontario); Finland; the Netherlands; Scotland; Spain, and Sweden. All of the selected countries take account of secondary school qualifications in selecting ITE students but many use other criteria such as interviews and/or examinations designed specifically for admission to teacher education. The selection measures taken often depend on the prestige of the profession; countries with an over-supply of candidates typically use more rigorous selection processes. The evidence does not point to 'one best' approach in selecting candidates, with the different approaches adopted reflecting historical developments, the structure of higher education and levels of demand for places on teaching courses. While there is variation across countries in the approach taken, the analyses also point to significant differences within national systems, with individual higher education institutions often setting different criteria for course entry.

Exploring the issue of entry to ITE is particularly pertinent in Ireland where teacher education is currently undergoing structural change. At present, there are sectoral differences in how entry requirements for ITE are specified: primary entry requirements are prescribed centrally, whereas the entry requirements for post-primary programmes are not (other than the specification of a third-level degree in specific subjects). In response to potential concerns about the quality of entry standards, consistency of procedure and equity of access, in 2012 the Teaching Council of Ireland initiated an extensive consultation process regarding minimum standards for entry to programmes of ITE. The results of the consultation process demonstrated the diversity in current practices and in the viewpoints of key stakeholders regarding the appropriate mechanisms for selection into courses. This study contributes to the results of the consultation and focuses on the implications of proposed changes in entry standards for the number and profile of eligible candidates.

Key Findings

ITE in Ireland is provided in undergraduate (concurrent) and postgraduate (consecutive) courses. The concurrent education programmes offer students who

are beginning their tertiary education, and wish to pursue a career in teaching, an opportunity to acquire a teaching qualification. In the consecutive model, a teacher first obtains a qualification in one or more subjects (typically an undergraduate Bachelor's degree), and then studies for a further period to gain an additional (postgraduate) qualification in teaching (typically a diploma). The study presents new findings on the process of entry into ITE in Ireland and outlines the procedures involved. Entry to undergraduate primary and post-primary ITE is largely through a centralised procedure, relying on Leaving Certificate grades. Procedures for entry to postgraduate courses are more diverse. Entry to some institutions operates through the centralised Postgraduate Applications Centre (PAC) system which selects entrants on the basis of degree results, other qualifications and relevant work experience. In contrast, other institutions utilise an interview as a part of the selection mechanism in conjunction with other criteria. Current entry criteria for postgraduate programmes for both primary and post-primary are set by the Department of Education and Skills in consultation with the higher education institutions and the Teaching Council. For post-primary undergraduate programmes, the higher education institutions tend to set their own entry criteria, with a variety of approaches being taken. This study explores whether current entry standards are seen as problematic by key stakeholders; the perceived purpose of using these entry criteria; and the possible trade-off between raising existing entry standards and having a diverse profile of applicants to ITE programmes.

The Profile of Applicants to ITE

In Ireland, there is a high level of demand for undergraduate and postgraduate places in ITE at both primary and post-primary level.[2] Entrants to primary undergraduate (concurrent) ITE have high grades, with a significant proportion entering with 500 or more Leaving Certificate points.[3] Entrants to primary and post-primary ITE are disproportionately female, though slightly less so at post-primary level. The student intake tends to be young, mostly entering immediately after school or primary degree. There is some indication that post-primary concurrent entrants are more diverse in profile than primary ITE entrants, in terms of characteristics such as receipt of a higher education grant, entry through the FETAC route, entry as a mature student and parental socio-economic group. However, they are not representative of the wider population in terms of nationality[4] or having attended a disadvantaged (DEIS) school (a broader indicator of socio-economic background). There is much less information available on the profile of entrants to postgraduate (consecutive) ITE but all

2 See Chapters 6 and 7 for detailed discussion. There are generally more applications than offers; the figures vary between HEIs.

3 From 2017, the system of grading for the Leaving Certificate will be changed with implications for the calculation of CAO points.

4 This could reflect relatively recent immigration history in Ireland.

candidates have a third-level degree (or equivalent) and a significant minority, at least of entrants through the PAC route, also have postgraduate qualifications.

The Implications of Changing Entry Criteria

In 2012 the Teaching Council initiated a consultation process in relation to the changing entry requirements for ITE. Four sets of proposals were set out in the initial consultation document:

(i) an increase in entry standards in Leaving Certificate Irish, English and Mathematics for entrants to primary ITE;

(ii) (ii) a requirement to have taken the relevant Leaving Certificate subject(s) for entry to post-primary concurrent (postgraduate) courses;

(iii) (iii) a literacy and numeracy test for mature entrants; and

(iv) (iv) the establishment of a system to assess the language fluency of Gaeltacht entrants.

For primary courses, the document suggested raising requirements in English (to B1 Higher), Irish (to B1 Higher) and Mathematics (A1 Ordinary or C3 Higher). Our analysis shows that the proposed changes in entry criteria in English, Irish and Mathematics for primary ITE would mean that only a small proportion (5 per cent) of current Leaving Certificate leavers would meet these criteria compared to 27 per cent meeting the existing criteria. Sensitivity analyses indicate that the eligible pool of Leaving Certificate leavers varies between 5 and 15 per cent, depending on the exact grades specified, with the 15 per cent estimate reflecting the following criteria: English C Higher or A Ordinary, Irish C Higher, and Mathematics C Higher or B Ordinary. Similarly only a small minority (14 per cent) of those currently entering primary ITE would be eligible to do so in the future, assuming student subject level take-up does not change markedly in response to any proposed changes. The proportion eligible would also vary significantly across higher education institutions, given differences in the profile of applicants across institutions. It could be argued, however, that changing the academic criteria is likely to result in a change in behaviour, particularly an increase in take-up of Higher Level Mathematics, among potential applicants. While this may be the case, during the adjustment period it would potentially preclude entry for those who decide on teaching as a career after decisions about subject level take-up have been made. A change in criteria would also have implications for the social differentiation in eligibility, with young people from disadvantaged backgrounds and those who attended DEIS schools being much less likely to meet the proposed criteria than is the case for the current entry requirements. Female applicants are more likely than male applicants to meet current entry criteria and the proposed entry criteria may reduce their advantage somewhat.

The potential impact of change in criteria on entry to post-primary undergraduate courses is more varied, as it depends on the type of subject area. Applicants to courses in humanities and single-subject Science areas generally take related subjects but the pool of Leaving Certificate candidates who would meet the criteria for specific subjects (such as Art, Music and Religious Education as an exam subject) is small. The situation is quite different for courses involving two or more Science or technology subjects, with much fewer applicants taking a combination of Science subjects at Leaving Certificate level and very small numbers taking a combination of technological subjects. The proposed criteria would, therefore, have very different consequences for future eligibility for certain courses, in the absence of a significant change in subject take-up patterns at second level. Such change may be limited by patterns of subject provision across different types of schools.

For a small number of mature students (23+), there is an alternative route of entry to primary teacher education, outside the CAO system. The process combines an interview with possession of minimum academic entry requirements, which vary according to the year in which the Leaving Certificate was taken. Mature students make up a small proportion (10 per cent) of undergraduate primary ITE entrants and 13 per cent of those embarking on post-primary ITE courses.[5] Changes in the entry criteria are likely to have implications for the profile of mature students, who may be less likely to meet the proposed requirements due to historically low take-up of Higher Mathematics, for example. This situation could be addressed through the use of additional courses or bridging units, in conjunction with exit tests at the end of the course or exams, an approach currently utilised in Australia. Introducing additional pre-entry testing in literacy and numeracy for this group of students, however, is not supported by Higher Education Institutions in Ireland who point to already high educational standards among mature entrants and highlight the potentially discriminatory nature of having separate criteria for younger and mature entrants.

Approximately 10 per cent of the places in ITE are reserved for Gaeltacht entrants. There is no systematic evidence on the numbers who avail of this route but take-up is considered very low according to the stakeholders participating in this study. Some stakeholders felt that the system by which Gaeltacht candidates are assessed needs to be reviewed. A grant known as 'Scéim Labhairt na Gaeilge', formerly used as a means of confirming Irish language competence, has been discontinued and while the Department of Arts, Heritage and the Gaeltacht plays a role in helping to assess candidates, many stakeholders considered that clarity

[5] The number of mature students in teacher education is small also elsewhere in Europe (Kaldi, 2010).

is needed in the procedures involved and in the relative responsibilities of the Department of Education and Skills and the Department of Arts, Heritage and the Gaeltacht. In the consultation process, stakeholders raised a more general issue concerning the Irish language proficiency of ITE graduates who go on to teach in Irish-medium schools. Some suggested additional supports or points should be provided to facilitate access to ITE among those with high levels of Irish language competency. To ensure high levels of Irish proficiency among ITE graduates, exit qualifications could be utilised, allowing the candidates to improve their proficiency levels during their ITE course.

International research provides little evidence of a link between specific entry criteria to performance during and/or after initial teacher education programmes. Consequently, it is difficult to argue that more stringent entry criteria are required in Ireland, especially in a context where entrants already have high levels of prior achievement. More stringent entry criteria are also likely to lead to less diversity in the teaching profession. The rationale for changing criteria reflects, in part, concerns about potential skill deficits among newly-qualified teachers as well as inconsistencies and anomalies in the current system. However, further research would be needed to establish the existence, nature and scale of such deficits and whether they are best addressed through changing entry standards and/or through the design and content of initial teacher education programmes. The practice of specifying minimum criteria centrally, and proposals to change those requirements, should also be balanced against the possible benefits of allowing a measure of institutional autonomy to decide on particular entry criteria and mechanisms. While there is already considerable variation across higher education institutions in Ireland in the approaches they take, particularly regarding entry to post-primary ITE, such inter-institutional variation is the norm rather than the exception internationally and no clear relationship has been established between such autonomy and lower standards.

Chapter 1

Introduction and Methodology

1.1 INTRODUCTION

In recent years, educational achievement has been placed firmly on the policy agenda across most countries, reflecting at least in part the prominence given to performance in standardised tests such as PISA (see OECD, 2005; McKinsey and Co., 2007, 2010). Given the large body of evidence on the effects of teacher quality on student outcomes, many countries are now engaged in attempts to enhance teacher quality. The quality of new teachers can be seen as reflecting the skills and competences they possess entering initial teacher education (ITE)[6] and the skills and qualities they cultivate during that programme of study. When exiting teacher education programmes, graduates must have the professional knowledge and skills necessary to engage in 'highly productive professional practice' (MCEECDYA, 2011). At the same time, some screening mechanisms are needed to select prospective students likely to succeed in the programme. Both aspects need to be seen as part of the 'infrastructure' of ITE.

The provision of initial teacher education across jurisdictions is varied and diverse. The most common pattern among OECD countries encompasses courses in subject matter (content knowledge), in teaching techniques (pedagogical knowledge), and practical school experience. Some countries also incorporate aspects such as the development of research skills, foundations in the cognitive, behavioural and social Sciences, and knowledge of child development, within teacher education programmes (Musset, 2010). Initial teacher education is provided via concurrent (undergraduate) or consecutive (postgraduate) courses (see Chapter 5 for a more detailed discussion). The concurrent education programme offers students who are beginning their tertiary education, and wish to pursue a career in teaching, an opportunity to acquire a teaching qualification. In the 'consecutive' model, a teacher first obtains a qualification in one or more subjects (often an undergraduate Bachelor's degree), and then studies for a further period to gain an additional qualification in teaching. While numerous international studies explore the nature of ITE, there has been little research in the past decade on the criteria used for entry to ITE programmes, though the gender imbalance in the profile of student teachers has attracted a good deal of attention across many countries (see Drudy et al., 2005; Mills et al., 2004; Dee,

[6] The term 'initial teacher education' describes a programme of professional education taken in order to be eligible to become certified to teach in a primary or post-primary school.

2005). Generally countries rely mostly on prior academic qualifications in selecting candidates to ITE (European Commission, 2013a). However, international research indicates that admission to ITE on such criteria alone has been shown to be a relatively poor indicator of later success as a teacher (Kane, 2005). As evidenced by a report from the European Commission (2013a), several countries now consider a range of criteria when screening candidates, including interviews, prior experience and interpersonal skills. In some jurisdictions, entry to the teaching profession is increasingly rigorous. For example, in Finland, selection is carried out in a number of phases (see Chapter 4), while in England, all entrants to ITE courses from July 2013 need to have passed the government Professional Skills Tests in literacy and numeracy.[7] Considering the importance of the topic, there is surprisingly little information about the other attributes that might contribute to a 'quality student teacher' (Cameron and Baker, 2004). While an extensive body of literature focuses on what makes a good teacher and on teacher effectiveness, international research on the selection mechanisms and criteria for entry into initial teacher education has remained sparse. Different countries use a variety of 'selection filters' (Wang, et al., 2003); some procedures are 'high stakes while others impose minimal requirements' (European Commission, 2012). While some studies exist on the effectiveness of initial selection criteria for ensuring teaching quality and enhancing the academic outcomes of students, research to date has not explored the link between entry criteria and engagement with the programme in ITE, most likely because the nature and content of ITE courses will, at least in part, be tailored to the starting-points of their students. However, research does point towards the need to have evidence of a student's ability to analyse critically and reflect on their learning and teaching practice when assessing the suitability of pre-service teacher candidates (Darling-Hammond, Bransford, LePage, Hammerness and Duffy 2005).

1.2 RESEARCH AIMS

While international research on entry to initial teacher education programmes is slowly emerging, little empirical evidence is available on this issue in Ireland. Although the standards of entry for programmes of ITE in Ireland are high, resulting in the admission of candidates with high educational attainment at second level, concerns have been expressed by stakeholders about their suitability, particularly with regard to their standards of literacy and numeracy, and about whether the profile of entrants adequately reflects diversity within Irish society. In addition, inconsistencies regarding the entry criteria between primary, post-primary consecutive and post-primary concurrent programmes prevail (Teaching Council, 2012). In responses to these concerns, the Teaching Council initiated a consultation process regarding changing entry requirements

[7] www.education.ox.ac.uk/courses/pgce/professional-skills-tests-for-entry-to-initial-teacher-education.

into ITE in 2012. Four sets of proposals were set out in the initial consultation document:

(i) an increase in entry standards in Leaving Certificate Irish, English and Mathematics for entrants to primary ITE;

(ii) (ii) a requirement to have taken the relevant Leaving Certificate subject(s) for entry to post-primary concurrent (postgraduate) courses;

(iii) (iii) a literacy and numeracy test for mature entrants; and

(iv) (iv) the establishment of a system to assess the language fluency of Gaeltacht entrants.

This study aims to fill the gap in research by analysing the criteria in place for entry to teacher education for the primary and post-primary sectors in the Irish context. In particular, the study aims to provide empirical evidence regarding the implications of proposed changes to those criteria, with particular reference to the profile of future student teachers.

In so doing, it seeks to:

- provide a balanced overview and discussion of current practices of selection criteria into initial teacher education in Ireland, encompassing requirements in place for consecutive and concurrent programmes, at national level and at individual higher education institution (HEI) level;
- place findings from Ireland in an international context;
- review the academic and other entry requirements in place in other jurisdictions, drawing conclusions about the implications these may have in an Irish context;
- determine the rationale for using entry criteria based on national and international research;
- analyse whether demand for places exceeds supply in ITE and how this impacts on the profile of candidates;
- analyse the profile of applicants/entrants into ITE in Ireland, including their academic attainment in the Leaving Certificate examination;
- explore the implications of suggested changes in the entry requirements in Ireland, by drawing on data regarding the take-up of, and performance in, the specified subjects (namely, Mathematics, English and Irish);
- use consultation with key stakeholders to explore their perceptions of current practices, including, for example, the relationship between subject content knowledge and the teaching of that subject, additional pre-entry requirements for mature applicants and the procedures currently used to assess the Irish language competence of Gaeltacht residents prior to entry;

- discuss the implications of the findings for future practice regarding selection into ITE.

1.3 DATA SOURCES AND METHODOLOGY

1.3.1 Phase 1: Review and Analysis of Irish and International Systems of ITE

This phase of the study involved the use of administrative data from the State Examinations Commission regarding Leaving Certificate subject take-up and performance, and from the Central Applications Office (CAO), the Postgraduate Applications Centre (PAC) and individual higher education institutions (HEIs) with regard to the number and profile of applicants and entrants to concurrent and consecutive programmes in primary and post-primary ITE. Additional information has been provided by the Departments of Education and Skills, and Arts, Heritage and the Gaeltacht, regarding the procedures currently used to assess the Irish language competence of Gaeltacht residents prior to entry to ITE.

This phase also involved a review of any recent and relevant research which has been carried out on entry requirements in Ireland and internationally and, in particular, on the relationship between subject content knowledge and the teaching of that subject. In addition, Phase 1 involved an overview of the academic and other entry requirements which are in place for consecutive and concurrent programmes in Ireland, at national level and at individual HEI level. This involved personal contact (in the form of short interviews or correspondence) with key people in the Irish higher education institutions. Research was conducted to examine selection procedures in eight case-study jurisdictions designed to capture key dimensions of variation in entry criteria and relative demand for ITE courses. These jurisdictions are Australia (New South Wales), Austria, Canada (Ontario), Finland, the Netherlands, Scotland, Spain and Sweden. This research relied on documentary evidence but, because of the lack of documentation on key practices in many instances, this phase of the research involved extensive communication with key stakeholders in these jurisdictions.

1.3.2 Phase 2: Dissemination and Feedback

Phase 2 involved two stakeholder meetings in early October 2014, at which the findings of the Phase 1 review were presented, and expert feedback sought in relation to those findings and the key issues which emerged during the initial consultation. Separate meetings were held for the primary and post-primary sectors; the profile of participants is outlined in Tables 1.1 and 1.2. These meetings focused on the following key issues:

- the primary aim of entry criteria; should they be determined on the basis of how accurately they predict a person will be a good teacher, or on the basis

of how accurately they indicate the potential of that person to engage satisfactorily with a programme of ITE?;

- the relationship between subject content knowledge and the teaching of that subject;
- the possible effects of the proposed changes, including the cumulative effect of requiring all students to have high grades in all three subjects for primary ITE courses;
- the probability that a sufficient number of Leaving Certificate students has the capacity to meet the higher grade requirements and, if such capacity exists, the potential trade-offs in terms of the pool of students, their curricular focus and/or diversity in profile;
- the extent to which literacy and numeracy tests can effectively measure the competence of potential entrants;
- the potential impact of any changes on the numbers of mature students accessing ITE programmes;
- the possible impact on access to ITE by under-represented groups such as those with disabilities, those from disadvantaged communities, males, and those born outside Ireland;
- the relationship between Leaving Certificate entry requirements (or literacy and numeracy tests) and the potential of students to engage with programmes of initial teacher education;
- the potential for programme providers to determine the knowledge, skills and competence necessary for successful participation in the programme;
- the potential for ITE programmes (or foundation programmes prior to ITE) to develop the required competences.

TABLE 1.1 Attendees: Providers of Initial Teacher Education - Primary Teaching and Other Stakeholders

National University of Ireland, Maynooth	Church of Ireland College of Education
Mary Immaculate College, Limerick	Irish Primary School Principals' Network (IPPN)
National Council for Curriculum and Assessment	Hibernia College
Froebel College (Maynooth)	Irish National Teachers' Organisation (INTO)
St. Patrick's College	Central Applications Office
Primary school principal	Marino Institute of Education

TABLE 1.2 Attendees: Providers of Initial Teacher Education - Post-Primary Teaching and Other Stakeholders

National University of Ireland, Maynooth	Trinity College Dublin
Dublin City University	National Association of Principals and Deputy Principals (NAPD)
National Council for Curriculum and Assessment	Hibernia College
University of Limerick	Teachers' Union of Ireland
NUI Galway	National College of Art and Design
Post-primary school principal	University College Cork
University College Dublin	Mater Dei College

1.3.3 Phase 3: Analysis of Feedback Following Phase 2

The analyses of Phase 1 of the study are presented in the remainder of the report. Information on the Phase 2 consultation is incorporated into Chapter 4.

1.4 STRUCTURE OF THE REPORT

This report is structured as follows. Chapter Two places the current study in the context of previous international and national research on the mechanisms used to select ITE students. Chapter Three provides a comparative overview of entry criteria to initial teacher education in Ireland and internationally. Chapter Four presents a description of case-study countries chosen to demonstrate the different approaches taken in these jurisdictions in selecting entrants to ITE. Chapter Five focuses on initial teacher education in Ireland, with particular reference to entry to primary programmes, concurrent post-primary programmes and mature entry to programmes in both sectors. Chapter Six looks at patterns of entry to primary teacher education courses, concurrent (undergraduate) and postgraduate, and analyses the extent to which proposed changes in entry criteria might influence the level and nature of the applicant pool. Chapter Seven presents comparable analyses for post-primary teacher education courses. Chapter Eight summarises the main findings of the study and discusses the implications for future practice of the proposed changes to the entry criteria for ITE.

Chapter 2

Review of the Literature

In an era of increased accountability for student achievement and greater focus on PISA results in many countries, discussion of the selection of entrants to ITE has become increasingly topical. However, in the past decade only a few studies have focussed on screening on entry to initial teacher education, even though the importance of selection was already highlighted in the 1970s by Bolton (1973) in his *Selection and Evaluation of Teachers.*[8] At the same time, there have been calls for the improvement of education by implementing research-based procedures for the selection of teachers (Mickler and Solomon, 1986). The following sub-sections review existing evidence on teacher selection and related issues.

2.1 SUPPLY OF, AND DEMAND FOR, TEACHERS

In order to understand the need for teacher selection prior to entry to initial teacher education, one needs to first examine the supply of, and demand for, teachers. The situation varies greatly across jurisdictions. While in some countries there is an over-supply of teachers, others are facing difficulties in filling positions in schools (OECD, 2005). The demand for teachers is determined by several factors such as demographic trends in a country but also various extrinsic motivators.

Demographic changes (e.g. the ageing of the teaching profession and overall birth rate) and national policies (e.g. changes in class size) will impact on the need for new teachers (Boyd et al., 2005; European Commission, 2013a). Eurostat (2011) notes that the share of teachers above the age of 50 is high in many EU Member States (see Table 2.1). The share of teachers aged over 50 is, in general, higher in post-primary education (ISCED levels 2 and 3) than in primary education (34.8 per cent and 28.6 per cent at EU27 level). The share of such teachers varies across Europe, being particularly high in Germany and Italy. Between 2000 and 2009 the relative number of older teachers rose in most countries, stabilising during the later part of the period, with a rise in the proportion of older teachers only evident in some countries (Bulgaria, Latvia, Austria). In Ireland, the proportion of teachers older than 50 years of age is below the EU average.

[8] Bolton suggested building teacher selection and evaluation into one comprehensive system that would include such interdependent areas as the processes of developing teacher selection criteria, recruitment, information collection about the candidates, placement, planning teacher evaluation, and observing teacher performance.

The European Union is facing unparalleled demographic changes; an ageing population, low birth rates in some jurisdictions, changing family structures and migration. The EU27 population has been growing constantly since 1960, although it is unevenly distributed across the Member States (Eurostat, 2011). A total of 20 Member States have reported an increase in their populations, with Ireland experiencing the highest population growth within the EU. Recent demographic projections suggest solid population growth in Ireland for the next 15 years (CSO, 2011). As a result, enrolment levels in Irish schools are expected to rise in the coming years. The CSO predicts that at primary and post-primary level, the number of enrolments will grow significantly by 2021. This will have an impact on the number of teachers needed in the future. In order to adequately plan for the provision of teachers, information regarding the number of teachers retiring and the subjects they teach is therefore essential.

TABLE 2.1 Percentage of Teachers Aged Over 50 Years of Age

European Union Countries	Primary	Post-primary
EU27	**28.6**	**34.8**
Austria	36.2	40.3
Belgium	20.8	33.0
Bulgaria	26.0	38.2
Croatia	Info not available	
Cyprus	3.1	20.7
Czech Republic	26.9	37.0
Denmark	37.6	
Estonia	32.4	45.9
Finland	27.7	37.3
France	21.6	33.0
Germany	49.3	50.7
Greece	Info not available	
Hungary	25.5	30.9
Ireland	**27.3**	**32.8**
Italy	44.8	57.9
Latvia	31.1	42.2
Lithuania	31.6	37.8
Luxembourg	23.2	26.9
Malta	22.8	19.2
Netherlands	34.7	45.7
Poland	13.4	21.3
Portugal	27.4	20.9
Romania	31.9	32.3
Slovakia	25.5	36.9
Slovenia	18.2	28.1
Spain	31.7	28.6
Sweden	48.1	41.1
United Kingdom	25.6	30.4

Source: Eurostat, 2011.

Class sizes will also impact on teacher numbers. Class size will reflect demographic trends, patterns of teacher recruitment and retirement, and explicit policy decisions regarding educational expenditure (OECD, 2013). Table 2.2 shows the average class size in primary schools across European countries. At primary school level, the United Kingdom has the largest average class size with the smallest classes at this level of schooling in Estonia. Ireland has higher than average class sizes at primary level.

TABLE 2.2 Average Class Size at Primary Level in the European Union

European Union Countries	Primary (Public)
EU21 average	**19.9**
Austria	18.2
Belgium	20.6
Czech Republic	19.9
Denmark	20.6
Estonia	17.5
Finland	19.4
France	22.7
Germany	21.2
Greece	16.9
Hungary	21.0
Ireland	**23.9**
Italy	18.9
Luxembourg	15.4
Netherlands	na
Poland	18.6
Portugal	20.6
Slovakia	17.6
Slovenia	18.5
Spain	20.1
Sweden	na
United Kingdom	26.0
OECD average	21.3

Source: Education at a Glance, 2013 (based on 2011 data).
Note: Na=information not available.

While countries across Europe and elsewhere have taken measures to help them anticipate and plan for the changing demand for teachers, the process is complex, being influenced by a range of factors including political and economic pressures (Donaldson, 2010). As indicated above, Ireland is experiencing substantial demographic growth with combined pupil numbers at primary and post-primary

level up by over 60,000 in the last five years. At the same time, during this period a range of budgetary measures were implemented that had a direct impact on the level of teacher allocations to schools. As a result, the net effect is that the overall number of teachers now is broadly similar to what it was four years ago, notwithstanding the increased demographics (IGEES, 2015).[9]

The supply of, and demand for, teachers are also influenced by the prestige of the teaching profession, salary and working conditions as well as possibilities for career progression. The prestige of a teaching career varies across jurisdictions. In Switzerland, existing research shows that entrants from less educated households were more likely to choose teaching as a career, indicating that the profession has low status in this jurisdiction (Denzler et al., 2008). Conversely in Finland, teaching is a top career comparable to many other professions and enjoys high social prestige (Sahlberg, 2011). Setting a high academic bar sends a clear signal that this is a difficult profession to enter, thus raising its status. Some countries have taken steps to try to raise the prestige of the teaching profession. For example, the UK Government has expressed a desire to 'raise the expectations of the academic achievement of trainees', and has pursued this by introducing a new bursary scheme for teacher trainees that took effect from 2012. Under that scheme, higher levels of financial support are awarded to trainees with higher degree classes, or with degrees in particular 'priority' subjects. According to the House of Commons (2012) report, degree class can be a useful 'initial sieve', prior to initial teacher education, to ensure that graduates have strong subject knowledge and solid academic credentials. Norway is also an example of attempts to raise requirements for teacher candidates. Teacher education in Norway is nationally regulated and has recently undergone extensive changes. Between 2004 and 2010 the Norwegian Agency for Quality Assurance in Education (NOKUT) conducted three broad, national programme evaluations: primary and lower secondary school teacher education, engineering degree programmes, and pre-school teacher education. All evaluations were commissioned by the Norwegian Ministry of Education and Research. The first reform targeted ITE in compulsory education (years 1-10). Munthe et al. (2011) note that the 2006 evaluation showed that there was a decline in the number of applicants[10] to ITE and in their qualifications. The NOKUT evaluation concluded that there was a great variety between institutions offering initial teacher education with regard to the quality of the educational programmes. The main concern expressed in the report related to the lack of coherence between different components of the programme (didactics, pedagogy and practical training) (Sugrue and Solbrekke, 2014). One of the areas explored was admission

[9] In 2013/2014 pupil/teacher ratios at primary schools are 16.3, in post-primary schools 13.9 (www.education.ie/en/Publications/Statistics/Key-Statistics). The corresponding figures for 2009/2010 are 16.0 and 13.6.

[10] It has been estimated that Norway will be short of up to 18,000 teachers by 2020 (Munthe, et al., 2011).

to initial teacher education. In her thesis, Mølstad (2008) noted that in order to raise the profile of applicants to ITE,[11] in 2004 it became a requirement to meet a minimum standard[12] grade. The author argued that had these requirements been in effect in the previous years (2001-2003), a large proportion of admitted students would have been rejected. The impact of the reform on the profile of entrants to the ITE cannot yet be assessed as the changes in teacher education are ongoing.[13]

Salaries may have a direct impact on the attractiveness of the teaching profession. Recent figures (see OECD 2014) reveal that while there has been some increase in teacher salaries in real terms, they remain below of those of other employees with tertiary education. There is a significant difference between countries regarding teacher salaries, the level of which increases with years of experience and level at which they teach. The highest teacher salaries can be found in Germany, Luxembourg, the Netherlands and Switzerland; and lowest in Estonia, Hungary, and the Slovak Republic (the example is based on the statutory salaries of lower secondary school teachers, with 15 years of experience, in public institutions, before taxes) (ibid.). In general, the higher the level of education at which teachers teach, the higher the salary. Secondary school teachers can earn up to 25 per cent more than primary teachers with the same level of experience in a range of OECD countries. Higher salaries are likely to attract the best candidates into the profession. Differences in teachers' pay at different levels of education (primary and secondary) may influence how education systems attract teachers.

Denzler and Wolter (2008) in Switzerland argue that the quality of the teachers depends, partly, on who opts for a career in teaching. This question is of particular importance in systems where teacher education offers an alternative pathway to a university degree. In Switzerland teacher education is provided in regular universities and universities of applied Sciences (Fachhochschulen) as well as teacher education colleges. Teacher education colleges do not generally administer entrance examinations or aptitude tests. Drawing on their study of 1,500 high-school students surveyed shortly before graduation, Denzler and Wolter (2008) found that these colleges tend to have lower prestige and attract applicants from lower socio-economic backgrounds.

11 In some instances the applicants were upper secondary students with low grades (ibid.).

12 The minimum requirements refer to the lowest grade point of 35 (based on ten subjects, so a possible 3.5 average in all ten subjects on a scale of 1-6, where the 6 is the highest grade), and minimum grade 3.0 in Mathematics and Norwegian (Munthe, et al., 2011).

13 The changes can be mapped from the introduction of the White Paper on teacher education in 2009 and the establishment of a national framework group in 2010. The policy work aims to develop suggestions for new national framework plans for two teacher education programmes in Norway. Parallel to this, new framework plans are also being developed for Sami teacher education.

Supply and demand issues can be linked to specific sectors (primary, secondary, vocational) or subject areas. For example, in New Zealand there is an over-supply of teachers in some areas, like physical education, but a shortage in others, such as Maori-medium, Mathematics, and Science (Goe, 2010).[14] The Finnish teacher education system has not had recruitment problems, with the exception of Mathematics and some subjects in natural science (OECD, 2003:36). Supply of Mathematics teachers is also a problem in Norway, with a high percentage of failure (24 per cent) in the subject (Mølstad, 2008).

In countries where there are teacher shortages, various measures have been used to combat the problem, including lowering qualification requirements for entry to the profession; assigning teachers to teach in subject areas in which they are not fully qualified; increasing the number of classes that teachers are allocated; or by increasing class sizes. Although ensuring that schools are not left without teachers, such measures raise concerns about the quality of teaching and learning (OECD, 2005). Alternative pathways to ITE have been considered as one way to help to address the issue of teacher shortages. According to the European Commission (2013a), these alternative routes are usually characterised by a high degree of flexibility, a short duration, and provide mostly employment-based training. These alternative routes into teaching may serve also to attract graduates from other fields into the teaching profession. For example, in Sweden, people with professional experience outside teaching can enter the teaching profession following the supplementary teacher education programme leading to a degree in a subject. The Netherlands and the England have a relatively long tradition of providing alternative routes into the teaching profession (European Commission, 2013a).

2.2 MOTIVATION TO BECOME A TEACHER

There is now a growing body of research into the factors influencing the choices people make to pursue a career in teaching. The issue has gained importance over the years as, in some jurisdictions, it has become increasingly difficult to motivate young people to take up the teaching profession as well as to retain existing teachers (Watt and Richardson, 2007).

Existing research into the reasons for becoming a teacher differentiates between three types of motives: intrinsic, extrinsic and altruistic (Bastick, 2000). Intrinsic motivation arises from a desire to engage with a profession due to its inherent

[14] The problem appears to be that those with a Mathematics qualification often have a wide choice of careers open to them and teaching is not necessarily at the top of the list.

interest, for self-fulfilment, personal experience, growth and enjoyment. Extrinsic motivation, on the other hand, reflects motivation to perform and succeed for the sake of accomplishing a specific result or outcome. In terms of the teaching profession, extrinsic motives include salary, working hours, holidays and job security and status. An altruistic motivation arises from a wish to contribute to the growth of another individual and make a positive difference to their lives (Hayes, 1990; Chong and Low, 2009).

A more detailed theoretical model exploring the motivation for choosing a teaching career was developed by Australian researchers, Richardson and Watt. The authors (see Richardson and Watt, 2006; and Watt and Richardson 2007) proposed a Factors Influencing Teaching Choice (FIT-Choice) model containing factors such as socialisation influence (social dissuasion, prior teaching and learning experiences, social influences), task perceptions (task demand and task return), self perceptions (teaching abilities), values (intrinsic, personal utility, and social utility values) and teaching as a fall-back career. The authors found that the highest rated motivations for teaching among Australian pre-service teachers were their perceived teaching abilities, the intrinsic value of teaching, and their desire to make a social contribution, shape the future, and work with children/young people (Richardson and Watt 2006).

Exploring student teachers' motivation to become secondary school teachers in Britain and Norway, Kyriacou et al. (1999) noted that the participants in both groups reported being strongly influenced by enjoying the subject they would teach, liking to work with children, and the fact that teaching would enable them to use their subject, placing more emphasis on intrinsic reasons. However, Sinclair (2008) found that prospective teachers tend to be multi-motivated. The author identified ten motivations for becoming a teacher that appeared to be common across studies, genders, ethnicities, and socio-economic background. These motivations included: (1) a desire to work with students; (2) a desire to make a difference; (3) teaching as a 'calling'; (4) a love of teaching or a particular subject matter; (5) the influence of significant others; (6) the nature of the work; (7) the perceived benefits of being a teacher; (8) a desire for a career change; (9) the perceived ease of entry into the teaching profession; and (10) the social status that accompanies teaching.

In addition to these motivating factors, self-efficacy, a construct first proposed by Bandura (1986), is also considered as an important source of motivation in the decision-making process since individuals' perception of their ability to perform often determines whether they will choose a specific occupation or not. The theoretical foundation of self-efficacy is found in social cognitive theory which

assumes that people are capable of human agency, or intentional pursuit of courses of action.

Existing research indicates that the initial motivation held by entrants to teacher education can influence their subsequent effectiveness. In their longitudinal study on teacher education, Hobson et al. (2009) in the UK highlighted the importance of ensuring that applicants and those accepted to the teacher education courses need to be aware of the demands of the teaching profession and that they 'are seeking to become teachers for sound reasons and are sufficiently committed to becoming a teacher' (ibid., p249). Richardson and Watt (2013) note that the initial motivations for choosing teaching impact on beginning teachers' professional engagement and persistence in the profession. 'Fall-back motivations', perceiving teaching as a provisional or non-committed option, were found to negatively impact on planned career persistence and level of effort, and lead to negative reported teaching behaviours. Interestingly, the authors found that social influences to become a teacher led to later negative teaching practices. The authors conclude that the negative effect of strong social persuasion consequently needs to be kept in mind when encouraging students to choose the teaching profession.

In summary, it is difficult to generalise the reasons why students choose teaching as a career. The variety in their motives may be due to the cultural, social, and economic contexts they live in as well as the subject areas they are interested in (Kyriacou et al., 1999).

2.3 TEACHER QUALITIES AND ATTRIBUTES

The quality of education and training in Europe is largely determined by the quality of the teaching that is provided; this in turn is in part a function of the quality of teacher education (OECD, 2005). Research suggests that the effects of teachers on student learning tend to be larger than that of other factors such as school organisation. In other words, teacher quality is the most important within-school aspect explaining student performance. Vidovic and Domovic (2013) observe that studies such as *Teachers matter - attracting, developing and retaining effective teachers* (OECD, 2005) or the so-called McKinsey report, *How the world's best performing school systems come out on top*, followed by their report *How the world's most improved school systems keep getting better*, have triggered a major shift in perceptions of the role of schools and teachers in achieving high quality education outcomes, moving away from structural issues and considering the more nuanced interplay between student and school characteristics.

Considerable research in the field of education converges around the conclusion that teachers have an impact on student school experiences and academic outcomes. For example, in the UK, Day et al. (2006) studied children in Years 6 and 9 and found that 15-30 per cent of the variance in pupils' progress in Mathematics and English was associated with the teacher, after controlling for pupil background and prior attainment. This assessment was conducted using baseline test results at the beginning of the year matched with pupils' national curriculum results at the end. The study confirmed the importance of the teacher in achieving better performance in pupils. In the same vein, an earlier study by Hattie (2003) found that teachers account for about 30 per cent of the variance in student achievement.

Quantifying the effect of individual teachers on pupil performance is difficult, as it is hard to disentangle the separate impacts of school context, peers, pupil ability and family background on pupil performance; such research would require rich and disaggregated data (Sutton Trust, 2011). A few studies have been able to draw on datasets that match pupils to individual teachers. Slater et al. (2009) estimate the effect of individual teachers on student outcomes, and the variability in teacher quality. The study links over 7,000 pupils to the individual teachers who taught them in each of their compulsory subjects in the high-stakes exams at age 16. The authors found that the teachers do matter: having a one-standard deviation better teacher raises the test score by (at least) 25 per cent of a standard deviation, even controlling for prior student attainment. However, the results of the study also revealed considerable variability in teacher effectiveness. Aaronson et al. (2007) in the US estimated the importance of teachers in public high schools using matched student-teacher administrative data. The authors identified a significant teacher impact on student academic outcomes. According to the authors, teacher quality was particularly important for lower ability students.

In 2009 RAND[15] researchers examined the relationship between teacher quality, measured in terms of prior qualifications and experience, and student achievement by analysing five years of Mathematics and reading standards tests and other records from students in elementary, middle, and high schools in the Los Angeles Unified School District (LAUSD). The data linked individual students to their classroom teachers each year, allowing the researchers to examine student progress from year to year and across classrooms led by different teachers. The RAND researchers then compared these data with teacher-specific information, such as LAUSD teacher licensure test scores for new teachers and other measures

[15] See RAND (2010).

traditionally assumed to indicate teacher effectiveness, such as degrees obtained and years of experience. The results of the study, which were similar for elementary, middle, and high schools, suggest that, while the teacher is an important determinant of a student's achievement, there was no direct connection between the traditionally assumed measures of teacher effectiveness and student achievement over time. In addition, the researchers found that a five-year increase in teaching experience affected student achievement very little, by less than 1 percentage point. Similarly, the level of education held by a teacher proved to have no effect on student achievement in the classroom. The authors suggest that their findings have implications for the way in which teacher quality and effectiveness should be assessed and valued.

Due to the recognition of teacher impact on student outcomes, research has accumulated on identifying the qualities and attributes associated with being a 'good', 'high value-added' 'expert', 'experienced' or 'efficient' teacher (see James and Pollard, 2011; Marzano et al., 2001; Hattie, 2008). A large study conducted by Chetty et al. (2011) defined 'high value-added (VA)' teachers as those having the most positive impact on test scores, and discovered that students taught by such teachers were more likely to participate in further education, to attend better colleges, to earn higher salaries, and to save more for retirement; they were also less likely to have children as teenagers. Advocates of the 'value-added approach' argue that selecting teachers on the basis of their VA can generate substantial gains in achievement (e.g., Gordon et al., 2006), while critics contend that VA measures are poor proxies for teacher quality (e.g., Baker et al., 2010). What seems to matter is teacher's subject matter knowledge and general competence.

