Perspectives and Practices of Irish Primary Teachers in Addressing the Needs of Exceptionally Able Pupils

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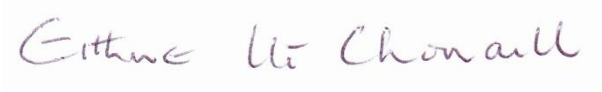
Signed: 

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
ADHD	Attention Deficit Hyperactivity Disorder
CCEA	Council of Curriculum, Examinations and Assessment
CPD	Continuing Professional Development
CTYI	Centre for Talented Youth, Ireland
DCU	Dublin City University
DCYA	Department of Children and Youth Affairs
DEIS	Delivering Equality of Opportunity in Schools
DES	Department of Education and Skills/Science
EAL	English as an Additional Language
IT	Information Technology
MICRA-T	Mary Immaculate College Reading Attainment Test
NA	National Assessment
NCCA	National Council for Curriculum and Assessment
NEPS	National Educational Psychological Service
NRIT	Non-Reading Intelligence Test
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
QUAL	Qualitative
QUAN	Quantitative
RtI	Response to Intervention
SERC	Special Education Review Committee
SESS	Special Education Support Service
SIGMA-T	Standardised Irish Graded Mathematics Attainment Test
SNA	Special Needs Assistant
SPHE	Social, Personal, and Health Education
SPSS	Statistical Package for Social Sciences
STEM	Science, Technology, Engineering, and Mathematics
TIMSS	Trends in International Mathematics and Science Study
US	United States
WSE	Whole School Evaluation

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Abstract

Eithne Uí Chonaill

Perspectives and Practices of Irish Primary Teachers in Addressing the Needs of Exceptionally Able Pupils

In Ireland, exceptionally able pupils are included under the category of pupils with special educational needs in the 1998 Education Act. However, the scarcity of research in this country regarding these pupils means that little information is available on how, or even whether, their needs are being met in Irish schools. The aim of this study was to explore what is currently happening in primary schools with regard to exceptionally able pupils. This sequential mixed methods study was conducted in two phases. First, a specially designed questionnaire was sent to all primary schools in Cork city and county (n=209) in order to get a broad picture of how teachers in one geographical region conceptualise exceptional ability, and how they identify and make provision for exceptionally able pupils. This was followed by an in-depth exploration of the main issues with twenty-seven teachers who volunteered to participate in focus groups. The findings from the focus groups expanded, and at times contradicted, the findings from the questionnaires, as participants reported on what happens, in practice, in busy schools and classrooms every day. In general, teachers are positive towards pupils with exceptional ability and many would like to do more to challenge and support them. However, on a practical level, they face many barriers and only ad hoc provisions are in place. Teachers are unsure what constitutes exceptional ability, and how they would identify a pupil with such ability. In particular, the current emphasis on pupils with learning difficulties and the focus on raising the standard of low achievers pose considerable challenges. Further barriers include lack of time, funding and resources. Finally, teachers report a need for further training in this area, as they also feel that they lack the necessary skills, and indeed knowledge, to deal with exceptionally able pupils.

CHAPTER 1 INTRODUCTION

Over the past twenty-five years, since the publication of the report of the Special Education Review Committee [SERC] (1993), educational practice in mainstream schools has undergone radical change as Ireland moves towards an increasingly inclusive education system. The focus in government reports, guidelines and in legislation has been on the right of every pupil, including those with special educational needs, to an education "appropriate to their abilities and needs" (Government of Ireland, 1998, p. 13). In the 1998 Education Act, exceptionally able or talented pupils are included among those with special educational needs. The term refers to pupils who are not sufficiently challenged in mainstream classes and who have the potential to perform at levels considerably above what would be expected for their age and grade.

Gifted education, which refers to curriculum and pedagogy appropriate to meeting the learning needs of exceptionally able pupils (Matthews & Dai, 2014), is an area that has received considerable attention internationally, but is one that has been largely neglected in Ireland (Cross, Cross, O'Reilly & Mammadov, 2014). Few studies, with some exceptions (Cross et al., 2014; Ní Chéilleachair, 2013), have explored how the learning needs of this cohort of pupils are addressed within the primary education system in Ireland. In an effort to extend this body of research, this study focuses on one aspect of gifted education in Ireland, namely that of meeting the needs of exceptionally able pupils in mainstream primary schools. The core research problem of this study is to determine how mainstream primary teachers in a particular geographical region, namely Cork, a large county in the south of Ireland, view their exceptionally able pupils, and how they identify and make provision for them.

This introductory chapter starts by explaining the position of the researcher with regard to the topic in order to provide background information relevant to the context of the study. The chapter continues by defining terms to be used in the study and then provides the national context, before exploring national and international assessment reports. It then briefly examines the limited relevant research carried out in Ireland in order to provide a background to the study. It is argued that there is a need for an enhanced focus

within the Irish educational system on the performance of higher-achieving pupils (Department of Education & Skills [DES], 2016a) as the attainment of these learners lags behind that of their international counterparts (DES, 2017a). A review of national and international reports will stress the need to increase the proportion of higher-performing pupils in both literacy and numeracy, and, crucially, to set higher expectations in relation to the performance of this cohort of pupils (DES, 2016a). In addition, an examination of DES inspectors' reports will suggest insufficient opportunities for exceptionally able pupils to progress at the level of their capabilities in Irish classrooms.

As legislation specifically mentions exceptionally able pupils as having special educational needs, it follows that this group of pupils' needs must be addressed. They have a right to an appropriate education as a matter of inclusion and equality. Every school received a copy of the National Council for Curriculum and Assessment [NCCA] guidelines in 2007 laying out best practice regarding identification and provision for exceptionally able pupils. However, the guidelines remain in draft form and their implementation has not been evaluated. Studying what happens at the school and classroom level is where "proactive improvement can best be observed" (Van Tassel-Baska, 2003, p. 174). The increased emphasis on exceptionally able pupils as evidenced by new initiatives (DES, 2017a; 2017d) indicates that this study is timely in order to gauge practices at the classroom level with regard to these pupils. The study investigates the perspectives of key stakeholders in primary schools – the teachers. Teachers' attitudes have an impact on whether or not pupils are regarded as exceptionally able, and this, in turn, influences whether or not appropriate provision is made for these pupils (Fraser-Seeto, 2013).

Position of the Researcher

This study has both personal and professional significance for me. I am the mother of seven children and grandmother of twelve, at least some of whom are exceptionally able - they have attended the Centre for Talented Youth, Ireland (CTYI) summer and Saturday programmes. I was very interested, as a parent, to see what changes, if any, had come about since my own children were in primary school. From a professional point of view, I worked for many years as a primary classroom teacher and taught all classes from junior

infants to sixth. I also worked as a learning support teacher, where the focus was on pupils who were experiencing difficulties with learning. From early in my teaching career, as a mainstream class teacher, I often wondered at the end of the week if I had adequately challenged the more able pupils in my class – if they had actually *learned* anything from me as a teacher that week. More recently, in my current work as an educational psychologist, I occasionally meet exceptionally able pupils, but they are referred only if they have a learning disability or are displaying behavioural difficulties. My work as parent, teacher and psychologist who works mainly in primary schools pointed me towards locating the study at primary level as this is the sector where my professional experience is concentrated.

Definition of Relevant Terms

The issue of the terms and definitions used in the whole area of what is called gifted education is highly contested. The most common terms used internationally are *gifted*, and *gifted and talented*. However, in the Irish context, that is, in government legislation, reports and guidelines, the term *exceptionally able* is the one commonly used to refer to pupils who demonstrate exceptionally high performance or potential for exceptionally high performance in learning relative to their peers, and this is the term most frequently used in this report. In view of the ubiquity of the terms *gifted* and *gifted and talented* internationally, these terms are used interchangeably with the term *exceptionally able* in this report where relevant. In the Irish context, the DES generally makes a distinction between the terms *pupils* and *students*, with the former referring to children attending primary school and the term *students* reserved for those in post-primary school. In keeping with DES, this study mainly uses the term *pupils*.