However, there is little agreement around how to define a good teacher (Casey and Childs, 2007). Although there are potentially many ways to measure teachers' performance, many studies, especially in the United States, have taken a narrow view, framing it in terms of a teacher's ability to raise students' test scores. Nye et al. (2004) report that between seven and 21 percent of the variance in student achievement gains can be explained by variations in teacher effectiveness. An earlier study by Sanders and Rivers (1996) found that the least effective teachers achieved student achievement gains of approximately 14 percentile points a year, while the most effective teachers helped their students achieve gains of 52 percentile points a year.

Some studies have considered the importance of teacher qualifications regarding student achievement. Goe (2010) argues that there is little evidence on the relationship between teacher qualifications and student achievement. However, Darling-Hammond and Snowden (2005) note the negative impact of being taught

by uncertified teachers on student outcomes. Wayne and Youngs (2003) summarised studies by Goldhaber and Brewer (2000) and noted that for Mathematics, the results of fully certified teachers were better than those of teachers who were not formally qualified or were alternatively qualified. Some of the differences in findings may reflect the fact that some studies compare certified and uncertified teachers while others look at variation in qualifications among a group of teachers who all meet minimum standards (such as a degree in education). Elsewhere, positive relationships have been found between pre- and in-service education and training and student achievement (Angrist and Lavy, 1999). The importance of initial teacher education for catering to diversity and fostering equality within classrooms has also been emphasised (European Union, 2014). According to an OECD report, *Teachers Matter* (2006), in order to improve the quality of education and to promote equality, all students must be taught by highly skilled good-quality teachers. In recognising this, in many countries there has been an increasing drive to improve policies relating to the recruitment and professional development of teachers. Research is inconclusive, however, in establishing whether teacher quality can be ensured through academic and additional criteria for entry to ITE. Research indicates that such screening is used to establish the general suitability of the applicant and the extent to which they are motivated to become a teacher. Once accepted, the education, training and teaching practice provided during the course should equip a new teacher for the demands of the teaching profession. Therefore, research tends to focus on the qualities that new graduates should bring to the profession rather than on whether they should possess such qualities prior to ITE entry and/or whether they should acquire these skills and competences in the course of their teacher education.

The existing literature has highlighted content knowledge, pedagogical knowledge, pedagogical communication and interpersonal skills and attitudes and motivation to teach as important attributes and qualities in a good/effective teacher (Stronge, 2002; Hattie, 2008; McKinsey and Co., 2007). In the UK a report by the House of Commons notes that:

> *'... an outstanding teacher generally has exceptionally strong subject knowledge and exceptionally good interactions with students and children, which will enable them to demonstrate their learning and build on their learning. They will challenge the youngster to extend their thinking to go way beyond the normal yes/no answer. They will be people who inspire; who develop a strong sense of what students can do and have no limits in terms of their expectations of students' (House of Commons, 2012).*

The 2007 McKinsey study, *How the World's Best Performing School Systems Come out on Top*, also highlights the importance of attributes such as a high overall level of literacy and numeracy. In addition, while subject knowledge is important, the ability to communicate this to students is equally relevant. Stronge (2002) notes that 'students taught by teachers with greater verbal ability learn more than those taught by teachers with lower verbal ability' (p.4). It is important to note, however, that success in teaching is often associated with the 'match' between teachers' knowledge, skills, and attitudes and the population they will teach (Goe, 2010). There is some indication that not all students are taught by well-qualified and effective teachers. Research, at least in the US context, suggests that students from low income families or from minority backgrounds are least likely to be taught by qualified and effective teachers (Darling-Hammond and Falk, 2012).

Some studies conclude that teacher effectiveness is not closely related to observable teacher characteristics (see Burgess et al., 2009; Aaronson et al., 2007) and research measuring the relationship between personal attributes and teacher effectiveness and student outcomes shows somewhat mixed results. The House of Commons (2012) report notes that

> *there is no clear formula for an 'outstanding' teacher and, although good subject knowledge, overall academic ability and a range of personal and inter-personal skills are vital, the evidence is similarly clear that no one factor (including degree class) correlates to performance in the classroom and thus to impact on pupil performance (p.20).*

In summary, there are a number of issues to consider when assessing teachers. First, the qualities required in a teacher might vary with the age group they teach (House of Commons, 2012). Second, it is important to consider the interaction between factors such as student motivation, the curriculum, the policy context, the principal, the school climate, the teacher, the various teaching strategies, and the home when assessing teacher effectiveness (Hattie, 2008). Third, while teachers' academic and pedagogical knowledge are important, interpersonal qualities also matter for student school experiences and their academic outcomes. A study by den Brok et al. (2004) explored the effectiveness of secondary school teachers' interpersonal behaviour. The results revealed a significant teacher impact on both the cognitive and affective outcomes of students. While teacher effects are larger for academic than non-academic outcomes, a sizeable impact of teachers on the social and behavioural skill development of children is evident (Jennings and DiPrete, 2009). The quality of relations with teachers also impacts on student academic outcomes, including

school retention and exam performance (Smyth, 1999). The following sections take a closer look at different components in teacher knowledge.

2.4 SUBJECT MATTER/CONTENT KNOWLEDGE

Subject matter is one of the components of teacher knowledge. It includes the knowledge of a subject or discipline per se and is not unique to teaching. However, it does not just cover the knowledge of facts, concepts, principles and theories, but is also concerned with how they relate to the broader organisation of knowledge (Shulman, 1987). In the US, concerns have related to students with high test scores not opting for the teaching profession. Of those who did become teachers, those with higher achievement test scores were most likely to leave the teaching profession (Vance and Schlechty, 1982). Combined, these trends have highlighted the need to take a closer look at the subject knowledge and pedagogic skills of teachers.

Darling-Hammond (1999) refers to studies which have correlated teachers' courses in subject matter areas and scores on subject matter tests with student achievement. She indicates that pedagogical training generally has a stronger effect than subject matter mastery. Subject matter mastery is likely to interact positively with knowledge on how to teach the subject. However, the teaching of subjects is often influenced by issues such as the time available for engaging in more complex approaches (Doyle, 1986), the subjects taught (Stodolsky, 1988), teachers' understanding of the nature of the subject (McDiarmid et al., 1989), and a teacher's lack of understanding of certain aspects of the discipline they teach (Lampert, 1988). Taken together, these factors present considerable challenges in explaining the subject matter adequately to students.

Having a good degree does not make one automatically a good teacher (House of Commons, 2012). While strong subject knowledge is necessary, it is not always sufficient (House of Commons, 2012). It is important to note that existing evidence on the association between teacher knowledge and student achievement is likely to suffer from bias due to unobserved student characteristics, school and teacher variables, and non-random sorting and selection into classrooms and schools (see Glewwe and Kremer 2006; Metzler and Woessmann, 2010).

In order to provide schools with good quality teachers, some jurisdictions use exit or licensure tests. These tests restrict entry into the teaching profession. The State of California requires new elementary teachers to pass general aptitude, subject-matter, and reading instruction competency tests. However, when the

researchers compared teacher licensure test results with teacher performance in terms of student test scores, they found no relationship between student achievement and teachers' test scores (RAND, 2010). These findings suggest that the measured basic skills, subject-matter knowledge, and reading pedagogy scores of elementary teachers do not contribute to improved student achievement, implying that new methods of teacher assessment might be needed.

In the US, a study by Boyd et al. (2005) assessed the effects of pathways into teaching on the teacher workforce and on student achievement. In particular, the study explored whether teachers who entered through new routes, with reduced coursework prior to teaching, were as effective at improving student achievement as other teachers who had gone through the 'traditional' route. The former were found to provide smaller initial gains in both Mathematics and English. However, most differences disappeared as the cohort matured. In fact, the variation in effectiveness within pathways was greater than the average differences between pathways.

2.5 PEDAGOGICAL KNOWLEDGE, PEDAGOGICAL CONTENT KNOWLEDGE AND INTERPERSONAL SKILLS

Across the world, expectations about the roles of teachers and schools are changing. Teachers need to be prepared to teach in increasingly diverse classroom settings, and use a variety of technologies and teaching approaches in their work. Although there is little consensus about what constitutes a good teacher (Turner-Bisset, 2001), high-quality teachers are seen as combining instructional strategies with clearly focused goals and high expectations for both behaviour and learning in order to promote student achievement (Cotton, 2000).[16] In addition to subject-specific knowledge, generic pedagogical knowledge i.e. subject-independent knowledge about classroom organisation and management, general knowledge of learning theory and general methods of teaching, is an important asset for effective teachers (Baumert et al., 2010).

In his seminal article in the *Education Researcher*, Lee Shulman (1987) criticised the sharp division between subject matter mastery and teachers' pedagogical skills. He introduced the concept of pedagogical content knowledge, briefly described as 'subject matter knowledge for teaching'. Pedagogical content

[16] Some jurisdictions have developed guidelines indicating what is expected of their teachers. For example, in its Standards of Practice for the Teaching Profession (1999), the Ontario College of Teachers (OCT) outlines standards for Ontario teachers in five areas: commitment to students and student learning, professional knowledge, teaching practice, leadership and community, and ongoing professional learning. These guidelines propose a framework for examining the relationships between admission criteria and the qualities and knowledge required of the applicant.

knowledge (PCK) is about the selection of topics, useful forms of presentation, analogies, illustrations, examples, explanations and demonstrations. Pedagogical content knowledge also includes an understanding of what makes the learning of specific topics easy or difficult, including knowledge about the conceptions and misconceptions that students bring to the subject. The assumption is that 'deep knowledge' about the content and structure of a subject matter area is the crucial precondition for teachers' reliance on pedagogical content knowledge in their teaching. Additional components sometimes included in the concept are knowledge of the appropriate use of teaching materials and media, as well as strategic knowledge on the application of teaching strategies. To illustrate, Magnusson et al. (1999) proposed a model of PCK in the area of Science education, defining five components. They include 'orientations towards Science teaching', 'knowledge of Science curricula', 'knowledge of students' understanding of Science', 'knowledge of instructional strategies' and 'knowledge of assessment for Science'.

Some studies have explored teaching techniques and their impact on student outcomes. Meta-analyses by researchers such as Marzano et al. (2001) attempted to quantify the average effects of specific instructional strategies (such as identifying similarities and differences, summarizing and note taking, reinforcing effort and providing recognition). The authors found that when properly implemented, these instructional strategies could result in percentile gains of 29-45 points in student achievement. Developmentally inappropriate instructional strategies can result in an opposite effect. A study of primary school children showed that teacher-student conflict was higher when certain instructional practices (teacher-directed, rote-learning, skills taught in isolation) were used (Mantzicopoulos, 2005). Consequences of conflict in teacher-student relationships can be long term, with children who experienced such conflict in first grade exhibiting lower achievement in Mathematics over the following two years (Buyse et al., 2009).

Teacher behaviour is an important component of the learning environment. In the classroom environment the interpersonal relationship between teacher and students is an important element contributing to the learning process of students and their academic outcomes (Klem and Connell, 2004; den Brok et al., 2004; Wubbels and Berkelmans, 2005) as well as their adjustment to school (Pianta and Stuhlman, 2004). Interpersonal skills relate to communicative skills. Montalvo et al. (2007) found that the traits students like in a teacher include constructing a classroom setting with an emphasis on learning, giving effective feedback, and encouraging persistence when work becomes challenging.

Rockoff et al. (2011) note that little progress has been made in linking teacher quality with factors observable at the time of hire, with teaching experience perhaps being the only characteristic that has consistently been found to be related to teacher effectiveness. In the same vein, the House of Commons (2012) report highlights the importance of demonstrating ability to teach:

> *teacher quality, actual or potential, cannot be fully established without observing a candidate teach. We would like to see all providers, wherever possible, include this as a key part of assessment before the offer of a training place is made.... Assessment panels, where they do not already, must include the involvement of a high quality practicing head teacher or teacher (p.23).*

Rockoff et al. (2012) note that considering a variety of factors seen as important in teacher effectiveness research, such as teaching specific content knowledge, cognitive ability, personality traits, feelings of efficacy and scores on a commercial teacher selection instrument; only a few had statistically significant relationships with student outcomes. However, when all of these variables are combined into two primary factors summarizing cognitive and non-cognitive teacher skills, the authors found that both factors had a modest and statistically significant relationship with student test scores. These results suggest that, while there may be no single factor that can predict success in teaching, using a broad set of measures such as screening at entry to ITE course, competence acquired during teacher education, and continuous professional development of practicing teachers, can help to improve the quality of their teachers.

2.6 TEACHER RETENTION

The selection and retention of effective teachers is largely influenced by broader socio-economic and demographic trends in specific national contexts. Economic and social changes in Europe place increasingly complex demands on schools and on teachers. Combined, they are expected to address the needs of students from diverse backgrounds (cultural, linguistic, special educational needs), take into account cultural and gender issues, promote tolerance, utilise new technologies, and keep pace with rapidly developing fields of knowledge and approaches to student assessment (European Commission, 2013).

While some jurisdictions where the teaching profession has high social prestige are less likely to have issues with teacher retention, there are others experiencing an under-supply of qualified teachers and where retention of teachers is a matter of concern (European Commission 2013b; OECD, 2005). In some countries, a considerable proportion of teachers retire from their profession early (European

Commission, 2013). The latter report also states that there is a perception that the reputation of teaching as a profession has declined over time and that there has been a 'de-professionalisation' process that has altered the mix of people going into the profession in the recent past (European Commission, 2013). However, countries like Finland have retained the prestige attached to the profession. It is recruiting the best candidates available, provides high quality research-led initial teacher education, and enables teachers to have high levels of autonomy (Sahlberg, 2011).[17]

Some research from the United States indicates that a significant proportion of new teachers leave the profession within four years (Benner, 2000). The research on teacher retention identifies different factors that impact on teachers' decision to remain in the profession or leave. These can broadly be divided into teacher factors, school factors and external factors. Teacher factors refer to issues such as salary, family situation, and disposition towards teaching. School factors relate to school leadership, meaningful professional development, positive school climate, working conditions, resources, and insufficient administrative support (Rosenholtz and Simpson 1990). Broad external factors include government policies (Tapper and Slater 1995).

Combined, these factors are associated with teacher job satisfaction. Existing studies in a number of different disciplines have found that low job satisfaction may have a negative impact on employee productivity and attendance (Martin and Miller 1986) and is often associated with occupational stress. The latter, in turn, is frequently associated with burnout, job retention (Stamps and Piedemonte 1986), lower job commitment and absenteeism (Kahn and Byosiere 1992). The existing research literature shows that the extent to which teachers are satisfied with their jobs and working conditions is likely to have significant consequences for the retention of teachers within the profession, for their approach to teaching, for the creation of collegial relations within a school, and for student outcomes (Crossman and Harris 2006; Chaplain 1995). While teacher retention may not be a policy issue in Ireland and other countries that attach high prestige to teaching, it is necessary to understand all processes shaping the supply and demand for teachers.

2.7 DIVERSITY WITHIN THE TEACHING PROFESSION

The diversification of the teaching profession continues to be on the policy agenda of several countries. Across Europe and elsewhere, the most prominent characteristic is the over-representation of women teachers at the primary and

[17] www.aft.org//sites/default/files/periodicals/Sahlberg.pdf.

secondary levels of schooling. It has been argued that the feminisation of a profession is often related to its general lower socio-economic status in terms of average earnings. There is continuing concern that entrants to initial teacher education are predominantly female. In the United States, for example, Chmelynski (2006) reported that the number of male teachers was then at its lowest point in over 40 years. The source of these gender differences in student performance has long been a topic of debate. While authors broadly agree that schools need more male teachers to act as role models, there is no consistent empirical evidence indicating that gender of the teacher impacts on student outcomes.

Another important characteristic is the uneven distribution of teachers across different age groups, with a high percentage of primary school teachers in the age group 40 to 49 years, while the highest percentages of secondary school teachers are over 50 years of age (Key data on education, 2012[18]). In other words, a large proportion of teachers in many European countries, especially in secondary education, are approaching retirement age. Moreover, it has also been noted that teachers in most European countries retire from their profession as soon as possible, i.e. as soon as they reach the minimum age for full pension entitlement. Such a situation can contribute to the shortage of qualified teachers, especially in some core subjects such as Mathematics and Science (Ibid.).

The lack of ethnic minority candidates continues to be a challenge, especially as minority student enrolment continues to increase in schools (Bird and Eyres, 2000). Provision of alternative routes to teaching has been seen as one possible way of increasing ethnic minority (and other) recruitment to ITE. Lack of ethnic minority candidates is also an issue in Ireland where very few young people from the Travelling community or immigrant families pursue a career in teaching. The Irish language requirement may preclude entry for some potential applicants. In addition, while primary and second-level classrooms have become ethnically more diverse, this is not reflected in the profile of teachers. Some international research indicates that teachers from minority language and cultural backgrounds can impact positively on minority students' self-esteem and academic performance, and that all students can benefit from a diverse teaching workforce (Gordon, 2002).

2.8 IRISH RESEARCH

In the Irish context, there is now a growing literature on teacher impact on student experiences at both primary and post-primary levels (see Morgan et al.,

[18] European Commission, 2012, Eurydice Report.

2009; Kitching et al., 2009). The impact of teachers on student outcomes is best demonstrated by a longitudinal study of the experiences of students in second-level schools, the Post-Primary Longitudinal Study. The research shows that during the course of junior cycle, the nature of feedback from teachers gradually changes as reprimands replace praise to a certain extent (Smyth et al., 2004, 2006, 2008). In senior cycle, students with more positive school experiences (including the nature of interaction with teachers) tended to do better at school (Smyth et al., 2011a, 2011b). The study also demonstrated that according to students, a good teacher provides clear explanations of their subject; utilises active teaching methods; and allows students to express their opinions. A good teacher is also someone who feels passionate about their subject, and creates a respectful and caring environment in the classroom (Smyth et al., 2004, 2006). The nature of interaction with teachers even influenced the post-school pathways pursued by young people, with those who had negative relations with teachers significantly less likely to go on to any form of post-school education and training (McCoy et al., 2014).

International studies have highlighted the importance of teacher job satisfaction and occupational stress. Research in the Irish context on this topic has revealed that Irish primary school teachers are generally satisfied with their jobs, even though many consider their jobs stressful (Darmody and Smyth, 2012). Recent changes in Irish schools, including greater diversity among the student body, may have resulted in greater stress levels but have not reduced job satisfaction. Perhaps the motivational factors associated with the teaching job outweigh the stressors.

In line with international research, relatively little attention has been paid to the selection of candidates into initial teacher education. However, a number of studies have contained aspects relevant for exploration of this topic. An article by Killeavy (1998) indicates that entrants to teacher education in Ireland can generally be characterised as being of high academic ability, unlike in some jurisdictions where there is a problem with recruiting and retaining teachers. In the same vein, Heinz (2008) shows that in Ireland the demand for places tends to be greater than the availability of places. One of the features of the system is that the entrants tend to be generally a homogenous group, with male entrants (Drudy, 2005)[19] and those from lower socio-economic backgrounds under-represented among the applicants (Heinz, 2013). Applicants tend to come from academically oriented secondary schools and report very positive school experiences (Heinz, 2013). The need to diversify the profile of entrants into ITE is

[19] Partly due to the poorer educational achievement of male graduates in Leaving Certificate exams and in undergraduate courses, as well as less interest in teaching as a career.

discussed in the Teaching Council's Strategic Plan (2008-2011) which called for the attraction of more applicants from under-represented groups. Suggestions for attracting applicants from different ethnic backgrounds (Devine, 2005) have so far not been addressed at the policy level.

There are two Irish studies that look more specifically at the relationship between entry characteristics and subsequent outcomes. A study by Greaney et al. (1999) was able to link pre-entry characteristics of primary student teachers in one Irish college with their degree results, their school placement assessment and their subsequent evaluation by the inspectorate. This study found that Leaving Certificate grades were significantly (but modestly) associated with final degree results but not with school placement grade or assessment of post-graduation teaching. Ratings on pre-entry interview were significantly (but modestly) correlated with school placement grade but not with assessment of teaching or final degree results. These findings should be interpreted with some caution as the authors did not control for these different factors simultaneously. A later study, again focusing on primary ITE, in one Irish college (Corcoran and Tormey, 2013) sought to look at the relationship between a measure of emotional intelligence and results from the school placement. Performance on school placement was not related to prior Leaving Certificate achievement and, contrary to expectations, was negatively (but modestly) correlated with one dimension of assessed emotional intelligence (perceiving emotion in self and others). Female students were found to have higher pre-entry achievement levels and higher assessed emotional intelligence but there were no gender differences in school placement results.

As in many other jurisdictions, the main criterion in Ireland regarding entry to ITE is academic achievement, whether Leaving Certificate grades for concurrent entry or degree results for consecutive courses. In some cases, however, the use of achievement criteria is accompanied by additional criteria such as interviews; the use of 'qualitative criteria' to assess candidate's personality traits, motivation for teaching and relevant experience is relatively rare (Heinz, 2008). There have been some concerns about the over-reliance on academic criteria in selecting applicants. For example, Drudy (2005) raises the issue of grade point averages being sensitive to institutional and/or disciplinary variability, while Heinz (2013) argues that primary degree results may not necessarily document applicants' comparative academic proficiency (p.109). Concerns have also been raised by Clarke et al. (2012) regarding the reliance on essays as a mechanism of selection, as applicants from fields of study other than Arts may be at a disadvantage in essay-type exams.

Little attention has been paid to issues relating to supply and demand in ITE, particularly in specific subject areas. Heinz (2008) notes that there is reason for concern regarding sufficient teachers of Irish considering that the number of applicants choosing this subject has fallen while the subject is still mandatory for second-level school students. She suggests considering the establishment of subject quotas within the overall admission quota for ITE.

Irish research has also touched upon the importance of subject matter knowledge. Hourigan and O'Donohue (2013) note that in many cases, opinions differ regarding what is perceived to be appropriate Mathematics subject matter knowledge (MSMK) for teaching elementary Mathematics among many qualified and prospective primary teachers. The findings demonstrate weaknesses and gaps in teachers' 'common' MSMK. Particular difficulties were evident in knowledge of rational numbers, conceptual understanding and problem solving. These findings highlight the inadequacy of previous Mathematics achievement and minimum entry requirements as predictors of MSMK for teaching.

It is important to note that while a teacher may have a significant effect on student experiences and outcomes, other factors such as the social mix in schools are also important. For example, findings using *Growing Up in Ireland* (GUI) data showed that the concentration of disadvantaged children in particular schools has an impact on their outcomes above and beyond that of their own background and that part of this effect is explained by differences in teacher experience (McCoy et al., 2014).

In summary, there is no clear formula for an 'outstanding' teacher and, although good subject knowledge, overall pedagogical content knowledge and a range of personal and inter-personal skills are vital, the evidence is similarly clear that no one factor predicts performance in the classroom and thus impacts on pupil academic performance. Many different factors contribute to a teacher's effectiveness and there is no obvious consensus in the existing research on how teacher quality should best be measured.

Chapter 3

Comparative Overview of Entry Criteria to Initial Teacher Education

3.1 INTRODUCTION

The approaches to initial teacher education vary across countries on a number of dimensions, including required qualifications, duration of the programme, admission criteria and so on. There is a growing interest in how best to identify the competences and qualifications that are required to be admitted as a qualified member of the teaching profession (ETUCE, 2008). In order to improve the academic outcomes of students, countries in Europe and elsewhere have been trying to attract highly capable and effective individuals to the teaching profession. In order to do so, the majority of higher education institutions responsible for teacher education apply some kind of entrance criteria, but procedures vary among countries (e.g. Valenčič-Zuljan and Vogrinc, 2011). However, it has been noted that these measures cannot be successful if social conditions do not contribute to the attractiveness of the teaching profession. The selection of candidates at the entry point produces desired outcomes only in the countries where the teaching profession is perceived as highly prestigious and is adequately rewarded, as for instance is the case of Finland (e.g. Sahlberg, 2011). Countries experiencing a shortfall of qualified teachers often utilise alternative entry routes into the profession while relying on ITE programmes to provide new teachers with the necessary skills and knowledge (Ingersoll, 2003).

3.2 DIFFERENCES BETWEEN EDUCATION SYSTEMS

In order to fully understand entry to the teaching profession at primary and post-primary level across countries, it is first necessary to understand how national education systems vary in terms of their structure. In particular, there are notable differences in the duration and organisation of the main levels of formal schooling. This often results in difficulties in comparing education systems across the world (Eurydice, 1997). For the purposes of this study, European countries can be divided into two broad categories. One group includes countries where primary and lower secondary[20] level form one block. In many cases this also marks the end of compulsory education (non-differentiated or integrated education systems). The second group includes countries where primary and

[20] Lower secondary level corresponds to ISCED Level 2 and upper secondary level to ISCED Level 3.

secondary level, including lower and upper secondary schools, form separate groups (differentiated or non-integrated education systems) (see Table 3.1).

TABLE 3.1 Differentiated and Non-Differentiated National Systems in the European Union (EU25)

Differentiated Systems (Primary and Lower Secondary Separate)		Non-Differentiated Systems (Primary and Lower Secondary Form Basic School)
Cyprus	Luxembourg	Portugal
Czech Republic	Netherlands	Estonia
France	Malta	Denmark
Germany	Poland	Latvia
Greece	Slovakia	Lithuania
Hungary	Slovenia	Sweden
Ireland	Spain	Finland
Italy	United Kingdom	
Austria	Belgium	

Source: Eurydice national education system charts.

Note: While the countries are divided into two broad categories ('integrated' and 'non-integrated'), there are some structural differences within these categories.

Formal primary schooling starts in most cases at the age of six or seven, although in some countries children go to school well before the age of six (for example, in Ireland, the Netherlands and the U.K.). In most cases, the beginning of primary schooling also constitutes the beginning of compulsory education. Exit from compulsory schooling usually takes place when students are about 15 or 16 years of age. In countries like Sweden, Portugal, Estonia, Finland, Denmark and some others, compulsory education is integrated[21] and includes primary and lower secondary education levels.[22] The length of basic education is usually nine years. After the completion of this level, most students continue their studies, many of them in general upper secondary level. In most cases, this level of schooling is voluntary and funded by the state, except in the case of private schools. In most European Union countries, however, primary and lower secondary levels are not integrated and such education is provided in separate schools. Lower secondary education usually caters for students entering this level of schooling at the age of approximately 12, after the completion of primary school. This level usually consists of two to six years of schooling. Lower secondary education level can either be terminal (preparing students for direct entry into the labour market), or preparatory (preparing students for upper second-level education).

[21] In other words, it is seen as one block, which is often referred to as 'basic' education, i.e. the level that forms a basis for further education and/or training.

[22] There are some variations among integrated systems in terms of changes in the learning environment that occur during year-to-year transfers.

3.3 INITIAL TEACHER EDUCATION - CONSECUTIVE AND CONCURRENT PROGRAMMES

Across Europe and elsewhere, the types of institutions that offer teacher education vary from universities to specialist institutes. The length of teacher preparation programmes also vary. In primary education such courses last three years in eight EU/EFTA countries, four years in 15 countries and around five years in seven countries. In some cases, courses of different durations are offered within the same jurisdiction (e.g. in Scotland both four- and five-year programmes are offered) (ETUCE, 2008). For lower secondary education the average length of teacher education is 4.5 years, and for upper secondary education the average is 4.8 years (ibid. p.23). In recent years, the length of ITE in both sectors across Europe has been gradually increasing.

The Eurydice report (2013), *Key Data on Teachers and School Leaders in Europe,* indicates that while approaches to initial teacher education vary across countries, in most cases ITE includes a general and a professional component. The professional component may be provided either at the same time as the general component (concurrent model) or after it (consecutive model). In general, the general component refers to general education courses and mastery of the subject(s) that candidates will teach when qualified. The professional part provides prospective teachers with both the theoretical and practical skills needed for teaching and includes school placements (p.23).

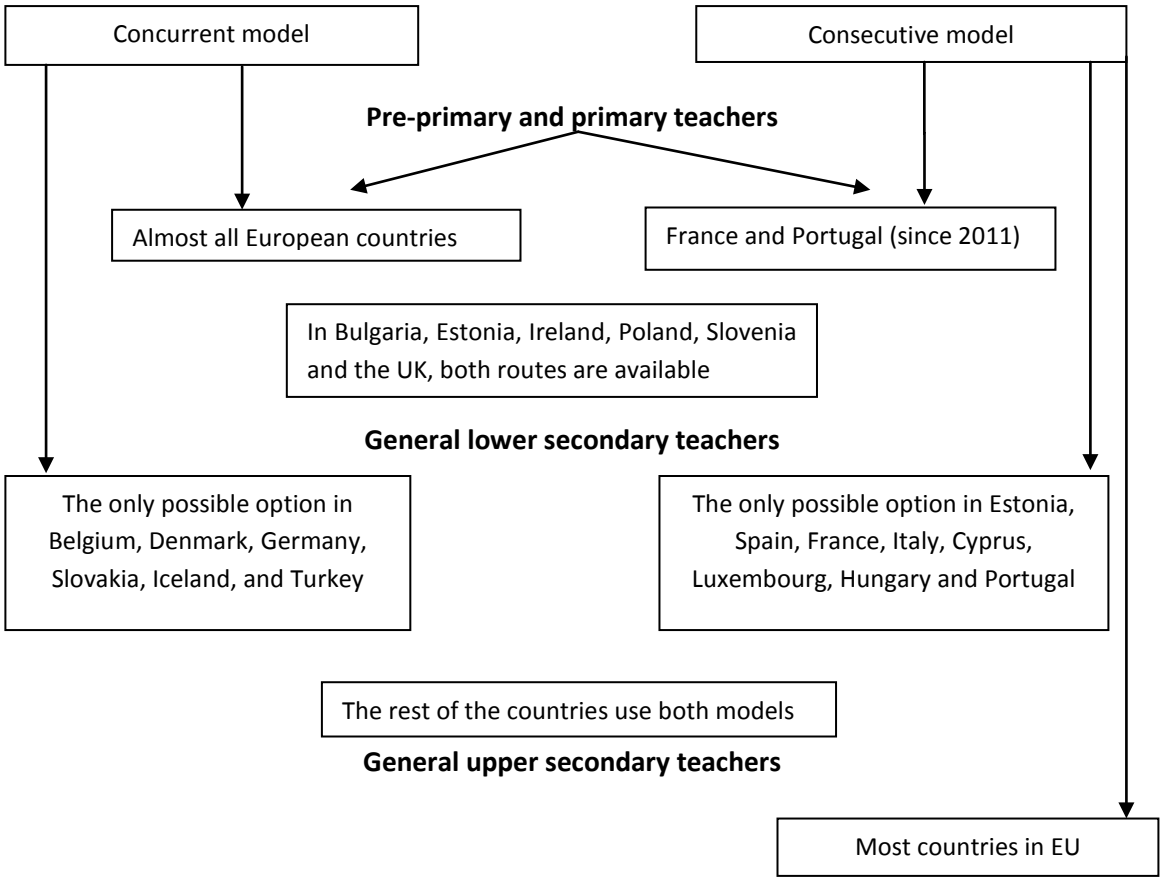
A consecutive programme is available for candidates who hold an undergraduate degree while a 'concurrent' programme combines a first undergraduate degree and professional education into one extended programme of study. Some jurisdictions offer both types of programmes.[23] In Germany, Slovakia, Iceland and Turkey, the concurrent model is the only possible route into teaching at all levels of education whereas in France and Portugal, the only available model is the consecutive one. In contrast, in Bulgaria, Ireland, Poland and the United Kingdom, both routes are available for pre-primary education through to upper secondary education. In some cases both programmes are potentially available (see Figure 3.1).

Each programme has its strengths and weaknesses: the concurrent model allows a more integrated learning experience, since pedagogical and subject-matter education takes place at the same time. However, it allows little flexibility for entering the teaching profession later on. As for the consecutive model, it enables applicants to have more flexibility in terms of entry to the teaching

[23] See Appendix II.

profession and allows teachers to have strong subject expertise in a specific academic discipline. Disadvantages include weaker knowledge in learning techniques and in pedagogy in general; potential fragmentation between subject-matter knowledge and pedagogical knowledge; and a potentially weaker professional identity. In countries where both models are used, the benefits include availability of different options to attract into the profession a different profile of potential teachers. However, having both models also represents additional financial costs for the country and less efficiency in teacher education (European Commission, 2013b).

FIGURE 3.1 Models of Teacher Education in Europe



There has been increasing policy interest in the structure of ITE programmes. The ETUCE (2008) report notes that the duration of such programmes has to be sufficient to ensure that teachers are adequately prepared for the increasing demands they face. Teachers need to have sufficient subject and pedagogical knowledge; they also need to be able to engage in reflective teaching and adjust their teaching approaches to the individual needs of the students. It has been suggested that to cope with these demands, all teachers need to be educated at

Master's level. At primary school level, Master's-level teacher education is provided in Estonia, Finland, Germany, Poland, Portugal and Slovenia, with several other countries set to follow this trend (ibid. p20). Master's-level education is more common for secondary school teachers.

3.4 ENTRY CRITERIA TO INITIAL TEACHER EDUCATION IN COMPARATIVE PERSPECTIVE

Across jurisdictions there is a concern about improving the educational outcomes of students. A substantial amount of international evidence indicates that teacher quality is vital to student achievement and success (See Chapter 2). Boyd et al. (2005) note that new standards for high achievement by all students require beginning teachers to be more skilled than in the past. In recent years different countries have devised varying means of selecting appropriate candidates for the teaching profession. The selection process usually takes place at the point of entry to initial teacher education. Approaches taken to selecting entrants to initial teacher education reflect the different education structures, prestige of the profession, as well as supply of and demand for teachers across Europe and elsewhere.

3.4.1 Selection Mechanisms

This section provides an overview of the different selection approaches used for screening candidates for initial teacher education. According to the European Commission (2013a) report, admission to initial teacher education seems to be governed more by general entrance requirements for tertiary education than by more specific selection criteria for teacher education. According to the Eurydice report (2013), across Europe in 2012 the prevailing qualification for school teachers was the Bachelor degree, except for upper secondary teachers who, in a majority of countries[24] are required to have a Master's degree. For primary teachers across European countries, a BA is more common as a minimum qualification. Where a Master's programme exists, it takes four to five years for teachers to qualify. In some countries the preparation may take even longer: in Germany initial teacher education takes five years for primary teachers and at least six years for secondary teachers (Sargent et al., 2013, Eurydice, 2013).

Casey and Childs (2007) argue that the primary goal of teacher education programmes is to produce good teachers for primary and secondary schools. The admission processes for these programmes are expected to select applicants who will succeed in the preparatory programmes and become good teachers (Darling-

[24] Only in the Czech Republic, Germany, Austria, Malta and Slovakia, do pre-school teachers (or qualified education staff at that level) not undertake higher education but instead have a qualification at upper or post-secondary level.

Hammond, 2000; Darling-Hammond et al., 2001). However, the relationship between admissions criteria and the knowledge, skills, and attitudes needed by beginning teachers and the preparation provided by the programmes are rarely made explicit. The McKinsey report (2007) also highlighted the need to consider overall system performance in education (its strengths and weaknesses) in devising selective entry requirements for initial teacher education.

The process usually starts with a candidate submitting an application to a relevant institution. Academic qualifications are important across jurisdictions when considering applicants to ITE. Most teacher education programmes use students' grade point average as a criterion for admission to measure academic ability (Mikotovics and Crehan, 2002). However, research has shown a weak relation between grade point average and future performance (Olstad et al., 1987). While good academic qualifications are necessary for entry to the teaching profession, they are not always sufficient for becoming a good teacher (Donaldson, 2010). The latter author argues that institutions need to be more effective in identifying and selecting candidates with the potential to become good teachers. For this to happen, however, there needs to be a consensus on what qualities and capabilities make such a teacher. In Scotland a small proportion of initial teacher education students are found to lack 'some of the fundamental attributes to become good teachers, including limited interpersonal skills and basic weaknesses in literacy and numeracy'[25] (Donaldson 2010: 23).

Only a third of all European countries have specific selection methods for admission to initial teacher education in place, such as satisfactory performance in a specific aptitude test or interviews in which candidates are asked about their motivations to become teachers. Where such specific selection methods exist, they are often applied at the discretion of the programme provider. Only in Italy, Lithuania and Scotland are such specific methods determined at the level of the education authority. In many countries, general admission requirements are determined at education authority level. However, institutions have some discretion with respect to their implementation. In several countries, institutions are free to introduce additional admissions criteria over and above central minimum requirements. In Denmark, Portugal, Romania, Slovakia and Finland, selection is exclusively determined at institutional level.

[25] Donaldson also argues that current requirements relating to Scottish Qualifications Authority qualifications in English and Mathematics do not seem to provide a sufficient guarantee of the levels of competence which are required for teaching. He suggests that the selection for entry to initial teacher education programmes should be made more rigorous, drawing on existing best practice and using a wider set of selection criteria.

A great deal of research has analysed the relationship between standardised admission tests and student teaching success, but found these tests to have little usefulness as predictors (Basom et al., 1994). Many teacher education programmes in the US use results from standardised tests in their selection processes. For example, 28 states and the District of Columbia require applicants to pass the Praxis I: Pre Professional Skills Assessments (Educational Testing Service, 2000), which tests basic skills in reading, writing, and Mathematics knowledge. There does not appear to be a consistent protocol for the use or selection of standardised tests in the United States, and none are used in Canada as the mandate for education falls under the jurisdiction of provincial governments. Much of the research on standardised testing indicates only limited predictability of student success (Casey and Childs, 2007).

Several jurisdictions also use written examinations and/or aptitude tests. However, there are marked differences between countries in how this is operationalised. For example, in Finland, the entrance examination for generalist (class) teachers includes both exams and aptitude tests. The aptitude test used may include an interview and a group exercise (EC, 2013). Many countries also test ITE candidates in literacy and numeracy. In the Netherlands, applicants for ITE at primary school level are tested in Dutch language and numeracy skills.[26] This is also the case in the United Kingdom. While similar tests are used in Belgium (Flemish Community), it is not obligatory for the teaching institutions to utilise them. In some countries (e.g. Spain, Luxembourg, Malta), language exams are included in the selection procedures for tertiary education (EC, 2013). There is also some research evidence indicating that using entrance tests may provide different results across fields of study. For example, Dobson and Skuja (2005) exploring the relationship between an entrance test (ENTERS) and first year results, found that while the test was a good predictor of performance in Engineering, Agriculture and Science, the relationship was largely non-existent for education. Although student admissions tests are utilised in some jurisdictions, there is a general paucity of research on university selection processes and tests (Coates and Friedman, 2010).

The measures described above are sometimes accompanied by other approaches, including interviews and/or providing references and a written profile (Caskey et al,. 2001; Denner et al., 2001).

An interview is one of the most commonly used formats for evaluating course applicants (Stronge and Hindman, 2006). According to Deems (1994), behaviour-

[26] If not, they will receive extra support. However, if they fail the test again at the end of their first year, they will not be allowed to continue their course.

based interviewing, based on a notion that past experiences, background and skills are the best predictors of future performance, is increasingly used in education. An interview also provides an opportunity to gather information about an applicant's language proficiency, attitudes, and interpersonal skills (Denner et al., 2001). Another approach is to ask interviewee questions that are explicitly linked to quality indicators to ensure a consistent response assessment. To facilitate this process a Teacher Quality Index was developed in the United States. This Teacher Quality Index (TQI) is a structured, research-based interview protocol built on the quality indicators explored in Stronge's *Qualities of Effective Teachers*. It provides interview questions and question-specific, descriptive rubrics that support consistent evaluation of candidates' responses.

Researchers' perspectives on the extent to which interviews are an adequate measure of a candidate's suitability tend to vary. Jacobowitz (1994) suggested that interviews are necessary to ensure the selection of applicants who understand the moral and ethical dimensions of teaching, because the applicants 'cannot develop a value-based and attitudinal perspective for enculturating the young within the timeframe 'of the interview' unless they are clearly predisposed to those ends' (ibid. p.46). However, Jacobowitz concluded that the interview process was not sufficient either to determine whether applicants possessed the desired attributes or to assess their ability. Interview ratings have also been found to be of limited value for predicting student teaching performance (Caskey et al., 2001; Denner et al., 2001). In contrast, Shechtman (1992) found that ratings of applicants' performance in a group interview predicted student teaching performance and that this type of interview was a better predictor than academic criteria. Similarly, several researchers have presented evidence that ratings on individual interviews can be good predictors of future teaching success (Haberman, 1987; Malvern, 1991). The interview process can be particularly time consuming and costly both for programmes and applicants. Because of this, in some programmes only applicants who have met other admission criteria are invited to be interviewed.

In conjunction with other measures, applicants for entrance to teacher education programmes are sometimes asked to provide a written profile, generally consisting of written responses to specific questions about relevant experiences and interest in teaching in order to determine the applicant's genuine interest in teaching (Caskey et al., 2001). In Ontario, most teacher education programmes use this approach for screening applicants (Teacher Education Application Services, TEAS[27]). Kosnik et al. (2005) noted that while the assessment of such written exercises is labour intensive, it provided some help in selecting students

[27] www.ouac.on.ca/teas.

who had demonstrated attributes that the evaluators were looking for. In the US, George et al. (2005) reported that an alternative method of entry known as the *portfolio*[28] was effective in assessing a wide range of skills necessary for success at university including motivation, independence, time-management and interest in the field of study. Laman and Reeves (1983) found that written recommendations were required by all of the 147 US programmes they surveyed. These letters vary in content from a discussion of the applicant's academic competences to descriptions of personal characteristics.

In some concurrent teacher education programmes, applicants are admitted directly into the programme in their first year of university. Other programmes, however, require students to apply after the first or second year of undergraduate courses (Casey and Childs, 2007). For applicants intending to become secondary school teachers, most *consecutive* programmes require university-level coursework in the subject areas to be taught.

Rose et al. (2014) note that while it is generally understood that better teachers lead to better student outcomes, schools often lack the resources and best practice knowledge to hire the best teachers. The authors outline how to use and refine four common selection tools (application forms, job simulations, interviews, and teaching observations). This best-practice guide for school or district hiring teams contends that a well-researched, systematic, standardised hiring process will yield a better teaching staff and offers guidelines for administrators to design their own hiring systems. Some skills and methods, the authors demonstrate, prove to correlate with successful teaching: having an extroverted personality, for example, has a weak correlation to job performance (0.09) as compared to situational interviews, which correlate strongly (0.43).

3.5 CONCLUSIONS

This chapter has shown that approaches to initial teacher education vary across Europe and further afield, reflecting the structures of national education systems. Teacher education is provided in a variety of institutions and is provided through concurrent and/or consecutive programmes. Countries also vary in the prestige the profession has in society, resulting in an under-supply of teachers or strong competition for places on the programme. All countries utilise some selection mechanisms regarding entry to ITE, mainly in the form of academic qualifications. It has been argued, however, that it may not be the best selection tool as

[28] For an example of requirements see information from University of Kentucky, College of Education: https://education.uky.edu/AcadServ/sites/education.uky.edu.AcadServ/files/TEP%20application%20Fall%202014%20v2.pdf.

teachers need to have a range of skills, competences and attitudes to become an effective teacher, especially in the light of rising expectations of teachers. Despite the importance of the topic, empirical research on the associations between entry criteria to ITE, engagement with the course and student outcomes has remained sparse.

Chapter 4

Entry to ITE: Case-Studies of Practice in Eight Jurisdictions

4.1 INTRODUCTION

The improvement of educational experiences and outcomes is the focus of national policies and government initiatives across different jurisdictions. In this context, attracting and retaining good teachers has become increasingly important. Although the approach taken varies between countries, it is generally recognised that good teachers are instrumental in children's learning experiences (see Chapter 2). While there is now extensive literature on teacher impact on student outcomes, relatively little attention has been paid to the selection of candidates to initial teacher education (ITE) programmes. This chapter provides an overview of eight case-study countries: Australia (New South Wales); Austria; Canada (Ontario); Finland; the Netherlands; Scotland; Spain, and Sweden. The selection of these case-study countries is designed to capture variation in the key dimensions of teacher education systems (see Chapter 3), namely, the prestige of the teaching profession, levels of supply and levels of demand. Taken together, the case studies encapsulate a range of measures used to screen entrants to ITE programmes. Exploration of the approaches used by other jurisdictions helps to critically reflect on the screening mechanisms currently used in Ireland.

Web-based material (mainly websites and relevant reports) was the primary source of information for this review. This resulted in certain variability in the level of detail provided in these case studies. In order to gain further insights, contacts were established in each of the eight jurisdictions to check the accuracy of the information and provide more uniform descriptions across the countries.[29] This approach was successfully used in a previous study by the authors (see Darmody and Smyth, 2013).

To gain a better understanding of teacher education in the case-study countries, some information on the general education system of this country is essential. Hence each country review starts with a short overview of the key features of the education system. It will then move on to a description of initial teacher education and the selection criteria used in the case-study countries. The key information from the country case-studies is summarised in Appendix I.

[29] Although several institutions were contacted in each of the case-study countries, the responses and extent of information provided varied somewhat. This needs to be taken into consideration when reading this chapter.

TABLE 4.1 Organisations Contacted

Case study country	Organisation
Australia (NSW)	ITE, Board of Studies, Teaching and Educational Standards (BOSTES)
Austria	University of Teacher Education Styria
Canada (Ontario)	Ontario Universities' Application Centre; Lakeland University; Ontario College of Teachers
Finland	University of Oulu
The Netherlands	Utrecht University; University of Groningen
Scotland	General Teaching Council for Scotland
Spain	University of Zaragoza
Sweden	Stockholm University

4.2 AUSTRALIA, NEW SOUTH WALES

4.2.1 Key Features of the Education System

In Australia there are minor variations between states and territories in terms of school-based education. Education is compulsory between the ages of six and 16 (Year 1 to Year 9 or 10). Children attend primary school from approximately the age of five to 11 years. From the age of about 12 to about 16-17, pupils attend secondary school. Years 11 and 12, the final two years of secondary school in Australia, are designed to prepare students for entry into training programmes or to university. The structure of Australian higher education follows a common 3+2+3 international model. Students are admitted via centralised admissions agencies across the Australian States and Territories (the Universities Admissions Centre UAC is responsible for this in NSW). The admission to undergraduate courses is based on prior academic achievement (the Higher School Certificate). Most Australian states, including NSW, use a common ranking system (a student's position relative to other students); the Australian Tertiary Admissions Rank (ATAR) for undergraduate admissions. University places are offered on the basis of this ranking. Some programmes have additional selection criteria, such as a portfolio, interview, audition, questionnaire or test.

4.2.2 Initial Teacher Education

In Australia initial teacher education is delivered across the nation, with provider programmes available in a range of locations. A number of programmes also provide options for distance education. Entrants to initial teacher education come from a diverse range of backgrounds and experiences. Initial teacher education students can enter both undergraduate and graduate programmes.

Most students who want to be a primary school teacher will either:

1. Complete an accredited four-year teaching degree (such as a Bachelor of Education).
2. Complete an undergraduate degree (such as a Bachelor of Arts) and then complete an accredited graduate-entry teaching degree (such as a Master of Teaching) (personal communication, BOSTES).

Most students who want to be a secondary school teacher will either:

1. Complete a four-year teaching degree, including the required amount of study in the secondary teaching subject they intend to teach. Appropriate degrees include a Bachelor of Education (Secondary), or a combined or double degree such as a Bachelor of Science/ Bachelor of Education (Secondary).
2. Complete an undergraduate degree (such as a Bachelor of Arts or Science) and then complete an accredited graduate-entry teaching degree (such as a Bachelor of Teaching (Secondary) or Master of Teaching (Secondary). (personal communication, BOSTES)

Over-supply of teachers in some areas means that many qualified teachers struggle to find employment. For graduate programmes, previous qualifications are typically the basis for admission, with some attention paid to relevant work experience. Tertiary providers selecting mature-aged or career change applicants use a range of mechanisms, including interviews, references and the recognition of past qualifications and experience. It is common for providers to offer special entry provisions under equity and access programmes to applicants from a wide range of backgrounds. Some providers also rely on external testing to assess the suitability of their applicants, for example, the Special Tertiary Admissions Test (STAT). The STAT is one method of assessing applicants who do not have a recent Year 12 certificate, and is externally administered by tertiary admissions centres in all Australian jurisdictions. Considering the selection of students into pre-service teacher education courses across Australia, Ingvarson (2008) observes that the major differences in selection are to be found between undergraduate and postgraduate courses. For undergraduate courses the use of the Tertiary Admission Centres is near universal, and few other data are used to make selections. However, for postgraduate courses where applicants have already attained a degree, universities use a wider range of information to guide selection. Again, the type of information used is common to most universities. According to the authors, this similarity seems to suggest that universities have optimised their selection procedures in terms of efficiency. In 2013 the NSW government outlined reforms including restricting practical training places in schools to student teachers with high academic standards. Guidelines that

recognise the personal qualities needed for teaching in addition to academic achievement are currently being developed by Australian Institute of Teaching and School Leadership (AITSL) in conjunction with universities and school education authorities. These could include communication, emotional and interpersonal skills. In addition, the Australian Council for Educational Research is developing an aptitude test for new teachers. Intended for implementation in 2015, the test will measure reading, writing and numeracy.

4.2.3 Selection Criteria to ITE

While the Australian Tertiary Admission Rank (ATAR) is often used as an indicator of the standard of entrants into tertiary education, more than half of entrants to initial teacher education programmes enter without an ATAR. There is some call for improving the quality of entrants into teacher education programmes through the setting of minimum ATAR cut-offs, but there is considerable support for the view that selection should not be based solely on a single measure such as an ATAR. In NSW there are also different routes by which students can enter teacher education courses and low socio-economic status (SES) students are well represented in initial teacher education, as are students from regional backgrounds (AITSL, 2013).

The admission of students to initial teacher education programmes is at the discretion of providers and different mechanisms can be employed in making selection decisions (AITSL, 2013). The Board of Studies, Teaching and Educational Standards (BOSTES) leads the approval and accreditation of NSW primary and secondary teacher education prior to the provider offering the programme for enrolment. BOSTES reviews, accredits and approves NSW primary and secondary teacher education programmes every five years according to specific policies, teaching reforms, and minimum entry requirements that all providers have to abide by but each programme has specific entry requirements that the providers implement (personal communication, BOSTES). In Australia (NSW), applicants into ITE are required to have good literacy and numeracy skills. Since 2009, NSW has required all entrants to undergraduate programmes to have Higher School Certificate (HSC) Band 4 in English and General Mathematics for primary teaching and HSC Band 4 in English for secondary teaching.[30] Applicants for graduate-entry programmes do not have their literacy or numeracy skills specifically assessed.

Prerequisites for admission to a primary Initial Teacher Education Programme include:

[30] Applicants not meeting these HSC benchmarks can be admitted to programmes, but they must complete study during their programme that demonstrates that they have equivalent skill levels.

1. Undergraduate programmes

For admission to an undergraduate teacher education programme, an applicant must have achieved a Higher School Certificate minimum Band 4 in English Advanced or minimum Band 4 in Standard English or minimum Band 4 in English as a Second Language, AND Higher School Certificate minimum Band 4 in General Mathematics, or completion of Mathematics (2 Units). Where an applicant does not meet these entry requirements, a tertiary institution may offer concurrent study or appropriate bridging units and/or require satisfactory performance in approved tests in literacy and numeracy before graduation.

2. Graduate-Entry Programmes

For admission to a graduate-entry primary teacher education programme (such as a graduate Diploma of Education, a Bachelor of Teaching, or a Master of Teaching), the degree should contain at least one year of full-time equivalent studies relevant to one or more learning areas of the primary school curriculum.

Prerequisites for Admission to a Secondary Initial Teacher Education Programme:

1. Undergraduate

Prior to entering an undergraduate teacher education programme, an applicant must have achieved a Higher School Certificate minimum Band 4 in Standard English or minimum Band 4 in English as a Second Language or minimum Band 4 in English Advanced. Where an applicant does not meet these entry requirements, a tertiary institution may offer concurrent study or appropriate bridging units and/or require satisfactory performance in an approved test in literacy before graduation.

2. Graduate

Undergraduate subject content studies are required in addition to a teaching qualification in order to be accepted into these programmes. For secondary teaching, where teachers specialise in a subject(s), undergraduate studies must match the subject(s) that an applicant intends to teach (for example, first subject English and second subject Modern History). These undergraduate studies are prerequisites for admission to a graduate-entry initial teacher education programme (such as a graduate Diploma of Education, a Bachelor of Teaching, or a Master of Teaching).

4.3 AUSTRIA

4.3.1 Key Features of the Education System

In Austria most children go to kindergarten between the ages of three and five. From age six to ten they attend primary school, from ten to 14 they attend lower secondary school, and from 14 to 18/19 they go to upper secondary school. Another option is to leave school at 15 after one more year of pre-vocational training. In this case they have to undergo three more years of part-time training in vocational schools combined with vocational training (apprenticeship) at a company (dual system). The Matura (school-leaving examination) is the prerequisite for higher education entry (university, academy, technical university, college). Qualified school-leavers from intermediate vocational schools or qualified apprentices can prepare for university entrance by way of the vocational qualifying examination (Berufsreifeprüfung or Berufsmatura). Qualified school-leavers from junior secondary schools (Hauptschule) or pupils who have dropped out can do so by way of the study entitlement examination (Studienberechtigungsprüfung). Technical universities offer practical training, facilitating direct access to a profession. Higher education colleges (pädagogische Hochschule) offer training for teachers at primary schools, secondary schools, special schools and polytechnic schools.

4.3.2 Initial Teacher Education

Due to a lack of uniformity in the Austrian school system, teacher education is also very fragmented and takes place at different institutions depending on the school type and level future teachers want to work at. The Austrian teacher education system is a two-tier system: compulsory school teachers (primary, secondary, special school) are educated at teacher training colleges, high school teachers (junior and senior level) at universities. There are two different institutions which are responsible for teacher education: the teachers' college ('Pädagogische Hochschule') and the university. Teachers that intend to obtain a teaching certificate for elementary school (grades 1-4), Hauptschule (grades 5-8; lower secondary level), polytechnical courses (grade 9) or special education (grades 1-9) have to attend Colleges of Teacher Education (Pädagogische Akademien). Teachers for vocational schools (grades 10-12/13) and practical subjects in vocational schools at upper secondary level (grades 9-11/13) are educated at one of four Colleges of Vocational Teacher Education (Berufspädagogische Akademie) in Austria. Studies at Colleges of Teacher Education are usually completed with a final examination (Lehramtsprüfung). After having passed this exam, students are able to apply for a teaching post without being obliged to take part in another training programme. At present teachers are prepared and developed in one type of institution depending on where they will teach and there are only limited bridging opportunities for

continued education and transfer between sectors. Teaching is largely seen as a civil servant's job for life. This contributes to the fact that more people want to teach in Austria than there are positions available. At the moment a general over-supply of teachers coexists with structural shortages in specific disciplines (e.g. Mathematics and Science) or regions (Delannoy et al., 2003).

4.3.3 Selection Criteria to ITE

Admission to Austrian higher education is organised by the educational institutions themselves. To be admitted to a higher education programme, the applicant first needs to contact the institution that offers the programme (personal communication, University of Styria). Applicants (for teaching in compulsory schools) who want to study at these colleges are required to have obtained the qualified school Leaving Certificate of an upper secondary school (A levels). Preparatory courses are offered for applicants with experience in various occupations who do not hold a school Leaving Certificate of an upper secondary school but may take an entrance examination (Studienberechtigungsprüfung). Those wishing to teach in Gymnasium/Upper secondary schools need a school Leaving Certificate of an upper secondary school (A level) or have to pass the Studienberechtigungsprüfung (entrance requirements of the Colleges of Teacher Education). Individuals interested in applying for a place in a compulsory vocational education programme need a qualification as a master craftsman or an A level certificate after at least 13 years of schooling, and at least two years of experience in a trade and participation in special introductory courses at in-service institutes for vocational teachers (Berufspädagogisches Institut). Overall, there are diverse procedures to assess the qualifications of future teachers. Apart from the procedures to assess the professional qualification, individual qualifications and interview performance play an important role.

4.4 CANADA, ONTARIO

4.4.1 Key Features of the Education System

Education in Canada is a state-run system of public education provided, funded and overseen by federal, provincial, and local government. The education system is generally divided into primary education, secondary education and post-secondary schooling. While in Ontario (and New Brunswick) education is compulsory up to the age of 18, the compulsory schooling age in other regions is 16. In Ontario there are four publicly-funded school systems (English Public, English Catholic, French-language public, French-language Catholic), private schools and homeschooling. In Ontario, each university sets its own admission standards. These vary depending on the type of degree, programme and applicant personal situation (e.g., enrolling in a programme for the first time

versus applying as a mature student). Students can apply via the Ontario Universities' Application Centre.

4.4.2 Initial Teacher Education

In Canada, concurrent or sole degree pathways require secondary school graduation and candidates can enter directly or in their first years at the university. Consecutive and graduate programmes require an undergraduate degree and candidates apply upon completion of their first degree or after several years in the workforce. Teachers in Canada typically need at least a Bachelor's degree plus one year of teacher education before they can teach, although provinces may also impose additional certification requirements. To become a teacher in Ontario, teachers must complete a postsecondary undergraduate degree, or meet other acceptable requirements, and complete an initial teacher education programme offered by an accredited faculty of education.

To assist teachers, several programmes have been developed. For example, in Ontario, a new programme called 'Survive and Thrive' is an online community for teachers at all levels, including teacher candidates, to share information and experience, as well as to establish mentorship relationships with one another. In Ontario the recruitment of applicants is carried out at provincial level using a centralised application system. However, the actual selection process is made by individual universities, the specific requirements of which may differ. Canada provides an interesting insight into ITE selection procedures as it has both general and level-specific admissions criteria.

4.4.3 Selection Criteria to ITE

In Ontario, actual selection (e.g. proficiency in oral and written English at the University of Toronto) takes place at university level. Admissions requirements are determined individually by programmes within the context of provincial ministry (and regulatory body) regulations. Thus, there are many differences with respect to prerequisites and entrance requirements. The various programmes also have differing admissions processes and entrance requirements. In some cases applicants are required to have some previous experience in teaching (not necessarily at school). For example, applicants to primary/junior (Kindergarten to Grade 6), junior/intermediate (Grades 4 to 10) and intermediate/senior (Grades 7 to 12) levels need two distinct teaching-related experiences.

Admission requirements to teacher education programmes must comply with the Ontario College of Teachers Act.[31] Candidates must qualify to teach in at least two consecutive divisions[32] and may obtain qualifications to teach in a specific discipline. Admission requirements vary for specific programmes for teaching broad-based technology subjects, for teaching the deaf, for teachers teaching Native Language as a Second Language and for persons of Native ancestry teaching in the primary and junior divisions.

The current requirements for teachers of general studies in Ontario's publicly funded schools are as follows:

- An Acceptable Post-Secondary Degree, must be the equivalent of at least three years of full-time study.
- An Acceptable Teacher Education Programme, must be the equivalent of a year of full-time study in education i.e. a minimum of 30 credits. The teacher education programme must include practice teaching and courses in foundations and teaching methods related to two consecutive levels: Primary/Junior; Junior/Intermediate; or Intermediate/Senior.

The teacher education programme must also lead to certification as a teacher in the jurisdiction where it was completed. The College evaluates the credentials of teachers educated outside Ontario to ensure that they meet provincially-legislated requirements for certification.

From September 1, 2015, Ontario's teacher education programme will change. The four-semester programme with an increased practicum of 80 days will include an enhanced focus in areas such as special education, how to teach using technology, and diversity. As a result of these changes, new teacher education programme requirements for certification will also take effect as of that date (personal communication, Ontario College of Teachers).[33]

4.5 FINLAND

4.5.1 Key Features of the Education System

In Finland the education system is divided into basic education (primary and lower secondary) and upper secondary education and training. Basic education encompasses nine years and caters for students between seven and 16 years. After compulsory basic education, school-leavers can opt for general or

[31] www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_96o12_e.htm.

[32] www.oct.ca/public/the-public-interest/how-teachers-are-certified/initial-teacher-education/teaching-divisions.

[33] The Ontario College of Teachers is the self-regulatory licensing body for the teaching profession in Ontario with responsibility for licensing teachers.

vocational upper secondary education. Both forms usually take three years and give eligibility for higher education entry. The selection of students for upper secondary school is based on their grade point average for the theoretical subjects in the basic education certificate. Entrance and aptitude tests may also be used, and students may be awarded points for hobbies and other relevant activities. Vocational qualifications can be completed in upper secondary vocational education and training (VET), apprenticeship training or as competence-based qualifications. The majority of young learners complete their upper secondary vocational qualifications at vocational institutions.

Higher education in Finland has a dual structure; it is provided by universities and polytechnics, also known as universities of applied sciences. Davies (2009) notes that Finland has among the highest levels of participation in tertiary education of any OECD member country. There is restricted entry to all fields of study.

4.5.2 Initial Teacher Education

Teacher education can be either concurrent, with pedagogical training integrated into the Master's programme, or consecutive, with the pedagogical training completed after the initial degree. The latter is the case, for example, in vocational teacher education. The consecutive model also serves those who decide on a teaching career later. Teachers in Finland are highly educated. In general education all teachers are required to have a Master's degree. In vocational education teachers should have a Master's degree or Bachelor's degree. The high level of education is seen as necessary as teachers in Finland are very autonomous professionally. Teaching as a profession has high social prestige and there is a strong competition for places on teacher education programmes; only approximately 15 percent of the applicants are accepted. Primary school teachers are required to major in education, with a minor in two primary school curriculum areas.[34] Secondary school teachers are required to major in the subject they will teach. The most common approach is to take the pedagogical studies after the students have acquired 50 or 60 credits in their major subject. This usually means after their third year.

Finnish teacher education has not faced any problems in attracting applicants, with the exception of Mathematics and certain natural sciences. Class teacher education, special needs teacher education, student/pupil counsellor education, and art and practical subjects are examples of fields where the number of applicants is far greater than the number of student places available (OECD, 2003). In Finland, there is no private teacher education; initial teacher education

[34] These can include various subject areas, e.g. sociology, gender studies, etc.

is only provided by public institutions. In general, the enrolment numbers for teacher education are fixed by the Ministry of Education and Culture (private correspondence, University of Oulu, October 2014).

4.5.3 Selection Criteria to ITE

Finnish higher education institutions providing teacher education are highly autonomous and establish their own selection criteria. The criteria in universities and polytechnics may vary to a certain extent but most commonly rely on matriculation examination and entrance tests. The approaches to selection of applicants in ITE differ between primary and secondary teaching courses. Applicants for class teacher education are required to have completed the upper secondary school matriculation examination or a three-year vocational qualification or equivalent studies abroad. The primary teaching applicants are selected by the faculties of education and only approximately 10 per cent will gain entry to the programme. Most of the primary teacher education programmes in Finland take part in the VAKAVA exam[35] (Phase 1). An English-medium teacher education programme (Intercultural Teacher Education) has an essay-based exam during the first phase; additional criteria may apply, depending on the college (e.g. relevant work experience). In general, the first phase tends to focus on academic skills. During the second phase, interviews are conducted with successful applicants. It is also an opportunity for the applicants to showcase their particular talents (music, art, etc.). At this point an applicant's potential to be a good teacher is considered. The evaluators focus on a student's motivation, social and communication skills. At the University of Oulu, 0-5 points are allocated for the VAKAVA exam; 0-5 for showcasing their special talents; 0-10 for the interview; 0.5-1 each for Mathematics and Finnish in the Matriculation exam (the last two criteria were added in 2014). As the interview process provides half of the points necessary for entry, it is a crucial step for a student. The interview panel consists of lecturers and teachers from the University's teacher education school (every faculty has one). In Oulu, 250 students are interviewed, while 100 are enrolled, compared to Helsinki where 360 students are interviewed and 120 enrolled (personal communication, University of Oulu).

Applicants for secondary school teaching in Oulu are selected by the faculties they study in, usually during the second year of their studies. The application requirements include an aptitude test, interview and grade point average from the first years of studies. Entry into secondary school teaching tends to be somewhat less competitive than entry into primary teaching (personal

[35] The VAKAVA exam consists of six to eight articles in various topics in education and is a multiple choice test. In 2015 the school leaving results (especially in Mathematics and Finnish) will be included in the VAKAVA score (private correspondence, University of Oulu, October 2014).

communication, University of Oulu, October 2014). Students apply to the teachers' pedagogical studies providing subject teacher qualifications either separately at some point during their university studies or after completion of a higher academic degree. The selection criteria comprise both aptitude and command of the teaching subject. Another procedure, where students apply directly for programmes with emphasis on subject teacher education upon seeking admission to university, is becoming more common in some subjects (Mathematics, natural sciences and languages).

4.6 THE NETHERLANDS

4.6.1 Key Features of the Education System

In the Netherlands, children must go to school from the age of five. However, most children start primary schooling at four years of age. There are four types of secondary education in the Netherlands: pre-university education; senior general secondary education; pre-vocational secondary education; and practical training. All four types of secondary school cater for children from the age of 12 and begin with a period of basic secondary education ('basisvorming'). Admission to higher education is open to all those who have successfully completed secondary education and passed one of three kinds of final examination. Students apply to higher education (a Research University or a University of Applied Science) through an online central admission process, Studielink. A weighted lottery system is used to determine access to a course and/or institution where the demand exceeds the availability of places. Using this system, the higher an applicant's score on their school leaving results, the greater the chance they have of being selected. Higher education institutions can also choose to exercise their autonomy in the selection process by determining admission to a certain percentage of places on a course. In such cases other criteria, in addition to school leaving examination results, may apply.

4.6.2 Initial Teacher Education

The education system in the Netherlands is highly centralised. The national government is responsible for establishing the criteria for hiring teachers, setting the criteria for admitting candidates to the schools of education and setting the curriculum for the teacher education institutions. Teachers are educated either in Hogeschools (Universities of Applied Sciences) or in other types of universities. Hogeschools are institutions that provide higher professional education programmes that are different from the academic Bachelor's degrees offered in other universities.

Due to the shortages of primary teachers and in order to provide more variety regarding the profile of applicants in the Netherlands,[36] it is possible for graduates without teaching qualifications to work in primary and secondary schools if they pass relevant aptitude tests in literacy and numeracy. In recent years there has been a drive to bring applicants from a range of backgrounds into the teaching profession through the provision of alternative pathways. These pathways are also targeted at those already holding higher education qualifications interested in completing a formal teacher education programme at a college or university. Other initiatives used include providing salary increases for teachers holding PhDs and those at the top of the pay scale who continue to perform at high levels, and improving mentorship and professional development for current teachers to improve the retention rate. If an unqualified teacher works in the higher classes of pre-university education or senior general secondary education, he/she needs to be qualified within four years after starting the job.

There is evidence of the fact that the government is trying to support teacher education. All students who wish to complete a second degree (i.e. a second Master's after having received one in the Netherlands already) have to pay a much higher 'institutional' tuition fee (approximately €6,000 to €11,000 per year instead of the €2,000 statutory fee per year). Students who follow a (second) programme which is in the teaching area are exempt from this higher fee and are allowed to pay the lower statutory fee (personal communication, University of Utrecht).

4.6.3 Selection Criteria to ITE

In the Netherlands, initial teacher education is provided by undergraduate and postgraduate programmes. There are two types of qualifications a teacher can have, the so-called 2nd degree and the 1st degree. With a 2nd degree qualification a teacher is qualified to teach in all four types of second-level schools except for the higher classes of pre-university and senior general secondary education. The 2nd degree qualification can be acquired by following a four-year Bachelor's degree course at a University of Applied Sciences, specialising in a focus subject or by doing an education minor (30 ECTS) during the Bachelor's programme at a research university. To obtain the 1st degree qualification, one has to take a postgraduate (Master's) programme. Students for postgraduate programmes are selected based on their prior academic

[36] Given the high performance of its students and its teacher salaries, which, at $60,174 for a mid-career lower secondary school teacher far outpace the OECD average of $41,701, there is still a teacher shortage in the Netherlands due primarily to the ageing teacher workforce and the decline of the student population. The government projected that there might be up to 4,000 secondary school teaching vacancies in the coming years, and that the shortage may become 'severe' by 2017 (European Commission, 2013a).

qualifications and other criteria. Students first apply via a national system, Studentlink. Thereafter, the applicants submit a letter of motivation, Curriculum Vitae and proof of prior academic attainment. If a candidate does not qualify, he/she may be able to take some extra courses in specific fields in order to meet the entrance requirements. These are nationally-applied entrance requirements and apply to all teacher education courses. However, each university has its own selection process. Once the candidate satisfies the national requirements, he/she attends a group interview (personal communication, University of Groningen). The teacher education providers have a lot of autonomy in establishing selection criteria for applicants (see below):

1. Applicants wishing to apply to a four-year Bachelor's education programme at a University of Applied Sciences require the Dutch high school degree 'senior general secondary education' or a foreign equivalent. Applicants wishing to apply to a three-year Bachelor's programme at a research university require a high school degree 'pre-university education'.

2. Applicants wishing to apply to a Master's course (MA or MSc, depending on the subject) are required to have prior academic education in the area of their future teaching speciality. There is a two-year programme for students whose highest education is an academic Bachelor's degree. Students holding an academic Bachelor's as well as an academic Master's degree can take the one-year programme. Their application procedure requires their diploma and transcript, a motivation letter, and their CV. This is, again, the criteria for the University of Utrecht and not consistent across the Netherlands. In the one-year programme the student will have a main subject (Biology, German, Philosophy, History, etc.). After completion, the student is qualified to teach their specific subject at the various high school types offered in the Netherlands. They are also prepared for other functions in the educational sector. The requirement to start with the one-year Master's programme is that the student has already had a degree in the main subject area. Should the student wish to become a teacher but does not have the qualification in a specific subject, they can opt for the two-year programme (personal communication, Utrecht University, August 2014).

4.7 SCOTLAND

4.7.1 Key Features of the Education System

Scotland has its own education framework that is separate from those in England, Wales and Northern Ireland. Children in Scotland complete seven years of primary school, starting in P1, going up to P7. After this, they do six years of secondary school from S1 to S6. Secondary schools in Scotland are also known as high schools or academies. Between 2013 and 2016, a new qualification structure is being introduced comprised of: Nationals, Highers and Advanced Highers. Most

children will be around 15 when they take Nationals. They can opt to stay in secondary school for two more years to take exams for Higher qualifications, which they need to apply for university; and Advanced Highers, equivalent to the first year of university and used for applying to enter the second year of university. The admissions system for entry to higher education in Scotland is administered by higher education institutions (HEIs) in conjunction with the Universities and Colleges Admissions Service (UCAS). A number of Scottish universities do not frame offers in terms of UCAS tariff points, nor do they make use of the tariff at confirmation. They generally express entry requirements in terms of grades gained in Scottish 'Highers', indicating equivalences with other qualifications (Boland and Mulrennan, 2011).

4.7.2 Initial Teacher Education

Initial Teacher Education is provided by eight universities across Scotland and there are two routes to becoming a primary or secondary teacher in Scotland: a four-year undergraduate programme or a one-year Professional Graduate Diploma in Education (PGDE) programme in either primary or secondary teaching. Entry to teaching can be either at undergraduate or postgraduate level, like in many other countries. The qualifications needed for entry to teacher education are set out in terms of the levels and credit value as defined in the Scottish Credit and Qualifications Framework (SCQF). It is for the universities to decide the acceptability of individual qualifications. Applicants must have appropriate levels of literacy and numeracy (aptitude tests are carried out by colleges or schools of education) and suitable levels of competence in the use of Information and Communications Technology (ICT). They must have appropriate interpersonal skills and have the kind of personal qualities which will allow them to relate well to young people. Universities also look for evidence that applicants have the necessary qualities for, and commitment to, teaching as a career, usually established by evidence of some experience in the classroom and/or interview.

4.7.3 Entry Criteria to ITE

Minimum entry requirements for a PGDE primary programme include a degree validated by a UK higher education institution or a degree of equivalent standard from an institution outside the UK; National Qualifications in English at SCQF Level 6 (e.g. Higher Grade) or an accepted alternative; and National Qualifications in Mathematics at SCQF Level 5 (e.g. National 5, Credit Standard Grade or Intermediate, or an accepted alternative). All students undertaking a programme leading to a teaching qualification for primary education must have a languages qualification at Higher level or equivalent (SCQF Level 6) either on entering the programme of ITE or by the time of completion.

In terms of secondary school programmes, applicants need a degree normally containing 80 SCQF credit points relevant to the subject area; 40 credit points must be at SCQF Level 8 or above. To qualify to teach more than one subject, appropriate credit points can be counted for entry to both subjects. Applicants also need National Qualifications in English at SCQF Level 6 (e.g. Higher Grade) or an accepted alternative; and National Qualifications in Mathematics at SCQF Level 5 (e.g. National 5, Credit Standard Grade or Intermediate, or an accepted alternative. Some secondary subjects may have specific entry requirements.

4.8 SPAIN

4.8.1 Key Features of the Education System

The education system in Spain is divided into the following levels: nursery education, primary education, compulsory secondary education, 'bachillerato' [high school Leaving Certificate] and vocational training and university education. Primary education, which covers from six to 12 years of age, is compulsory and free of charge in public and grant-aided schools. Compulsory secondary education, which covers 12 to 16 years, is taught in Secondary Education Institutes. Successful pupils leave school with a secondary education school certificate. After obtaining the compulsory secondary education school certificate, the student may opt to continue with middle level vocational training studies or bachillerato studies. The two-year bachillerato, normally taken between the ages of 16 to 18, confers the qualification of *bachiller* [baccalaureate]. It provides the foundation for higher-level vocational training or, if the students pass the necessary access tests, to university education. University studies in Spain, according to EHES, are divided into three different stages, Grade degrees (undergraduate studies), University Master degrees (graduate studies) and Doctoral degrees (postgraduate studies). Admission to the university system is determined by the nota de corte (cutoff grade) that is achieved at the end of the bachillerato.

4.8.2 Initial Teacher Education

In Spain, primary teachers can either have a general qualification, or a specialised qualification in one of the following areas: Music, Foreign Language Teaching, Arts, Special Education, Physical Education, Nursery school, Primary school. At secondary school level, teachers require a degree granted by Universities in their one specialised subject. They can then enter the private sector to teach. To teach in the public sector, where teachers become civil servants, they have to pass tenure examinations (otherwise they are only employed on a temporary basis). The education authorities are gradually introducing a new model, called the CCP

(Certificado de capacitación pedagógica, 'Certificate of pedagogical ability'). In Spain, access to a teaching post in public sector schools is subject to passing a competitive examination (concurso-oposición). The examination comprises three phases: an examination phase assessing the specific knowledge for the relevant field or speciality, aptitude for teaching and mastery of the necessary teaching techniques; a merit-based selection phase assessing, as established by each call, the suitability of candidates (educational background and previous teaching experience); and a probationary period during which the selected candidates are required to demonstrate their aptitude for teaching. All post-primary teachers (secondary school and vocational training) are be required to have a Master's Degree in Secondary and Bachillerato Education and to attend the assessment that regulates the entrance to the public education system or to private schools for teachers.

In Spain, once primary teachers graduate they can either apply for a job in a Private or Private State subsidised school or they can take a bar exam to access a position in the public school system. If they pass the exam they become civil servants. If they don't, but they score highly enough, they are put on a list and they are offered jobs whenever there is a temporary opening in one of the Public Schools. Broadly the same applies to secondary school teachers. The only difference is that students with a degree are required to complete a Master's degree in Secondary Education Teaching (private communication Zaragoza University, August, 2014).

4.8.3 Entry Criteria to ITE

Due to specific linguistic requirements, in Spain language exams are included in the selection procedures for tertiary education (EC 2013). In autonomous regions[37] with bilingual programmes, teachers are now required to have a certificate of proficiency in the official autonomous language. They need to prove a certain degree of proficiency in all four skills (Task-based/Project-based approach, Evaluation, Legislation, The Education Reform).

All university students are selected on the basis of their A level scores (Selectividad exam) and the scores in their last two years of high school. Each degree has a different minimum entry score, depending on supply and demand. For example, applicants to study Medicine need the top scores. For the Faculty of Education the scores tend to be average, although for some degrees (e.g. foreign language education, e.g. English) there is more demand and, hence, better scores are needed (private communication Zaragoza University, August, 2014).

[37] Spain is made up of 17 autonomous regions known as 'Comunidades Autónomas' (e.g. Andalucia, Aragon, etc.).

4.9 SWEDEN

4.9.1 Key Features of the Education System

In Sweden, attendance at school is compulsory for all children aged 7-16. Leaving certificates are issued when the pupil finishes compulsory school. Upper secondary school is not compulsory: students can leave when they turn 16. However, most continue in upper secondary schools that have different tracks. Higher education has two strata of entry requirements: general and specific requirements. General eligibility is attained either by completing an upper-secondary school programme, completed adult education at upper secondary school level or equivalent. The specific requirements vary according to the field of higher education and are in general expressed in terms of upper-secondary school qualifications in specific subjects. Restricted admission is used for all study programmes and courses.

4.9.2 Initial Teacher Education

In Sweden all teachers undergo training at a university or university college. Students who wish to be admitted to a teacher training programme must meet both general and specific entry requirements. It is also possible to fulfil these requirements through a so-called review of prior learning (Department of Mathematic and Science Education, University of Stockholm). In 2011 the degrees of Bachelor/Master of Education were replaced by four new professional degrees: a degree in pre-school education, a degree in primary school education, a degree in subject education and a degree in vocational education. The degree in primary school education allows for three specialisations: the first directed at work in pre-school class (for children the year before they start the compulsory school) and years 1–3, the second at work in years 4–6, and the third at work in out-of-school care (in so-called leisure time centres which cater for children before and after the school day and during holidays). There are two specialisations for pupils in subject education: one directed at work in years 7–9 of compulsory school and the other at work in upper secondary school.

Like in Finland, there is a growing tendency to regard teacher education as an education for a profession on the basis of research and tested experience. In general there is a tendency to allow students to choose from a variety of rather broad alternatives on how to begin their studies. Through successive choices of Orientation areas and Specialisations the students define what teacher work they aim at. Approximately 10 per cent of those admitted each year at universities/ university colleges are to be found within Teacher Education. There are some difficulties in recruiting a sufficient number of teacher education students in

Science and technology and in modern languages (with English as an exception). (Kallós, 2003).

4.9.3 Entry Criteria to ITE

The basic principle is that anyone who has a complete Leaving Certificate from an upper secondary school programme and has received a grade of no lower than 'Approved' in the A and B (basic and intermediate) courses in Swedish, Mathematics and English meets the general requirements. For the subjects the student intends to specialise in, specific entry requirements and thereby a grade of 'Approved' at a higher level are required. In Sweden, there is a shortage of teachers in Mathematics, in some Science courses and modern languages. A preparatory one-year foundation course in Science and Mathematics is used to recruit Science teachers. This method is also used for recruiting teachers from immigrant backgrounds who are under-represented among the teaching force. Universities tend to have certain autonomy in selecting applicants. For example, in Umea University, selection to the teacher education courses first considers the number of available places followed by the use of different selection criteria. In cases where the courses are oversubscribed, the University endeavours to offer a place on at least one course per semester. In general, preference is given to applicants who have previously applied for, but not received, a place. Applying for a third time guarantees a course place (Umea University, Centre for Teaching and Learning).

4.10 PRESTIGE, SUPPLY AND DEMAND IN THE CASE-STUDY COUNTRIES AND THE IMPACT ON INITIAL TEACHER EDUCATION

As described in earlier parts of the report, teacher education is influenced by a number of factors including prestige of the profession, as well as supply and demand. A report by the European Commission (2013a)[38] notes that in some jurisdictions there have been national concerns about teacher shortages for quite some time while others experience over-supply. What both types of jurisdictions have in common is the concern about recruiting the right people for the teaching profession. In order to do this, all countries utilise some form of selection criteria. The importance of those criteria is highlighted by Donaldson (2010) in Scotland, according to whom

> *Selecting the right people to be teachers: good academic qualifications are necessary but not in themselves sufficient conditions for being a good teacher…. In addition to ensuring appropriate academic qualifications for entry to teacher education, there is a need to be more effective in identifying and selecting*

[38] EC (2013), *Study on Policy Measures to improve the Attractiveness of the Teaching Profession in Europe*.

candidates with the potential to be future high quality teachers (p.34).