The definition of exceptionally able pupils in this study is one used in the Irish context as this is the definition with which teachers may be most familiar: pupils for whom the education which can generally be provided in the mainstream classroom is not sufficiently challenging and who therefore "require opportunities for enrichment and extension that go beyond those provided for the general cohort of students" (NCCA, 2007, p.7). It is important to note that it is expected that in every school there will be a group of pupils who require extended educational opportunities, regardless of how they compare to exceptionally able pupils in other schools. On that basis, the NCCA (2007) expects that

approximately 5-10% of the school population may be exceptionally able, and these pupils will show very high levels of attainment in one or more of seven areas listed:

- general intellectual ability or talent
- specific academic aptitude or talent
- visual and performing arts and sports
- leadership ability
- creative and productive thinking
- mechanical ingenuity
- special abilities in empathy, understanding and negotiation (NCCA, 2007, p. 8).

This is quite a broad definition which suits the Irish context. Characterised by a wide range of domains, the definition emphasises the need to provide a more challenging education than that which is generally available in the regular classroom. Furthermore, these pupils come within the category of those with special educational needs (Government of Ireland, 1998). Thus, there is a need to identify these pupils before making special provision for them. Issues around definition, identification and provision for this cohort of pupils are further discussed in Chapter 2. It is acknowledged that although the NCCA (2007) guidelines outline many domains in which pupils can excel, this study focuses on the intellectual and academic domains as these are the areas which form the basis of most learning activities in Irish primary schools.

Context of the Study

In Ireland, exceptionally able pupils, those for whom "the provision of education in mainstream classes may not be sufficiently challenging" are regarded as having special educational needs (Department of Education & Science [DES], 1999, p. 29). They are covered by legislation, such as the Education Act 1998, and are specifically mentioned in subsequent policy documents (e.g., DES 1999; 2011; 2017a). In 2007, in order to help teachers to deal with this particular cohort of pupils, all schools in the country, both primary and post-primary, were issued with guidelines, *Exceptionally Able Students – Draft Guidelines for Teachers* (NCCA, 2007), and more recently, the Special Education Support Service (SESS) has offered seminars to primary teachers in relation to these pupils. Thus, legislation is in place and guidance for teachers is available. However, little

information is available regarding the educational engagement and progress of exceptionally able pupils, and whether they have "equality of *access* to and *participation* in" appropriate education, and crucially whether they "*benefit"* from that education (Government of Ireland, 1998, p. 10, italics added). In addition, the limited research base in Ireland means that primary teachers' perspectives and practices in relation to these pupils are areas which require exploration. Before looking at the reports of national and international assessments to ascertain how exceptionally able pupils are performing, a brief note is included on primary schools in Ireland.

While almost all primary schools in Ireland are privately owned, mostly by denominational bodies, they are publicly funded and are required to follow the Primary School Curriculum. The state-funded primary schools include religious schools, nondenominational schools, multidenominational schools, and scoileanna lán-Ghaeilge (Irish-medium schools). An individual board of management governs each school which is expected to operate in accordance with centrally agreed procedures. The inspectorate division of the DES has responsibility for evaluating and reporting on educational provision in all primary schools that are publicly funded. In the Cork region, there were 344 publicly funded schools and three private schools (which are also partly publicly funded) when this research was carried out.

Exceptionally Able Pupils in Ireland

Some idea of how exceptionally able pupils in Ireland are performing can be gleaned from the most recent reports on the National Assessments of Reading and Mathematics (e.g. Shiel, Kavanagh & Millar, 2014; Kavanagh, Shiel, Gilleece & Kiniry, 2015) and from the achievements of Irish pupils in comparison to international standards (Clerkin, Perkins & Chubb, 2017; Clerkin, Perkins & Cunningham, 2016; Eivers & Clerkin, 2012; Perkins, Shiel, Merriman, Cosgrove & Moran, 2013). Some idea of how teachers are providing for Ireland's most capable pupils can be ascertained from the reports of the inspectorate, including reports on incidental inspection findings (DES, 2010) and whole school evaluation (WSE) reports that are published on the DES website, and from context reports based on the results of international assessments. All of the aforementioned reports indicate that there is scope for improvement in many areas of teachers' practice.

National Assessments

National Assessments (NA) of English reading and mathematics have been conducted periodically in primary schools in Ireland since 1972. The most recent assessment was carried out in 2014 and showed statistically significant increases in performance in English reading and maths (DES, 2016a).[1] This improved performance of Irish primary pupils at all proficiency levels is to be welcomed, but unpacking these results reveals that while there were increases in performance at each key percentile marker, increases were greater for lower proficiency levels than for higher levels. For example, compared to NA 2009, in 2nd class reading, there was an increase of fourteen points at the 10th percentile marker compared to nine points at the 90th percentile marker, indicating that there is further scope for improved performance among the higher-achieving pupils (Eivers et al., 2010).

International Assessments

Ireland participates in two international assessments at primary level: the *Progress in International Reading Literacy Study* (PIRLS), and the *Trends in Mathematics and Science Study* (TIMSS). These are implemented in 4th and/or 8th grade (4th class and 2nd year in Ireland) classrooms with a nationally representative sample of pupils, either every four (TIMSS) or five (PIRLS) years. The most recent assessments for which reports are available are for PIRLS 2016[2] and for TIMSS 2015. On PIRLS 2016, fourth class Irish pupils performed extremely well overall in reading, with scores that were significantly above the PIRLS centrepoint, and only two of the 50 participating countries had significantly higher mean scores (Eivers, Gilleece & Delaney, 2017). Most impressively, over one fifth of Irish pupils (21%) reached the Advanced benchmark compared to the international median of 10%, and this represented a significant increase from the corresponding number for Irish pupils (16%) in PIRLS 2011 (Eivers et al., 2017).

The performance of Irish pupils in mathematics in international and national assessments is weaker than for literacy, particularly among higher-performing pupils

[1] The results showed that the targets set out in *Literacy and Numeracy for Learning and Life* (DES, 2011), colloquially known as the 'Literacy and Numeracy Strategy', to reduce the proportion of pupils performing at the lowest level and to increase the proportion performing at the higher levels by five percentage points, were met and even exceeded (Shiel et al., 2014).

[2] Further Irish analyses will be published later in 2018 after the full and final international dataset is made available.

(DES, 2016a). In TIMSS 2015, there were substantial improvements in maths and science performance compared to TIMSS 2011 particularly among lower- and medium-performing pupils (Clerkin et al., 2016). However, similar gains have not been observed among higher-performing pupils. When compared to countries that performed at a similar level to Ireland overall, Ireland's higher-achieving pupils are underperforming (Clerkin et al., 2017). This is consistent with previous findings suggesting that Ireland's above-average performance in international assessments is often driven by the strong performance of lower-performing pupils "rather than a strong performance across all ability levels" (Perkins & Shiel, 2016, p. 9).

It is worth looking at the results that Irish pupils achieved in the Programme for International Student Assessment (PISA) in which Ireland has participated since its inception in 2000. PISA is an internationally administered assessment of science, maths, and reading for 15-year-olds, and, while primary schools are not directly involved, it gives a picture of how pupils are performing three to four years after leaving primary education in Ireland. In the latest assessment in 2015, Irish pupils achieved mean scores that were significantly above the Organisation for Economic Co-operation and Development (OECD)[3] average in all three domains (Shiel, Kelleher, McKeown & Denner, 2016). However, in common with the TIMSS results, Ireland's strong performance relative to the OECD average was due more to lower-achieving pupils, rather than to higher-achieving pupils, performing well (Clerkin et al., 2017; Perkins & Shiel, 2016). Print reading was the only area in which the percentage of Irish pupils performing at or above Level 5 was considerably higher than the OECD average level (Shiel et al, 2016), but closer examination reveals that at the highest level (Level 6), the percentage of Irish pupils was similar to that of the OECD average, pointing, according to DES (2016a) to a need for schools "to set higher expectations for all learners" (p. 7) and for "high-achieving students … to be motivated to stretch themselves further" (p. 5).

[3] The OECD, an intergovernmental economic organisation which was founded in 1961 to stimulate economic programmes and world trade, carries out a triennial international survey (PISA) in many countries worldwide. 72 countries and economies participated in PISA 2015. The aim of PISA is to evaluate educational systems worldwide by testing the skills and knowledge of 15-year-old students in maths, science and reading (www.oecd.org/pisa).