TABLE 4.2 Supply and Demand in Case-Study Jurisdictions

Jurisdiction	Overall Shortage	Social Prestige	Shortage in Levels/Subjects	More Applicants Than Places
Australia NSW	-	High	Upper secondary (Mathematics, Sciences)	*
Austria	*	medium	-	-
Canada (Ontario)	-	High	-	*
Finland	-	High	Rural areas (Finnish, English)	*
The Netherlands	*	Good, less so in vocational schools	Secondary (Mathematics and Science, vocational subjects)	-
Scotland	-	medium	-	*
Spain	-	High	English	*
Sweden	*	medium	Pre-school and vocational teachers in upper secondary schools (Mathematics and Science)	

Note: *indicates Yes; - indicates No.

This chapter has focussed on the character of initial teacher education in eight case-study countries. Table 4.2 provides an overview of supply and demand in the jurisdictions selected for the study. The table was compiled by reviewing various web-based materials, printed documentation and personal communication. The table identifies countries characterised by general teacher shortage (Austria, the Netherlands, Sweden) and countries characterised by over-supply of teachers (Australia NSW, Canada Ontario, Finland, Scotland, Spain). Some countries have teacher shortages in specific areas, even though there is an over-supply of teachers (Mathematics and Science at upper secondary level in Australia NSW; Finnish and English in Finnish rural schools). Other countries have overall shortages, while experiencing specific shortages at specific levels of schooling or specific subject areas (Mathematics, Science, vocational subjects in Dutch schools, Mathematics and Science subject teachers in Swedish upper secondary schools and pre-school teachers in Sweden).

All case-study countries utilise some selection mechanisms (Table 4.3). Patterns emerging from the case-study countries show that while all selected countries utilise secondary school results, the specific entry requirements tend to vary, depending on the specific needs of the jurisdiction and their educational systems.

TABLE 4.3 Use of Entry Criteria for ITE

Basic Entry Requirement- Secondary School Results	Specific Entry Requirements
Australia NSW, Austria, Canada (Ontario), Finland, The Netherlands, Scotland, Spain, Sweden	Literacy and numeracy skills (Australia NSW, Scotland) Requirements based on different levels of schooling (Austria, the Netherlands) Language requirement (Sweden, Spain)

The rationale for using selection at entry into initial teacher education is twofold: the screening helps to identify candidates considered most likely to succeed in the training programme and who, after graduation, are likely become good teachers. In addition, the process helps to regulate the numbers admitted to the colleges of teacher education, and thus is a tool for controlling over-supply. For example, there is a significant over-supply of applicants in Finland (basic and secondary school level) and Australia NSW (primary level), imbalance driven by the popularity of the profession. In some cases, for example Australia NSW, there is a central organisation, The Board of Studies Teaching and Educational Standards NSW (BOSTES), whose remit includes monitoring teacher provision and supply, to address the issue of over-supply. The demand-driven university model does not appear to be sufficiently sensitive to the needs of schools and can be costly to public resources when qualified teachers do not find employment. In Finland, the popularity of the profession is associated with the high quality of initial teacher education, training at Master's level, extensive decentralisation of the education system and the important autonomy granted to schools. These practices tend to reinforce the prestige of the teachers who are considered as competent professionals.

Over-supply of applicants does not automatically exclude a shortage of teachers in some areas. Areas of concern in some jurisdictions seem to be Mathematics, Sciences, foreign languages, and special education. For example in Finland, while there are more applicants than places, in some rural areas, there is a small shortage of teachers in Mathematics, and to a lesser extent, in the Swedish and English languages. Another area where there is a shortage is in the number of candidates for teaching students with special needs. In Spain the supply of teachers exceeds demand. In some cases, however, it can be difficult to find a sufficient number of teachers in some subjects (namely, English language and some vocational training fields). There is also a shortage of teachers able to teach their subjects in the English language for the growing number of bilingual programmes currently being developed in many regions (teaching non-linguistic disciplines in a foreign language). While there is no overall shortage of teachers in the Netherlands, particularly at primary school level, there is a shortage in secondary and vocational education for some subjects (mainly Mathematics,

German and some vocational subjects) and in some cities. In 2012 the requirement to have a Master's degree was introduced to raise teacher qualifications and make the profession more attractive. The selection process of teacher education colleges has become stricter. The current problems are partly due to the fact that there has not been any policy planning for teacher recruitment until relatively recently.

Supply and demand are also often driven by public policy, changes in the labour market and salary. For example, in Ontario, teacher education has undergone a substantial change. The number of teacher education places across colleges has been cut,[39] in hopes of reducing the surplus of unemployed teachers[40] and in response to falling student numbers. In addition, teacher education was extended from one to two years. The change is part of a broader reform of the teacher-education curriculum that includes mandatory training on how to work with students of diverse backgrounds and those with special needs, a doubling of the amount of practice-teaching time and training on the use of technology in the classroom. These changes have been supported by the Ontario College of Teachers, which regulates the profession. In Spain, recent increases in working time and in the number of pupils per class as well as lower wages for civil-servant teachers seem to have curbed the attractiveness of the teaching profession to a certain extent. While there are still sufficient candidates entering initial teacher education in Scotland, the teaching profession seems to be becoming less attractive due to the number of unemployed qualified teachers. In Sweden, there is a shortage of pre-school and vocational teachers in upper secondary schools (Mathematics and Sciences). The difficulties with recruiting vocational teachers are mainly associated with low salaries.

In some jurisdictions teacher numbers are affected by teacher mobility. For example in Austria, many teachers seek employment in Bavaria, a southern German Länd where salaries are higher and the profession has civil servant status. While in some areas in Austria the civil servant status is still in effect, in others it has been abolished. The trends in Austria are difficult to explain as the teaching profession is popular, as demonstrated by the number of applicants; at the same time there is a shortage of qualified teachers (employment of unqualified teachers is prohibited).

While low prestige and social status of teachers may have a negative impact on the attractiveness of the profession, possibly influencing the quality of practice

[39] The enrolment numbers were actually cut by half, to 4,500 a year (European Commission 2013).

[40] A survey by the college of 2011 graduates from Ontario faculties and US border colleges found one third were unable to find jobs in their field, compared with just three per cent in 2006.

and the number of students who want to become a teacher, there are many other factors that play a role, including working conditions, being able to secure permanent employment after graduation and salary. The overview of these eight case-study jurisdictions indicates that in general, teaching is still a popular choice among students although the attractiveness is somewhat diminished by a saturated labour market.

Chapter 5

The Structure of Irish Initial Teacher Education Programmes in Ireland and Current Debates

5.1 INTRODUCTION

In Ireland, the teaching profession is a popular career choice among young people, or at least among young women. There is a high demand for places in teacher education programmes in Ireland, resulting in strong competition for places. Initial teacher education is widely accessible in Ireland with a number of higher education institutions providing courses at undergraduate and postgraduate levels. In Ireland, entry to third-level education takes place mostly through the centralised Central Applications Office (CAO) and is based on students' terminal state exam results (Leaving Certificate exams). The points system utilised by the CAO helps to regulate supply and demand to some extent. Students are allocated points for the results they get in their six best subjects at a single sitting of the Leaving Certificate. The points awarded depend on the level at which they take a subject and the grades received. The number of entry-level points needed for any course depends on the number of places and the number of applicants for those places so the entry level varies from year to year. Under a 4-year pilot scheme operated from Leaving Certificate 2012, the seven universities, Dublin Institute of Technology and the Royal College of Surgeons in Ireland allocate extra bonus points for Higher Level Mathematics. A student must also have the particular academic entry requirements (also called matriculation requirements) for the course he or she wants to take.

The chapter starts off by providing a short description of the structure of initial teacher education in Ireland. It will then explore issues related to entry criteria and selection of entrants to initial teacher education programmes followed by an analysis of information gathered during two consultation meetings with key stakeholders.

5.2 DESCRIPTION OF IRISH INITIAL TEACHER EDUCATION

Initial teacher education in Ireland is provided by a number of higher education institutions. While most of them are state-run, one private college (state accredited) is also involved in educating future teachers. There is some variation across the ITE providers in the type of education and training they provide. While some institutions provide both concurrent (undergraduate) and consecutive

(postgraduate) programmes, others offer only one type of programme. The Teaching Council of Ireland (TC) has the responsibility for establishing and monitoring the requirements for entry to the teaching profession at primary and post-primary level, and within specific areas of the further education sector. The allocation of places is generally determined by the Central Applications Office (CAO) for undergraduate courses and at postgraduate level, a centralised application system for some HEIs through the Postgraduate Applications Centre (PAC) or by procedures set by individual institutions. In recent years, the structure of ITE in Ireland has undergone significant change, particularly regarding the extension of the duration of ITE and the introduction of teacher education at Master's level. The following sections provide a short overview of ITE provision at primary and post-primary level.

5.2.1 Initial Teacher Education (Primary)

At primary school level, entry to initial teacher education is regulated by the Department of Education and Skills (DES), in order to monitor the number of entrants into the profession; the actual allocation of places is determined by the CAO. Until recently, there have been six providers of programmes of primary initial teacher education in Ireland: Coláiste Mhuire / Marino Institute of Education, Mary Immaculate College, St. Patrick's College, the Church of Ireland College of Education, the Froebel College of Education and a privately-owned company, Hibernia College (see Table 5.1).[41] While the majority offer both concurrent (undergraduate) and consecutive (postgraduate) courses, the Church of Ireland College of Education only offers concurrent and Hibernia College only offers consecutive courses. In recent years, the duration of ITE has been extended. Since 2012, full-time undergraduate programmes for primary teachers (B. Ed) are four years in duration[42] across all institutions. Postgraduate programmes for primary teaching (PME) were extended to two years from September 2014 onwards. For a small number of mature students (23+) there is an alternative route of entry to primary teacher education, outside the CAO system. The process combines an interview with possession of the minimum academic entry requirements.

[41] Following the report of the International Review Panel on Teacher Education, at the time of writing Froebel College has become integrated as a department into Maynooth University. A new Institute of Education at Dublin City University will incorporate St Patrick's College, Mater Dei College and the Church of Ireland College of Education. An Institute of Education comprising UCD, TCD, NCAD and Marino College of Education has also been proposed.

[42] A part-time primary qualification is also offered by Hibernia College. The course offered is an online Higher Diploma in Arts in Primary Education, accredited by the Higher Education and Training Awards Council (HETAC).

TABLE 5.1 Institutions Providing Programmes for ITE at Primary School Level

Institution	Type of Provision
Coláiste Mhuire	Concurrent and consecutive
Mary Immaculate College	Concurrent and consecutive
St. Patrick's College	Concurrent and consecutive
The Church of Ireland College of Education	Concurrent
The Froebel College of Education (now part of Maynooth University)	Concurrent and consecutive
Hibernia College	Consecutive

Source: Teaching Council website.

5.2.2 Initial Teacher Education (Post-Primary)

Post-primary initial teacher education has been provided in 15 higher education institutions, including the private Hibernia College. The programmes they offer are concurrent (undergraduate), consecutive (postgraduate) or both (see Table 5.2). The *concurrent* (undergraduate) route to a teaching qualification is offered for a range of programmes (e.g. with practical, laboratory and workshop elements). Depending on the subject specialism taken, the final degree awarded may be a Bachelor of Arts, Bachelor of Science (Education), a Bachelor of Technology (Education) or a Bachelor of Education. Some higher education institutions offer a 'hybrid model' whereby students can exit the programme with a subject specialist degree after three or four years but are not qualified teachers until they have completed all five years. In the case of concurrent programmes, subjects are taught simultaneously with education programmes and school placement. Students generally apply through the Central Applications Office (CAO) and the selection is based on the CAO points system. As for consecutive programmes, applications are made through the Postgraduate Applications Centre (PAC), a central application system for NUI colleges and Dublin City University.[43] For other institutions, applications are made directly to individual institutions. Since September 2014 the consecutive programme has been extended to two years (120 ECTS credits) and is now termed the Professional Master of Education.

[43] It should be noted that candidates for DCU apply through the PAC system but selection is administered at the institutional level.

TABLE 5.2 Providers of Post-Primary Initial Teacher Education Programmes

Institution	Type of Provision
University College, Cork	concurrent and consecutive
University College, Dublin	Consecutive and concurrent
NUI Galway	concurrent and consecutive
NUI Maynooth	concurrent and consecutive
Trinity College, Dublin	concurrent and consecutive
Dublin City University	concurrent and consecutive
University of Limerick	concurrent and consecutive
Mater Dei, Dublin	Concurrent
St. Angela's College, Sligo (being merged with NUI Galway)	Concurrent
National College of Art and Design, Dublin	concurrent and consecutive
Crawford School of Art and Design, Cork	consecutive
Limerick Institute of Technology, School of Art and Design	consecutive
St. Patrick's College, Thurles	concurrent
Galway Mayo Institute of Technology, Letterfrack	concurrent
Hibernia College	consecutive

Source: Teaching Council website.[44]

5.3 ENTRY REQUIREMENTS TO INITIAL TEACHER EDUCATION

Minimum entry requirements for programmes of initial teacher education at primary level are generally set by the Minister for Education and Skills, with the Teaching Council having an advisory role. In contrast, for concurrent post-primary programmes the higher education institutions involved have the discretion to determine their own entry requirements. According to the DES (2012) review, the criteria for selection differ somewhat between sectors and between colleges. The situation for post-primary consecutive programmes is different, with the Teaching Council setting central requirements in particular subject areas (thus, the requirement for a certain level of Mathematics to be eligible to become a Mathematics teacher).

5.3.1 Current Entry Requirements to ITE (Primary Level)

At primary school level, teachers must be qualified to teach the range of subjects to children aged four to 12 years. In concurrent courses both general and subject-specific entry requirements are established by the DES. Minimum entry requirements are specified in regard to the areas of Irish language, English language and Mathematics.

[44] See www.teachingcouncil.ie/entry-to-initial-teacher-education/teaching-qualifications.1062.html.

TABLE 5.3 Minimum Entry Requirements for Concurrent (Undergraduate) Programmes of ITE (Primary Teaching)

General	Subject-Specific
Leaving Certificate examination(s) with Grade C3 Higher Level in not fewer than three subjects; Grade D3 in three other subjects	Grade C3 in Higher Level Irish, Grade C3 in English Ordinary Level or D3 in Higher Level, Grade D3 in Mathematics (either Ordinary or Higher Level)

Source: Teaching Council website.

At primary school level entry to concurrent programmes in colleges of education (primary teaching) depends on applicants having Grade C3 on a Higher Level paper in not less than three subjects of the Leaving Certificate examination and Grade D3 in three other subjects (see Table 5.4). Candidates must achieve a minimum of Grade C3 in Irish at Higher Level: a minimum of Grade C3 in English Ordinary Level or D3 Higher Level and a minimum of Grade D3 in Mathematics at either Ordinary or Higher Level. Applications for undergraduate degrees are handled by the Central Applications Office (CAO). The best six subjects in a single sitting of the Leaving Certificate Examination are counted for points purposes in accordance with CAO procedures. While the minimum grades in the subjects Irish, English and Mathematics specified above need not be obtained at the same sitting of the Leaving Certificate examination, applicants are required to achieve a minimum of Grade C on three Higher Level papers and Grade D in three other subjects in a single sitting of the Leaving Certificate. Grades obtained in the Leaving Certificate or GCE Examinations are converted in accordance with the points scale of the appropriate college. Where two or more applicants obtain the same points total, the CAO applies the random selection procedure. In recent years the cut-off points for entry to primary undergraduate ITE was in the region of 470 (out of a maximum of 600).

In the past, young people also had to undergo an interview and undertake other tests of suitability, but these requirements for entry to the B.Ed. programme have generally been discontinued.[45]

[45] With the exception of the Church of Ireland College of Education where applicants for concurrent programmes for primary level still attend an interview.

TABLE 5.4 Minimum Entry Requirements for Consecutive (Postgraduate) Programmes of ITE (Primary Teaching)

General	Subject-specific
An Honours Bachelor degree (Level 8 NFQ)[46] or a degree at Master's (Level 9) or Doctoral level (Level 10)	Grade C3 in Higher Level Irish, Grade C3 in English Ordinary Level or D3 in Higher Level, Grade D3 in Mathematics (either Ordinary or Higher Level)

Source: Teaching Council website.

Entrants to consecutive initial teacher programmes at primary level must have an honours Bachelor degree or qualifications at Master's or Doctoral level, accompanied by a grade C3 or above in Higher Level Irish; a grade D3 or above in Mathematics (Ordinary or Higher level); and a grade C3 or above in English (Ordinary level) or grade D3 or above in English (Higher level) in the Leaving Certificate (see Table 5.6). Eligible applicants will be required to undergo an interview, the aim of which is to ascertain the suitability of the applicant for participation in a primary teacher education programme.[47] The candidates also need to undertake an Oral Irish Examination comprising conversation on everyday topics and on books read by the applicant, and reading correctly and intelligently a suitable passage of prose or poetry and explaining the matter read. In other words, the applicants need to demonstrate a high standard of fluency in Irish.[48] All students who gain entry to the programme are required to attend two residential placements in the Gaeltacht.

A mature new entrant is defined as a student who was 23 or over on the first day of January of the year of entry to the higher education institution. Over the years there has been a steady increase in the proportion of applications from mature students (Carroll and Patterson, 2011) in Irish HEIs. The increase in numbers may partly reflect the impact of the Springboard Initiative.[49] Data on new entrants available from the Higher Education Authority (HEA) show that in 2013-2014 mature students made up 13 per cent of full-time undergraduate students while those who undertook study part-time were predominantly mature students.[50] There are somewhat more male than female mature students across all HEIs.

46 From 2016 the minimum qualification H2.2 at Level 8 will apply.

47 Interviews assess candidate's suitability to teach, motivation, interpersonal skills, communication ability, relevant talents and aptitudes, evidence of leadership and initiative, and relevant experience. The relevant experience may include professional work (e.g. classroom assistant, SNA) or experience of working with young people in a role sufficiently related to teaching (e.g. social work, youth organiser).

48 During the consultation process, a representative of Gaelscoileanna Teo was critical of this approach, noting that the oral exam and approach described above do nothing more than demonstrate an ability to memorise and analyse in a very linguistically limited way.

49 The Springboard initiative in higher education offers free courses at certificate and degree level leading to qualifications in areas where there are employment opportunities in the economy: www.springboardcourses.ie.

50 Figures are based on year one of undergraduate Certificate, Diploma, Ordinary Bachelor Degree and Honours Bachelor degree programmes. Data from National College of Ireland and Royal College of Surgeons are excluded.

Regarding field of study, 4 per cent of mature full-time students and 8 per cent of part-time students studied Education in Irish universities. Enquiries about full-time new entrants (mature students) pursuing a course in initial teacher education in 2014-2015 showed that such numbers are very small: 2-3 per cent in the three institutions for which data were available (personal communication with HEA, June 2015). The minimum entry requirements for mature entrants are presented in Table 5.5.

TABLE 5.5 Minimum Academic Requirements of Mature Entrants - Bachelor of Education Degree Programme (Primary Teaching)

Leaving Certificate Examination 1992 or later	Leaving Certificate Examination 1969 to 1991	Leaving Certificate Examination prior to 1969
General: *Grade C3 on a Higher Level paper in not less than three subjects *Grade D3 in three other subjects in accordance with the Rules and Programme for Secondary Schools	General * Grade C on a Higher Level paper in not less than three subjects. * Grade D in three other subjects in accordance with the Rules and Programme for Secondary Schools.	To be eligible to apply for the competition, applicants who sat the Leaving Certificate Examination prior to 1969 must hold an Honours Leaving Certificate with Honours in Irish. In English one must have obtained marks equivalent to Grade C at Pass level or Grade D at Honours level. One must also have passed in Mathematics.
Essential Subjects *Irish: Grade C3 Higher Level *English: Grade C3 Ordinary Level or D3 Higher Level *Mathematics: Grade D3, either Ordinary or Higher Level	Essential Subjects * Irish: Grade C Higher Level * English: Grade C Ordinary Level or D Higher Level * Mathematics: Grade D, either Ordinary or Higher Level	

Source: www.education.ie/en/Education-Staff/Information/-New-Teachers/Entry-Requirements-Mature-Competition.pdf.

Applicants may combine results obtained at the Leaving Certificate Examination in different years for the purpose of meeting the academic requirements. Once applicants have satisfied the minimum academic requirements, selection is on the basis of a competitive interview and a competitive Oral Irish Examination.

In the case of the State-funded providers, the number of places available in this category is decided by the Department of Education and Skills and there is a competition for the (relatively few) places available (DES, 2012).[51]

5.3.2 Current Entry Requirements to ITE (Post-Primary Level)

From 2012, a two-year (or equivalent) postgraduate initial teacher education qualification at Level 8 is now a required qualification for persons wishing to register as post-primary school teachers in the Republic of Ireland. In practice, all

[51] However, a private provider, Hibernia College, accepts a large number of students each year.

HEIs have chosen to provide such programmes at Master's level and they are now referred to using the title Professional Master of Education (PME). A prerequisite for entering a consecutive programme of initial teacher education (post-primary teaching) in Ireland is a degree at NFQ Level 8 which enables the holder to teach at least one post-primary curricular subject to Leaving Certificate (Higher) Level and which satisfies the Teaching Council requirements for registration purposes. Since 1 April, 2013 applicants must hold an Honours Bachelor's Degree (NQF Level 8) or equivalent, consisting of at least three years of full-time study. Applicants can combine a NFQ Level 7 (Pass) degree with a Master's degree, Higher Diploma or Postgraduate Diploma to meet the new registration requirement, provided the latter qualification award carried at least 60 ECTS credits at NFQ Level 8 or higher, and they had completed at least ten ECTS of study in a curricular subject at the under-graduate degree level.

The criteria for selection to consecutive programmes differ somewhat for the different universities. The four universities of the National University of Ireland (UCD, UCC, NUIG and NUIM) apply a points system to applications based on (1) performance in an eligible primary degree, (2) additional relevant academic qualifications and (3) allowable relevant professional experience. Applicants are not interviewed. The academic standard of entry to these programmes is high and usually only those applicants who have achieved a First Class Honours degree or a degree at the upper Second Class honours level succeed in gaining a place. This selection system makes no provision for ensuring that places will be provided in subject areas where there are teacher shortages. The procedures are different in TCD where the applicants have to indicate at the point of application which subject specialism they intend to study, thus enabling the institution to control and monitor the number of places in each subject area; in addition, TCD also interviews its applicants (DES, 2012).

For post-primary teachers, the concurrent (undergraduate) route to a teaching qualification is offered for a range of programmes, typically those with practical, laboratory and workshop elements but also in subjects such as Religious Education. Application is through the Central Applications Office (CAO) and selection is based on the CAO points system. The number of entry-level points needed for any course depends on the number of places and the number of applicants for those places. Under a four-year pilot scheme operated from Leaving Certificate 2012, the seven universities, Dublin Institute of Technology and the Royal College of Surgeons in Ireland allocate extra bonus points for Higher Level Mathematics. Higher education institutions can establish additional entry requirements in subject areas (see Appendix II).

5.3.3 Specific Selection Process at HEI Level

As discussed in Chapter 1, across European countries, admission to ITE seems to be governed more by general entrance requirements for tertiary education than by more specific selection criteria for teacher education (Eurydice, 2013). The same report indicates that only a third of all European countries have specific selection methods for admission to ITE in place. However, secondary school grade point average has been found to have a weak relationship with future performance as teachers (Olstad et al., 1987; Donaldson, 2010). The selection criteria that are specifically applied to entrants into initial teacher education include standardised admission tests, written examinations and/or aptitude tests, interviews, written profile, and portfolio entry. In general, the result of research regarding the effectiveness of these measures tends to be somewhat mixed, depending on the structure of the education system and the attractiveness of the field of study (See Chapter 3 for more detailed discussion on selection criteria). However, interviews tend to be one of the most commonly used formats. Although some authors found this practice to be of limited value (Denner, et al., 2001; Caskey et al., 2001), there are others who argue that interviews provide an opportunity to gather information about the applicants' language proficiency, attitudes and interpersonal skills (Denner et al., 2001) and that it is a better predictor than academic criteria (Shechtman, 1992).

Little is known about the screening process of entrants into initial teacher education in Ireland. During the course of the study, information was collected from individual HEIs in the form of short interviews. These interviews demonstrated that some HEIs rely on central application systems in selecting the candidates (CAO, PAC). However, others have specific additional screening mechanisms in place at institutional level. In line with international practice, the most common approach is using an interview for selecting suitable applicants. Where interviews are used, the practices vary, encompassing group interviews (College 3), individual interview (College 6, College 1) and interviews that are only held with mature students (College 7). Other approaches include short-listing (College 3, College 1), portfolio (College 3), a 'writing task' (College 4), references (College 7), or a combination of approaches (e.g. short-listing and interview, College 1; interview and skills test and portfolio, College 3; interview and writing task and portfolio, College 4). Some colleges utilise additional screening processes over and above the central PAC application system (College 7). In line with the international literature, the interviews were seen by stakeholders as particularly useful in establishing a student's language fluency level, but also in giving insight into the applicant's interpersonal skills, awareness of current issues in education, knowledge and expertise, interest and commitment. While labour intensive, the stakeholders involved in the consultation phase of this study generally considered it a good practice.

5.3.4 Irish Language Requirement

Although spoken by a minority,[52] Irish is the first official language of Ireland. Therefore there is a requirement for teachers (particularly those teaching at primary schools) to speak both English as well as Irish, and have adequate literacy levels in both. Since 2010 the Department of Arts, Heritage and the Gaeltacht has been responsible for the development and implementation of policies which will ensure a high standard of Irish throughout the education system.[53] The *20-Year Strategy for the Irish Language* recognises the importance of generating a teaching force to achieve objectives regarding competence in the Irish language and in particular to raise the standard of Irish language competency for teaching the subject of Irish.

All primary teachers are required by the Department of Education and Skills to have an Irish language qualification and must be able to teach the range of primary school subjects through Irish. For full recognition, the candidates must pass the written, aural and oral parts[54] of the Irish language exam.[55]

For primary school teaching, applicants to ITE programmes must meet the entry requirements in Irish, i.e. a Grade C3 on a Leaving Certificate Higher Level or a recognised equivalent (see above). From 2017, the system of grading for the Leaving Certificate will be changed with implications for the calculation of CAO points. Where an applicant for registration with the Teaching Council as a primary teacher has completed a programme of teacher education outside Ireland, an Irish Language Requirement condition normally applies to his/her registration. The applicant can either complete an Aptitude Test (SCG; An Scrúdú le hAghaidh Cáilíochta sa Ghaeilge) or an Adaptation Period (OCG; Oiriúnú le hAghaidh Cáilíochta sa Ghaeilge), which confirms the applicant's competence to teach the Irish language as well as a range of primary school curricular subjects through the medium of Irish. Conditional registration is granted to those in the process of completing this requirement. A maximum period of three years is permitted to satisfy this condition.

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52 According to the latest figures released from Census 2011, the number of people who declared they can speak Irish has increased by 7.1 per cent since 2006. In total 41 per cent of the respondents answered 'Yes' to the question, 'Can you speak Irish?'

53 While this department is responsible for the implementation of the *20-Year Strategy for the Irish Language*, including many strategies at the education level, ultimately the responsibility for development and implementation of policies which will ensure a high standard of Irish throughout the education system rests with the DES.

54 Students will be subject to an oral Irish test at the end of their first year of initial teacher education, and must pass this test in order to continue to the second year of the course. Students who fail this oral Irish test may, at the discretion of the institution, be allowed to repeat the test.

55 Restricted recognition of teaching qualification is given to teachers who are qualified to teach required subjects at primary schools but have yet not attained the necessary Irish language qualification.

Up to 10 per cent of ITE places can be made available to Gaeltacht applicants and to qualify, the applicants must be living in a Gaeltacht area and come from a family that uses Irish as their normal household language. The special entry competition is in accordance with Government policy for the support and promotion of the Gaeltachtaí and for the use of the Irish language as a community language. Gaeltacht applicants compete separately from other applicants for the places in ITE. Given the smaller numbers applying, this can result in lower points than otherwise required on entry. The points required from Gaeltacht applicants for entry to teacher education vary across institutions. For example, in Marino Institute an applicant for primary teaching requires 465 points, while Gaeltacht applicants need 435 points (the figures for St. Patrick's Drumcondra are 470 vs 430; Mary Immaculate: 470 vs 430). According to COGG, even though the Gaeltacht applicants compete separately and lower points may apply, very few applicants take up the places set aside for Gaeltacht applicants. It has been argued by COGG and D/AHG that the system by which 'Gaeltacht' candidates are identified needs to be reviewed. Previously, the D/AHG assessed students' ability as part of the *Scéim Labhairt na Gaeilge* (which involved a grant of €200 to Irish-speaking families) but this scheme was discontinued some years ago. At present, the D/AHG play a small role regarding Gaeltacht applicants who have applied for places in the educational colleges for initial teacher education; they liaise with CAO offices regarding identifying Irish speakers among the Gaeltacht applicants.[56] COGG and D/AHG suggest that there should be a transparent, reliable system in place to confirm that the Gaeltacht applicants are native speakers of Irish. The representative of COGG believes that ad hoc arrangements are now in place in some Colleges of Education.

Unlike teachers in primary schools, entrants to post-primary ITE do not require a qualification in Irish unless that is their subject specialism. However, graduates may require certified Irish competency for entry to the profession if they are employed in Irish-medium schools.

5.3.5 Proposed Changes to the Entry Requirements

In 2012, in response to concerns about quality, consistency of procedures and equity of access, the Teaching Council initiated a consultation process regarding entry requirements into ITE. The findings from this consultation process were inconclusive, indicating a diversity of perspectives on the appropriate entry requirements, and identified the need for further research. The proposed changes included increasing entry requirements for both primary and post-primary teachers (see Table 5.6) and introducing tests of suitability in cases where more than five years have passed since the applicant's Leaving Certificate

[56] D/AHG has noted that not all individuals living in Gaeltacht areas are fluent Irish speakers.

examination. It was proposed that such applicants need to demonstrate (English) literacy and numeracy competence by means of an ITE Admissions Test; and applicants for primary teaching and those who will be teaching Irish at post-primary level would be required to demonstrate competence in Gaeilge by means of an Irish Language Admissions Test (Teaching Council, 2012).[57]

TABLE 5.6 Proposed Minimum Entry Requirements with Effect from 2016-2017

Primary Teacher Education	Post-Primary Teacher Education
Leaving Certificate levels: Mathematics: A1 Ordinary or C3 Higher English: B1 Higher Irish: B1 Higher	Consecutive: Satisfy general and subject specific criteria, in undergraduate degree, set out by the Teaching Council Concurrent: Minimum Leaving Certificate level, or equivalent, in subject(s) being studied for teacher education purposes, to be set by HEIs

Source: Teaching Council website.

5.4 CURRENT DEBATES ON ENTRY TO INITIAL TEACHER EDUCATION: WHY DOES SELECTION MATTER?

As discussed in Chapter 2, teacher quality is the most important within-school aspect explaining student performance (Daly et al., 1999). Increasing focus on students' educational outcomes has significantly contributed to the literature on 'what makes a good teacher'. However, since the 2000s the shift has tended to move away from structural factors and focussed more strongly on the teacher-student relationship, giving rise to an abundance of literature in this area. Nevertheless, little consensus seems to exist on this topic (Casey and Childs, 2007) and a significant proportion of the literature tends to associate teacher quality with the academic achievement of students, particularly in terms of raising their test scores.

It is possible that growing interest in teacher quality in this context can be traced back to the availability of comparable data on student outcomes such as PISA results, ranking participating countries. Concerns about students' performance are also influenced by various literacy and numeracy reports produced by different jurisdictions demonstrating that this is an area needing improvement. There are many different ways to improve a school system and address the educational needs of students. In 2007 a study[58] explored 25 of the world's school systems in order to understand why some schools succeed and others do not. The results of the study showed that the factors that matter include:

[57] www.teachingcouncil.ie/_fileupload/Teacher%20Education/Final%20Criteria%20and%20Guidelines%20for%20Existing %20Progs%20Aug2011.pdf.

[58] McKinsey and Company, *How the world's best-performing school systems come out on top*.

1. getting the right people to become teachers,
2. developing them into effective instructors and,
3. ensuring that the system is able to deliver the best possible instruction for every child.

In this context, interest in attracting teachers who are most likely succeed in raising students' achievement is increasing and a number of countries are now using some form of screening mechanism to select the candidates considered most suitable for the profession.

5.4.1 Screening Mechanisms in Ireland

As in a number of other jurisdictions, initial teacher education in Ireland is undergoing substantial change.[59] In this context, and in light of the inconsistencies and anomalies in the prevailing entry requirements, it has been suggested that they should be revised. In Ireland, the teaching profession is popular, attracting more applicants than places. Consequently only the top academic achievers are accepted. However, the consultation process of the Teaching Council raised concerns that current entrants may not have sufficient literacy and numeracy skills, though no systematic evidence is available on entrant skills. At the same time, calls have been made to increase the diversity of entrants to teacher education (DES, 2012). In 2011 a consultation process was initiated regarding the revision of entry requirements. In order to feed into this consultation process, this study explored the views of key stakeholders (see Tables 1.1 and 1.2) on the topic of selection criteria. The consultation process was carried out in two phases,[60] one with primary teacher educators and the second with post-primary teacher educators and other stakeholders.

5.4.2 Key Stakeholders' Perception of Selection Mechanisms into ITE: 'What is Wrong With Our Current Entry?'

There were mixed reactions from both groups of stakeholders regarding satisfaction with the current system of selecting entrants into concurrent and consecutive teacher education programmes. The stakeholders felt that a strong rationale for changing the current academic entry criteria for entry to primary ITE is lacking and that the current debates are being driven by the National Literacy

[59] There are other changes in train in the education system that can potentially impact on the ITE, such as junior cycle reform. In addition, the extension of the duration of consecutive teacher education is likely have an impact on the number and profile of applicants.

[60] This was done to allow stakeholders to focus more precisely on the issues arising for teacher education in their sector. While there are some common issues across sectors, proposals to raise entry standards in Irish, English and Mathematics apply to primary ITE only.

and Numeracy Strategy rather than a demonstrated need to evaluate and revise the selection procedures. This being said, some stakeholders noted that in some cases the standards of literacy are low despite the high points of entrants. In this context it was seen as unclear whether 'an overall change' should be introduced in entry to ITE or whether the academic criteria in English, Irish and Mathematics should be raised by a more modest amount, for example, one grade. However, the participants were not convinced that a change of one grade in academic entry criteria would make a difference in how the student succeeds in the teacher education programme and as a teacher. It was argued that, before introducing changes, consensus needs to be reached on the rationale for the change. It was suggested that the focus should be placed on exit rather than entry standards since the purpose of changing entry criteria is seen as unclear. The stakeholders argued that the current minimum entry standards are sufficient, and that failure rates in ITE programmes are low.

Following on from the discussion of international studies on teacher impact on students' outcomes, it was argued that it is difficult to establish a causal link between entry criteria to ITE and teacher quality in the classroom without giving sufficient consideration to the nature and content of initial teacher education programmes. One stakeholder in the primary consultation group noted that considering entry criteria solely based on academic qualifications is a very 'narrow' way of looking at teacher education applicants. It is equally important that the applicant has the right disposition towards teaching, love for children, can cope well with change, embraces challenge, and is highly motivated. These qualities will be honed during the teacher education course. It was argued by many that the skills necessary to cope in classroom, such as people skills, communication skills, conflict resolution and so on, should be provided as part of initial teacher education and so are 'exit' rather than 'entry' skills. While it was accepted that people 'who are not competent' should not be accepted, it was argued that changes 'in the refinement of Leaving Certificate results make no sense'. Schools need student teachers who can connect with students rather than just having 600 points. The focus of the debate should be on the development of well-rounded individuals who grow into becoming good teachers rather than looking at 'ready-made excellent candidates' at the beginning of their teacher education. The issue is less about skills and more about what qualities the person should bring. It was argued, however, that there must be some minimum standards of competency (including literacy) below which applicants could not be considered for teacher education.

In order to look for the right qualities, many HEIs hold interviews with prospective candidates.[61] While entry into consecutive courses is often determined by PAC criteria, many colleges conduct interviews with the (sometimes shortlisted) candidates. The aim of these interviews is to determine the suitability of the candidate in terms of their disposition, motivation and passion for teaching. Some post-primary consultation group members felt that at second level some applicants tend to be more passionate about the subject than about teaching per se. The views of attendees on the usefulness of interviews were mixed; while some noted that the practice is 'worth its weight in gold', others felt that even interviews do not eliminate some candidates not suitable for teaching. In addition, potential social class and gender bias was highlighted, with middle-class young women tending to do best in interviews (and being able to afford coaching for interviews), reflecting their cultural capital. The participants in the two groups felt that colleges should have autonomy in selecting their students as they 'don't want a generic teacher' and that the selection process 'can't be streamlined too much'. It was felt by some that while criteria could be set centrally, the suitability to be accepted on a teacher education course should be decided at college level. Some key stakeholders noted that there is very little information available on what school principals are looking for, or what they are expecting from the graduates; a potential area for further research. Equity and access were also highlighted as areas warranting further attention (see below). The increase in the duration of the PME was seen as placing a considerable financial strain on students, some of who may not be able to complete their studies.

Another area that was highlighted by some participants was the level of Irish among student teachers placed in Irish-medium schools. While some students cope well (particularly those coming from the Gaeltacht), others, even with a degree in Irish, do not and may struggle in an environment of total immersion. Furthermore, subject-specific vocabulary (e.g. Geography, Science, Math, Art History) is seen as creating problems for some students. It was suggested that greater attention should be paid to CPD as Gaeilge. One representative of Irish-medium schools felt that there needs to be a specific entry requirement regarding Irish and some way to standardise exit level competence in the language, possibly by using the TEG framework and agreeing a minimum requirement for the English-medium system and another for the Irish-medium system. Another representative noted that, until there is an additional Irish-language requirement that prepares / qualifies teachers sufficiently for the immersion model, including subject-specific vocabulary, new teachers continue to struggle and the provision of more CPD is not sufficient to rectify this problem. According to a COGG representative, very few Gaeltacht or Irish-medium school students opt for teaching as a profession. They thus see it as of vital importance

[61] The four-year undergraduate programme relies mostly on Leaving Certificate points, however.

that a scheme of some sort be developed to encourage more applicants. One way would be to award students with very high proficiency additional CAO points, similar to the procedure for Higher Level Mathematics. According to the stakeholder, the situation regarding post-primary teachers is of particular concern, with perceived poor Irish language fluency even among honours degree graduates. NUIG offers a postgraduate teaching qualification for those wishing to teach Irish and, according to the stakeholder, this approach should be developed further. There is currently a particular shortage of Irish-medium teachers in Mathematics, Science and languages. Representatives of Gaelscoileanna Teo and An Chomhairle um Oideachas Gaeltachta and Gaelscolaíochta (COGG) felt that an oral Irish examination is not a satisfactory method of assessment as it will only inform of oral competence (possibly memorised). Teachers need to have the ability to write the language accurately; therefore they recommend a written test of some kind along with a reliable, valid oral Irish exam. In addition, the Irish exam takes place in the first year of a four-year programme and there is no guarantee that students would maintain their proficiency. They also felt the system by which Gaeltacht candidates are identified needs review. Gaeltacht candidates previously had to be in receipt of a grant known as 'Scéim Labhairt na Gaeilge' as a means of confirming Irish language competence. This scheme was discontinued some years ago and no reliable system has replaced it.

Stakeholders discussed the Gaeltacht placements during second-level and ITE as a way of potentially bridging the gap between language fluency at entry to ITE and the required standards on exit. However, financial issues were seen by a stakeholder as a potential impediment. It was suggested that appropriate supports, direct or indirect, would encourage wider participation on Gaeltacht courses and in turn remove Irish as an impediment, increase diversity among applicants as well as assisting applicants in meeting the Irish language requirement. The *20-Year Strategy for the Irish Language* planned the establishment of a National Centre for All-Irish Teacher Training which was intended as a centre of excellence, aiding and advising the Colleges of Education in preparing teachers for the entire cycle of Irish-medium schools through consultancy, in-service training, additional accredited training programmes and resource development. The National Centre would work in conjunction with all established Colleges of Education and mobility of professional staff between all education providers and systems and the proposed National Centre was to be encouraged (personal correspondence, Principal Officer, D/AHG).