Looking at the results of Irish pupils across both national and international assessments, it is heartening to see the improved overall performance of Irish pupils. However, higher-proficiency pupils are not making the same gains as their lower-proficiency peers, particularly in maths. The priority given to teaching basic literacy and numeracy skills, and the supports available to struggling learners may well have contributed to ensuring that Ireland has relatively fewer lower-achieving pupils (Shiel et al., 2016). It is likely that a number of factors contribute to comparatively low performance among exceptionally able pupils, including underperformance on certain mathematical content areas, anxiety among pupils, especially girls, about mathematics (Shiel et al., 2016), professional development for teachers, quality of text books, the support pupils receive at home and at school, and pupils' dispositions (Kavanagh et al., 2015). Kavanagh et al. (2015) add that the nature and focus of mathematics instruction is likely to be a factor, and this raises the question of whether the focus on basic processes leads to less time being given to providing more able pupils with appropriate lesson content and to subsequent weaker performance of these pupils in international assessments. Robinson (2009) suggests that schools that focus on bringing pupils up to proficiency level "have little reason to concern themselves with learners who have already attained it" (p. 260).

The relatively weak attainments of exceptionally able pupils has led to a focus on this cohort by the DES which has begun to stress the need to "improve upward differentiation" and to develop awareness among teachers that overreliance on text books, which do not always reflect the breadth of the curriculum, affects the learning and performance of pupils (DES, 2015g, p. 6). Two new initiatives are targeting exceptionally able pupils as well as the general body of pupils. In November 2017, the Minister for Education announced the School Excellence Fund under which clusters of schools explore new, innovative solutions to tackling disadvantage and learning outcomes for pupils, and one cluster in Limerick city, comprising one post-primary and two primary schools, are trialling interventions to ensure "the attainment of higher-ability pupils" (DES, 2017d, p. 1).

The revised targets in the Literacy and Numeracy Strategy for 2017 – 2020, published in March 2017, include increases of four to eight percentage points so that 50% or more of second and sixth class pupils will score at Level 3 or above in reading and mathematics by 2020 (DES, 2017a). Significantly, there is an emphasis on the need for

additional focus on pupils with exceptional ability: "their needs are a key priority up to 2020 and beyond" (p. 43). Targets aimed at this group of pupils include actions to:

- Enhance the performance of higher performing students in literacy and numeracy and increase expectations in relation to their achievement;
- [Provide] targeted teacher professional learning opportunities … to help higher-achieving learners to reach their full potential, supported by resource development;
- Provide national guidelines to support the needs of students with exceptional ability, with particular emphasis on literacy and numeracy, subject to resources.

It is hoped that these initiatives will enable high achievers to reach their full potential (DES, 2017a; 2017d).

Inspectors' Reports

Reports from the inspectorate, such as reports on incidental inspection findings (DES, 2010) and whole school evaluation (WSE) reports that are published on the DES website, give some idea about practice in primary schools in relation to providing an appropriate education for all pupils including those of high ability. Specific reference is not made to exceptionally able pupils in the guidelines for school inspections in Ireland (DES, 2016b), in contrast to the UK where inspectors are directed to pay particular attention to the outcomes of, among others, "the highest attaining children" (Ofsted, 2015, p. 13).

In their report, *Incidental Inspection Findings: A Report on the Teaching and Learning of English and Mathematics in Primary Schools* (DES, 2010)[4], inspectors found a very clear link between the learning outcomes for pupils on the one hand and the quality of teacher preparation and planning, use of appropriate teaching approaches and learning activities, and satisfactory assessment practice on the other. Particularly serious problems were identified in relation to assessment. Information from assessment should enable a teacher to construct a comprehensive picture of the learning needs of the pupils and plan future work accordingly so that all learners, regardless of ability, are moved from where they are to where they need to be (Education and Training Inspectorate of Northern Ireland/Department of Education & Skills [ETI/DES], 2010, 2015). This includes providing "opportunities for extension work for more able children" (DES, 2005b, p. 16).

[4]This report was published before the publication in 2011 and subsequent implementation of the Literacy and Numeracy Strategy.

The inspectorate carries out inspections in schools and centres of education every few years and publishes reports of these inspections on the DES website. Whole school evaluations (WSE) report on the quality of teaching and learning, and on the quality of management and leadership in a school. While provision for exceptionally able pupils is not laid out as a specific target of WSE, nonetheless, the issue is occasionally mentioned in reports. Of the twenty-one WSE reports from the Cork area that were posted on the DES website during the two school years from September 2016 to June 2018, four reports made explicit reference to provision for pupils of high ability. In one school, the inspectors praised the successful strategies to enhance the experiences of a significant number of accelerated learners that were used, including the communication of high expectations for all pupils, the use of a diverse range of methodologies and assessment practices, the provision of a wide range of learning opportunities, and a clear focus on the varying needs of all pupils. In the case of the three other schools, recommendations were made regarding the necessity of addressing the learning needs of the more able pupils through meaningful differentiation in the form of purposeful, collaborative, independent, challenging learning activities. No reference to exceptionally able pupils was made in the other 17 reports, although undoubtedly they were included in many of the recommendations, such as the application of critical thinking skills to solve problems, and the provision of enriched and more challenging learning experiences.

Similar to DES (2010), the WSE reports were critical of the overreliance on textbooks and the over-emphasis on whole-class teacher-directed instruction, poor assessment practices, and the lack of differentiated teaching and activities. They strongly recommended that active learning approaches be developed on a whole-school basis, that a more cohesive whole-school approach to assessment, including pupil self-assessment and assessment for learning at all class levels be practised, and that differentiated teaching in classrooms be prioritised for further development on a schoolwide basis.

Since January 2017, the inspectorate has carried out inspections to evaluate provision for pupils with special educational needs. Of the 23 reports (from all over the country) posted by the end of June 2018, only two Cork schools were evaluated, but it is interesting to note that both were commended for their attention to more able pupils. It seems likely that inspectors take special note of these pupils when their focus is on pupils with special

educational needs rather than when focusing on the overall practice in schools in general WSE inspections.

The reports that are available on national and international assessments, as well as reports from the inspectorate, raise questions regarding the attainments of exceptionally able pupils and the provision that is made for them in primary schools. Teachers play a key role in this provision. In his large-scale meta-analysis, Hattie (2009) explored the influence of pupil, parent, school, and teacher factors on pupils' achievement, and he concluded that "it is the differences in the teachers that make the difference in student learning" (p. 236) and that more important than curriculum content are the strategies teachers use to implement that curriculum so that pupils develop positive attitudes towards learning and become active in the learning process. Hattie (2009) further claims that important pupil characteristics, such as "openness to experience, willingness to invest in learning, and intellectual engagement" (p. 60) can be nurtured in school by ensuring that pupils are exposed to appropriately challenging tasks and instruction, and by pupils realising that success is attributed to their efforts. This is something that needs to be looked at in Irish practice.

Irish Research

In Ireland, there is limited research on what happens with regard to exceptionally able pupils within mainstream schools and classes. There is a body of research which centres on the experiences of pupils and young people who attend the enrichment courses and classes run by the Centre for Talented Youth Ireland (CTYI) in Dublin City University (DCU) and in outreach centres around the country[5] (see Healion, 2013; Ledwith, 2013; O'Reilly, 2010). The limited research on experiences in primary schools that is available is explored below to shed light on teachers' perceptions, practices, and perspectives in relation to exceptionally able pupils.

A small number of studies address issues that, while not focussing specifically on teachers' everyday practices, nonetheless shed some light on the topic under discussion here. Using semi-structured interviews, Flynn (2005) found that, in contrast to CTYI teachers, trainee primary teachers were very vague in their knowledge about the concept of

[5] See CTYI website, www.ctyi.ie for details

exceptional ability and did not know how they would identify such pupils. Whelan (2003) surveyed both primary and post-primary preservice and inservice teachers about their attitudes and practices regarding exceptionally able pupils. Among the 80 participants, primary and special education teachers held positive attitudes towards these pupils and the majority were moderately confident about teaching them. Preferred classroom practices included curriculum differentiation, compacting, and higher-level thinking strategies, but there was little support for ability grouping. A majority of participants in both studies felt they did not receive adequate teacher training to competently teach exceptionally able pupils (Flynn, 2005; Whelan, 2003). It is also worth noting Daly's (2015) findings regarding post-primary teachers who attended a seminar run by the Special Education Support Services (SESS) on pupils with exceptional ability and dual exceptionality (exceptionally able plus a disability), and who could therefore be expected to have particular interest in these pupils. A very large majority of his 35 questionnaire respondents reported that their staffs had little knowledge of the concepts and definitions of exceptional ability, did not know who the exceptionally able pupils in their classrooms were, and did not feel that lesson content was differentiated to take account of the needs of these pupils.