The consultation process also involved contacting various colleges providing courses in initial teacher education in order to seek their views on additional pre-entry requirement for mature students. In particular, the stakeholders were

asked about the need to introduce literacy and numeracy tests for these students. Overall, the stakeholders felt that since entrants into initial teacher education in Ireland are already high achievers, additional tests in literacy and numeracy are not needed:

> *If someone has a Leaving Certificate for undergraduate or a degree for post graduate then you would think they should have sufficient literacy and numeracy skills. [HEI1].*

It was felt by some that there is no notable difference between mature and other applicants: 'We here in [HEI4] see no significant or identifiable difference between mature students and non-mature students'. Furthermore, it was felt that applying additional criteria for mature entrants could be discriminatory:

> *All applicants to the consecutive programmes are by definition mature students in that they come to the PME programme with an undergraduate degree so to single out those who are older, i.e. above a certain age, would seem to me to be somewhat ageist in that the presumption would be that they are older therefore they need to be treated differently when in fact they will have met the same entry criteria as those who are younger, i.e. hold a recognised degree (Stakeholder 1, HEI1).*

> *So I think the focus on entry to the teaching profession needs to be on the same entry criteria for everyone and to ensure that the entry criteria is set up in such a way that it treats all applicants the same and expects the same from all applicants (Stakeholder 2, HEI1)*

> *We are already conducting a test for mature entrants in terms of their spoken competence in Irish on top of their original / recent Leaving Certificate grades in those areas. I am not sure what the purpose of conducting English and Irish written literacy tests and numeracy tests would be given the requirement for certain grades in Leaving Certificate or equivalent examinations. Could we reasonably treat mature candidates in a way that is potentially discriminatory in terms of putting an additional barrier in the way of their gaining entry? My own view on such entry tests is that you either have them for all entrants or none and if you do have such tests how does that impact on the minimum Leaving Certificate subject attainment? (Stakeholder 3, HEI2)*

Crucially, the consultation with HEIs raised a number of questions to be addressed before any additional testing can be introduced:

1. Would existing tests be used or would new tests be developed?
2. How would test validity be established for the proposed tests?
3. How would the reliability of the tests be determined?
4. How well would the entrance tests be linked to the Mathematics modules offered by the teacher education providers?
5. What would be the syllabus for the mathematical content on which the test is based? Would it be Leaving Certificate Mathematics/English, primary school English/Mathematics or Mathematics/English for teaching?
6. On what basis would the tests be given to mature students and not to students entering teaching more generally?
7. Would the tests replace the requirements to have passed English/Mathematics in the Leaving Certificate?
8. How would the pass level be set on the test?

Another stakeholder indicated that rates of mature entry on to ITE courses were already low and thus an additional requirement may act as a disincentive to potential applicants.

5.4.3 Diversity Among Entrants to ITE

The stakeholders were in agreement about the need to increase diversity among applicants. Many argued that changing the existing criteria would make it difficult to increase diversity among applicants. Introducing different pathways into teacher education and promoting teaching as a high status job in some communities were seen as potential ways of increasing diversity. Irish was seen as the greatest impediment for applicants from under-represented groups. Stakeholders were concerned that, should the minimum requirement be increased in Irish, this would greatly diminish the number of these applicants. The stakeholders suggested that the Irish requirement could be an exit rather than entry requirement.

Several participants across the two consultation groups commented on the homogeneity of teachers versus the mixed multicultural classroom environment, a feature of many schools in Ireland. While the mature route introduced not only older students but also students from different backgrounds, the majority of

current teachers tend to come from farming and middle-class backgrounds. It was argued that many such teachers may not be able to sufficiently relate to students whose background is very different from theirs. Importantly, provision of subjects at higher level is crucial for being able to consider a teaching career. However, many DEIS students do not have access to Higher Level Irish. Very few Travellers enter teacher education programmes. It was suggested that perhaps a quota system should be introduced to cater for different groups of students.

While the participants generally supported the idea of increasing diversity in ITE, some argued that additional effort has to be made in making sure that applicants from other countries have sufficient fluency in English to successfully operate in a classroom environment. There may also be difficulties in the school placements of such students (not unlike students with dyslexia).

5.5 CONCLUSIONS

This chapter has outlined the procedures used for entry to initial teacher education at primary and post-primary level in Ireland. As in other countries (see Chapter 3), there is a good deal of diversity in approach across levels and institutions. Entry to concurrent primary and post-primary ITE is largely through a centralised procedure, relying on Leaving Certificate grades. Procedures for entry to consecutive courses are more diverse, with entry to some institutions operating through the centralised PAC system which selects entrants on the basis of degree results, other qualifications and relevant work experience. In contrast, other institutions utilise the interview as a selection mechanism in conjunction with other criteria. Consultation with stakeholders raised issues about whether entry standards are indeed problematic, the appropriate balance between skill development prior to entry and during the ITE programme, and the trade-off between high entry standards and diversity of the teaching profession. The consultation did not support the perceived concern about the adequacy of entry criteria into ITE. However, the importance of ensuring proficiency in Irish for ITE graduates working in Irish-medium schools was highlighted, as well as the need to establish greater clarity about the roles of the Department of Education and Skills and the Department of Arts, Heritage and the Gaeltacht in identifying Gaeltacht entrants. It was also felt that introducing additional pre-entry tests in literacy and numeracy for mature students only could be discriminatory. Considering that entrants to ITE are predominantly drawn from among high achievers, there is little support from stakeholders regarding the introduction of higher academic entry criteria.

Chapter 6

Primary ITE: Criteria for Entry and Student Profile

6.1 INTRODUCTION

Chapter 5 has outlined the two routes into primary initial teacher education: concurrent Bachelor of Education qualifications and consecutive Professional Master of Education qualifications. This chapter considers the impact of potential changes in entry criteria for application and entry to primary ITE. Section 6.2 examines the role of second-level take-up and grades in facilitating, or constraining, eligibility for ITE entry. Section 6.3 looks at the level of demand for primary ITE and the profile of entrants and applicants.

6.2 THE ROLE OF SECOND-LEVEL SUBJECT TAKE-UP AND GRADES

Chapter 5 has outlined the entry criteria used for access to initial teacher education. For access to primary ITE undergraduate degrees, applicants must have taken three or more Higher Level subjects, must have achieved at least a C3 in Higher Level Irish at Leaving Certificate (or equivalent) level, must have achieved at least Higher Level D3 or Ordinary Level C3 in English, and must have achieved at least a D3 in Higher or Ordinary Level Mathematics. Proposals for having more stringent entry criteria have suggested requirements of at least a B in Higher Level English, at least a B in Higher Level Irish and at least a C in Higher Level Mathematics. Changes in requirements will potentially impact on mature as well as school-leaver entrants. However, because of the absence of information on the profile of mature entrants who apply through the non-CAO route, the extent of the impact cannot be directly assessed in the remainder of this section.

6.2.1 Take-Up of Higher Level Subjects

Take-up of, and performance in, different subject levels varies across schools and individuals, and these patterns will have consequences for those eligible (or potentially eligible) for entry to primary ITE. In the remainder of this section, we explore the impact of current and potential entry criteria on the number and profile of eligible candidates.

Table 6.1 shows the average take-up of Higher Level English, Irish and Mathematics across second-level schools in 2013. Average take-up varies

markedly across the subjects, being highest for English and lowest for Mathematics.

TABLE 6.1 Profile of Second-Level Schools Providing Higher Level English, Irish and Mathematics, 2013

	English %	Irish %	Mathematics %
No take-up of Higher Level	1.3	6.4	6.0
Average take-up of Higher Level	61.3	35.6	23.1
All taking Higher Level	1.5	4.8	0.0

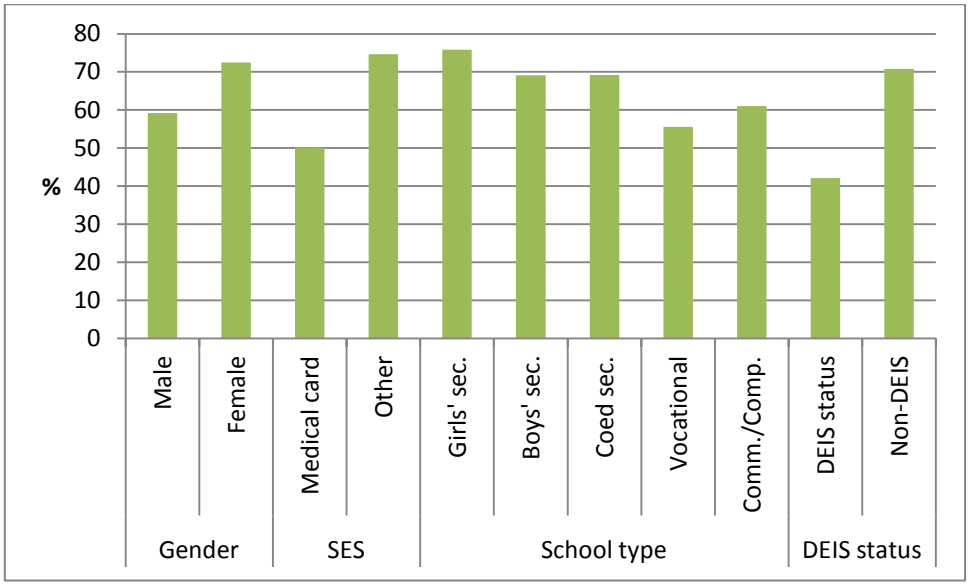
Source: State Examinations Commission Leaving Certificate exam data.

All students take Higher Level Irish in one in 20 schools while only a small proportion (1.5 per cent) of schools have all students taking Higher Level English. No school has all of its students taking Higher Mathematics. There is a small number of schools in which no students take Higher Irish or Mathematics (6 per cent) and only a very small number of schools (1 per cent) where no-one takes Higher English. Schools not providing Higher Level English are more likely to be designated disadvantaged (DEIS) and/or vocational schools. However, the numbers in any category are very small. In contrast, when it comes to Higher Irish, a sizeable proportion (23 per cent) of DEIS schools do not provide it compared with less than 1 per cent of non-DEIS schools. A higher proportion (13 per cent) of vocational schools do not provide Higher Irish than is the case for other sectors. Similarly, when it comes to Mathematics, almost a fifth (19 per cent) of DEIS schools do not provide Higher Mathematics compared with 1 per cent of non-DEIS schools; 14 per cent of vocational schools do not provide Mathematics at Higher Level. In summary, the use of take-up of Higher Irish and Mathematics as criteria for entry to ITE has significant consequences for the potential eligibility of students who attend disadvantaged schools.

Take-up of Higher level in a particular subject reflects the complex interaction between school provision of Higher Level teaching, school policy regarding access to Higher Level, teacher expectations and student expectations (Smyth et al., 2007). Take-up of Higher Level subjects at junior cycle acts as a gateway to taking related subjects at Higher Level for the Leaving Certificate, with practically no movement 'upward' from Ordinary to Higher Level over the transition to senior cycle (Smyth et al., 2011). Figure 6.1 shows the proportion of different groups of students taking Higher Level English. There are marked gender differences with female Leaving Certificate candidates much more likely to take Higher English than their male counterparts. The only measure of socio-economic background available in the exam database is whether the candidate had an exemption from

paying exam fees, which is based on whether the family qualifies for a means-tested medical card. Students from these more disadvantaged families are significantly less likely to take Higher level English than other groups. Take-up of higher English varies across school types, being highest in girls' secondary schools and lowest in vocational schools. These patterns are likely to reflect the gender and social composition of these schools. Students attending DEIS schools are far less likely to take Higher English than those in non-DEIS schools (42 per cent compared with 71 per cent).

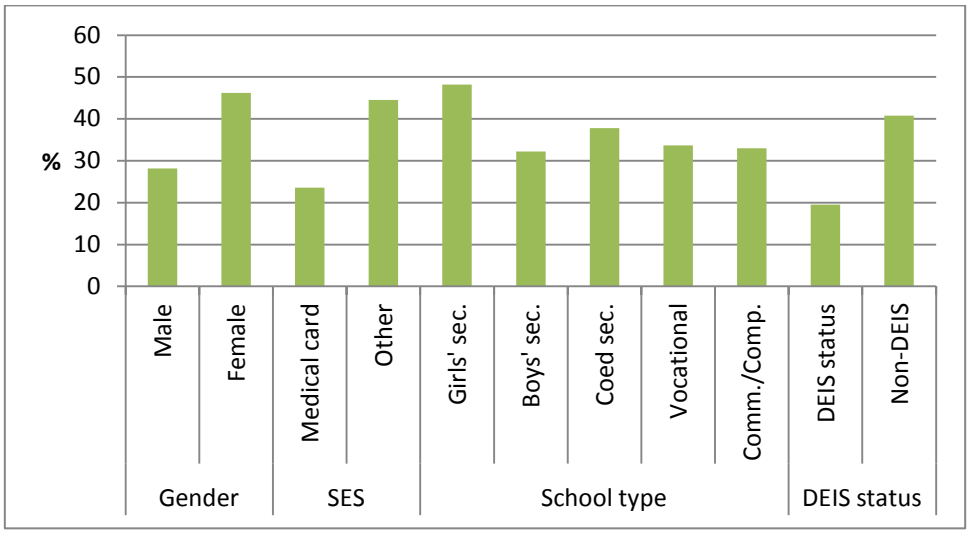
FIGURE 6.1 Take-Up of Higher Level English at Leaving Certificate Level by Student and School Characteristics



Source: State Examinations Commission Leaving Certificate exam data (2013).

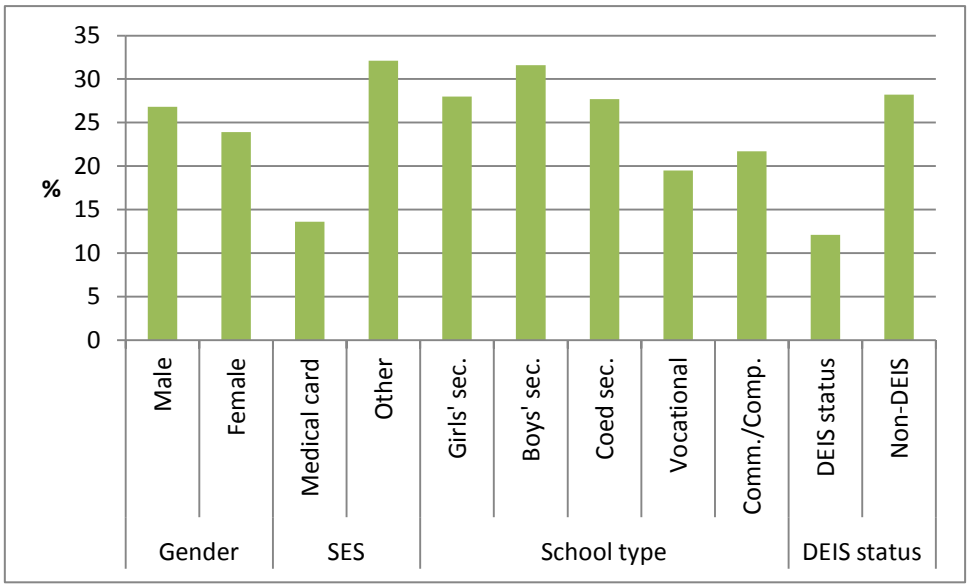
Overall, levels of take-up of Higher Level Irish are lower than for English (Figure 6.2). The gender gap in take-up of Higher level Irish is larger than is the case for English, with girls much more likely than boys to take the subject at Higher Level. Candidates from disadvantaged backgrounds and those who attended DEIS schools are much less likely to take Higher Level Irish than their peers. Take-up levels of Higher Level Irish are highest in girls' secondary schools and lowest in boys' secondary schools.

FIGURE 6.2 Take-Up of Higher Level Irish at Leaving Certificate Level by Student and School Characteristics



Source: State Examinations Commission Leaving Certificate exam data (2013).

FIGURE 6.3 Take-Up of Higher Level Mathematics at Leaving Certificate Level by Student and School Characteristics



Source: State Examinations Commission Leaving Certificate exam data (2013).

Take-up levels of Higher Mathematics are lower than those for English or Irish (Figure 6.3). In contrast to the other two subjects, there is a slight advantage in take-up in favour of male candidates, indicating a persistent gender bias in level take-up. There is a marked difference in the take-up of Higher Mathematics by individual social background and school social mix. Candidates who attended boys' secondary schools have higher take-up of Mathematics, with the lowest take-up levels found in the vocational sector.

In summary, the take-up of Higher Level English, Irish and Mathematics varies by gender and social background as well as by the type of school attended. However, the specified criteria for primary ITE entry relate not only to the subject level taken but to the grade achieved. The following sub-section looks at individual and school variation in meeting these eligibility criteria.

6.2.2 Take-Up of, and Performance in, Higher Level Subjects

Table 6.2 contrasts current entry criteria for primary initial teacher education with the proposed entry criteria. At present, candidates are required to have a C grade in three Higher Level subjects and are required to have a higher level C in Irish but not in English or Mathematics. The proposed criteria are much more stringent for English and Mathematics and involve a slight change in Irish requirements (from Higher C to Higher B).

TABLE 6.2 Current and Proposed Entry Criteria for Primary ITE[62]

	Current	Proposed
Minimum no. of Higher level C grades	3	3
Minimum grade in English	D at Higher level or C at Ordinary Level	B at Higher level
Minimum grade in Irish	C at Higher level	B at Higher level
Minimum grade in Mathematics	D at Ordinary or Higher level	D at Higher level

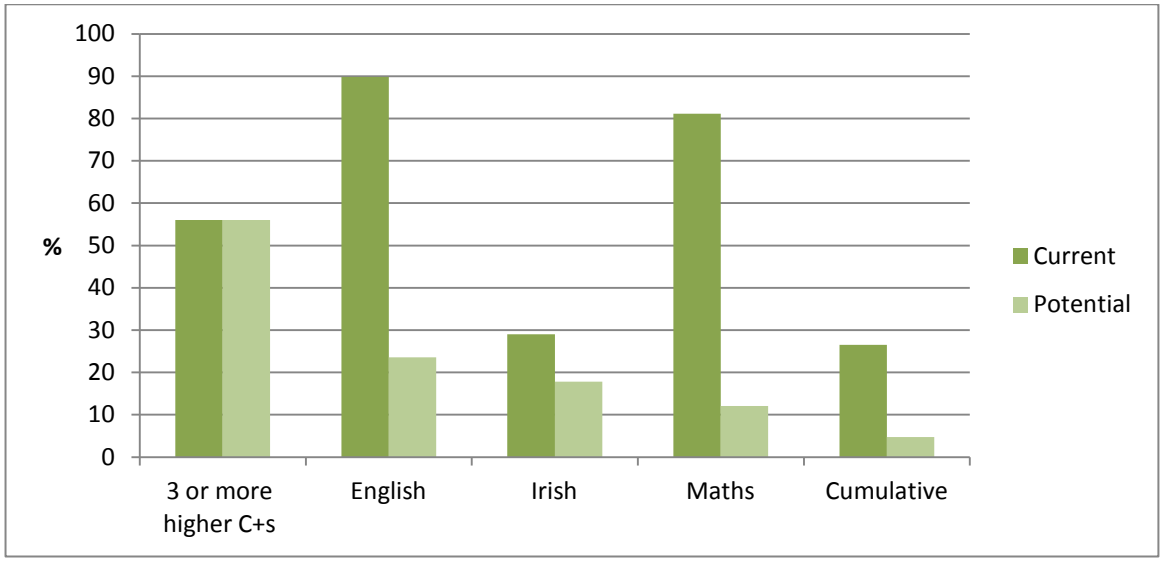
Source: Teaching Council website.

Figure 6.4 shows the proportion of all Leaving Certificate candidates who meet the current criteria and would meet the proposed criteria, using figures from 2013. Looking at current criteria, over half of candidates meet the requirement to have three Cs at Higher Level while the vast majority meet the English and Mathematics criteria. In contrast, under a third of Leaving Certificate candidates meet the Irish criteria. Taking all of these criteria together, we find that 27 per cent of the Leaving Certificate cohort, or approximately 13,000 individuals, meet the current criteria. Not meeting the current criteria is largely driven by take-up of, and performance in, Higher Irish. Looking at the proposed criteria based on the Leaving Certificate attainments of the 2013 Leaving Certificate candidates, and assuming no behavioural change in response to the new criteria, there would be a reduction in the proportion meeting the Irish criteria, from 29 per cent to 18 per cent. There would be a greater reduction in the proportion meeting the English criteria, as the requirement shifts to a Higher Level B, with the eligible group dropping from 90 per cent to 24 per cent of the cohort. There is also a

[62] The proposed Mathematics criterion differs somewhat from that proposed in the Teaching Council consultation document. Discussions with Teaching Council staff helped refine the criteria to be analysed in this chapter.

sizeable reduction in the proportion who meet the Mathematics criteria, dropping from 81 per cent to 12 per cent. Taking all of the criteria together, only 5 per cent of the 2013 Leaving Certificate cohort, or 2,000-2,500 individuals, would be eligible to enter ITE based on the changes in requirements and assuming no change in subject level provision or student behaviour in response to those changes. Not meeting the proposed criteria would largely be driven by take-up of, and performance in, Higher Level Mathematics, though Irish continues to play a role in disqualifying students.

FIGURE 6.4 Proportion of Leaving Certificate Candidates Meeting Current and Proposed Criteria for Entry to Primary ITE



Source: State Examinations Commission Leaving Certificate exam data (2013).

Multilevel models can be used to identify the individual and school factors influencing the likelihood of meeting each of the individual criteria. Even controlling for individual social background and school attended, girls are more likely to achieve three or more Higher C grades in any exam subjects at Leaving Certificate level (Table 6.3). Students from more disadvantaged backgrounds (as evidenced by having an exam fee waiver) are significantly less likely to attain this minimum as are those who attended designated disadvantaged (DEIS) schools. Controlling for gender, exam fee waiver and DEIS status, there is no significant variation across school sectors in the likelihood of attaining this criterion. Students who attended an Irish-medium school were more likely to achieve three 'honours' than those in English-medium schools, though this may reflect other social background differences not captured in the exams database. Students attending larger schools (more than 400 students) were more likely to meet this criterion than those in very small schools, all else being equal. This may reflect greater ease of providing Higher Level classes in larger schools. The coefficient for

between-school variation indicates that the proportion of students achieving three or more Higher C grades differs significantly by school, even taking account of the individual and school factors included in the model.

TABLE 6.3 Multilevel Model of Likelihood of Achieving Three or More Higher C Grades in any Leaving Certificate Exam Subjects, 2013

	Coefficient
Constant	0.350
Female	0.332***
Exam fee waiver	-0.933***
School type:	
Girls' secondary	0.129
Boys' secondary	0.050
Vocational	-0.103
Community/Comprehensive	-0.165
Ref.: Coeducational secondary	
DEIS status	-1.098***
Language medium:	
All subjects taught in Irish	0.327*
Some subjects taught in Irish	0.980***
School size:	
200-399	0.166
400-599	0.279**
600+	0.253*
Ref.: <200	
Between-school variation	0.335***

Source: Calculated from State Examinations Commission Leaving Certificate exam data.
Note: *** p<.001; ** p<.01; * p<.05.

There are commonalities in the profile of candidates who would meet the current and potential criteria for English (Table 6.4). Girls and those without an exam fee waiver are at an advantage while those in DEIS schools are at a disadvantage. Those in girls' schools are more likely to meet the criteria while those in vocational schools are least likely to do so. Changing the criteria for English would mean that boys' secondary schools would also be at an advantage as would larger schools (over 400 students).

TABLE 6.4 Multilevel Models of Likelihood of Achieving Current and Potential English Criteria, 2013

	Current	Potential
Constant	2.281	-1.358
Female	0.704***	0.512***
Exam fee waiver	-0.703***	-0.860***
School type:		
Girls' secondary	0.418***	0.184*
Boys' secondary	0.162	0.166*
Vocational	-0.191*	-0.199**
Community/Comprehensive	-0.160	-0.141
Ref.: Coeducational secondary		
DEIS status	-0.807***	-0.939***
Language medium:		
All subjects taught in Irish	0.178	0.204
Some subjects taught in Irish	0.853***	0.490***
School size:		
200-399	-0.061	0.100
400-599	0.115	0.238*
600+	0.158	0.315**
Ref.: <200		
Between-school variation	0.380***	0.237***

Source: Calculated from State Examinations Commission Leaving Certificate exam data.
Note: *** p<.001; ** p<.01; * p<.05.

A broadly similar pattern of variation in characteristics is apparent when we consider the current and proposed criteria for Irish (Table 6.5). Female candidates are more likely to meet both the current and proposed criteria than their male peers while those from disadvantaged backgrounds, either at individual or school level, are less likely to meet the criteria for Irish. Not surprisingly, those attending Irish-medium schools are significantly more likely to achieve the minimum standards in Irish. Controlling for gender, those attending boys' secondary schools are more likely to meet the current and proposed criteria. There is no significant difference between girls' and coeducational secondary schools in relation to the current criteria but girls' schools are at an advantage in relation to the proposed criteria.

TABLE 6.5 Multilevel Models of Likelihood of Achieving Current and Potential Irish Criteria, 2013

	Current	Potential
Constant	-1.415	-2.039
Female	0.964***	0.965***
Exam fee waiver	-1.042***	-1.134***
School type:		
Girls' secondary	0.157	0.337***
Boys' secondary	0.313***	0.380**
Vocational	0.061	0.008
Community/Comprehensive	0.018	0.053
Ref.: Coeducational secondary		
DEIS status	-1.089***	-1.205***
Language medium:		
All subjects taught in Irish	0.830***	1.045***
Some subjects taught in Irish	4.375***	3.812***
School size:		
200-399	0.176	-0.030
400-599	0.264*	0.039
600+	0.200	0.062
Ref.: <200		
Between-school variation	0.363***	0.426***

Source: Calculated from State Examinations Commission Leaving Certificate exam data.

Leaving Certificate candidates who received an exam fee waiver and those who attended DEIS schools are significantly less likely to achieve the current or proposed minimum standards in Mathematics (Table 6.6). Those attending very large schools (over 600 students) are at a slight advantage in reaching these criteria, presumably because larger school size facilitates offering Higher Mathematics to a larger proportion of the cohort. There are no gender differences in relation to the current criteria but raising the standards for Mathematics entry would advantage male candidates. Under the proposed criteria, those who had attended vocational or community/comprehensive schools would be less likely to meet the standards than those who had been at voluntary secondary schools.

TABLE 6.6 Multilevel Models of Likelihood of Achieving Current and Potential Mathematics Criteria, 2013

	Current	Potential
Constant	1.709	-1.752
Female	0.081	-0.356***
Exam fee waiver	-0.829***	-1.099***
School type:		
Girls' secondary	0.178*	0.135
Boys' secondary	0.085	0.169
Vocational	0.013	-0.252*
Community/Comprehensive	-0.166	-0.270*
Ref.: Coeducational secondary		
DEIS status	-0.987***	-1.082***
Language medium:		
All subjects taught in Irish	0.180	0.132
Some subjects taught in Irish	0.565***	0.467**
School size:		
200-399	0.154	0.199
400-599	0.273*	0.283
600+	0.324**	0.396*
Ref.: <200		
Between-school variation	0.378***	0.329***

Source: Calculated from State Examinations Commission Leaving Certificate exam data.
Note: *** p<.001; ** p<.01; * p<.05.

Taking the combined entry criteria, Table 6.7 compares the patterns for those who meet the current standards and those who would meet the proposed standards. For both sets of criteria, girls, those without an exam fee waiver, those in non-DEIS schools, those in single-sex secondary schools and those in Irish-medium schools are more likely to meet the criteria. What is of interest is the extent to which the size of these differences changes using the current and proposed criteria. In the absence of significant behavioural change, the proposed criteria would imply an increase in social inequality (with a greater advantage to non-disadvantaged individuals and schools) and an increase in the advantage of the single-sex secondary sector. Very large schools (with more than 600 students) would be at an advantage using the proposed criteria while there is no significant variation in eligibility by school size using the current criteria. In addition, the proposed change in criteria would narrow the gender gap in favour of female candidates.

TABLE 6.7 Multilevel Models of Likelihood of Achieving Combined Current and Potential Criteria, 2013

	Current	Potential
Constant	-1.430	-3.439
Female	0.889***	0.358***
Exam fee waiver	-1.088***	-1.500***
School type:		
Girls' secondary	0.245**	0.466***
Boys' secondary	0.315***	0.317**
Vocational	0.068	0.002
Community/Comprehensive	0.017	-0.027
Ref.: Coeducational secondary		
DEIS status	-1.115***	-1.456***
Language medium:		
All subjects taught in Irish	0.682***	0.426*
Some subjects taught in Irish	2.236***	1.064***
School size:		
200-399	0.093	0.274
400-599	0.193	0.343
600+	0.159	0.537**
Ref.: <200		
Between-school variation	0.303***	0.329***

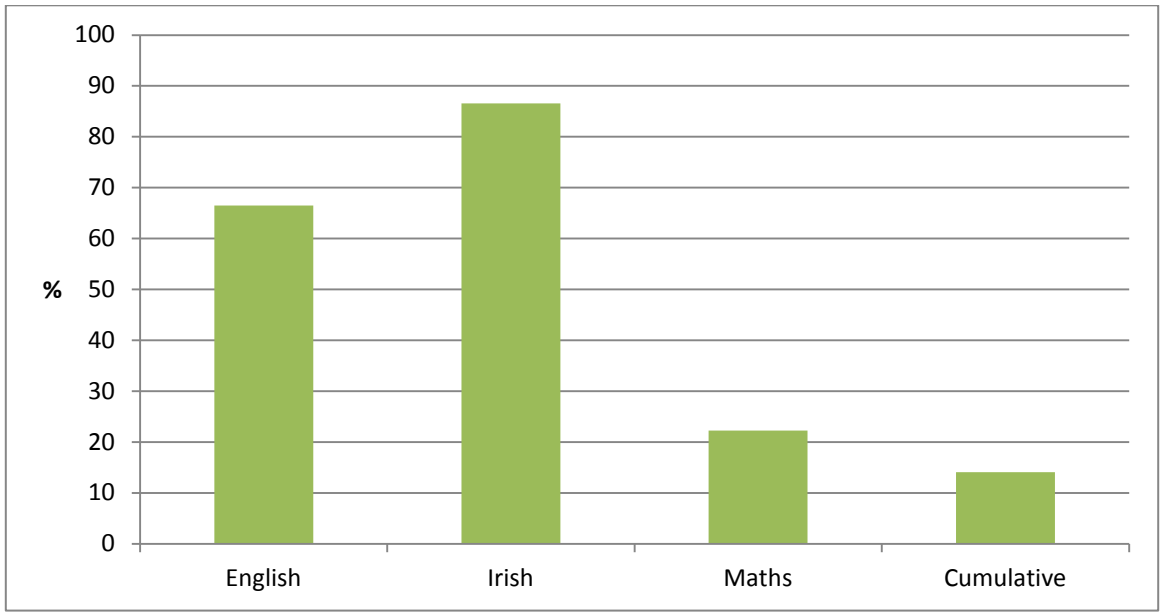
Source: Calculated from State Examinations Commission Leaving Certificate exam data.
Note: *** p<.001; ** p<.01; * p<.05.

The analyses in this sub-section have shown that the proposed change in entry standards would involve a very significant reduction in the number of eligible Leaving Certificate candidates and a greater selectivity in the social and school profile of those meeting the standards. These patterns would hold in the absence of significant behavioural change in terms of subject level take-up; the extent to which these estimates are sensitive to different assumptions is explored in the following sub-section.

An alternative perspective is to explore the extent to which existing students on primary ITE would meet the proposed criteria. The vast majority of current student teachers would meet the criterion for Irish. However, only two-thirds would meet the criterion for English and an even smaller proportion, a fifth, would have a minimum of a Higher Level C in Mathematics. Taking these criteria together, fewer than one in six (14 per cent) of current student teachers would meet these entry criteria. In other words, approximately 150 of the current student body (out of almost 1,000 entrants) would be eligible to entry using the

proposed criteria. The extent to which current student teachers would meet the criteria differs markedly across institutions, ranging from none to 28 per cent of the students. As with the Leaving Certificate analyses, it should be noted that these applicants were not aiming to meet the proposed criteria. At the same time, the scale of the gap is quite marked and is unlikely to be bridged by behavioural change.

FIGURE 6.5 Proportion of Leaving Certificate Entrants to Concurrent Primary ITE Meeting Proposed Criteria (2013 CAO Figures)

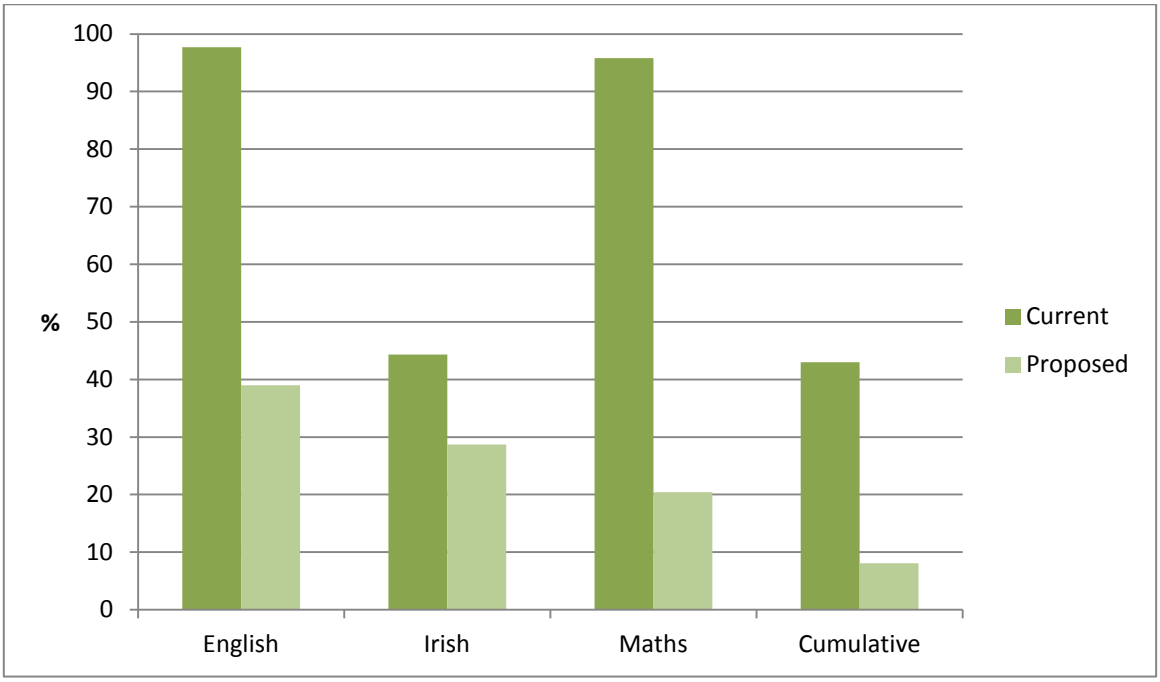


Source: CAO database.

The analyses so far have looked at the implications of changing the academic entry criteria for concurrent primary teacher education. It is worth noting that these subject criteria are also proposed for entry to consecutive primary ITE. It is more difficult to assess the impact on consecutive entrants as data are not routinely collected on their Leaving Certificate grades. However, the requirements that entrants must have a Level 8 degree means that we can make some inferences on the basis of the profile of current Level 8 students. Using CAO data on those entering Level 8 degrees in 2013, we can assess the proportion of the cohort who would meet the proposed minimum standards in English, Irish and Mathematics (see Figure 6.6). A significant proportion (43 per cent) of this group meets the current eligibility criteria and ineligibility is largely driven by not having a Higher Level C (or higher) grade in Irish. This group of students is more likely to satisfy the proposed English requirement and least likely to satisfy the Mathematics requirement. Only 8 per cent of current Level 8 degree entrants satisfy all of the criteria specified, meaning a very small pool of people would be eligible to apply for consecutive primary ITE on the basis of the proposed criteria.

It should be noted that these calculations are based on the subject background of all those entering a Level 8 degree in 2013 and so cannot allow for course drop-out. Previous research on course non-completion (McCoy and Byrne, 2011) indicates that drop-out is higher among those with lower Leaving Certificate grades. It is expected, therefore, that the proportion completing a Level 8 degree meeting the relevant criteria would be somewhat higher than the estimates presented here.

FIGURE 6.6 Potential Entrants to Consecutive Primary ITE Estimated Using Current and Proposed Entry Criteria (Based on 2013 CAO Figures)



Source: Calculated from the CAO database.

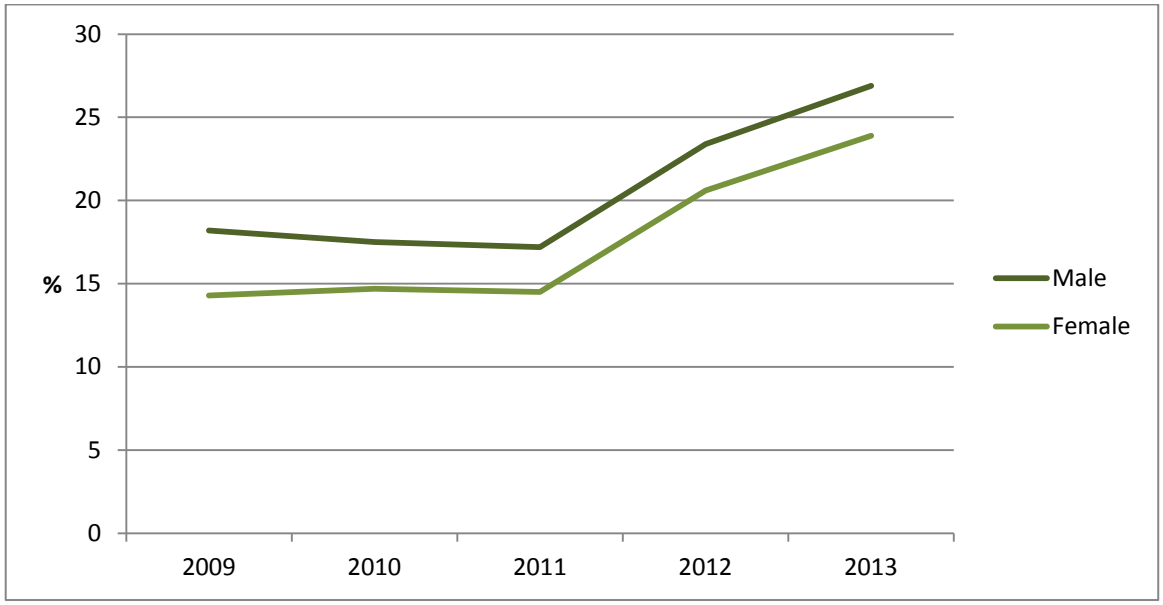
In summary, analyses point to a significant reduction in the pool of candidates eligible to enter concurrent or consecutive primary ITE courses. This pattern is largely driven by the relatively low proportion of potential candidates who have at least a C grade in Higher Level Mathematics.

6.2.3 Sensitivity Analysis of the Implications of the Proposed Entry Criteria

Section 6.2.2 examined the impact of the changing the entry criteria to primary initial teacher education on the basis of current patterns of subject level take-up and performance. In practice, changing entry criteria or other selection mechanisms is likely to result in a change in behaviour. The most pertinent recent example of a change in behaviour resulting, at least in part, from a change in incentives relates to the introduction of bonus CAO points for those taking Higher

Level Mathematics. Figure 6.7 shows a marked increase over time in the proportion of Leaving Certificate candidates taking Higher Level Mathematics. After relative stability in take-up levels from 2009 to 2011, take-up increased from 17 per cent to 27 per cent for males, and from 14 per cent to 24 per cent for females, between 2011 and 2013. This must be regarded as an upper bound estimate of a potential behavioural response as all Leaving Certificate students were taking Project Maths from 2012 and the change in curriculum is likely to have enhanced the take-up of Higher Level Mathematics. Given the timing of the two changes, it is impossible to disentangle the relative effects of the two influences.

FIGURE 6.7 Changes in the Take-Up of Higher Level Mathematics Over Time (2009-2013)



Source: State Examinations Commission Leaving Certificate exam data.