Of greater relevance to this current project are two pieces of research that explored mainstream teachers' perspectives on exceptionally able pupils (Cross et al., 2014; Ní Chéilleachair, 2013). Looking specifically at 44 primary teachers in one local area, and using an adaptation of Gagné and Nadeau's Attitude Scale (1991) as well as a specially designed questionnaire, Ní Chéilleachair (2013) found that familiarity with the NCCA (2007) guidelines was very limited with few of the participating teachers having seen or used them. The rate of identification of exceptionally able pupils, 3% in total, was lower than the 5% -10% recommended in the guidelines. Half of the participants did not identify any pupils as being exceptionally able, and those who reported having pupils in the school who had been identified largely relied on someone other than class teachers to identify them, such as parents, psychologists or the CTYI. As reported, little provision was made for this cohort of pupils and the participating teachers were generally against acceleration and ability grouping as strategies for making provision for them. Ní Chéilleachair's findings echo those of Flynn (2005) and Whelan (2003) noted above.

A more substantial piece of research undertaken by CTYI in collaboration with the Center for Gifted Education at the College of William and Mary, Virginia, US, surveyed

both primary and post-primary teachers in Ireland (Cross et al., 2014).[6] A total of 837 educators, 570 of them primary teachers, from across the country responded to a detailed questionnaire which explored teachers' opinions and beliefs about gifted pupils, their ideas about the characteristics of these pupils, their practices, and perceived supports. Cross et al. (2014) found that although most respondents, particularly primary teachers, expressed a desire to support gifted pupils, a large number of responding classroom teachers (42% of 367) believed that they had insufficient knowledge about how to teach them and did not have adequate time to differentiate instruction. Many respondents did not believe they had adequate support to differentiate instruction for this group of pupils, nor did they feel they had adequate access to specialists who could identify and work with them. Primary teachers, as well as teachers at both levels with more teaching experience, engaged more frequently in curricular modification than less experienced and post-primary teachers. The results led Cross et al. (2014) to note that the adequacy of provision appeared to be questionable and to maintain that "providing a differentiated educational experience … appears to be challenging" (p.3) as practices beneficial to high-ability pupils occur infrequently.

Looking at these studies overall, questions can be asked regarding teachers' ability to adequately address the needs of their exceptionally able pupils in view of the seeming lack of knowledge regarding the concept of exceptional ability, lack of information and/or confidence on how to identify them, and lack of strategies and support in teaching them. Teachers' practices within the classroom, and knowledge about and confidence regarding exceptionally able pupils are now discussed in more detail.

Classroom Practices

As reported, there is little support among Irish teachers for practices that have been shown to benefit exceptionally able pupils, such as acceleration and ability grouping (Cross et al., 2014; Ní Chéilleachair, 2013; Whelan, 2003). Whole-class teaching is the most common format for teaching core subjects in primary schools (Clerkin et al., 2017; Kavanagh et al., 2015). In NA 2014, 85% of sixth-class pupils were taught by teachers who engaged in whole-class teaching in most maths lessons, and a similar picture emerged

[6] It should be noted that the research reported in this thesis was conceived, planned, and the data collected before the Cross et al. study was published in late 2014.

for English with 70% of second-class pupils in classes in which whole-class teaching was implemented in most lessons (Kavanagh et al., 2015). Working in groups, either mixed-ability or same-ability, was infrequently experienced in mathematics (Clerkin et al., 2017) and reading lessons (Kavanagh et al., 2015). For example, only 16% of pupils were in classes in which group reading involving similar-ability groups was implemented in most lessons (Kavanagh et al., 2015). Team-teaching with a support teacher is becoming more common in classrooms and this strategy was implemented in at least some lessons by teachers of 40% of pupils (Kavanagh et al., 2015). Consistent with the inspectors' reports, textbooks were the most commonly-used resource in mathematics classrooms, with over 90% of pupils in classrooms where these were used on a daily basis (Kavanagh et al., 2015).

A mismatch between how teachers teach and how pupils feel they learn best has been reported (Department of Children & Youth Affairs [DCYA], (2017). Over 3,000 young people completed a national survey which was designed by Comhairle na nÓg.[7] The results show that although pupils prefer active learning experiences, only 30% reported that their teachers make learning interesting by using methods that challenge, stimulate, and encourage them to be actively involved (DCYA, 2017). Inquiry-based methodologies are not common in Irish classrooms (Clerkin et al., 2017). This is supported by findings that the only two practices which a majority of fourth-class pupils experienced in almost all mathematics lessons in Ireland were listening to the teacher explaining new content (73%) and explaining how to solve problems (57%) (Clerkin et al., 2017). Research has shown how the use of inquiry-based methodologies in primary school science lessons is associated with more positive attitudes to science among pupils (Murphy, Varley & Veale, 2012). A national study elicited primary pupils' views through questionnaires, lesson observation, and focus group interviews, and found that the pupils were generally very positive about learning science especially using a 'hands-on' approach, but there was infrequent use of inquiry-based approaches and over-emphasis on deductive approaches (Murphy et al., 2012).

[7] Comhairle na nÓg consists of child and youth councils in 31 local authorities and are designed to give young people a voice on the services, policies, and issues that affect them (DCYA, 2017).

Teacher Confidence and Knowledge

Irish teachers have acknowledged that they are not very confident in teaching science, particularly to exceptionally able pupils (Clerkin et al., 2017). Two-thirds (66%) of fourth class pupils in Ireland are taught by teachers with only medium or low confidence that they could provide appropriately challenging science instruction for higher-achieving pupils. A majority of teachers (55%) also acknowledged their limited confidence in their ability to accurately assess their pupils' understanding of science in the first place (Clerkin et al., 2017).

The picture in mathematics teaching is more complex. In TIMSS 2015, most pupils had teachers who expressed high or very high levels of confidence in inspiring their pupils to learn mathematics (93%), and in being able to adapt their teaching to engage pupils' interest (86%; Clerkin et al., 2017). Furthermore, 79% of pupils had teachers who reported that they were confident that they could provide appropriate tasks for high-achieving pupils in maths. Paradoxically, two-thirds of pupils in sixth class were taught by teachers who agreed or strongly agreed that they would benefit from professional development to improve their own understanding of the mathematics content/processes they teach (separately from strongly agreeing that they would benefit from support in the teaching of mathematics; Kavanagh et al., 2015). Previously, Delaney (2010) found that primary teachers varied greatly in their mathematical knowledge for teaching, and teachers identified a need for greater support in differentiating their teaching to address the needs of individual pupils, including those who are exceptionally able (Clerkin, 2013).

Questions have been raised about the performance of pupils in Ireland in both national and international assessments on reasoning and problem-solving, areas in which higher-ability pupils might be expected to perform well. In the mathematics domain, Irish pupils in TIMSS 2015 performed relatively poorly in the most cognitively demanding domain, that of Reasoning, which encompasses unfamiliar situations, complex contexts and multi-step problems (Clerkin et al., 2016). A similar picture was reported in NA 2014 where the second and sixth class pupils responded correctly to approximately half of the Apply and Problem Solve items in comparison to getting around two-thirds of the Implement items correct (Kavanagh et al., 2015). This is perhaps not surprising, as Close (2013) points to less time allocated by Irish teachers to teaching more complex

mathematical processes and more cognitively demanding content areas compared with the more basic processes and content.

Teachers are clearly aware that mathematical problem solving presents a particular difficulty. Kavanagh et al. (2015) reported that more pupils (52%) were taught by teachers who expressed a need for CPD in the area of problem solving/reasoning than in any other aspect of mathematics, and problem solving was the area mentioned most often by teachers when asked to identify classroom targets for improving mathematics.