Leaving Certificate data were used to assess whether all groups of students reacted in the same way to the presence of bonus points for Higher Mathematics. The factors influencing the take-up of Higher Mathematics are similar to those reported in the previous sub-section. In other words, take-up is higher among male candidates, those without an exam fee waiver, those in non-DEIS schools, those in voluntary secondary schools, those in Irish-medium schools and those in larger schools. Here we are more interested in whether these differences changed over time. The analyses presented in Table 6.8 indicate that an increase in the take-up of Higher Mathematics was evident across all groups. There was a slightly greater increase for female candidates than for males, meaning that the gender gap in take-up narrowed a little. There was also a slightly greater increase in take-up for those attending vocational schools compared to those in other school types.

TABLE 6.8 Multilevel Model of Likelihood of Take-Up of Higher Level Mathematics, 2009-2013

	Coefficient
Constant	-1.546
Exam year:	
2010	0.017
2011	0.018
2012	0.476***
2013	0.702***
Female	-0.298***
Exam fee waiver	-0.851***
School type:	
Girls' secondary	0.126*
Boys' secondary	0.067
Vocational	-0.305***
Community/Comprehensive	-0.165*
Ref.: Coeducational secondary	
DEIS status	-0.736***
Language medium:	
All subjects taught in Irish	0.197*
Some subjects taught in Irish	0.351*
School size:	
200-399	0.235**
400-599	0.300***
600+	0.349***
Ref.: <200	
Interaction between factors and year:	
2012/3*female	0.071*
2012/3*exam fee waiver	-0.001
2012/3*DEIS school	-0.056
2012/3*Girls' sec.	0.016
2012/3*Boys' sec.	0.013
2012/3*Vocational	0.078*
2012/3*Comm./comp.	0.010
2012/3*200-399 students	-0.060
2012/3*400-599 students	-0.081
2012/3*600+ students	-0.076
2012/3*All Irish	0.094
2012/3*Some Irish-medium	0.109
Between-school variation	0.223***

Source: State Examinations Commission Leaving Certificate exam data.
Note: *** p<.001; ** p<.01; * p<.05.

The estimates presented in this chapter will be sensitive to the reaction of potential candidates to any new requirements for entry. Thus, Leaving Certificate students reacted to the award of bonus points for Higher Mathematics as well as

to curricular change. It is worth noting that the awarding of bonus points potentially affected all those intending to apply to higher education. In contrast, entry criteria for primary ITE are likely to affect only those intending to apply for primary teaching courses at the time they are choosing subject levels. Thus, young people who reach sixth year and then decide they wish to pursue primary teaching may be precluded from doing so by not having selected Higher Mathematics two years earlier. Without information on the timing of decisions to aim for primary teaching, it is not possible to quantify the extent to which changes in entry criteria are likely to influence behaviour.

The estimates presented in this chapter will also be sensitive to the choice of a minimum standard for entry. Table 6.9 shows the potential pool of Leaving Certificate candidates who meet the minimum standards specified. As discussed above, the proposed criteria would involve a sharp reduction in the size of the potential pool from 27 per cent to 5 per cent of Leaving Certificate candidates. Relaxing the criteria somewhat results only in a modest increase in the number of those eligible. The largest increase results from reducing the minimum standard for Mathematics to at least a C at Higher Level or at least a B at Ordinary Level.

TABLE 6.9 Sensitivity of Size of Eligible Pool for Primary ITE to Minimum Standards (using LC 2013 Data)

	% of all LC Candidates
At least three Higher Level C grades plus:	
English D Higher or C Ordinary, Irish C at Higher, Mathematics D at Ordinary or Higher	26.5
English B at Higher, Irish B at Higher, Mathematics C at Higher	4.7
English B at Higher, Irish C at Higher, Mathematics C at Higher or A at Ordinary	5.8
English C at Higher or A at Ordinary, Irish C at Higher, Mathematics C at Higher or A at Ordinary	6.6
English C at Higher or A at Ordinary, Irish C at Higher, Mathematics C at Higher or A at Ordinary	8.6
English C at Higher or A at Ordinary, Irish C at Higher, Mathematics C at Higher or B at Ordinary	14.6

Source: Calculated from State Examinations Commission Leaving Certificate exam data.

6.3 APPLICATION AND ENTRY TO PRIMARY ITE

6.3.1 Demand for Primary ITE Courses

Section 6.2 considered the implications of the minimum standards set for entry to primary ITE. However, the profile of entrants will not only reflect these minimum standards but will also be driven by relative demand for primary ITE courses. Apart from mature students, entry to concurrent primary ITE courses operates through the Central Applications Office (CAO) process. As with all higher education courses, the 'points' (grades and subject levels) required to obtain a

place reflect the demand for particular subject areas and the academic profile of applicants to these areas. Table 6.10 shows that the proportion of CAO applicants for Level 8 courses who list a primary ITE course as their first preference has remained relatively stable at between 3 and 4 per cent over the period 2011-13.[63] A total of 5-6 per cent of applicants list at least one primary ITE course as one of their top ten preferences. The demand for places can be calculated as the ratio of applications to acceptances. This is fairly high for primary ITE, but there was a slight reduction in the level of demand between 2011 and 2013. It is not possible, given available data, to discern whether this change reflects the move to a four-year degree programme and/or the impact of reduced employment chances and salary levels among teachers.

TABLE 6.10 Demand for Concurrent Primary ITE Courses 2011-2013

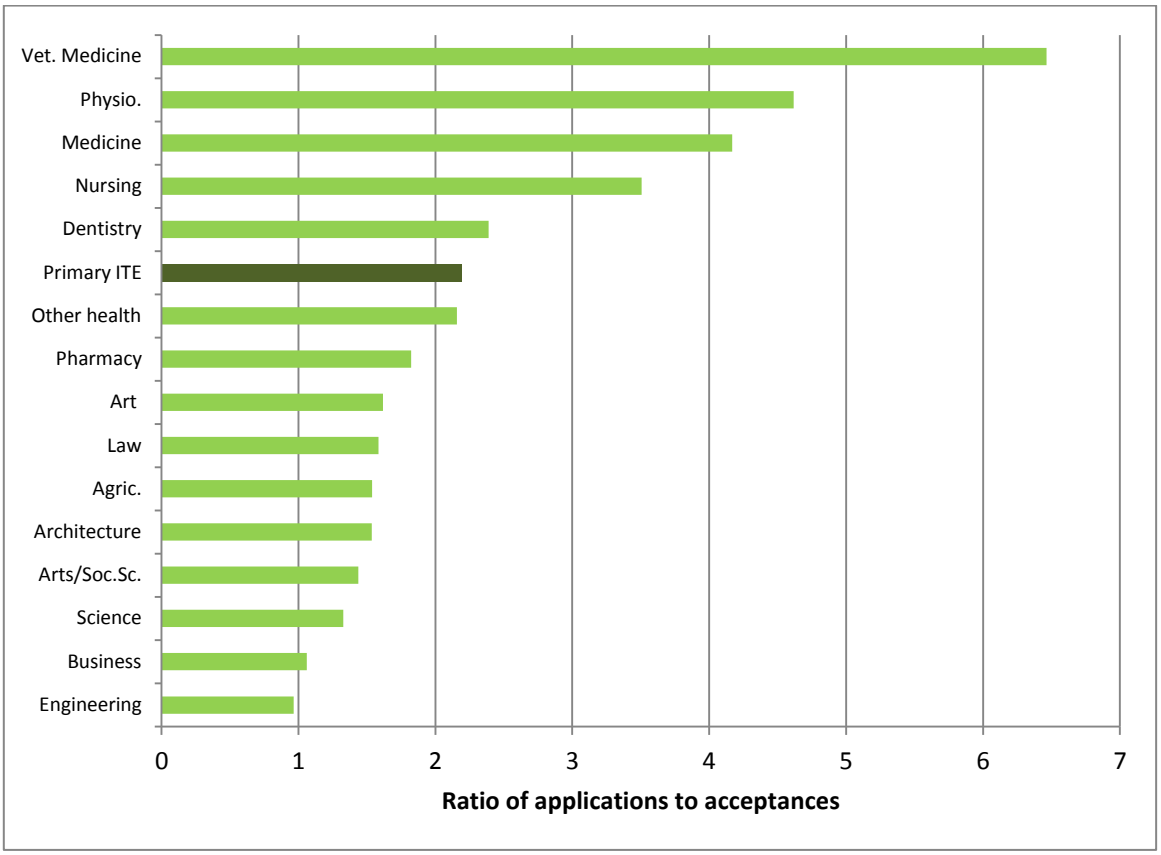
	2011	2012	2013
% giving first preference	3.8	3.5	3.5
% listing as any of top ten preferences	5.7	5.5	5.2
Demand (ratio of applications to acceptances)	2.55	2.24	2.19

Source: Central Applications Office data.

Figure 6.8 shows demand for primary ITE courses as compared with demand for other CAO courses in 2013. The highest level of demand is found for medical and other health care courses. However, levels of demand for primary ITE courses are high, almost as high as for dentistry and higher than for other professional courses such as law.

[63] The overall number of first preferences for education is provided in Appendix III. The figures have remained relatively stable over time.

FIGURE 6.8 Demand for Primary ITE Compared with Demand for Other CAO Courses, 2013



Source: Central Applications Office data.

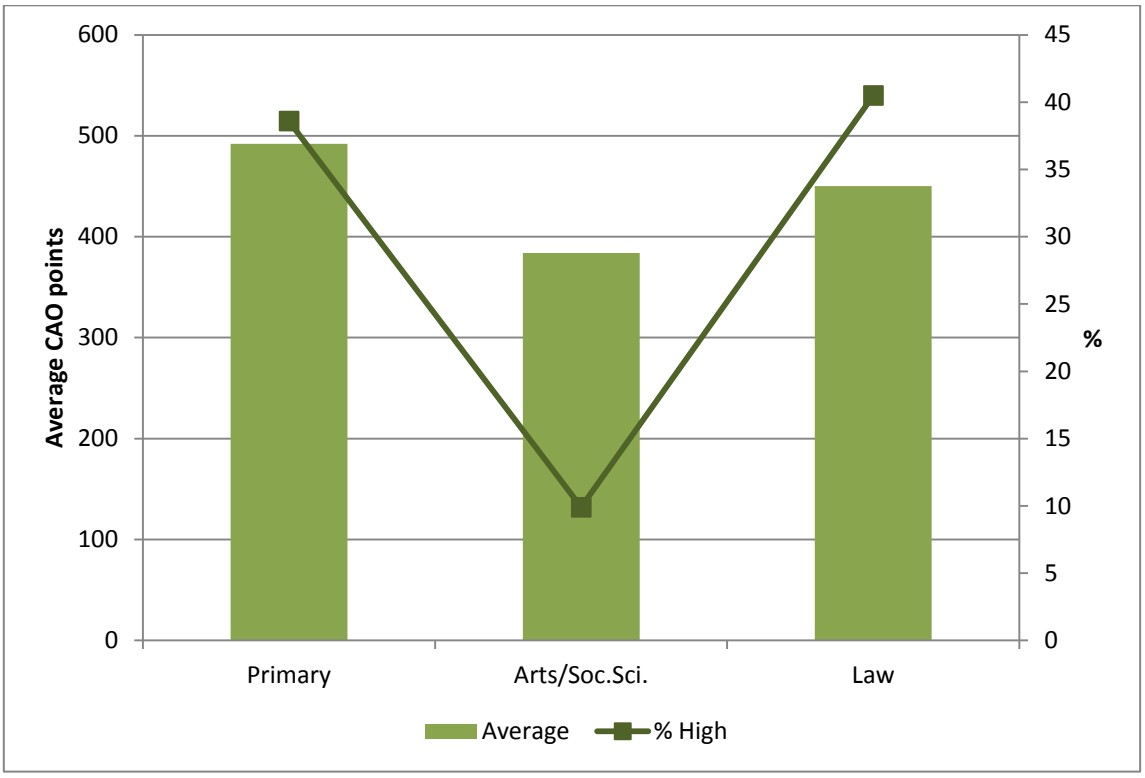
Demand for consecutive primary ITE appears to be similarly high. Detailed information was obtained from three higher education institutions, but covering slightly different timeframes. For the most recent cohort of entrants to the graduate diploma, the ratio of applications to entrants was 4.2 in one institution and 3.5 in another. For PME, the ratio of applications to entrants was 2.4 in one institution and 1.4 and 1.6 for two courses in another institution. Information on the level of demand over time was available for two institutions; in both cases, there appears to have been a decline in demand in recent years.

6.3.2 Grade and Subject Background of Entrants

The high level of demand for primary ITE courses results in a high grade profile among course entrants (see Figure 6.9). The points profile of entrants to different courses will reflect not only the minimum points cut-off for acceptance but also the distribution of grades among applicants. Average Leaving Certificate points are higher for primary ITE entrants than for those embarking on Law or Arts/Social Science degrees. If we consider the proportion of high points entrants (that is, those with 500 or more points), those in Law and Primary ITE are more likely to have such high points (at 39-40 per cent of the entrant cohort) compared

with just a tenth of Arts/Social Science students. Variation is evident between institutions in the points profile of primary ITE entrants, with an 82 point difference between the highest- and lowest-scoring institutions. The proportion of high points entrants similarly varies across institutions, ranging from 13 to 75 per cent of the intake.

FIGURE 6.9 Grade Profile of Primary ITE Entrants Compared with Entrants to Selected CAO Courses, 2013

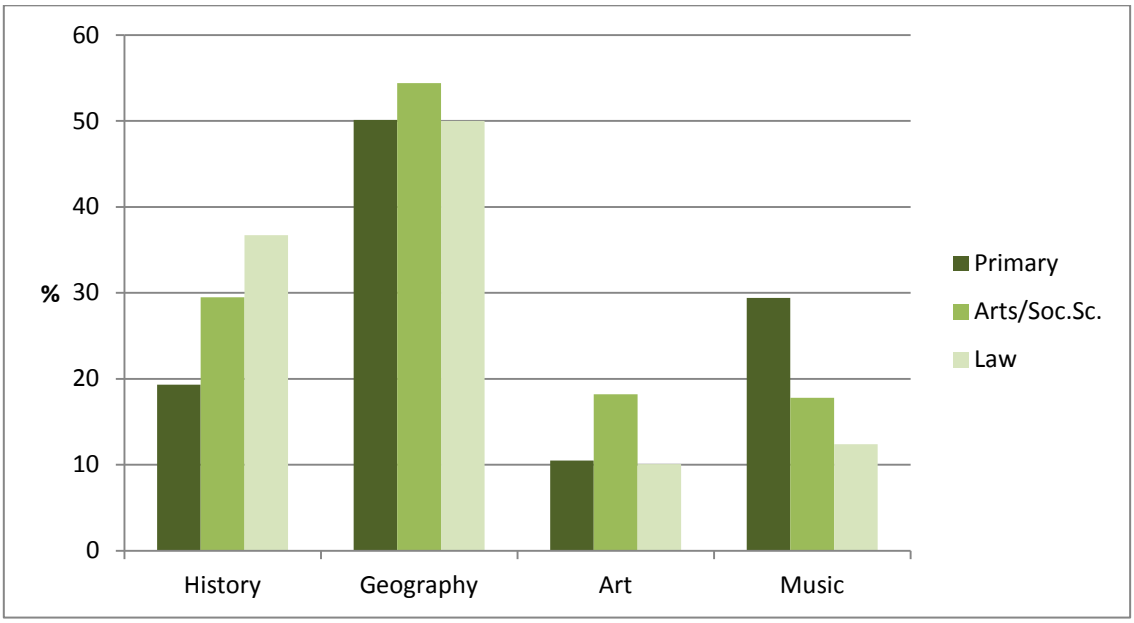


Source: Central Applications Office data.

Section 6.2 has outlined the levels taken and grades achieved by primary ITE entrants in Irish, English and Mathematics as a good deal of the policy discussion on entry criteria has focused on these subjects. However, entrants also vary in the extent to which they have taken other subjects which form part of the primary curriculum, and this prior subject take-up will influence the knowledge and skills entrants bring to their teacher education. Around half of the entrant cohort had studied Geography to Leaving Certificate level, roughly similar to the profile of those entering Arts, Social Science and Law courses. Entrants were less likely to have studied History, with a fifth doing so, compared with 30 per cent of Arts and 37 per cent of Law entrants. The proportion of primary ITE entrants who had taken History varies across institutions, ranging from 9 to 29 per cent of the cohort. Entrants to primary ITE were more likely to have studied Music than those entering Arts, Social Science and Law, though only 30 per cent had taken

the subject to Leaving Certificate. Only a small minority, a tenth of primary ITE entrants, had taken Art for the Leaving Certificate. The extent to which entrants had taken Art varies significantly across higher education institutions, ranging from 8 to 28 per cent of the cohort (see Figure 6.10).

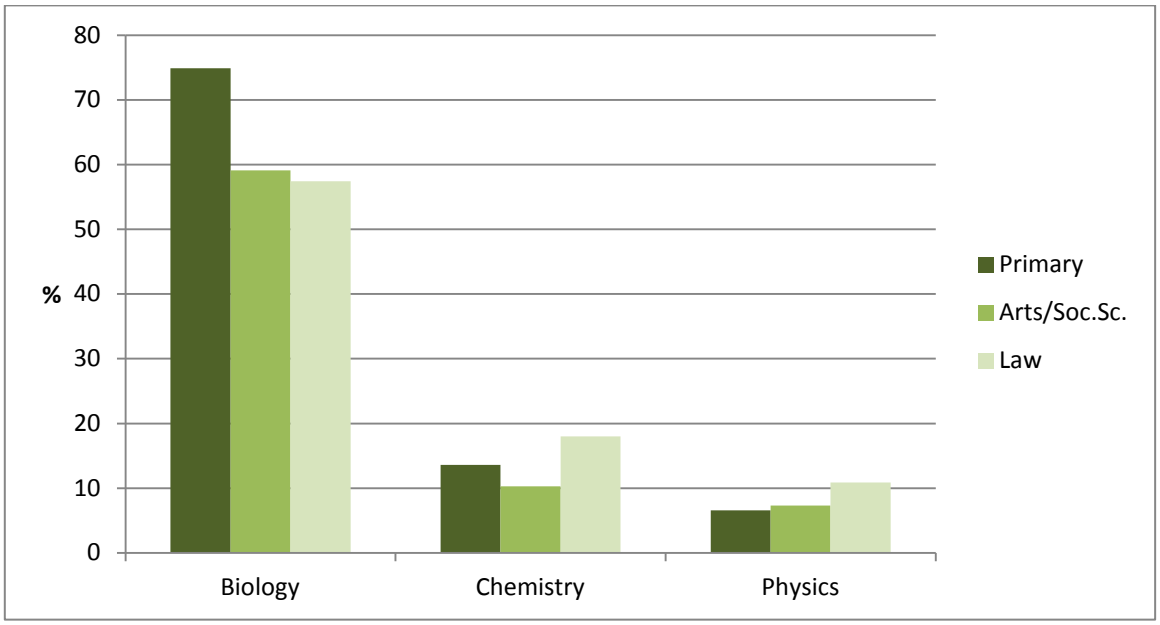
FIGURE 6.10 Proportion of Primary ITE Entrants Having Taken LC Humanities Subjects Compared with Entrants for Selected CAO Courses, 2013



Source: Central Applications Office data.

Entrants also vary in their background in the Science subjects (see Figure 6.11). The majority, three-quarters, of primary ITE entrants had taken Biology at Leaving Certificate level, and were much more likely to do so than entrants to Arts, Social Science and Law courses. Only a minority (14 per cent) had taken Chemistry, a slightly higher level than among Arts/Social Science entrants but lower than for Law entrants. A very small proportion (7 per cent) had taken Physics, comparable with the level for Arts/Social Science entrants and lower than among Law entrants. Take-up of Physics and Chemistry does not vary across different institutions but there is some variation in the proportion who had taken Biology (ranging from 64 to 81 per cent of the cohort).

FIGURE 6.11 Proportion of Primary ITE Entrants Having Taken LC Science Subjects Compared with Entrants for Selected CAO Courses, 2013



Source: Central Applications Office data.

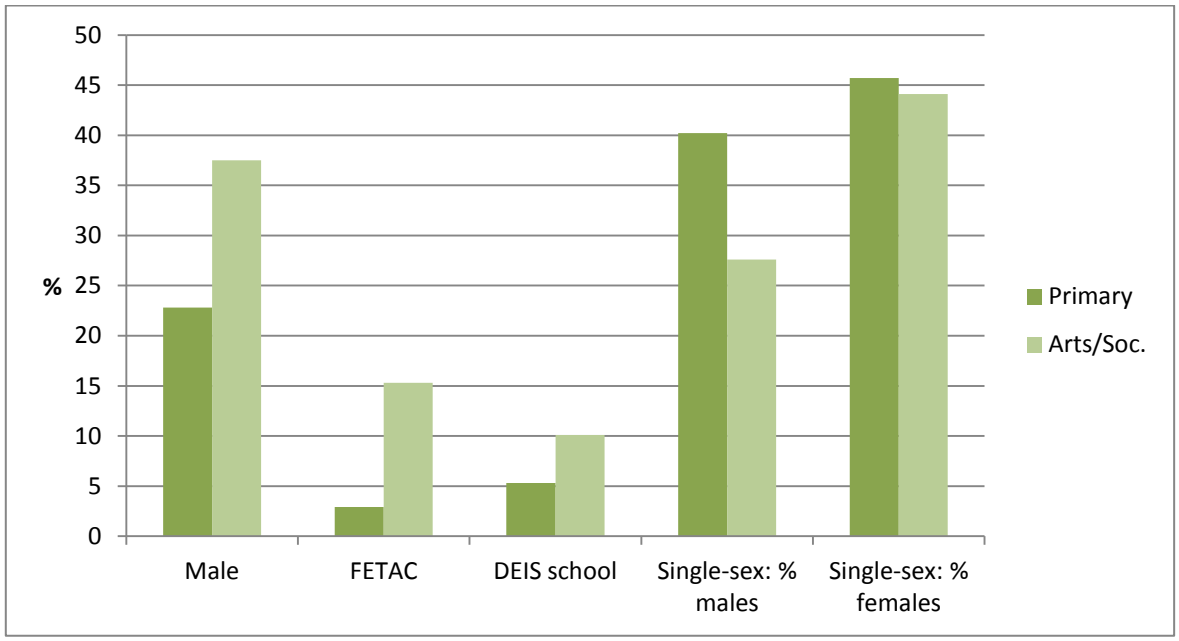
6.3.3 The Diversity of Primary ITE Entrants

A number of studies have raised the issue of the lack of diversity in terms of gender, social background and nationality among the teaching profession (Drudy, 2005; Heinz, 2011). CAO and HEA Entrants' data allow us to explore some aspects of diversity among entrants to concurrent primary ITE courses. Unfortunately, in the case of consecutive primary ITE courses, as is the case for all postgraduate courses, data are not routinely gathered on the profile of entrants.

Figure 6.12 shows that entrants to primary ITE courses are disproportionately female compared with those entering Arts/Social Science courses. Only a tiny proportion (3 per cent) enters ITE through alternative FETAC qualification routes, much lower than the 15 per cent of the cohort for Arts/Social Science courses. The CAO database does not record candidates' social background, though it is possible to use type of school attended as a proxy. Only 5 per cent of primary ITE entrants had attended designated disadvantaged (DEIS) schools, half the level for Arts/Social Science entrants. Single-sex secondary schools tend to have a more advantaged intake in terms of social background and prior ability (Hannan et al., 1996; Williams et al., forthcoming). Levels of attendance at girls' secondary schools are roughly comparable for primary ITE and Arts/Social Science entrants. However, for male entrants, the pattern is quite different; 40 per cent of males entering primary ITE had attended boys' secondary schools compared with only 28 per cent of those entering Arts/Social Science courses. To what extent does

diversity vary across higher education institutions? The proportion who had attended a DEIS school or who entered through a FETAC route does not vary across institutions. However, the gender profile of primary ITE entrants varies, with males making up from 13 to 26 per cent of the cohort across different institutions.

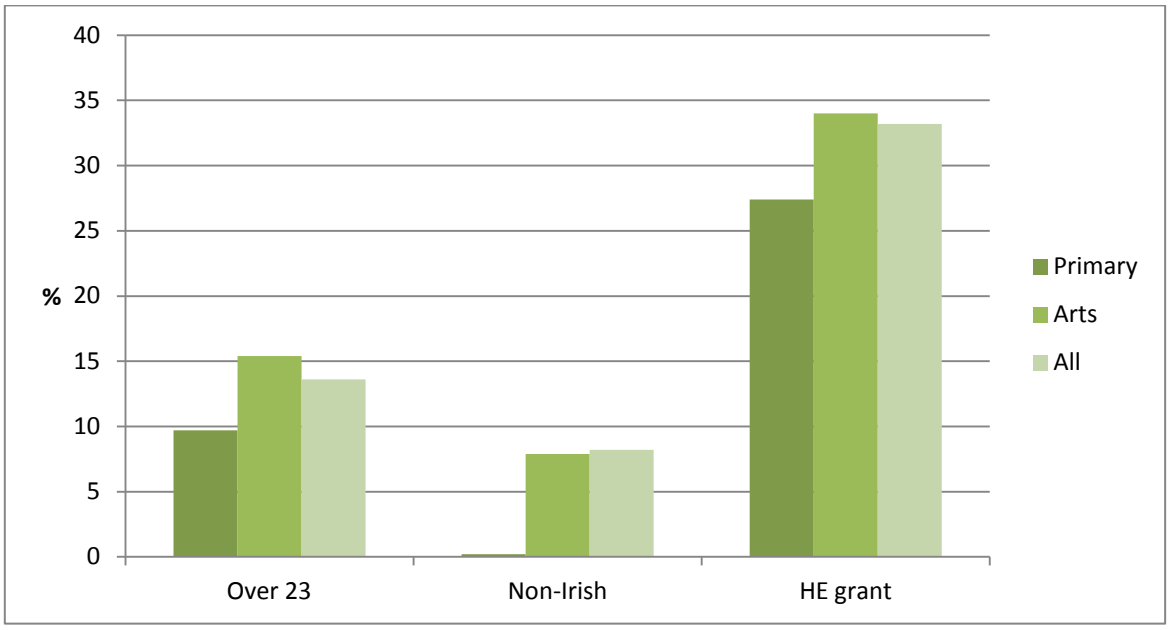
FIGURE 6.12 Profile of CAO Entrants to Primary ITE Compared with Selected Courses, 2013



Source: Central Applications Office data.

The data on entrants collected by the Higher Education Authority include more detailed information on the profile of entrants, including mature status, nationality, being in receipt of a higher education grant and parental socio-economic group (see Figure 6.13). Mature students make up a small proportion (10 per cent) of concurrent primary ITE entrants compared with Arts/Social Science and all higher education entrants (15 per cent and 14 per cent respectively). Only a tiny number of primary ITE entrants are non-Irish, presumably a reflection of the minimum standards set for Irish. This compares with 8 per cent of Arts/Social Science and all entrants. Eligibility for a higher education grant is determined by household income and number of children. Primary ITE entrants are less likely to receive a higher education grant than Arts/Social Science and all entrants (27 per cent compared with 33 per cent and 32 per cent), reflecting a higher income level among their families.

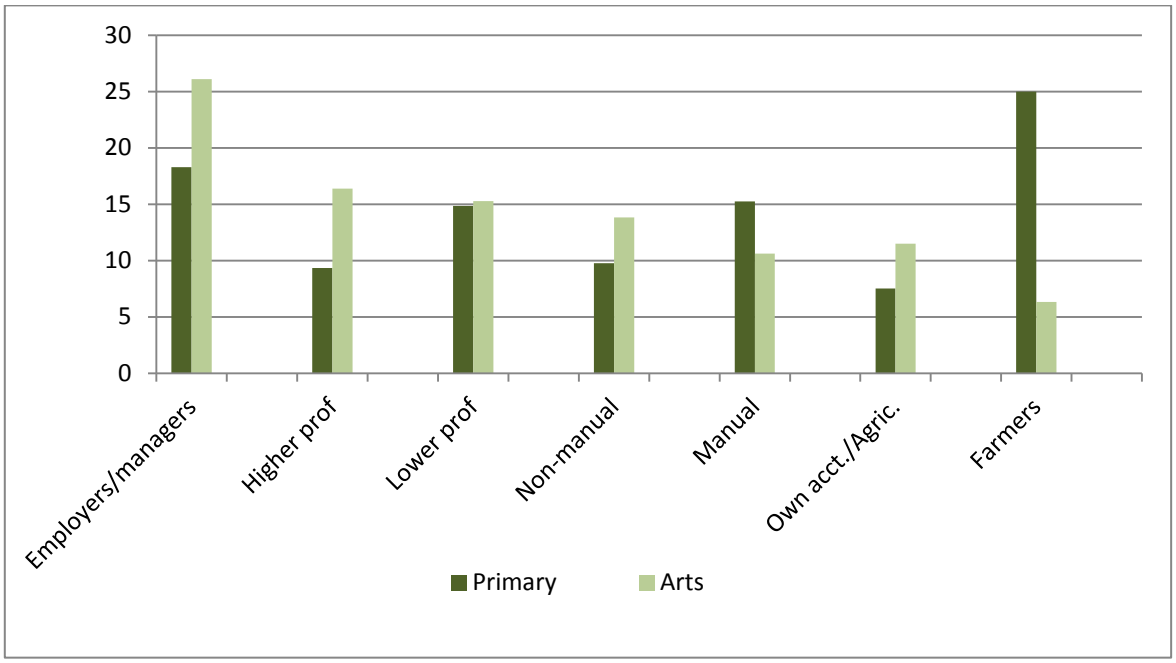
FIGURE 6.13 Profile of Entrants to Primary ITE Compared with Selected Courses, 2011 Entrant Cohort



Source: HEA entrants' data.

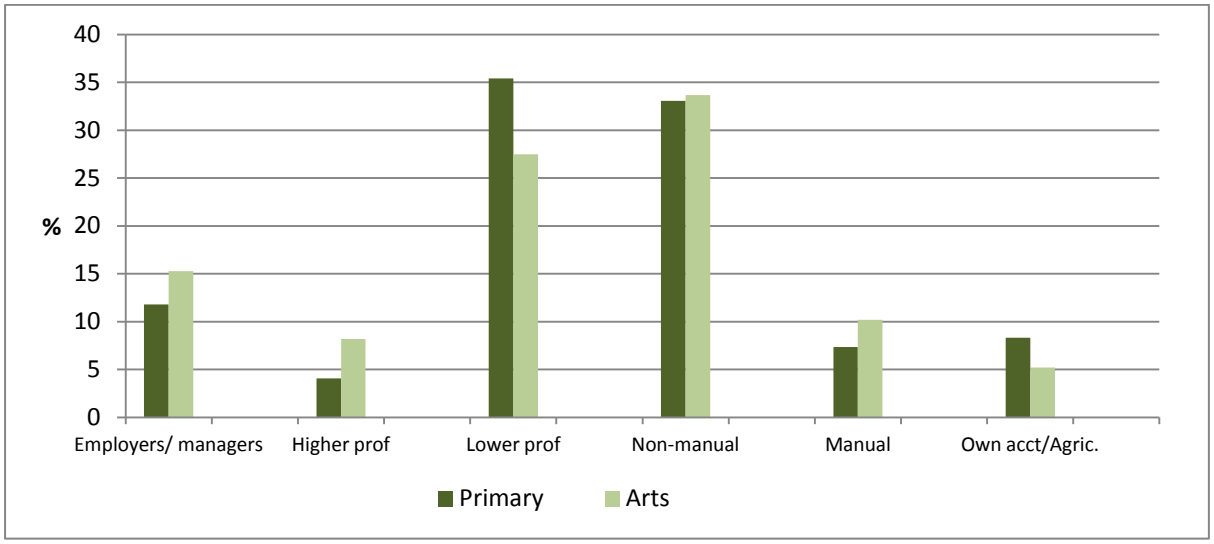
The HEA Entrant Database contains information on the socio-economic group of the entrant's mother and father. However, information is missing on a sizeable proportion of the cohort. Figures 6.14 and 6.15 show socio-economic group for fathers and mothers respectively, recalculating the figures to exclude records with missing information. A significant proportion, a quarter, of primary ITE entrants come from farm families, a much higher proportion than for Arts entrants (6 per cent). ITE entrants are less likely to have fathers who are employers/managers or higher professionals than Arts entrants. They are somewhat more likely to have fathers in a working-class (manual) occupation (15 per cent compared with 11 per cent). In total, three-quarters of primary ITE entrants have fathers in the farm, employer/manager or professional groups. In terms of mother's socio-economic group, the most common pattern is for mothers to have lower professional or other non-manual jobs. Primary ITE entrants are more likely to have mothers with a lower professional job than Arts entrants (35 per cent compared with 27 per cent), perhaps reflecting the pursuit of a teaching career among those whose mothers are themselves teachers. These figures should be interpreted with some caution as parental occupation was not reported by a significant proportion of first year entrants.

FIGURE 6.14 Father's Socio-Economic Group among Entrants to Primary ITE Compared with Arts Courses, 2011 Entrant Cohort



Source: HEA entrants' data.

FIGURE 6.15 Mother's Socio-Economic Group among Entrants to Primary ITE Compared with Arts Courses, 2011 Entrant Cohort



Source: HEA entrants' data.

6.4 CONCLUSIONS

This chapter has looked at the profile of entrants to primary initial teacher education courses and the potential implications of changing entry criteria.

Demand for concurrent primary ITE programmes is high relative to other undergraduate courses, with only health courses having a higher level of demand. As a result, entrants to primary ITE have high grades, with a significant proportion entering with 500 or more Leaving Certificate points. On the basis of concerns about quality and about lack of standardisation in entry criteria across the system, the Teaching Council proposed that the educational requirements for entry to programmes of initial teacher education be raised for Mathematics, English and Irish. Despite the high grade profile of ITE entrants, the proposed changes in entry criteria would mean that only a small minority of those who entered primary ITE in 2013 would be eligible to do so in the future. Fewer than one in six (14 per cent), or approximately 150, of current student teachers would meet these entry criteria and the proportion eligible would vary significantly across higher education institutions. It could be argued that changing the academic criteria in English, Irish and Mathematics would result in a change in behaviour, particularly an increase in take-up of Higher Level Mathematics, among potential applicants; it may also indirectly influence the number of schools which offer Higher Level options in these subjects. While this may be the case, two caveats should be indicated. Firstly, the introduction of bonus points for Higher Level Mathematics, a move which potentially all those aspiring to higher education, did result in a significant increase in take-up but only a minority of students take Higher Level Mathematics even now. Secondly, it would potentially preclude entry for those who decide on teaching as a career after decisions about subject level take-up have been made. A change in criteria would also have implications for the social differentiation in eligibility; with young people from disadvantaged backgrounds and those who attended DEIS schools much less likely to meet the proposed criteria than is the case for the current criteria. A good deal of the discussion about entry criteria has focused on entrants' background in Irish, English and Mathematics. The analyses presented in this chapter indicate that entrants have differential background in the subject areas that form the primary curriculum and that this subject background varies across higher education institutions. In particular, entrants' knowledge of Science centres on Biology with only a very small minority taking Physics or Chemistry. In addition, only a minority of entrants have taken History, Music or Art.

Chapter 7

Post-Primary ITE: Demand for Places and Student Profile

7.1 INTRODUCTION

Chapter 5 has outlined the two routes into post-primary initial teacher education: concurrent qualifications in specific subject areas and a consecutive Professional Master in Education qualification. This chapter considers available information on the demand for places and the resulting student profile. Section 7.2 examines entry to concurrent courses while entry to consecutive courses is explored in Section 7.3.

7.2 DEMAND FOR CONCURRENT POST-PRIMARY ITE COURSES

7.2.1 Demand and Profile of Applicants

Chapter 5 has shown that the bulk of education for post-primary teaching takes place at postgraduate level. However, concurrent courses are available in a range of subject areas, including Science, Physical Education, Home Economics and technological subjects. In addition to proposed changes in entry requirements for primary ITE in Irish, English and Mathematics, Teaching Council proposals also involved a requirement that all entrants to post-primary concurrent programmes would have studied the relevant subject to Leaving Certificate level, with the minimum grade in specific subjects being set by the HEI. This would represent a significant change from the current system whereby HEIs do not always require entrants to have studied their subject to Leaving Certificate level. It should be noted; however, that many institutions currently set subject requirements, for example, requiring a Science subject for entry to a Science education course (see Appendix II for the detailed specifications across courses and institutions). The impact of the proposed changes is explored in Section 7.2.2 below.

Entry to concurrent courses is largely through the CAO points system. Table 7.1 indicates that in 2013, 2.4 per cent of Level 8 course applicants listed a post-primary ITE course as their first preference, a slight decline from 3.5 per cent in 2011. There was also a slight decline in the proportion listing a post-primary course as one of their top ten Level 8 preferences, from 7.5 per cent in 2011 to 5.4 per cent in 2013. These changes are reflected in a slight drop in relative demand, with 3.8 times as many applications as places in 2011 compared to a ratio of 2.95 in 2013. Nevertheless, demand for concurrent post-primary ITE

courses is very high relative to other courses, even higher than for primary concurrent courses and only surpassed by demand for health care courses.

It is interesting to examine whether applicants are interested in becoming teachers of specific subject areas or in a career in 'teaching' broadly defined. Of those who list post-primary ITE as their first preference, 16 per cent list a primary ITE course as one of their top ten Level 8 course preferences. This would suggest a relatively modest overlap between an interest in primary and post-primary teaching.

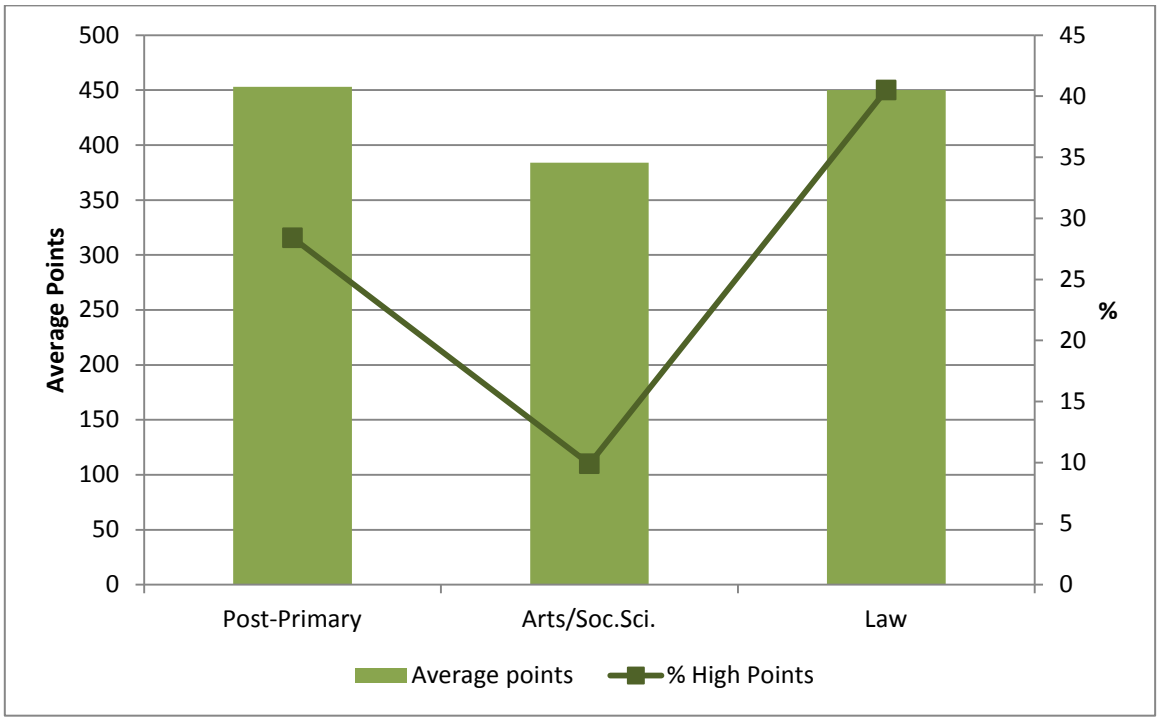
TABLE 7.1 Demand for Concurrent Post-Primary ITE Courses 2011-2013

	2011	2012	2013
% giving first preference	3.5	3.1	2.4
% listing as any of top ten preferences	7.5	6.8	5.4
Demand (ratio of applications to acceptances)	3.82	3.10	2.95

Source: Central Applications Office data.