Recognising the difficulties in the more cognitively demanding aspects of maths, the revised literacy and numeracy targets aim to provide resources and supports for teachers and schools to support a broad range of teaching and learning methodologies, including inquiry-based learning and problem-solving, both areas of recognised weakness (DES, 2017a). This is a timely initiative as Close (2013) argues that the discrepancy between teachers' reported high confidence in their ability to teach higher-achieving pupils and their expressed need for support to help them understand the mathematics content they teach suggests that primary schools need to do more to challenge more able pupils, and to highlight this need among teachers and teacher educators.

Interpretation of the Problem

In Ireland, the picture regarding exceptionally able pupils, who are categorised in legislation as having special educational needs, is complex. Results of national and international assessments indicate that they are not making progress commensurate with their abilities as their lower-achieving peers are, and their achievements do not match those of their international counterparts. Inspectors' reports raise questions regarding some practices in primary schools with regard to providing adequate challenge to pupils, and teachers acknowledge their need for support in teaching more cognitively demanding material to exceptionally able pupils. The DES is aware of these weaknesses in the system and seems to be increasing its focus on this cohort of pupils now as can be seen in the launch of two recent initiatives. Hence, research is needed to explore what happens at the school and classroom level in primary schools, through gauging the perspectives of key stakeholders, namely the teachers. In response, this study, which is both necessary and

timely, focuses on the experiences of mainstream classroom teachers in one geographical area in the south of Ireland to determine how they view, identify, and address the needs of exceptionally able pupils.

Organisation of Thesis

This introductory chapter presented the aim, rationale, and broad research question that this study seeks to address. It outlined the Irish context which gave rise to the research question, in particular, the scarcity of research in the area of gifted education. There is an extensive literature on gifted education, and Chapter 2 draws on and critically analyses research and theories from which the specific research questions evolved. Chapter 3 describes the research strategy and design which underlie the study, as well as the data collection methods considered most suitable to answer the research questions. The procedures used in the data analysis are also briefly described. Chapter 4 presents the findings and discusses these in relation to the literature. Finally, following a brief summary of the findings and their implications, Chapter 5 provides recommendations for teachers, schools and the DES, along with recommendations for future research.

CHAPTER 2: REVIEW OF LITERATURE

There is an extensive literature, both theoretical and empirical, on various aspects of gifted education, but the focus has not changed much over the past twenty years. This literature review explores work relating to some of the main topics, particularly the conceptualisation and definition of giftedness or exceptional ability, the identification of exceptionally able pupils, and provision to address their needs. Definition, identification and provision are separate but interrelated elements which impact on and interact with one another. Making appropriate provision for exceptionally able pupils in order to address their special needs depends on these pupils being identified, and this, in turn, largely depends on teachers' ideas of what constitutes an exceptionally able pupil. These concepts are the main focus of the study.

This chapter is divided into three main sections. The first section explores changing definitions and conceptions of giftedness in order to tease out and clarify what, in an Irish context, is meant by giftedness, or exceptional ability as it is termed in government policy documents. The second section looks at the strategies and procedures that are considered best practice for identifying and making provision for exceptionally able pupils, and the implications these have for schools. The third section examines research on teachers' attitudes and beliefs regarding individual differences and their knowledge about the needs of exceptionally able pupils, as these play an important role in how teachers respond to the challenge of educating these pupils (Szymanski & Shaff, 2013).

It is acknowledged that other important topics in gifted education, which generate much research and discussion in the literature, are not covered in this review. These include, but are not confined to, the underrepresentation of minority pupils in gifted provision, the issue of gender differences, underachievement, the role of creativity in the conceptualisation of giftedness, the role of parents in gifted education, and the voice of exceptionally able pupils. These topics, while alluded to, are not covered in depth in this review, not because they are not important, but rather due to the limited nature of this project. It must be noted also that this review focuses mainly on literature and research which has been published over the past ten years. Particularly relevant work from the latter part of the twentieth century and the beginning of this century is also discussed. Research

from the US dominates the field, but studies from other countries, where available and relevant, have been included also.

Section 1: Changing Conceptions of Giftedness/Exceptional Ability

Being closely allied to conceptions of intelligence, theories of giftedness and exceptional ability have become more complex as theories of intelligence have become more comprehensive, and considerable controversy continues to surround both (Matthews & Dai, 2014). Striving to arrive at a satisfactory definition of what is meant by exceptional ability is not just an academic exercise, as the definition used has significant implications regarding educational provision for exceptionally able pupils (Matthews & Dai, 2014). Particular conceptualisations of ability underpin identification procedures and teaching methodologies, and affect whether and which pupils are offered differentiated provision (Freeman, Raffan & Warwick, 2010; Mazzoli Smith & Campbell, 2016).

The idea of giftedness as largely genetically based, stable throughout life, general across domains, synonymous with innate high intelligence, and measurable on IQ tests, was the dominant view throughout much of the 20th century (Foley Nicpon & Pfeiffer, 2011). This perspective saw relatively few pupils regarded as gifted and led, not surprisingly, to charges of elitism and entrenchment of existing inequalities (Freeman, 1998; Matthews & Dai, 2014; Mazzoli Smith & Campbell, 2016). In opposition to this narrow psychometric view, a very different approach began to emerge during the last quarter of the 20th century, an approach which stressed the importance of context, that is, environmental and psychosocial factors.

Influence of Marland (1972)

Ushering in a newer, multidimensional view of ability, the publication of the Marland Report (1972) in the US marked a watershed moment in the area of gifted education (Jolly & Robins, 2016), and provided an impetus for new thinking about ability and intelligence. Focusing on domain-specific abilities rather than on general intelligence alone, Marland (1972) claimed that gifted and talented pupils are those who, "by virtue of outstanding abilities, are capable of high performance" (p. 36), with high performance being characterised by demonstration of achievement and/or potential ability in any one of

several areas, either singly or in combination. These areas included "general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performance arts, and psychomotor ability (athletics and gymnastics)", and it was estimated that 3% - 5% of the population fell under this definition (Marland, 1972, p. 36).

Marland's broad interpretation of giftedness served to direct the attention of educators to the priority of providing special services for exceptional learners whose instructional needs were not being served by the regular school curriculum. Marland's definition is still widely used in US schools (Warne, 2016), and it has served as a basis for many contemporary definitions of giftedness, including the first definition of giftedness in Ireland, in the report of the Special Education Review Committee [SERC] (1993).

Conceptualisation of Exceptional Ability in the Irish Context

The SERC report contains the first definition of exceptionally able pupils in Ireland and is the basis for the definition in *Exceptionally Able Students: Draft Guidelines for Teachers* (NCCA, 2007) which was distributed to every school in Ireland in 2007. These two publications remain the main sources of information and guidance regarding exceptionally able pupils which are available to Irish teachers, and this literature review draws extensively on them. Following closely the vision set out in Marland's report, the SERC (1993) report defines exceptionally able or talented pupils as those for whom the "education which is generally provided in the ordinary classroom is not sufficiently challenging" (p. 160), and who have demonstrated their capacity to achieve high performance in one or more of the following areas:

- general intellectual ability
- specific academic aptitude
- creative or productive thinking
- leadership ability
- visual and performing arts
- mechanical aptitude
- psychomotor ability (for example, in athletics or gymnastics) (p. 160).

SERC (1993) further argues that exceptional ability and talent are seen as an "interaction between three basic human traits – above-average general abilities, high levels of task commitment and high levels of creativity" (p. 162), an argument that is based on Renzulli's (1978) three-ring model of giftedness.[8]

The definition in the NCCA (2007) *Draft Guidelines for Teachers* categorises exceptionally able pupils as those who "require opportunities for enrichment and extension that go beyond those provided for the general cohort of students" (p. 7). The NCCA definition also includes a list of areas in which exceptionally able pupils will demonstrate very high levels of attainment, most of which are very similar to those of SERC (1993),[9] and according to this definition it is estimated that between 5% and 10% of the school population are exceptionally able. The SERC (1993) report and the NCCA (2007) guidelines espouse a multidimensional view of giftedness, but they also include the more unidimensional idea of an IQ score of 130 and above as a marker of giftedness, with the caveat that exceptional ability in areas such as creativity, leadership, art, and social and physical skills may not be recognised (NCCA, 2007). In contrast to Marland's (1972) definition which included "potential ability" as well as "demonstrated achievement" (p. 36), the definition available to Irish teachers talks of pupils who "will demonstrate very high levels of attainment" (NCCA, 2007, p. 8) or have "demonstrated their capacity to achieve high performance" (SERC, 1993, p. 160). The Irish perspective would thus seem to exclude underachieving pupils as well as those who may not be able to demonstrate capacity for high performance such as some pupils with disabilities.