The high level of demand for concurrent post-primary ITE courses results in a high grade profile among course entrants. Figure 7.1 shows that entrants to post-primary ITE have average 'points' at a similar level to those entering Law and at a Higher Level than those entering Arts/Social Science courses. The proportion entering with high points (that is, 500 or higher) is much greater than among Arts/Social Science entrants but markedly lower than the proportion of high-achieving entrants to Law. Compared to primary ITE entrants (see Chapter 6), post-primary entrants have lower average points and are less likely to fall into the high points category. As for primary ITE, there is significant variation in the profile of entrants to different higher education institutions, with a gap of 87 points between the institution with the highest average points among entrants and that with the lowest points. The proportion of high points entrants similarly varies from 3 to 48 per cent of the cohort.

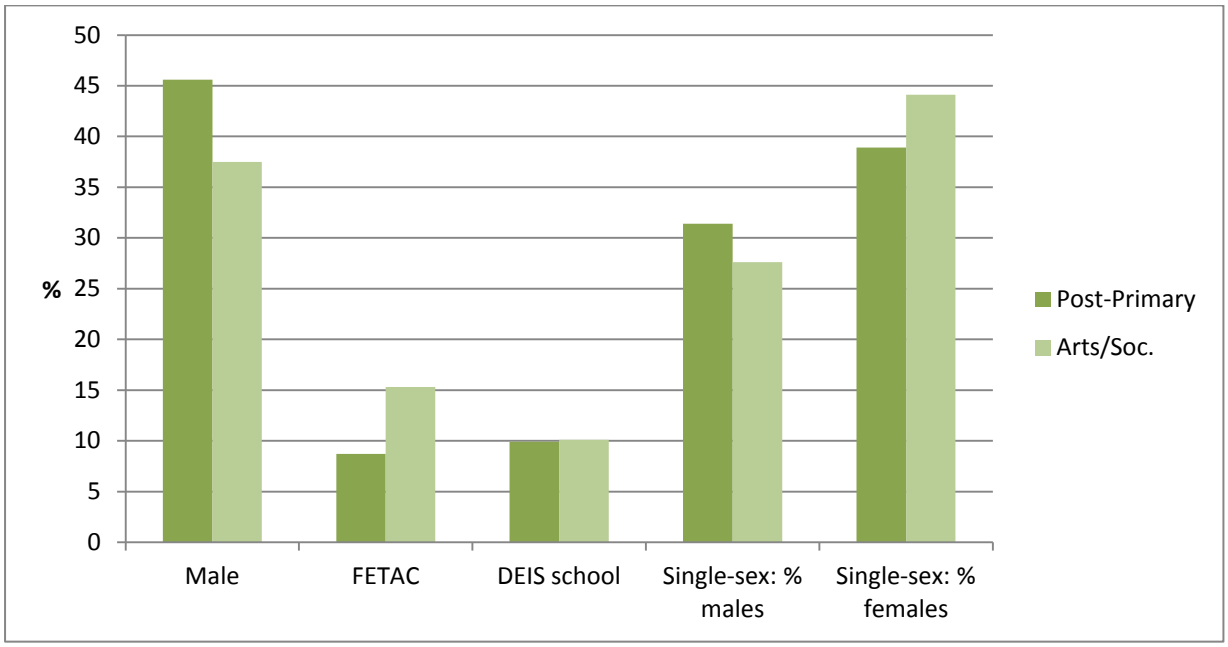
FIGURE 7.1 Grade Profile of Concurrent Post-Primary ITE Entrants Compared with Entrants to Selected CAO Courses, 2013



Source: Central Applications Office data.

Figure 7.2 shows the diversity of profile of entrants to post-primary courses compared to those entering Arts/Social Science courses. Entrants to concurrent post-primary ITE courses are more likely to be male than Arts entrants, most likely reflecting the kinds of subject areas in which concurrent courses are provided. The gender profile of entrants varies very significantly across institutions, with the proportion of males ranging from none to 62 per cent of the cohort. Post-primary ITE entrants are much less likely to enter with a FETAC qualification than Arts/Social Science entrants but are more likely to do so than their primary ITE counterparts. The proportion entering through this alternative route differs markedly across institutions, ranging from 3 to 29 per cent of the intake. In terms of the school attended, about a tenth of post-primary entrants had attended a DEIS school, a higher proportion than for primary entrants and equivalent to the pattern for Arts entrants. However, it is worth noting that these patterns represent an under-representation of those who had attended a DEIS school relative to the population as a whole. Entrants from DEIS schools are under-represented across all higher education institutions providing concurrent post-primary ITE. Chapter 5 showed that males entering primary ITE were disproportionately from the single-sex sector. Analyses for post-primary ITE entrants indicate that single-sex males are only slightly over-represented compared to Arts entrants while those who had attended girls' schools are slightly under-represented relative to Arts students.

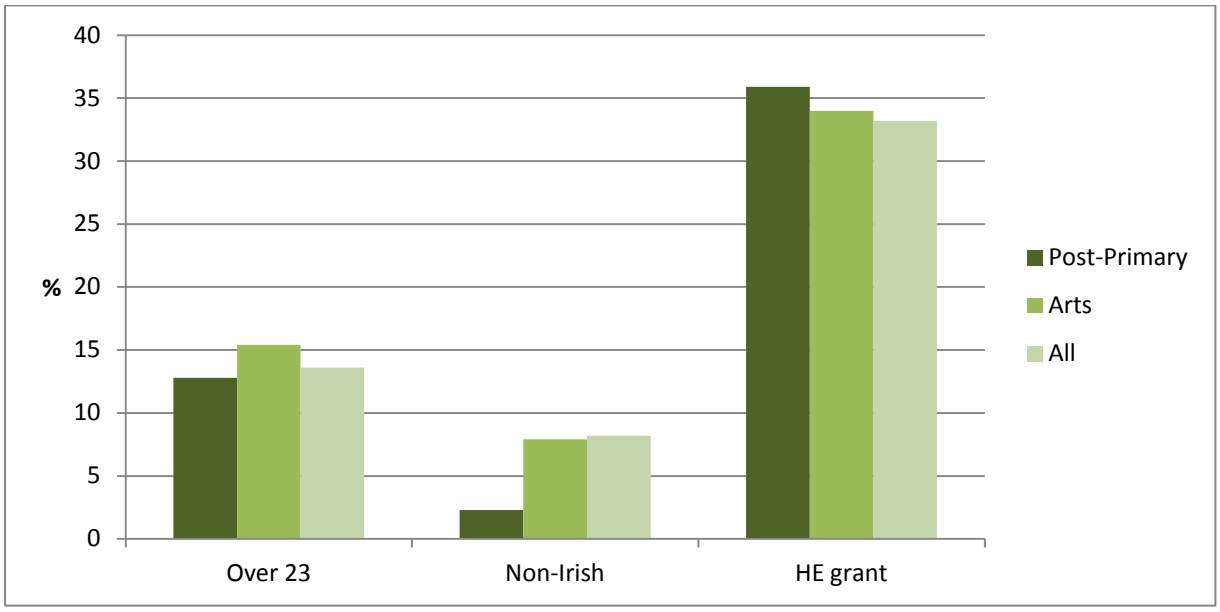
FIGURE 7.2 Profile of Concurrent Post-Primary ITE Entrants Compared with Entrants to Selected CAO Courses, 2013



Source: Central Applications Office data.

HEA entrants' data provide further insights into some aspects of diversity of intake. Mature entrants make up 13 per cent of those embarking on post-primary ITE courses, roughly equivalent to the profile for entrants to all Level 8 courses but somewhat lower than is the case for the Arts intake. Entrants to post-primary ITE are much less likely to be non-Irish than Arts entrants or all Level 8 entrants. Entrants to post-primary ITE are slightly more likely to be in receipt of a student grant than all or Arts entrants, reflecting somewhat lower levels of family income among this group.

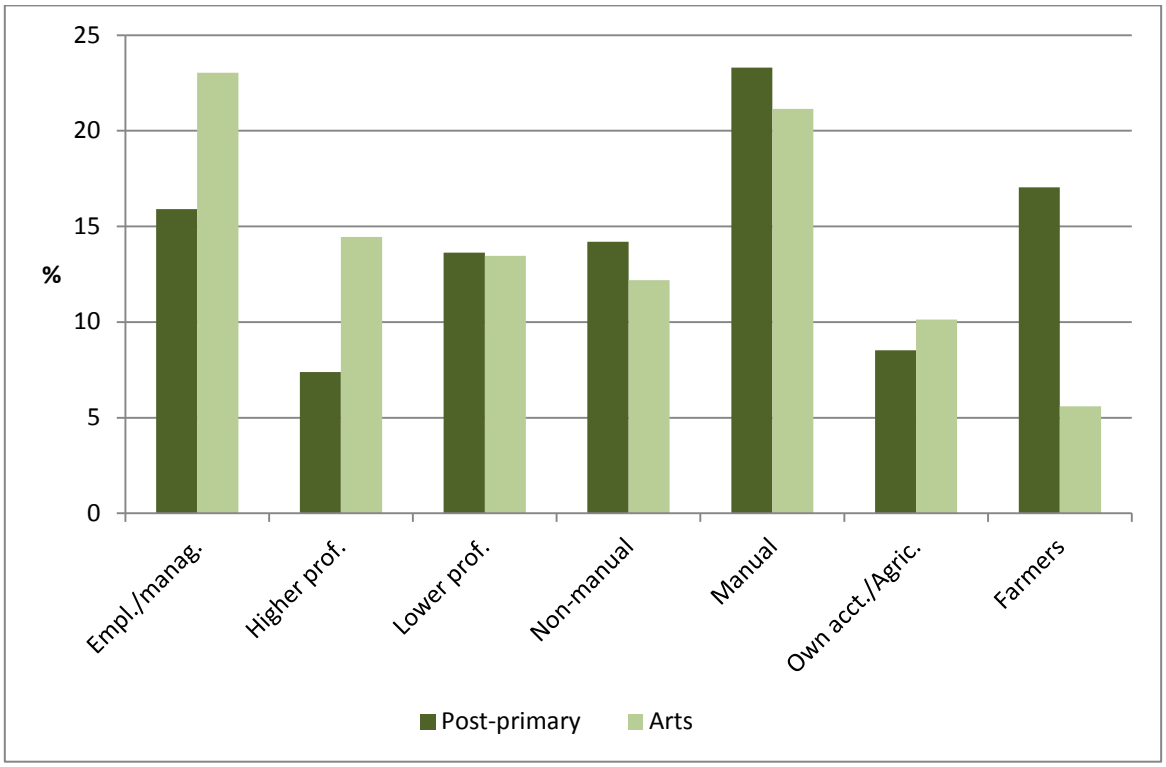
FIGURE 7.3 Profile of Concurrent Post-Primary ITE Entrants Compared with Entrants to Arts and All Entrants, 2013



Source: HEA entrants' data.

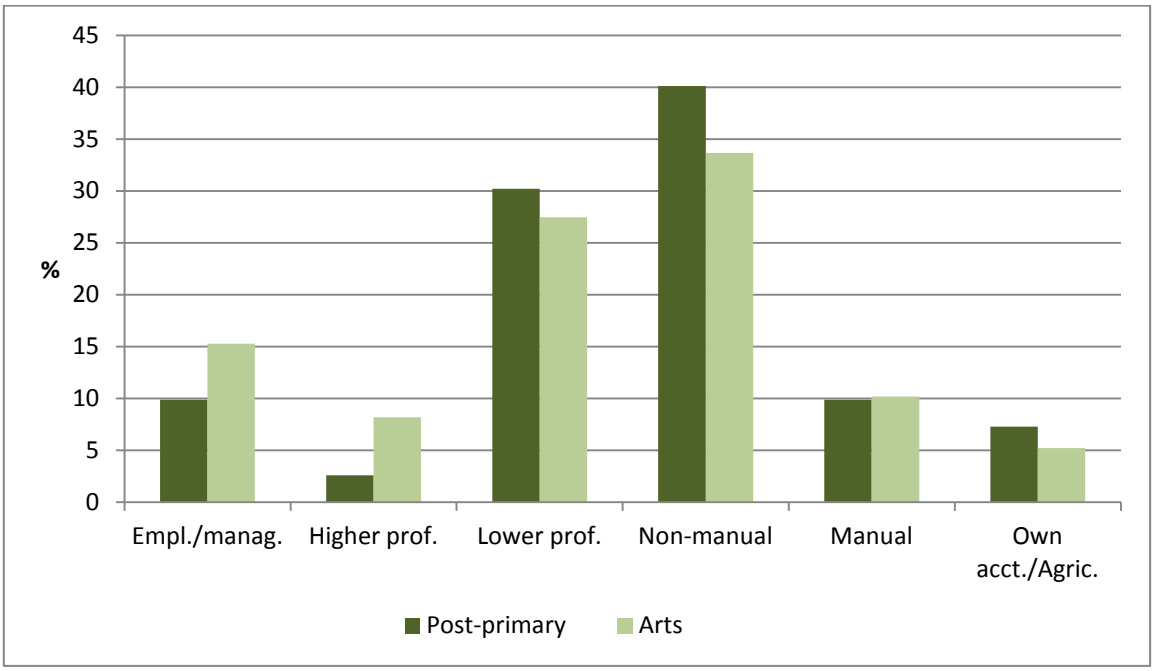
HEA entrants' data indicate that, as with primary ITE, entrants to concurrent post-primary ITE courses are much more likely to come from farm families than Arts entrants (Figure 7.4). Interestingly, post-primary entrants are somewhat more likely to come from manual (working-class) backgrounds than Arts entrants. In total, over half (53 per cent) of post-primary entrants come from professional, managerial or farm families. In terms of mother's socio-economic group, post-primary entrants are somewhat more likely to have mothers in lower professional or non-manual jobs (Figure 7.5). These figures should be interpreted with caution as parental occupation was not reported by a significant proportion of first year entrants.

FIGURE 7.4 Father's Socio-Economic Group among Entrants to Concurrent Post-Primary ITE Compared with Arts Courses, 2011 Entrant Cohort



Source: HEA entrants' data.

FIGURE 7.5 Mother's Socio-Economic Group among Entrants to Concurrent Post-Primary ITE Compared with Arts Courses, 2011 Entrant Cohort



Source: HEA entrants' data.

In summary, demand for post-primary concurrent courses is high relative to other undergraduate degrees and is reflected in a high grade profile among entrants. The profile of entrants would appear to be slightly more diverse than primary entrants in terms of mature entry and entry through the FETAC pathway. However, those from non-Irish backgrounds and those who had attended DEIS schools are under-represented among the intake.

7.2.2 Potential Impact of Changes in the Criteria for Entry to Post-Primary Concurrent Courses

Chapter 6 looked at the potential impact of changing the criteria for entry to primary concurrent teacher education courses. Proposals for changes in entry criteria for post-primary concurrent courses have centred on the idea that candidates should have taken related subjects at Leaving Certificate level, with the level and grade required in those subjects to be determined by the individual educational institution. Because of the variety of post-primary courses, the implications for required subjects will vary significantly across the different courses (see Table 7.2). For the purposes of analysis, courses are grouped here into humanities/arts (which includes Home Economics and Physical Education) and Science/technology.

Table 7.3 looks at the proportion of 2013 Leaving Certificate candidates who would meet the proposed requirements to have taken related subjects at Leaving Certificate level. Because Physical Education is not yet an exam subject, entry requirements for PE courses are determined on the basis of the other subjects taken as part of the degree (e.g. Biology or English). Looking at the humanities and arts grouping, almost all candidates have a related subject for the two courses that combine PE with an arts subject, though the proportion with a Higher Level C grade in one of these subjects is lower, at just over half of male Leaving Certificate leavers and three-quarters of female Leaving Certificate leavers. There are clear gender differences in the proportion of candidates meeting the subject criteria for some courses, principally Home Economics, where women are much more likely to have taken this subject at Leaving Certificate level. A very small proportion of Leaving Certificate candidates have taken Religious Education as an exam subject so if this was to be a requirement, a very small number of the total pool would be eligible for entry. For humanities/arts courses, setting a Higher Level C grade would reduce the pool of potential candidates, and has particular implications for those who have attended DEIS schools.

Turning to Science and technology subjects, the proportion of Leaving Certificate candidates eligible for entry varies by the specific Science subject, with more leavers meeting the Biology requirement than for Chemistry or Physics (Table 7.3). There are also significant gender differences, with females more likely to have taken Biology and males more likely to have taken Physics. The requirement to have two or more Science subjects for entry significantly reduces the potential pool of eligible candidates. The proportion of candidates who meet the criteria for entry to the three technology courses is very low, especially among female candidates. It would appear that very few young people take two or more technological subjects at Leaving Certificate level. As with humanities courses, specifying a Higher Level C grade as an entry requirement reduces the pool of eligible candidates for Science/technology courses, especially for those in DEIS schools.

Table 7.4 shows the proportion of CAO applicants for post-primary concurrent teacher education courses in 2013 who would meet the proposed eligibility requirements regarding subjects and subject levels. The proportion applying to PE courses who had taken related humanities or Science subjects was relatively high, with a high proportion of this group of applicants achieving a C grade at Higher Level in these subjects. The vast majority of those applying for art or music courses have taken these subjects at Leaving Certificate level and achieved a Higher Level C grade. In contrast, a very small proportion of those applying to RE courses would meet the subject requirements, largely because they had not taken RE as an exam subject. Similarly, a small proportion of applicants had taken both Business Studies and Accounting, and thus were eligible for entry to the course that combined these subjects. In term of single-subject Science courses, the vast majority had taken the related subject at Leaving Certificate level, with most achieving a Higher Level C grade. However, the pool of eligible applicants reduces where two or more Science subjects are required. For example, only 39 per cent of applicants to a course combining Chemistry, Physics and Mathematics had taken all of these subjects, with only 16 per cent achieving a Higher Level C grade in these subjects. There are three concurrent technology courses, each combining two subjects. Only a tiny proportion of applicants had taken both the specified subjects, ranging from 0.3 per cent to 6 per cent of applicants, with even smaller numbers having achieved a Higher Level C grade in these subjects.

In summary, specifying that post-primary concurrent teacher education entrants have taken related subjects at Leaving Certificate level would have very different implications for the pool of eligible candidates across different courses. Applicants to courses in humanities areas generally take related subjects already but the pool of Leaving Certificate candidates who would meet the criteria for art

and music is small.[64] The pattern for Religious Education is very different to that for the other humanities subjects as very few applicants have taken it as an exam subject. Applicants generally meet the criteria for single-subject Science courses but much fewer take a combination of Science subjects at Leaving Certificate level and very small numbers take a combination of technological subjects. The proposed criteria would therefore have very different consequences for future eligibility for certain courses, in the absence of a significant change in subject take-up patterns. It is worth noting too that the degree of subject choice open to Leaving Certificate students varies across schools (Smyth et al., 2011a), with subject provision often reflecting the gender and social composition of the student body. Patterns of subject provision may thus act as a constraint on whether particular (groups of) students meet the eligibility criteria.

[64] However, as the number of places on these courses is small, the majority of entrants have studied these subjects to Leaving Certificate level.

TABLE 7.2 Implications of Proposals for Subject Entry Requirements

CAO Course Code	Related Subjects
Humanities/Arts	
AD202	Art
AS001	Home Economics, Biology
AS002	Home Economics, RE (exam)
AS003	Home Economics, Irish
AS004	Home Economics, Economics
CK116	As PE is not yet an exam subject, the specified subjects are taken to be the related Arts subjects: English, Irish, Mathematics, French, History.
LM090	As PE is not yet an exam subject, the specified subjects are taken to be the related Arts subjects: English, Irish, Mathematics, Geography.
MD201	RE (exam), English
MD301	RE (exam), History
MD401	RE (exam), Music
TH002	Bus Studies, Acc
TH003	Bus Studies, RE (exam)
TH004	Irish, RE (exam)
TH005	Irish, Business Studies
TR009	Music
TH002	Bus Studies, Accounting
Science/Technology	
CK402	Biology, Chemistry
CK404	Biology
CK406	Chemistry
CK408	Physics
DC203	Chemistry, Physics, Mathematics
DC205	Biology
GA980	Construction Studies, Design Graphics
GY109	Mathematics
LM092	Biology, Physics or Chemistry
LM094	Materials Technology, Construction Studies, Technical Graphics
LM095	Engineering, Tech Graphics
LM096	Chemistry, Physics
MH212	Two Science subjects
MH213	Mathematics

Source: Calculated from State Examinations Commission Leaving Certificate exam data.

TABLE 7.3 Implications of Proposals for the Proportion of Leaving Certificate Candidates (2013) with the Required Subject(s) and with a Higher Level C Grade in the Required Subject(s), Broken Down By Gender and DEIS Status of the School

Course code	Has Subject(s)				Has C+ in Higher Level			
	Male	Female	DEIS	Non-DEIS	Male	Female	DEIS	Non-DEIS
Humanities/Arts								
AD202	14.4	26.1	28.2	18.5	6.3	17.1	9.8	12.1
AS001	2.7	30.0	16.5	16.1	0.6	12.2	4.0	6.9
AS002	0.1	0.7	0.6	0.4	0.0	0.3	0.2	0.2
AS003	3.8	37.5	23.0	19.9	0.3	11.2	2.9	6.3
AS004	0.2	1.2	0.5	0.8	0.1	0.6	0.1	0.4
CK116	99.7	99.8	99.5	99.8	51.7	74.6	32.6	73.4
LM090	99.7	99.8	99.5	99.8	58.0	68.0	36.6	68.5
MD201	2.3	2.5	1.7	2.5	1.3	1.5	0.6	1.5
MD301	0.9	0.7	0.6	0.8	0.6	0.5	0.2	0.6
MD401	0.3	0.5	0.2	0.4	0.2	0.4	0.2	0.3
TH002	4.0	3.3	3.9	3.6	1.7	1.5	0.6	1.8
TH003	0.7	0.5	0.4	0.6	0.4	0.3	0.2	0.3
TH004	1.9	2.1	1.2	2.2	0.4	0.9	0.2	0.7
TH005	26.0	29.0	27.7	27.5	5.2	9.1	3.4	7.9
TR009	7.7	16.5	8.9	12.7	6.6	14.6	5.9	11.5
Science/Technology								
CK402	8.4	13.5	6.6	11.8	4.9	8.3	2.5	7.4
CK404	48.9	73.0	51.6	62.7	23.4	39.0	15.5	34.4
CK406	14.9	16.6	10.2	16.9	8.6	10.2	3.6	10.6
CK408	19.7	6.3	9.3	13.9	10.4	3.9	3.0	8.1
DC203	6.1	2.7	3.3	4.7	3.6	1.7	0.9	3.0
DC205	48.9	73.0	51.6	62.7	23.4	39.0	15.5	34.4
GA980	8.3	0.2	7.7	3.6	3.9	0.1	2.4	2.0
GY109	98.4	98.1	97.1	98.5	20.0	16.6	6.6	20.8
LM092	11.8	15.1	8.3	14.5	6.5	9.2	2.9	8.9
LM094	8.3	0.2	7.7	3.6	3.9	0.1	2.4	2.0
LM095	5.6	0.1	6.3	2.2	2.3	0.1	2.0	1.0
LM096	6.1	2.8	3.3	4.7	4.1	2.0	1.5	3.3
MH212	15.8	16.3	9.9	17.3	9.2	10.1	3.7	10.9
MH213	98.4	98.1	97.1	98.5	20.0	16.6	6.6	20.8

Source: Calculated from State Examinations Commission Leaving Certificate exam data.

TABLE 7.4 Implications of Proposals for the Proportion of CAO Applicants to the Course with the Required Subject(s) and with a Higher Level C Grade in the Required Subject(s)

Course code	Has subject(s)	Has C+ in Higher Level
Humanities/Arts		
AD202	97.6	87.3
AS001	87.9	68.7
AS002	3.0	0.0
AS003	94.0	82.0
AS004	6.9	4.9
CK116	96.0	81.5
LM090	97.7	83.8
MD201	9.7	0.0
MD301	10.0	0.0
MD401	10.0	0.0
TH002	17.2	8.6
TH003	3.0	0.0
TH004	11.7	0.0
TH005	64.3	46.5
TR009	90.2	88.2
Science/Technology		
CK402	62.6	49.1
CK404	88.0	69.4
CK406	90.5	70.3
CK408	88.3	77.7
DC203	39.4	16.2
DC205	92.8	70.0
GA980	5.9	1.0
GY109	98.7	66.4
LM092	50.0	35.7
LM094	1.8	1.1
LM095	0.3	0.3
LM096	38.0	27.0
MH212	57.7	41.1
MH213	100.0	76.2

Source: Calculated from State Examinations Commission Leaving Certificate exam data.

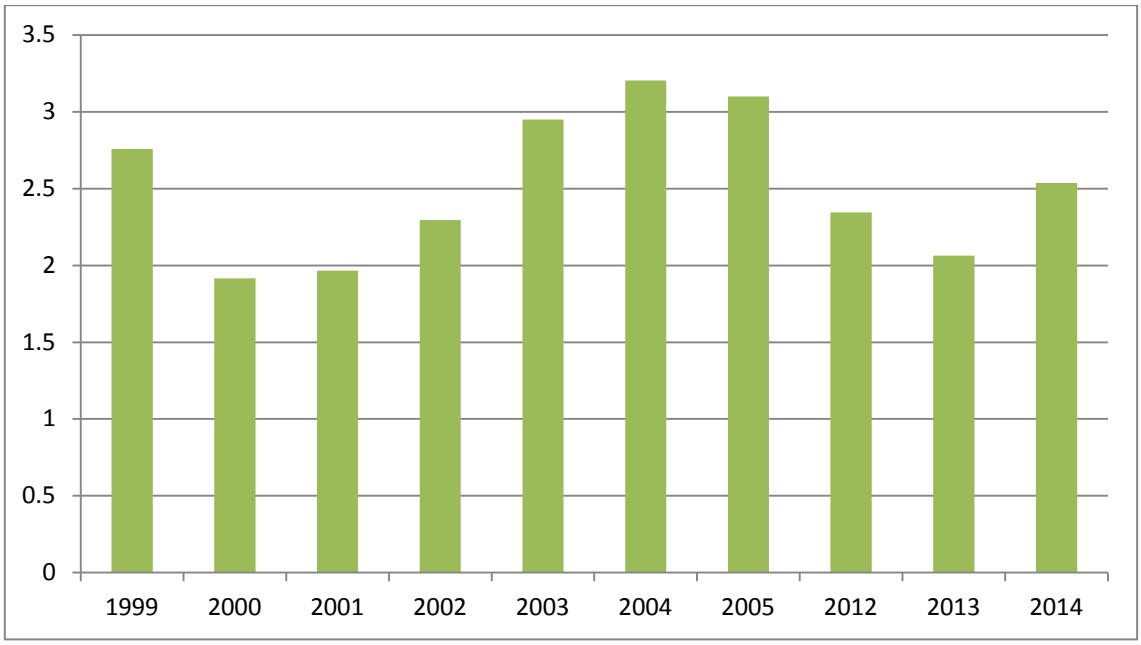
7.3 DEMAND FOR CONSECUTIVE POST-PRIMARY ITE COURSES

The entry process for consecutive post-primary ITE courses is quite distinct from the process for concurrent courses (see Chapter 5). Applications to some higher education institutions are centralised through the Postgraduate Applications Centre (PAC) but other institutions manage their own entry process. The nature of the process means that we cannot determine whether some people apply to both PAC and non-PAC courses or whether those who turn down PAC offers accept places in other institutions or do not access an ITE course at all. In this section, analyses draw mainly on PAC information because more detailed information is collected on the profile of applicants and entrants. These data are

supplemented by information from individual higher education institutions on the numbers of applicants and entrants.

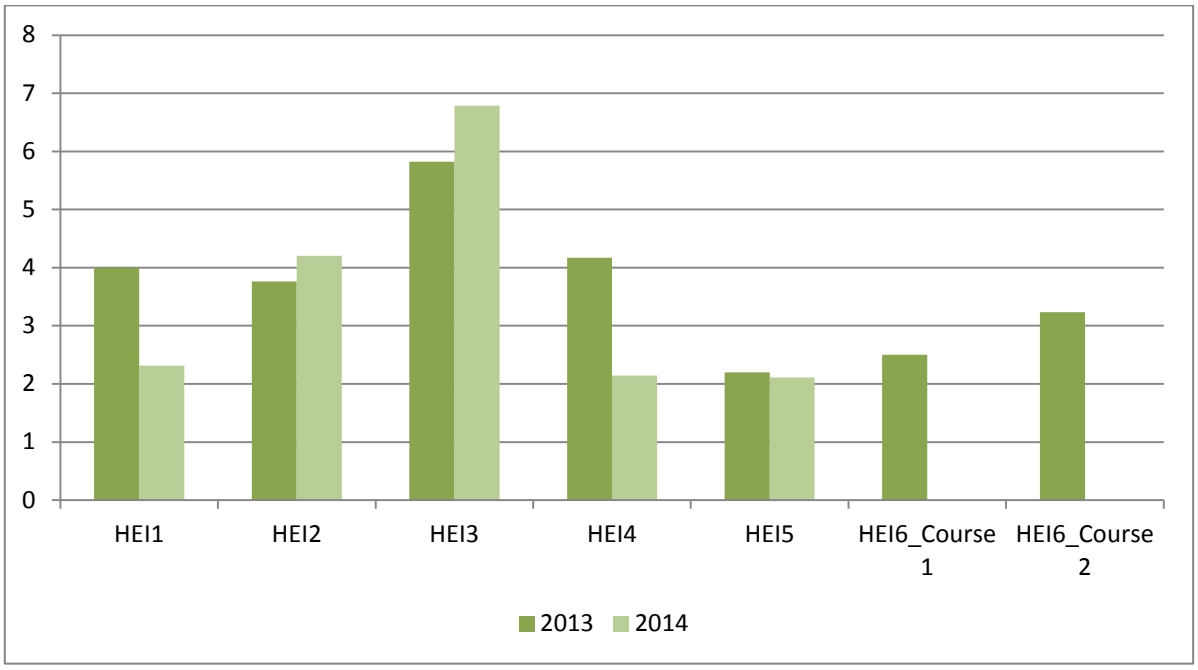
Figure 7.6 shows the demand for places in consecutive post-primary courses in the NUI colleges participating in the PAC applications process. There has been some fluctuation over time but demand remains relatively high at between two and three times as many applicants as places. This level of demand is comparable with that for concurrent courses at primary and post-primary level. There is a suggestion of a slight fall-off in demand between the mid-2000s and the most recent period. Data from individual non-PAC institutions also indicate a high level of demand for consecutive ITE courses (Figure 7.7). There is evidence of substantial variation between institutions, and between courses within institutions, in the level of demand for places. There is no consistent evidence of change in non-PAC institutions between 2013 and the introduction of the two-year PME in 2014. Two of the five institutions for which data are available on the two time-points show a reduction in relative demand; one institution shows a marked increase in relative demand while another shows a slight increase.

FIGURE 7.6 Demand for Places in Consecutive Post-Primary ITE Courses, NUI Colleges in the PAC system, 1999 to 2014 (Ratio of Applicants to Places)



Source: Data for 1999 to 2005 are derived from Heinz (2008); data for 2012 to 2014 are derived from the PAC database.

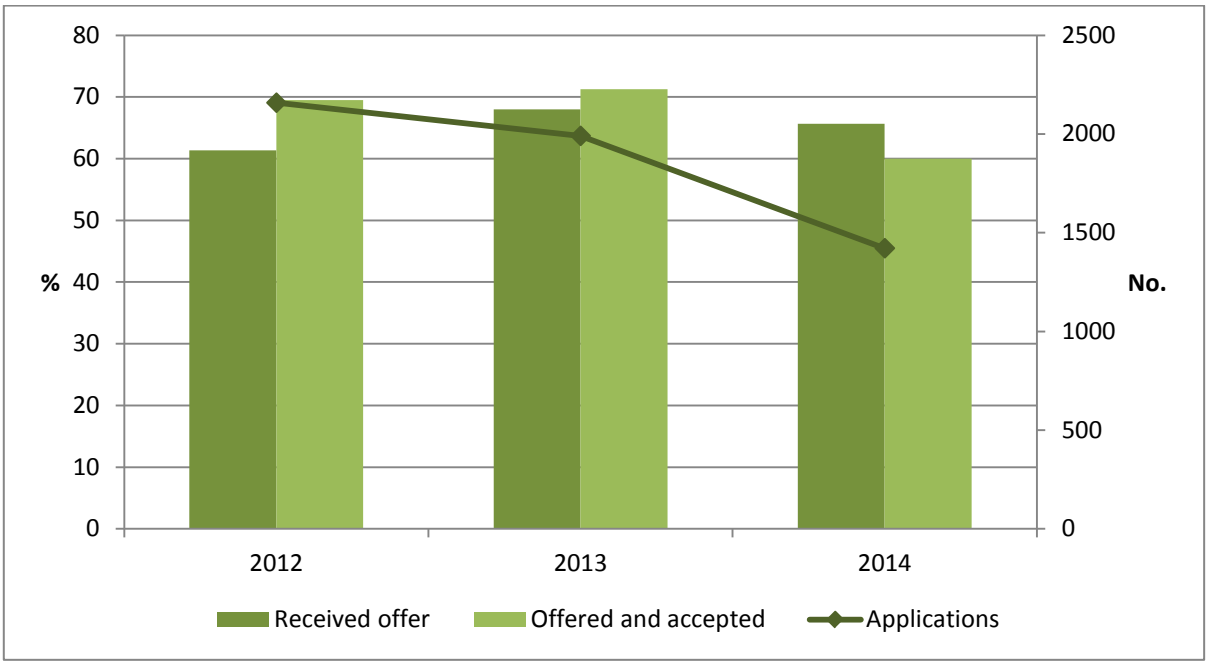
FIGURE 7.7 Demand for Places in Consecutive Post-Primary ITE Courses, non-PAC institutions, 2013 and 2014



Source: Individual higher education institutions.

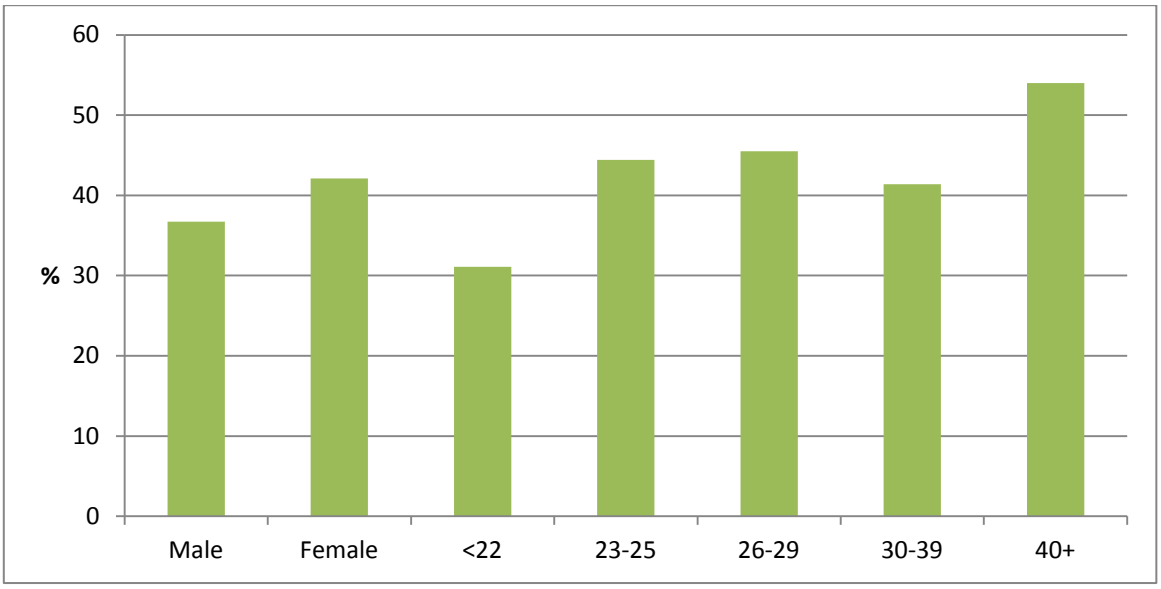
Figure 7.8 shows the number of applications, offers and acceptances through the PAC system over the period 2012 to 2014. The total number of applications declined over the three-year period, with the sharpest decline occurring between 2013 and 2014, coterminous with the introduction of the two-year PME. The proportion of applicants who received offers has fluctuated over time, comprising 61-68 per cent of applicants. Of those who were offered a place, the majority (60-71 per cent) accepted that place but the proportion who did not accept the place is noticeably higher in 2014 than in the two previous years. In 2014, female candidates were somewhat less likely to accept a place than male applicants. The main differentiating factor in course non-acceptance is age, with older applicants much less likely to accept the place offered than their younger counterparts (Figure 7.9). As noted above, it is not possible to discern whether these candidates accepted a place in another higher education institution.

FIGURE 7.8 PAC Applications, Offers and Acceptances, 2012-2014



Source: PAC database.

FIGURE 7.9 Profile of Those Not Accepting the Place, PAC 2014

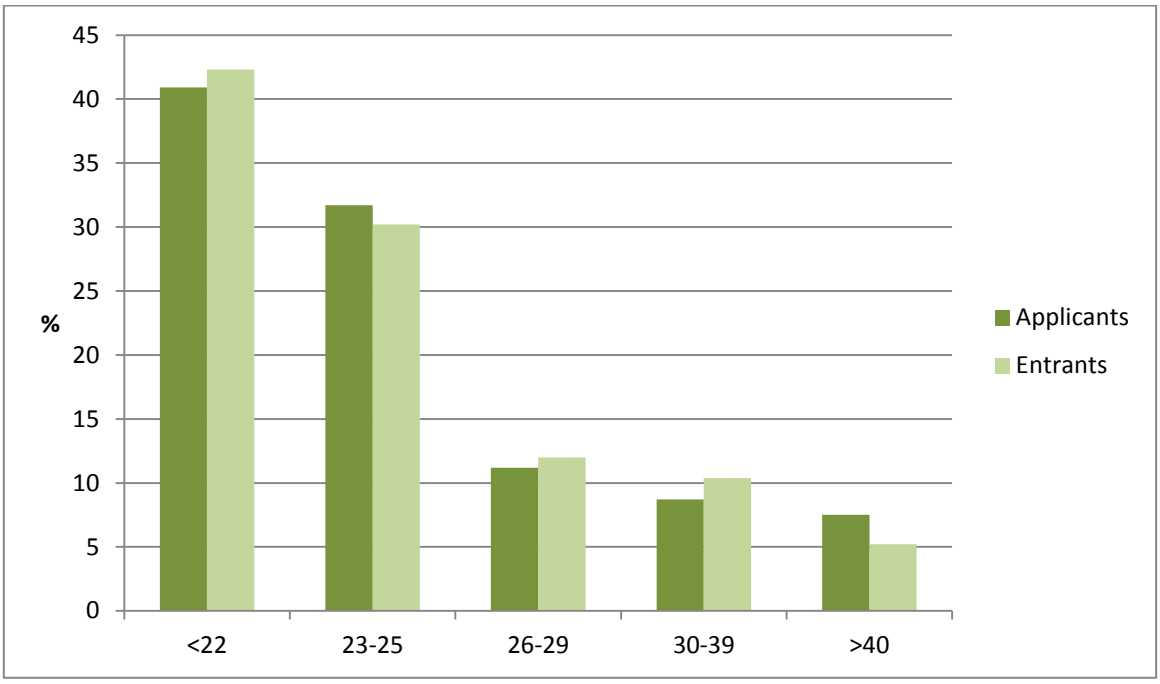


Source: PAC database.

In 2014, males made up 39 per cent of applicants for PAC courses and 42 per cent of those who were offered and accepted places were male. The bulk of applicants are 22 years or younger, suggesting that graduates from primary degrees embark on a postgraduate teaching qualification more or less immediately. A further group, almost a third, are aged between 23 and 25 years of age. Only a small

proportion of applicants, one in six, are aged 30 years or over. The age distribution of entrants is roughly similar to that for applicants, though those aged over 40 years of age are somewhat under-represented as entrants relative to their application rates (see Figure 7.10).