Drawing heavily on the SERC/NCCA definition, the Special Education Support Service [SESS] (n.d.), which is primarily a support agency for Irish teachers to help them enhance the quality of learning and teaching in relation to special education provision, adds that the definition accepted worldwide in educational and psychological fields is that an exceptionally able pupil shows exceptional ability in one or more areas, including mathematical, verbal, musical, spatial, artistic etc. However, it leaves undefined what is meant by 'exceptional', and it agrees that clearly delineating what 'exceptional' entails is

[8] It is clear that SERC drew heavily on both Marland (1972) and on Renzulli (1978), although neither is referenced in the SERC (1993) report.
[9] Psychomotor ability is excluded from the NCCA (2007) definition, but "special abilities in empathy, understanding and negotiation" are included, and sports is added to visual and performing arts (p. 8).

problematic, as the abilities of exceptionally able pupils stretch along a continuum so that it is difficult to determine exact cut-off points.

Contemporary Conceptions of Giftedness/Exceptional Ability

Following Marland, the latter part of the 20th century was notable for the number of theories and models that were produced as theorists and researchers tried to broaden the concepts of ability, intelligence, and giftedness, and attempted to clarify how these related to one another. A hallmark of these new approaches was that intelligence, which had been largely synonymous with giftedness in earlier conceptions, was seen as a necessary but not a sufficient condition for high achievement (Plucker & Callahan, 2014). Factors such as motivation, effort, persistence, support, and opportunity were regarded as necessary to complement high ability.

Three of the most influential models advanced were those of Renzulli, Gardner, and Sternberg respectively. Renzulli's (1978) three-ring conception of giftedness, which is the best known model in the field (Plucker & Callahan, 2014), suggested that giftedness is a result of the interaction between above average ability, creativity, and task commitment. He argued that high achievement was not possible without task commitment (Renzulli, 1998). In contrast, Gardner's (1983) theory of multiple intelligences sees intelligence as best quantified in terms of multiple distinct abilities. Likewise, Sternberg's (1985, 1988) triarchic theory of successful intelligence, differs in the extent to which giftedness was modifiable and could be developed, and he regarded the application of thinking skills to practical problems as a necessary component of giftedness. Both Renzulli and Sternberg continued to refine and expand their models (see for example, Renzulli, 2002; Renzulli & D'Souza, 2014; Sternberg, 2009), and Gardner (1997) added other intelligences to his original seven.

An approach to giftedness or exceptional ability that focuses on schools is that of Cross and Coleman (2005). This developmental model makes a distinction between exceptional ability or giftedness displayed by primary pupils and that shown by post-primary pupils. At primary level, pupils can be regarded as having potential for giftedness, especially based on the results of ability tests. However, by post-primary school, pupils should only be regarded as gifted if they perform at an advanced level in a particular area,

because being gifted means “moving beyond potential to actual performance” (Cross & Coleman, p. 53). This means that older pupils should be identified on the basis of achievement rather than ability, a view supported by Erwin and Worrell (2012) who maintain that giftedness is the manifestation of potential through actual accomplishments in the real world.

According to Cross and Coleman’s conception, giftedness is seen as developmental in that it is dynamic and malleable, and the expression of giftedness depends mainly on a responsive context and on a pupil’s personal characteristics such as motivation, effort and perseverance. A responsive context includes the opportunities that are available in schools and classrooms, as well as teacher expertise. Advanced development can occur when opportunities for learning are available in the school and when the pupil avails of those opportunities. The pupil therefore plays a vital role in his or her own development. Balchin (2009) agrees that a pupil’s motivation and engagement in learning are essential to the development of gifted achievement.

Subotnik et al.’s (2011) model incorporates many aspects of Cross and Coleman’s school-based conception. They also see giftedness as developmental in that gifted potential is the hallmark of younger exceptionally able pupils, but older pupils are expected to display their exceptional ability through their achievements or performance. Subotnik et al. (2011) also stress that cognitive and psychosocial variables are essential, are malleable, and need to be deliberately cultivated. Many newer approaches to giftedness include motivation, effective cognitive skills, and above-average performance in a domain, and many are developmentally based (Callahan 2011).

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A conceptualisation of giftedness that is gaining traction is one proposed by Matthews and colleagues (Matthews 2014; Matthews & Dai, 2014; Matthews & Folsom, 2009; Matthews & Foster, 2005, 2006), which they claim leads to an education-based definition that is both simple and practical:

> Giftedness is exceptionally advanced subject-specific ability at a particular point in time such that a student’s learning needs cannot be well met without significant adaptations to the curriculum (Matthews & Foster, 2005, p. 25).

Balchin (2009) pointed out that this practical definition emphasises the dynamic nature of exceptional ability and "leads directly to reasonable implications for educators" (p. 55). Consistent with Dweck's (2006) idea of mindsets (see next section), this model, referred to as the mastery model, may be more acceptable to teachers as the focus is on pupils' learning needs, and teachers are well placed to assess pupils' learning needs, whichever end of the ability spectrum those pupils occupy.

As far back as 1989, Borland argued for a 'special education' approach to the needs of exceptionally able pupils which would provide a workable framework that teachers could use. In a special-education approach, exceptionally able learners are regarded as having advanced educational needs which require special educational provisions if these pupils are to continue learning (Balchin, 2009; Borland, 2012). Giftedness is essentially about "matching exceptional learning needs with appropriate educational provisions" (Balchin, 2009, p. 55), thus providing pupils of high ability with an appropriate education. Working from a similar perspective, Peters (2016) argues that instead of trying to define giftedness, teachers should focus on pupils who are in some way mismatched with the curriculum or instruction they are receiving, and move straight from the observation of an unmet need to providing more challenging material.

This idea of a mismatch is one that would fit well within the Irish education system, as exceptionally able pupils belong on a continuum of pupils with special educational requirements (NCCA, 2007). One theoretical model, Response to Intervention (RtI), has a number of similarities to the Irish system of special education in mainstream schools. The RtI model was originally used to assess the learning needs of pupils who were experiencing difficulties in learning, and is based on the understanding that pupils learn at different rates and at varying levels of complexity (Brown, 2012). Adapted for gifted pupils, RtI considers pupils' learning needs based on their strengths and areas of mastery. For exceptionally able pupils, this might then mean providing challenging coursework early in school, before problematic work habits have a chance to develop.

This model ties in well with Borland's (2005) call for a shift in gifted education so that rather than labelling pupils as gifted or not gifted, the focus would be on providing pupils with a responsive differentiated curriculum that is guided by their educational needs. It can also be argued that twice-exceptional pupils can be well supported in the fluid tiered

system of RtI as it allows for focused instruction targeting both areas of challenge and areas of strength (Brown, 2012; King, Coleman, & Miller, 2011; Robertson & Pfeiffer, 2016). There is no doubt that their dual set of needs complicates identification and provision of support: because their exceptional ability and higher-level thinking often mask their disability, twice-exceptional pupils may appear to be average in the classroom setting. The RtI screening for strengths and interests, as well as academic challenges, would go a considerable way towards identifying their areas of need in both directions (Hughes et al., 2009).

RtI has many points of similarity with the Continuum of Support model used in Ireland for primary pupils with learning difficulties, and many of the school-level issues are the same. The Continuum of Support is a problem-solving model in which a dynamic process of identification of needs, planning, target-setting, intervention, and monitoring of outcomes are essential elements (DES, 2017c). This process is quite similar to the key components of RtI: identification of need, meeting the need, and monitoring and reviewing outcomes. Each of these steps in the process involves trying to answer the question of how a pupil, whether initially below grade-level curriculum or above it, can be helped to make achievement gains when the standard curriculum is not appropriate to do so (Hughes & Rollins, 2009). As an example, just as below-grade-level assessments allow teachers to identify pupils who may be in need of different interventions that reteach the core curriculum, so assessments that monitor progress within and beyond the core curriculum – out of level tests – allow teachers to identify pupils in need of an accelerated core curriculum (Johnsen, Parker & Farah, 2015). The idea of identification viewed as an integral part of provision, reflects the conclusion that an education system that caters for a diversity of pupils' needs is founded on the premise that pupils first need enriching opportunities to discover their strengths and interests, and once identified, those strengths and interests can be "nurtured and supported and potential can be developed into performance" (NCCA, 2007, p. 80).

Some Areas of Consensus

Debate continues in the literature regarding the concept of giftedness, and no agreed definition has arisen out of contemporary theories and models. Nonetheless, there are a

number of areas where some general agreement has been reached, which can be summarised as follows:

- Giftedness is a multidimensional concept, embracing "*relatively autonomous* human intellectual competences" (Gardner, 1993, p. 8), different ways of being intelligent (Sternberg, 2003b) or clusters of traits which interact with and affect each other (Renzulli, 2005).
- Environmental factors strongly influence the extent to which individuals are able to utilise and develop whatever inherited potential they have, and good teaching is a vital part of that environment (Cross & Cross, 2017).
- Personal factors are important: Opportunities to develop skills and competencies need to be provided to pupils, but pupils also need to play a part by using the opportunities they are offered (Cross & Coleman, 2005; Subotnik, Olszewski-Kubilius & Worrell, 2012). In particular, experts see motivation as the driving force behind other traits and agree that it is likely to be impossible to develop any or all abilities without proper motivation and sufficiently focused attention (Dweck, 2009; Gardner, 1993; Renzulli, 1986, 1998; Sternberg, 2000).
- Giftedness is developmental in nature: Rather than being seen as an innate, general, immutable ability, giftedness is now regarded as being dynamic and malleable. There is an emerging consensus that giftedness is the result of the interaction between genetic predispositions, personal characteristics, and environmental forces (Cross & Coleman, 2005; Jung, 2012; Matthews & Dai, 2014; Ziegler, Stoeger & Vialle, 2012). This also means that giftedness emerges and wanes at various times depending on the contextual factors at play (Worrell, Olszewski-Kubilius & Subotnik, 2012).
- Modern conceptions of exceptional ability recognise that giftedness is socially-constructed, and that definitions of giftedness are time and culture bound (Borland 2012; Csikszentmihalyi, 1996; Subotnik et al., 2012). What is valued in any culture at a particular time will vary greatly between communities, and cultural conceptions reflect the values of society and dictate who and what are seen as important (Coleman, Sanders & Cross, 1997; Dai & Chen, 2013; Freeman, 2005; Pfeiffer, 2012). For example, based on perceived national need, currently Ireland

strongly promotes and values interest in science, technology, engineering and mathematics (STEM) abilities.

Mindsets

The broadening of the parameters of what is understood by exceptional ability leads to questions regarding the appropriateness of schools' structures for defining giftedness and for identifying, teaching and assessing gifted pupils. These, in turn, depend to a great extent on teachers' beliefs or mindsets regarding ability. The concepts of ability and intelligence explored in Dweck's work (1999, 2006, 2017) sum up the two main theoretical paradigms in gifted education which are likely to lead to very different outcomes for pupils depending on which one teachers, and indeed pupils themselves, hold. Dweck used the term 'mindset' to describe assumptions held by individuals about ability and achievement, and reported that these assumptions affect the way that individuals respond to challenge. Those who hold an entity or 'fixed' mindset see ability as a more or less fixed attribute, which is demonstrated in successful performance – this view is consistent with the traditional, unidimensional views of intelligence. On the other hand, more in line with newer perspectives, individuals who hold an incremental or 'growth' mindset view ability as malleable and as developing over time through effort, practice, opportunity and support (Dweck, 2006).

A review of research published from 1998 to 2017 on the relationship between mindset and academic achievement found a limited number of studies, but the evidence suggested that supporting teachers to view ability as malleable and to view hard work as necessary for high attainment, is beneficial to promoting a learning environment in which pupils can achieve optimal learning and intellectual growth (Zhang, Kuusisto & Tirri, 2017). Teachers also have a vital role to play in orienting pupils to the idea of developing their abilities through effort and persistence. Pupils with a fixed mindset tend to see failure as evidence of lower ability, and thus they are likely to avoid challenge where possible, while those with a growth mindset are likely to attribute failure to a need to work harder or smarter rather than to a lack of ability (Dweck, 2009). Balchin (2009) goes so far as to speculate that perhaps "gifted-level outcomes result simply from fostering a mindset that includes hard work, drive, motivation and persistence over time in diverse subjects" (p. 54).

Conceptual Framework

Having reviewed some of the major approaches to giftedness/exceptional ability in the giftedness literature, Cross and Coleman's (2005) School-based Conception of Giftedness was chosen as the theoretical framework for this study of primary teachers' perceptions and practices in relation to exceptionally able pupils. This is a developmental model which focuses mainly on academic domains and on the key role that schools and teachers play in the development of those domains, such as core subjects in school. Cross and Coleman (2005) define giftedness as an age-related phenomenon which manifests in young children and preadolescent pupils as high general cognitive ability, displayed through "potential (ability), actions (performance), or rapid learning in school-related domains" (p. 59). The model is based on many decades of research in gifted education.

This model is particularly useful because it clearly indicates the role teachers hold in promoting advanced development in pupils with potential. Teachers can identify signs of exceptional ability in primary pupils through the potential pupils display, their actual performance in school, and/or their rapid learning compared to peers in a school-related subject or domain. Regarding provision for these pupils, the role of the teacher is to provide opportunities to develop pupils' skills and competencies, and good teaching is a vital part of that context (Cross & Cross, 2017). Teachers need knowledge and strategies to be able to respond to a pupil's rapid learning and have adequate resources relevant to a domain.

An interesting facet of this model is the emphasis placed on pupils' personal characteristics and on their role in their own development. Cross and Coleman (2005) maintain that having high cognitive ability may predispose pupils to develop in an area, but for advanced development to occur in an area of schooling, opportunities for advanced development must be provided by the teacher or school, and the pupils are expected to show commitment to developing their skills and knowledge in their area of strength. This then means that the teacher needs to consider pupils' interests, motivation, perseverance and work ethic (Cross & Coleman, 2005). Balchin (2009) agrees that the teacher has to closely monitor the current intensity and drive that pupils bring to their schooling.

Cross and Coleman's (2005) School-Based Conception of Giftedness served as a base to explore primary teachers' perceptions as well as their classroom practices as they try to facilitate learning of exceptionally able pupils in traditional classroom settings. In order to answer the research questions driving this study, the model provided a lens through which the teachers' perspectives and experiences could be explored.

Situation in Ireland

Relatively little is known about the way in which giftedness/exceptional ability as a concept is defined and operationalised in Irish schools. The NCCA (2007) guidelines point out that the typical picture of an exceptionally able learner as a hard-working pupil who completes work diligently and is seen by peers as the best in the class, does not reflect the reality which is much more complex. However, Ní Chéilleachair (2013) found that few of the responding primary teachers in her study reported having seen or used the NCCA (2007) guidelines.

The few studies that have been carried out indicate that teachers lack knowledge about gifted education. In a survey of 35 post-primary schools, Daly (2015) found that almost all participants (91%) gave a negative response to an item which asked about staff knowledge of the concept and definitions of exceptional ability, and almost three-quarters responded negatively to the item, 'Most teachers know who the Exceptionally Able /Dual Exceptional students are in their classes and are aware of the range and nature of their activities'. Previously, Flynn's (2005) small-scale study explored teachers' understandings of what constitutes exceptionally able pupils by comparing the views of final-year trainee primary teachers to the views of teachers engaged with exceptionally able pupils on a Centre for Talented Youth, Ireland (CTYI) course. The results indicated big differences in the views and knowledge of the two groups. Perhaps not unexpectedly, all CTYI teachers were very exact and specific in their conceptualisations of exceptionally able pupils. In contrast, the trainee teachers were vague in their knowledge, a result that is unsurprising given that currently there is little input regarding exceptionally able pupils in initial teacher training. In a more extensive study, Cross et al. (2014) found that, in line with one element of the NCCA (2007) definition, primary teachers were likely to believe that exceptionally able pupils require the regular curriculum to be adapted so that a more challenging

education is offered to them than that which is generally provided for the general cohort of pupils in the ordinary classroom.