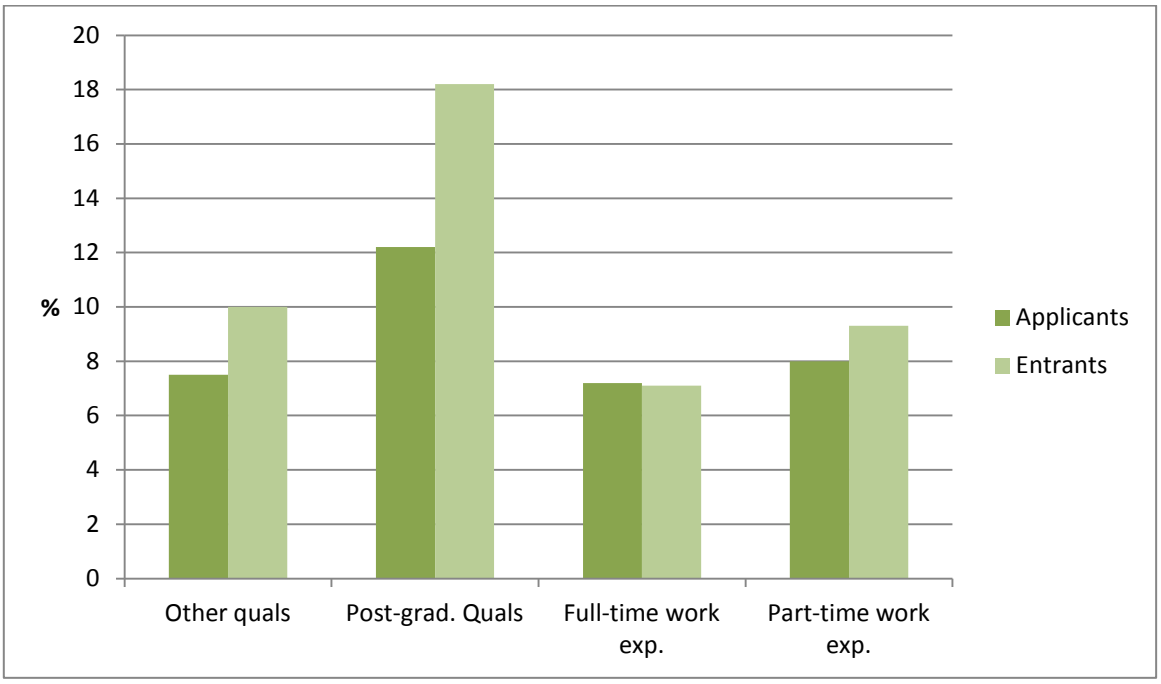
FIGURE 7.10 Profile of Those Not Accepting the Place, PAC 2014



Source: PAC database.

The PAC system utilises a 'points' system, with the greatest number of points allocated on the basis of primary degree results. There is an average of a three point differential in degree-based points between applicants and successful entrants to PAC courses. Figure 7.11 indicates the extent to which applicants rely on other criteria to secure entry. Comparing applicant and entrant characteristics, it is evident that having other qualifications, particularly postgraduate degrees, is an advantage in accessing post-primary ITE courses. Eight per cent of applicants, and a tenth of entrants, have qualifications other than a primary degree. A further 12 per cent of applicants, and 18 per cent of entrants, have a postgraduate qualification. Only a small proportion of applicants rely on relevant work experience, full-time or part-time, in their application.

FIGURE 7.11 'Points' for Criteria Other than Primary Degree, PAC 2014



Source: PAC database.

7.4 CONCLUSIONS

In 2011, the Teaching Council adopted *Initial Teacher Education: Criteria and Guidelines for Programme Providers* which proposed that the educational requirements for entry to programmes of initial teacher education be amended. For post-primary teachers pursuing consecutive (postgraduate) courses, the requirements included the need for the students in their undergraduate degree to satisfy general and subject specific criteria set by the Teaching Council; while for concurrent (undergraduate) courses, criteria included a minimum Leaving Certificate level, or equivalent, in one or more subject(s) being studied for teacher education purposes; exact criteria to be set by the HEIs. Analyses indicate that introducing new subject criteria for concurrent courses would impact on courses to varying degrees. In particular, without significant change in subject take-up, which may itself be limited by patterns of subject provision at school level, the pool of applicants for some courses, particularly those requiring two or more Science or technology subjects, would be significantly reduced.

This chapter has explored the level of demand for post-primary ITE courses. As with primary ITE, there is a very high level of demand for places at both concurrent and consecutive levels. As a result, entrants have very high achievement levels, with good grades at Leaving Certificate and/or degree level. Entrants to post-primary ITE are disproportionately female, but are more mixed

in gender profile than primary ITE entrants. The student intake tends to be young, mostly entering immediately after school or higher education. There is tentative evidence that post-primary concurrent entrants are more diverse in profile than primary ITE entrants, in terms of characteristics such as receipt of a higher education grant, entry through the FETAC route and parental socio-economic group. However, they are not representative of the wider population in terms of nationality or having attended a DEIS school. Unfortunately, information on the socio-economic background of consecutive post-primary ITE entrants is not routinely collected but given the requirement to possess a Level 8 degree, the profile is likely to be strongly influenced by the overall social composition of higher education entrants and graduates.

Chapter 8

Conclusions and Policy Implications

8.1 INTRODUCTION

In Ireland, the teaching profession continues to be a popular career choice among young people. High demand for places in teacher education programmes results in strong competition for places across higher education institutions that provide concurrent and/or consecutive courses. Unlike many other countries in Europe and further afield, the teaching profession in Ireland has not lost its attraction despite the cuts in funding in the education sector, reduction in pay and conditions introduced during the economic downturn, and the shortage of permanent positions available.

Countries experiencing high demand for initial teacher education tend to be much more selective about those who are accepted to ITE programmes. For example, Finland, one of the highest-performing countries in terms of international standardised test scores, utilises a rigorous selection process. Because of the high prestige and professionalisation of the teaching profession, along with considerable teacher autonomy, ITE applicants in Finland are drawn from among the top performers.[65] On the other hand, countries experiencing a shortage of ITE applicants tend to rely on general tertiary academic entry criteria, sometimes also introducing alternative pathways into teacher education. In these latter cases, the focus seems to be on the content and quality of initial teacher education in providing the necessary skills for new teachers. Overall, only a minority of countries utilise specific entry criteria into teacher education, with interviews the most frequently used approach (in addition to minimum academic requirements). While the perceived usefulness of interviews varies, some studies consider it a good indicator in addition to academic grade point average. In general, where entry screening is used, higher education institutions tend to have autonomy in the approaches taken. While some screening is commonly used in entry into initial teacher education in order to identify 'the best' applicants, it remains unclear exactly what the applicants are being screened for. In a context where teacher quality significantly influences student outcomes, it is worth exploring the qualities and dispositions that make a good teacher.

[65] It is worth noting, however, that Finland also experiences teacher shortages in some areas, as seen in Chapter 3.

8.2 WHAT MAKES A GOOD TEACHER?

International research has highlighted teacher quality as the most important within-school aspect explaining student performance (Daly et al., 1999). This has given rise to a wealth of research studies exploring what makes a good teacher. Although there is no ultimate consensus in this matter, it is generally understood that a quality teacher has an in-depth knowledge of the content that he/she is teaching allied with the pedagogical knowledge and skills needed for effective classroom management. In addition, a good teacher is expected to have high efficacy, recognising their capacity to foster student achievement and development. The recent focus on disposition draws heavily from research on the characteristics of effective teachers (Good and Brophy, 1997; Leithwood, 1990). Over time, attention has shifted away from emphasizing content and pedagogical knowledge as the most important skills for teachers toward acknowledging the importance of inter- and intra-personal knowledge and skills as well as the dispositions of effective teachers (Collinson, 1996). Dispositions can be defined as:

> *The values, commitments, and professional ethics that influence behaviours toward students, families, colleagues, and communities and affect student learning, motivation and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment (The National Council for Accreditation in Teacher Education (NCATE) Online Glossary).*[66]

Usher et al. (2003) identify the following dispositions as characteristic of effective teachers: empathy, a positive view of others, a positive view of self, authenticity, meaningful purpose and vision. The disposition to teach is commonly identified as the primary quality of successful educators (Taylor and Wasicsko, 2000). In some American HEIs, teacher education programmes have been revised to focus on developing the key dispositional skills of quality teachers, namely, teaching efficacy and caring (Tobias et al., 2008). It can be argued that a 'good teacher' embodies content and pedagogical knowledge as well as positive dispositions towards teaching and students. To summarise, content knowledge, pedagogical knowledge, pedagogical communication and interpersonal skills, and attitudes and motivation to teach are seen as important attributes and qualities in a good/effective teacher (Stronge, 2002; Hattie, 2008; McKinsey, 2007; Slater, 2013).

[66] www.ncate.org/search/glossary.htm.

8.3 RELEVANCE OF ENTRY AND EXIT SKILLS

In order to select suitable candidates for initial teacher education, most countries utilise some kind of screening mechanism, as mentioned above. Admission to ITE seems to be governed more by general entrance requirements for tertiary education than by more specific selection criteria for teacher education and only a third of all European countries have specific selection methods for admission to ITE in place (Eurydice, 2013). Existing research on the use of specific entry criteria has produced mixed results. For example, grade point average has been found to have a weak relationship with the future performance of teachers (Olstad et al., 1987; Donaldson, 2010), whereas written profiles and entry portfolios have been found useful in detecting the skills and qualities the evaluators are looking for (Kosnik et al., 2005; George et al., 2005). Standardised admission tests have been considered to have little usefulness as predictors of future teaching ability and student outcomes (Basom et al., 1994; Casey and Childs, 2007). Views are mixed regarding the use of written examinations and/or aptitude tests and interviews, the latter being one of the most commonly used formats (Dobson and Skuja, 2005). While some authors argue that an interview is a better predictor than academic criteria (Shechtman, 1992), and provides an opportunity to gather information about an applicant's language proficiency, attitudes, and interpersonal skills (Denner et al., 2001), others feel that it is of limited value considering the cost and subjectivity involved (Denner, et al., 2001; Caskey et al., 2001). Teacher education institutions often utilise a combination of approaches. Reviewing the evidence, it is difficult to establish 'the best' approach in identifying the required characteristics in an applicant. Such research studies rarely distinguish between the criteria needed to select students who will be able to engage with the ITE programme and the criteria needed to become a good teacher on leaving the programme. It can be argued that ITE programmes should provide teacher candidates with relevant knowledge and skills to become a good teacher rather than relying on students having such skills on entry to the programme.

It is difficult to establish a direct link between screening at entry to ITE and good educational outcomes among students of that teacher, disentangling this from all other factors that may potentially impact on a student's achievement. Studies have shown that in general, personal teaching efficacy and confidence in their own skills increases during the teacher preparation programme and with teaching experience (Hoy and Woolfolk, 1993; Wenner, 2001). Some studies, mostly from the US, have demonstrated the ability of admission criteria to predict the overall success of pre-service teachers in the ITE programme and their subsequent teaching performance (Caskey, et al., 2001; Riggs 1991 and others). However,

other studies have found no such link between entry characteristics and subsequent performance. Furthermore, entry standards to teacher education programmes in the US are quite variable and we do not know whether variation in background characteristics makes a difference in countries, such as Finland and Ireland, where entrants tend to have high levels of prior achievement. In addition, we do not know how the students who were not selected (often selected based on academic qualifications only) would have performed in ITE courses and as teachers. The information gathered for this study from two consultation sessions with key stakeholders indicated that the participants were in favour of colleges having autonomy in selecting their students as they 'don't want a generic teacher' and that the selection process 'can't be streamlined too much'. It was felt by some that while criteria (such as minimum academic requirements and literacy) could be set centrally, the suitability to be accepted on a teacher education course should be decided at college level. Some key stakeholders noted that there is very little information available on what principals are looking for, or what they are expecting from graduates, a potential area for further research. It was felt by some that high content knowledge does not automatically make one a good teacher, indicating the importance of teacher education programmes. Several participants highlighted the importance of the right dispositions towards teaching and children, qualities that can be explored during an interview process.

While screening may be useful for identifying suitable candidates for ITE courses, it is equally important to consider the adequacy of initial teacher education programmes in equipping future teachers with sufficient skills and knowledge to function effectively in today's diverse classroom environments. The quality of new teachers can be seen as reflecting the skills and competences they possess entering initial teacher education and the skills and qualities they cultivate during that programme of study. In practice, the nature and content of teacher education will be, at least in part, responsive to (changes in) the profile of course entrants, making it difficult to disentangle what is required to engage with the course from what is ultimately required to make a good teacher.

8.4 IMPLICATIONS OF THE PROPOSED CHANGES TO ENTRY CRITERIA

Initial teacher education in Ireland is currently undergoing significant change. In recent years the duration of teacher education courses has been extended, with the roll-out of four-year primary concurrent degrees followed by the introduction of the two-year Professional Master of Education. In 2012 a proposal was made by the Department of Education and Skills to undertake a review of the structure of initial teacher education (ITE) provision in Ireland (Hyland, 2012). The proposal was followed by an extensive consultation process, covering various areas in

initial teacher education, and suggested the formal integration of a number of ITE providers.

Falling student attainment in PISA results between 2000 and 2009 placed a spotlight on the teaching of literacy and numeracy in Irish schools. A strategy document on literacy highlighted the need to improve the professional practice of teachers through changes in both pre-service and in-service education.[67] In addition, a consultation process was initiated by the Teaching Council on the impact of raising minimum entry criteria in ITE. Four sets of proposals were offered in the subsequent consultation document:

(i) an increase in entry standards in Leaving Certificate Irish, English and Mathematics for entrants to primary ITE;

(ii) the requirement to have taken the relevant Leaving Certificate subject(s) for entry to post-primary concurrent (postgraduate) courses;

(ii) a literacy and numeracy test for mature entrants; and

(iv) the need to put a system in place to assess the language fluency of Gaeltacht entrants. The proposed requirements for primary teaching included a Higher Level C grade (or Ordinary Level A) in Mathematics, a Higher Level B in Irish, and a Higher Level B in English at Leaving Certificate level. For post-primary teacher education the requirements at postgraduate level include general and subject specific criteria in the undergraduate degree, set out by the Teaching Council. For concurrent courses in post-primary teaching, criteria include a minimum Leaving Certificate level, or equivalent, in one or more subject(s) being studied for teacher education purposes, to be set by the HEIs (Teaching Council, 2012).

This report has looked at the profile of entrants to primary and post-primary initial teacher education courses in Ireland and the potential implications of changing current academic entry criteria. The results of the study have demonstrated that in Ireland demand for primary ITE is high relative to other undergraduate courses, with entrants needing high grades in order to be accepted. There appears to be a trade-off between the high grades required of entrants and the diversity of their profile. Those entering primary concurrent ITE are disproportionately female and under-represent those from disadvantaged and non-Irish backgrounds. Despite the selective profile of entrants, the proposed changes in entry criteria would mean that only a small minority of those entering primary ITE would be eligible to do so in the future. The reduction in the potential size of the pool of Leaving Certificate leavers eligible to enter primary ITE is

[67] www.education.ie/admin/servlet/blobservlet/lit_num_strat.pdf.

largely driven by the Mathematics requirement, although the reduction in the size of the potential pool varies according to the exact grades specified in Mathematics, English and Irish. While some behavioural response to changed criteria might be envisaged, such a response would be limited to those who have decided on pursuing teaching as a career *before* making decisions about subject levels. The proposed changes in raising academic requirements in English, Irish and Mathematics would also have implications for social differentiation in eligibility, with young people from disadvantaged backgrounds and those who attended DEIS schools much less likely to meet the proposed criteria than is the case for the current criteria.

As with primary ITE, there is a very high level of demand for places at both concurrent and consecutive post-primary levels. As a result, entrants have very high achievement levels, with good grades at Leaving Certificate and/or degree level. Entrants to post-primary ITE are disproportionately female, but are more mixed in gender profile than primary ITE entrants. The student intake tends to be young, mostly entering immediately after school or higher education. There is tentative evidence that post-primary concurrent entrants are more diverse in profile than primary ITE entrants, in terms of characteristics such as receipt of a higher education grant, entry through the FETAC route and parental socio-economic group. However, they are not representative of the wider population in terms of nationality or having attended a DEIS school. Unfortunately, information on the socio-economic background of consecutive post-primary ITE entrants is not routinely collected but given the requirement to possess a Level 8 degree, the profile is likely to be strongly influenced by the overall social composition of higher education entrants and graduates. Analyses indicated that changing the subject requirements for entry to concurrent post-primary courses would have very different implications across subject areas. Many entrants to humanities and single-subject Science courses already meet the proposed criteria for entry. However, it is unclear whether candidates would be required to have taken Religious Education as an exam subject, which would considerably reduce the pool of potential candidates. Furthermore, the requirement to have two or more Science or technology subjects for certain courses would greatly reduce those eligible to apply. As with the proposed criteria for primary education entry, subject take-up will potentially change in response. However, there are some limitations on such behavioural change due to the patterns of subject provision across different types of schools as well as the way in which schools 'package' subject options for students.

At present, entrants to primary teacher education are required to have a minimum grade in Leaving Certificate Irish. Some stakeholders in this study

expressed their concern about the level of Irish language fluency of newly qualified teachers, especially for those who will go on to work in Irish-medium schools. However, there was a diversity of opinion regarding a potential solution, with some stakeholders advocating changes in entry standards (e.g. by requiring applicants to take an oral and/or written exam in Irish) and others arguing for a greater focus on Irish language preparation within teacher education courses. In relation to the special entry route for Gaeltacht applicants, stakeholders suggested that there should be greater clarity in identifying Gaeltacht applicants, with the relative responsibilites of the Departments of Education and Skills and Arts, Heritage and the Gaeltacht made more transparent.

Mature students form a small proportion of entrants into ITE. Minimum entry requirements of these applicants depend on the timing of their Leaving Certificate exam. Proposed changes in the entry criteria are likely to disadvantage this group of students, given historically low levels of take-up of Higher Level Mathematics. Furthermore, the stakeholders in this study felt that there is not necessarily a difference between mature and other entrants, with both groups having high levels of prior achievement, and that proposed pre-entry literacy and numeracy tests for this group only could be discriminatory.

In summary, international research indicates the lack of a strong evidence base on the link between specific entry criteria and performance within and/or after initial teacher education programmes. Without such a firm link, it is difficult to argue that more stringent entry criteria are required, especially in a context where entrants already have high levels of prior achievement. More stringent entry criteria are also likely to lead to less diversity in the teaching profession at primary level, especially a reduction in those entering from disadvantaged school settings. Without significant behavioural change in take-up of specific (combinations of) subjects and subject levels, the proposed criteria are likely to lead to a reduction in the pool of potential entrants to initial teacher education, at a time when demographic trends mean that more teachers are likely to be required in the years to come. The rationale for changing criteria reflects concerns about potential skill deficits among newly qualified teachers. However, further research would be needed to establish the existence and scale of any such deficits. Any deficits found need not only be addressed through changing entry standards but could be dealt with through redesigning the content of initial teacher education programmes. It would be possible, as is done in Australia, for example, to develop supplementary or bridging courses within ITE to raise entrants' skill levels in particular subjects such as Irish or Mathematics. Specifying minimum criteria must also be balanced against the potential benefits of institutional autonomy to decide on particular entry criteria and mechanisms.

While there is considerable variation across higher education institutions in Ireland in the approaches they take, particularly regarding entry to post-primary ITE, such inter-institutional variation is the norm rather than the exception internationally and no clear relationship has been established between such autonomy and lower standards.

Appendix I International Comparison of Entry Selection Criteria to Initial Teacher Education

	Differentiated or non-differentiated system[68]	Consecutive or concurrent (p, ls, us)	P	LS	US	Performance in US level	US cert	Entrance exam to tertiary education	Specific subject requirements		interview	Aptitude or standardised test and other requirements, incl. Lit and num tests	Character references	Previous teaching experience	Alternative pathways
European countries			Level at which taught			ISCED LEVELS 1,2,3									
Austria	D	Concur p consec ls, us	BA	MA	MA		X (1,2,3)		X		X (1,2,3)	X (1,2,3)[69]			
Belgium	D	Concur p, ls consec/concur us	BA	BA	MA		X (1,2,3)				X	X, language & numeracy (pr)			X
Cyprus	D	Concur p consec ls consec us	BA	BA	BA			X (1,2,3)							
Czech Republic	D	Concur p consec/concur ls consec us	MA	MA	MA	X (1,2,3)	X (1,2,3)	X (1,2,3)			X (1,2,3)	X (1,2,3)[70]			
Denmark	ND	Concur ls consec, us	BA	BA	MA	X (1,2,3)					X				
Finland	ND	Consec/concur ls consec us	BA[71]		MA	X (1,2,3)	X (1,2,3)		X[72]		X (1,2,3)	X, written exam, aptitude test (class teacher) (1,2,3)		X	
France	D	Consec only (2011) p, consec ls, consec ls, us	MA	MA	MA		X (1,2,3)								
Germany	D	Concur p, ls, consec/concur us	BA	MA	MA			X (1,2,3)							X
Greece	D	Concur p, consec ls, consec ls, us													

Contd.

68 Non-differentiated Systems (primary and lower secondary form basic school); While the countries are divided into two broad categories ('integrated' and 'non-integrated'), there are some structural differences within these categories.

69 Entrants into ITE programmes are required to have basic personal qualifications; knowledge of the German language (written and spoken), speech and voice power; musical and rhythmic qualification for primary and special school; physical and motor qualification. http://www.european-agency.org/agency-projects/Teacher-Education-for-Inclusion/country-info/austria/structure-and-content-of-initial-teacher-education-courses

70 A (written or oral) examination specifically for admission to teacher education.

71 Only pre-primary teachers are required to have MA.

72 Those wanting to become subject teachers are selected for university admission according to their main subject. www.oecd.org/education/school/5328720.pdf.

APPENDIX I *Contd.*

	Differentiated or non-differentiated system[73]	Consecutive or concurrent (p, ls, us)	P	LS	US	Performance in US level	US cert	Entrance exam to tertiary education	Specific subject requirements		interview	Aptitude or standardised test and other requirements, incl. Lit and num tests	Character references	Previous teaching experience	Alternative pathways
European countries			Level at which taught			ISCED LEVELS 1,2,3									
Hungary	D	Concur p, consec ls, consec ls, us	BA	MA	MA	X (1)	X (1)				X (1)				
Italy	D	Concur p, consec ls, consec ls, us	MA	MA	MA		X (1,2,3)					X (1,2,3)			
Luxembourg	D	Concur p, consec ls, consec ls, us	BA	MA	MA			X (1)				X,[74] language test, (2,3)			
Netherlands	D	Concur p, consec ls, consec ls, us	BA	BA	MA		X (1,2,3)					X, Dutch language & numeracy (pr)			X
Malta	D	Concur p, consec ls, consec ls, us	BA	BA	BA				X (language)			X, language test, (1,2,3)[75]			
Poland	ND	Consec & concur p, consec/concur us	BA	BA	MA		X (1,2,3)								
Portugal	ND	Consec only (2011) p, consec ls, consec ls, us	MA	MA	MA										
Slovakia	ND	Concur p, ls, consec/concur us	MA	MA	MA	X (1,2,3)	X (1,2,3)								
Slovenia	ND	Consec& concur p, consec ls, consec ls, us	MA	MA	MA	X (1,2,3)	X (1,2,3)	X (1,2,3)							
Spain	D	Concur p, consec ls, consec ls, us	BA	MA	MA	X (1,2,3)		X (1,2,3)	X (language)			X, language test			

Contd.

[73] Non-differentiated Systems (primary and lower secondary form basic school); While the countries are divided into two broad categories ('integrated' and 'non-integrated'), there are some structural differences within these categories.

[74] In case of upper secondary.

[75] Students applying to read for a Bachelor of Education at the University of Malta need to have obtained the European Computer Driving Licence (ECDL) certificate.

APPENDIX I *Contd.*

	Differentiated or non-differentiated system[76]	Consecutive or concurrent (p, ls, us)	P	LS	US	Performance in US level	US cert	Entrance exam to tertiary education	Specific subject requirements		interview	Aptitude or standardised test and other requirements, incl. Lit and num tests	Character references	Previous teaching experience	Alternative pathways
European countries			Level at which taught			ISCED LEVELS 1,2,3									
Sweden[77]	ND	Concur p, consec ls, consec ls, us	MA	MA	MA		X (1,2,3)	X (1,2,3)	X[78]			X[79]			
United Kingdom (Scotland)	D	Consec & concur p, consec/concur us	BA	BA	BA	X (1,2,3)	X (1,2,3)	X (1,2,3)	X[80]		X (1,2,3)	X, literacy & numeracy (1,2,3)			X
Other jurisdictions															
Australia (NSW)	D	Concur p, consec ls, consec ls, us				X		No ATAR minimum	X[81]						X
Canada	D	Concur p, consec ls, consec ls, us				X			X			X[82]	X		
South Korea	D	Concur p, consec ls, consec ls, us				X									

Source: Compiled from Eurydice data and other materials.

[76] Non-differentiated Systems (primary and lower secondary form basic school); While the countries are divided into two broad categories ('integrated' and 'non-integrated'), there are some structural differences within these categories.

[77] www.european-agency.org/country-information/sweden/national-overview/teacher-training-basic-and-specialist-teacher-training.

[78] For the subjects the teacher student intends to specialise in, specific entry requirements and thereby a grade of 'Approved' at a higher level are required.

[79] Swedish Scholastic Aptitude Test if do not meet the general criteria.

[80] The qualifications needed for entry to teacher education are set out in terms of the levels and credit value as defined in the Scottish Credit and Qualifications Framework (SCQF). A National Qualification Course award in English at SCQF Level 6 (Higher Grade English or an accepted alternative), is an essential requirement for entry to all teacher education programme. A National Qualification Course award in Mathematics at SCQF Level 5 (National 5 Mathematics or an accepted alternative), is an essential minimum requirement for entry to all teacher education programmes. It is for the universities to decide the acceptability of individual qualifications. Specific requirements apply to various subjects: www.gtcs.org.uk/web/FILES/about-gtcs/memorandum-on-entry-requirements-to-programmes-of-ite-in-scotland-0413.pdf.

[81] Primary school programme, undergraduate course: a Higher School Certificate minimum Band 4 in English Advanced or minimum Band 4 in Standard English or minimum Band 4 in English as a Second Language, AND Higher School Certificate minimum Band 4 in General Mathematics, or completion of Mathematics (2 Unit). If a student does not meet these criteria, a tertiary institution may offer concurrent study or appropriate bridging units and/or require satisfactory performance in approved tests in literacy and numeracy before graduation. Graduate entry into primary degree should contain at least one year of full-time equivalent studies relevant to one or more learning areas of the primary school curriculum. Secondary school programme, undergraduate course: a Higher School Certificate minimum Band 4 in Standard English or minimum Band 4 in English as a Second Language or minimum Band 4 in English Advanced. If a student does not meet these requirements, a tertiary institution may offer concurrent study or appropriate bridging units and/or require satisfactory performance in an approved test in literacy before graduation. www.nswteachers.nsw.edu.au/Teaching-in-NSW/Subject-Content-Requirements-abridged.

[82] French proficiency is mandatory in Quebec as well as French language programmes elsewhere. Concentrations or specialisations in particular content areas may also be required.

Appendix II Undergraduate (Concurrent) Teacher Education: Post-Primary Teaching Entry Requirements

HEI	Qualification	Course name	Entry requirements
UCC	B.Ed. (Hons)	Sports Studies and Physical Education - Second Level Teaching	HC3 in two subjects and passes in four other subjects at H or O level in the Leaving Certificate from: Irish, English, another language and three other subjects recognised for entry purpose. Mature entrants: University College Cork reserves places for mature students on almost all of its degree programmes.
NUIG	B.A.	Mathematics and Education	Minimum Grade HC3 in two subjects and passes in four other subjects at H or O level in the Leaving Certificate including: Irish, English, another language and three other subjects recognised for entry purposes. HC3 or OA2 in Mathematics is also required.
NUI Maynooth	B.Sc. (Hons)	Science with Education or Mathematics with Education	2HC3 and 4OD3, passes in English and Irish and OC3/HD3 in Mathematics, OC3/HD3 in a Science subject (i.e. Agricultural Science, Biology, Chemistry, Physics, or Physics with Chemistry). To choose the Mathematics (with Education) stream following entry, students need to have at least HC3 in their Leaving Certificate Mathematics or equivalent. Students admitted who do not have a HC3 or better in Mathematics must take the BSc Science (with Education) degree. Mature entry: A certain number of places are reserved for mature students on all undergraduate courses. Some take preparatory studies in advance of gaining admission.
TCD	B. Mus. Ed.	Music Education - Second Level Teaching	Minimum LC entry level points apply. Applicants need to sit for an entrance test. This will include a simple harmony paper, an ear test, a paper on general musical knowledge and background and an essay paper. On the basis of the examination results, successful applicants will be called to attend for interview. Music performance will feature as one element of the interview.
DCU/ Mater Dei	B.Rel.Ed. (Hons)	Education - Religious Education and English - Second Level Teaching	Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects including Mathematics AND either English or Irish. DCU does not award points for the subject of Mathematics at Leaving Certificate Ordinary Alternative or Foundation Level. Mature entrants: Mature applicants to Bachelor of Religious Education and Music must take Music Aural and Performance Tests. For details, please visit www.materdei.ie/music-tests.
DCU/ Mater Dei	B.Rel.Ed. (Hons)	Education - Religious Education and Music - Second Level Teaching	General Entry Requirements: Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects including Mathematics AND either English or Irish. In addition to the general entry requirements for admission to the University, the following requirements apply: HC3 in Music or equivalent (this requirement may be waived by the Head of Department). Applicants must take Music Aural and Performance Tests. For details, please visit www.materdei.ie/music-tests.
DCU/ Mater Dei	B.Rel.Ed. (Hons)	Education - Religious Education and History - Second Level Teaching	General Entry Requirements: Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects including Mathematics AND either English or Irish. Leaving Certificate Mathematics Requirements DCU does not award points for the subject of Mathematics at Leaving Certificate Ordinary Alternative or Foundation Level. Mature entrants: Upon completing the CAO application, all applicants will be required to attend MDI for an interview and a writing skills assessment.

Contd.

APPENDIX II *Contd.*

HEI	Qualification	Course name	Entry requirements
DCU	B.Sc. (Hons)	Science - Science Education - Second Level Teaching	OA2 or HD3 Mathematics and OC3 or HD3 in one of Physics, Chemistry, Biology, Physics with Chemistry or Agricultural Science. General Entry Requirements: Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects including Mathematics and either English or Irish. Mature entrants: experience other than examination grades is taken into consideration - this may be work experience, further studies or other relevant experience.
DCU	B.Sc. (Hons)	Physical Education with Biology - Second Level Teaching	General Entry Requirements: Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects including Mathematics and either English or Irish. Course Requirements: Leaving Certificate - OC3 or HD3 Mathematics and OC3 or HD3 in one of Physics, Chemistry, Biology, Physics with Chemistry or Agricultural Science. Mature entry: experience other than examination grades is taken into consideration - this may be work experience, further studies or other relevant experience. For some courses, however, particular Leaving Certificate subjects may be necessary.
UL	B.Sc. (Hons)	Physical Education with concurrent Teacher Education - Second Level Teaching	At least Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects (including Mathematics; Irish or another language; and English). Foundation Mathematics accepted. It is desirable that the candidate wishing to take a specific elective subject within this Degree should hold at least a Higher Grade C3, or an approved equivalent, in the relevant Leaving Certificate subject. The University holds a special Mathematics entrance examination in August each year for students who achieve sufficient CAO entry points and satisfy all other entrance requirements, but who do not achieve the requisite grade in Mathematics in the Leaving Certificate for Faculty of Science and Engineering undergraduate degrees. Mature entry: Since 2014 entry, Mature applicants to the University of Limerick apply through the CAO rather than directly to the University. Assessment usually, but not always by means of an interview (some courses require an additional written essay) with the following exceptions: With effect from 2015 entry the Faculty of Education and Health Science plan to introduce the Mature Students Admissions Pathway (MSAP) test as the selection tool for three degree programmes Sports and Exercise Science, Physiotherapy, Psychology.
UL	B.Tech. Ed. (Hons)	Materials and Engineering Technology with concurrent Teacher Education - Second Level Teaching	At least Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects (including Mathematics; Irish or another language; and English). In addition, applicants are required to hold at least the following in the Leaving Certificate or an approved equivalent: Grade B3 in Ordinary Level Mathematics (Grade D3 in Higher Level Mathematics also suffices) and Grade D3 at Higher Level (or Grade C3 or above at Ordinary Level) in one of the following: Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Design and Communication Graphics, Technology, Construction Studies, Agricultural Science, Biology. Mature entry: see above

Contd.

APPENDIX II *Contd.*

HEI	Qualification	Course name	Entry requirements
UL	B.Tech. Ed. (Hons)	Materials and Architectural Technology with concurrent Teacher Education - Second Level Teaching	Applicants are required to hold at the time of enrolment the established Leaving Certificate (or an approved equivalent) with at least Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects (including Mathematics; Irish or another language; and English). In addition, applicants are required to hold at least the following in the Leaving Certificate, or an approved equivalent: Grade B3 in Ordinary Level Mathematics (Grade D3 in Higher Level Mathematics also suffices) and Grade D3 at Higher Level (or Grade C3 or above at Ordinary Level) in one of the following: Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Design and Communication Graphics, Technology, Construction Studies, Agricultural Science, Biology. Mature entry: Assessment of mature applications usually, but not always, takes place by means of an interview (some courses require an additional written essay).
UL	B.Sc. (Hons)	Science with concurrent Teacher Education - Physical Sciences with Chemistry and Physics	Applicants are required to hold at the time of enrolment the established Leaving Certificate (or an approved equivalent) with at least Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects (including Mathematics; Irish or another language; and English). In addition, applicants are required to hold at least the following in the Leaving Certificate or an approved equivalent: Grade B3 in Ordinary Level Mathematics (Grade D3 in Higher Level Mathematics also suffices) and Grade D3 at Higher Level (or Grade C3 or above at Ordinary Level) in one of the following: Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Design and Communication Graphics, Technology, Construction Studies, Agricultural Science, Biology. Mature entrants: interview (some courses require an additional written essay).
UL	B.Sc. Ed. (Hons)	Biological Science with Physics	Applicants are required to hold at the time of enrolment the established Leaving Certificate (or an approved equivalent) with at least Grade C3 in two Higher Level subjects and Grade D3 in four Ordinary or Higher Level subjects (including Mathematics; Irish or another language; and English). In addition, applicants are required to hold at least the following in the Leaving Certificate or an approved equivalent: Grade B3 in Ordinary Level Mathematics (Grade D3 in Higher Level Mathematics also suffices) and a Grade D3 at Higher Level (or Grade C3 or above at Ordinary Level) in one of the following: Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Technology, Design and Communication Graphics, Construction Studies, Agricultural Science, Biology. Mature entrants: interview (some courses require an additional written essay).
St. Angela's	B.Ed.	Home Economics with Biology - Second Level Teaching	Applicants are required to have an established Leaving Certificate with at least two Grade C3s at Higher Level and four Grade D3s at Ordinary or Higher Level. Subject requirement: - Irish, English, Mathematics - A laboratory Science subject (inc. Agricultural Science) - A third language - Any one other subject recognised for entry purposes Mature entry: A number of places are reserved to facilitate the admission of students who may matriculate by reason of mature years (23 years of age on 1 January of the calendar year of entry to the College) and of students already matriculated who have been some years away from school.

Contd.

APPENDIX II *Contd.*

HEI	Qualification	Course name	Entry requirements
St. Angela's	B.Ed. (Hons)	Home Economics with Irish - Second Level Teaching	Applicants are required to have an established Leaving Certificate with at least two Grade C3s at Higher Level and four Grade D3s at Ordinary or Higher Level. Subject Requirement: - Irish (Minimum C3 at Higher Level) - English, Mathematics - Any one other subject recognised for entry purposes - A third language for entry purposes - Home Economics or a laboratory Science subject (inc. Agricultural Science). Mature entrants: A number of places are reserved to facilitate the admission of students who may matriculate by reason of mature years.
St. Angela's	B.Ed. (Hons)	Home Economics with Religious Education - Second Level Teaching	LC entry requirements: Applicants are required to have an established Leaving Certificate with at least two Grade C3s at Higher Level and four Grade D3s at Ordinary or Higher Level. - Irish, English, Mathematics - Home Economics or a laboratory Science subject (inc. Agricultural Science) - A third language - Any one other subject recognised for entry purposes. Mature entry: A number of places are reserved to facilitate the admission of students who may matriculate by reason of mature years.
St. Angela's	B.Ed. (Hons)	Home Economics with Economics - Second Level Teaching	Applicants are required to have an established Leaving Certificate with at least two Grade C3s at Higher Level and four Grade D3s at Ordinary or Higher Level. Subject Requirement: - Irish, English, Mathematics - Home Economics or a laboratory Science subject (inc. Agricultural Science) - A third language for matriculation purposes - Any one other subject recognised for matriculation purposes. Mature entry: A number of places are reserved to facilitate the admission of students who may matriculate by reason of mature years.
Nat College of Art and Design	B.A. (Hons)	BA Hons Design or Fine Art and Education - Second Level Teaching	2HC3 + 4OD3, English, Irish and a Third Language or Art. Foundation level Mathematics may be included as one of the Ordinary Level subjects. Applicants for September 2015 must submit a portfolio by Friday 6 February 2015 in accordance with the NCAD Portfolio Submission Guidelines 2015. NCAD does not operate the Leaving Certificate/ CAO points scheme for programmes requiring a portfolio submission. Offers are made based on portfolio score to applicants who meet minimum academic entry requirements. Mature entrants: Mature students should include on their CAO application form information on previous learning and/or any relevant work or other experience that might support their application. Mature students who achieve a sufficient portfolio score to warrant an offer but who do not otherwise meet minimum academic entry requirements will have an opportunity to matriculate on mature years. These applications will be reviewed based on information and documentation submitted to the CAO and may be invited to attend for interview.
NUI Galway	B.A. (Hons)	Arts - Mathematics and Education - Second Level Teaching	Minimum Grade HC3 in two subjects and passes in four other subjects at H or O level in the Leaving Certificate including: Irish, English, another language and three other subjects recognised for entry purposes. A HC3 or OA2 in Mathematics is also a requirement.

Contd.

APPENDIX II *Contd.*

HEI	Qualification	Course name	Entry requirements
GMIT	B.Sc. (Hons)	Education - Design Graphics and Construction - Letterfrack Campus - Second Level Teaching	Higher C3 in Design and Communication Graphics or Construction Studies. The general minimum Leaving Certificate entry requirement is a pass (grade D3 or better) in six Leaving Certificate subjects including English or Irish and Mathematics. Two of the six Leaving Certificate subjects must be passed in Higher Level papers at Grade C3 or higher. Mature Applicants • Do not have to meet the Leaving Certificate entry requirements/points. • Are considered on an individual basis (previous education, work experience and demonstration of ability and competence to undertake the programme). • May be invited for interview and to an information and advisory session in May which will be used to rank applicants where demand exceeds the available places on a programme • For Restricted programmes, must pass the portfolio assessment; the score will be aggregated with the interview score for ranking purposes.

Source: Compiled from Qualifax.ie and HE websites.
Note: The concurrent model combines the study of education in all its components with the study of the academic subject specialist area.

Appendix III CAO Entrants Over Time

Year	1st Preferences Educ	CAO Applicants	%
2001	3,999	6,2849	6.4
2002	4,403	6,2294	7.1
2003	4,656	6,2802	7.4
2004	4,275	6,0174	7.1
2005	4,397	6,0126	7.3
2006	3,907	5,9485	6.6
2007	4,981	6,1961	8.0
2008	5,321	6,3868	8.3
2009	5,499	6,7633	8.1
2010	5,267	7,1843	7.3
2011	5,294	7,1466	7.4
2012	4,963	7,1648	6.9
2013	4,563	7,1151	6.4
2014	4,658	7,3091	6.4

Source: CAO Website.

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