Conclusion of Section

Contemporary theories of exceptional ability emphasise that gifted achievement depends not alone on intelligence, but also on environmental opportunities such as appropriate teaching, and on the development of psychosocial skills including effort, motivation and persistence which are often regarded as the key ingredients that enable high ability pupils to successfully move to gifted performance (Cross & Coleman, 2005; Gagné, 2005). The definition of giftedness or exceptional ability available to teachers in Ireland draws on contemporary ideas about broadened conceptions of giftedness and intelligence, as well as on traditional ideas and has a double focus: (a) pupils must demonstrate very high levels of ability or very high levels of attainment in one or more domains; and (b) they need more challenging opportunities than are generally available in the regular classroom (NCCA, 2007; SERC, 1993). This definition is consistent with the approach that sees gifted education, similar to special education, as a mismatch between a pupil's ability level and the curriculum offered to his/her age and grade. Teachers are well placed to assess pupils' learning needs, but the literature suggests that they need to hold, and support their pupils to hold, a growth mindset which is critical to the development of their abilities (Dweck, 2017). Due to the scarcity of research, little is known about how teachers in Ireland define and conceptualise exceptional ability and whether or not they draw on the newer multidimensional perspectives. This study seeks to address this deficit.

Section 2: Changing Practices in Identification and Provision

Contemporary perspectives on giftedness acknowledge that pupils demonstrate exceptional ability and skills in different ways, which, in turn, require more reliable and varied forms of assessment and identification (Calero, Belen & Robles, 2011; VanTassel-Baska, Feng & Evans, 2007). Identifying exceptionally able pupils is regarded as an essential part of providing a comprehensive education that is in keeping with their abilities and learning requirements, and needs to be carried out in the context of some planned educational provision (Dai, 2003). This section first looks at the issue of identification, briefly outlining why exceptionally able pupils need special provision, before looking at

specific methods and procedures that can be used in practice at the school and classroom level to identify exceptionally able pupils, and also at some of the challenges inherent in the identification process. The literature is then examined to see what are regarded as the most effective current practices in provision for addressing the needs of exceptionally able pupils. These issues are teased out against a background of the information available to teachers from policy and research regarding identification and provision practices in the Irish setting.

Approaches to Identification

Identification is one of the most widely researched topics in gifted education (Cao, Jung, & Lee, 2017; Dai, Swanson, & Cheng, 2011). In addition to making decisions about curriculum differentiation, Pfeiffer (2015) lists several other reasons why pupils of exceptional ability should be identified: to understand the unique learning strengths and weaknesses (asynchronies) of these pupils; to help in diagnosing dual exceptionality; to assess development in areas such as critical thinking and higher-order problem-solving with a view to modifying the curriculum to ensure pupil 'fit'; and to discern issues that may be contributing to underachievement. In this way, identification can be considered the mediating link between a school's definition of exceptional ability and the differentiated opportunities it provides (McClain & Pfeiffer, 2012; Worrell & Erwin, 2011).

Special Educational Needs of Exceptionally Able Pupils

Although the term 'special educational needs' is rarely used explicitly in the literature in the context of exceptionally able pupils, in Irish policy, pupils who are classified as exceptionally able belong on a continuum of pupils with special educational needs. The NCCA (2007) guidelines state that a pupil assessed at three standard deviations above the norm (IQ of 145) has learning needs as unique as those of a pupil whose IQ is assessed at three standard deviations below the norm (IQ of 55). Both SERC (1993) and NCCA (2007) note that, in order to meet their needs, exceptionally able pupils require special arrangements for enrichment and challenge that go beyond the range of activities provided for the general cohort of pupils.

Table 2.1. Characteristics of exceptionally able pupils and their ensuing learning needs

Characteristics	**Learning Need**
Ability to quickly grasp concepts and see relationships between them; quickly make generalisations and extract relevant points from complex material	Faster pace
Wide range and variety of interests	Greater breadth of information
In-depth, consuming interests	Greater depth of content
Persistent, intellectual curiosity; reason logically; good insight into cause-effect relationships	Opportunities to engage with complex/ challenging/ open-ended tasks that use higher-order thinking and problem-solving skills
Unusual insights and ideas; skilled in problem-solving; imaginative and highly creative	Complex, challenging and open-ended tasks; not restricted to producing one correct response; meaningful tasks with practical application
Highly motivated and self-directed (in area(s) of interest); preference for planning own learning and working independently	Independent, self-paced learning
Questioning decisions, ideas and 'givens', challenge the conventional	Opportunities to analyse and synthesise information, to debate issues and produce plans to solve problems
Reluctant to practise skills already mastered; can jump stages in learning and often frustrated by having to fill in the stages missed	Fast-paced instruction with minimal repetition

List of characteristics adapted from Betts and Neihart (2010).

As a consequence of their advanced cognitive abilities, experts argue that exceptionally able pupils typically have particular characteristics which result in specific educational needs (Table 2.1), and recognising these characteristics is an important first

step in ensuring that these pupils' needs are met (Olszewski-Kubilius, Subotnik, & Worrell, 2016). It must be noted that there is a danger that outlining characteristics such as these in Table 2.1, echo stereotypes. Not all exceptionally able pupils demonstrate these characteristics, and, just as with pupils who experience difficulty in learning, exceptionally able pupils require a different approach to learning, and the best way forward is through identifying and responding to the needs of individual pupils as they arise.

There is growing recognition that exceptionally able pupils, as all pupils, need support that is appropriate to their level of ability (Freeman, 1998). As a group, they do not achieve at impressively high levels if deprived of an appropriately challenging education (Assouline & Lupkowski-Shoplik, 2012; Colangelo, Assouline & Gross, 2004). There is no one definition for what constitutes challenge in the school context, but even 'the successfuls' (Betts & Neihart, 2010), that is, exceptional pupils who are performing well at school, may not be meeting their full potential, as they sometimes learn that they can satisfy teachers' expectations with little effort (Betts & Neihart, 1988; NCCA, 2007; Taylor, 2016).

Psychosocial Needs

Many exceptionally able pupils adjust to the school environment with relative ease, but, for others, exceptionality can bring with it challenges in social and emotional development, and this group of pupils are just as much in need of support as their peers in dealing with emotions, self-perception, and behaviour (NCCA, 2007). Because of their advanced intellectual ability, some high-ability pupils can understand the world and work intellectually years ahead of their chronological age, but their emotional level is more typical of their age-group and they are without the life experiences to temper their thoughts (Pfeiffer, 2012; NCCA, 2007). For example, these pupils may be more concerned than peers with their purpose in life, and are often more than usually interested in 'adult' problems such as environmental issues and injustice, but may not have the emotional maturity to deal with such issues without experiencing undue distress (Cross, 2011; NCCA, 2007).

Cross (2011), one of the leading experts in this area, argues that there is insufficient evidence to unequivocally state that exceptionally able pupils have social and emotional

needs that are qualitatively different from those of their non-gifted peers, but he agrees that, because of their extraordinary capabilities, they are more likely to experience some aspects of the world differently from pupils who are not within the gifted range. Neihart (2011) concurs, stating that "growing up gifted is a significantly different experience" (p. 189). Neihart (2011) argues that gifted pupils are markedly different in their intensity, perfectionism, sensitivity, and introversion than average ability peers, or even than older, average-ability pupils. Teachers need to be aware of the central importance of atypical or asynchronous development in the lives of exceptionally able pupils (NCCA, 2007), and the more extreme the advanced development, and the more obscure the area of interest, the less well-rounded the pupil may be (Coleman, 2011) and the greater the need for differentiated provision (SERC, 1993).

Consequences for pupils and society

Failure to appropriately provide for exceptionally able pupils can have possible adverse consequences for the pupils themselves and for society as a whole. If their advanced learning needs are not adequately addressed, experts believe that exceptionally able pupils develop further needs. Included among these are boredom and frustration leading at times to disruptive behaviour (Lubinski, 2004; NCCA, 2007); under-performance and disengagement from learning; (Ryan, 2009; Swiatek, 2007); hiding abilities in order to fit in with peers, behaviour that is particularly prevalent among girls (NCCA, 2007; Neihart, Reis, Robinson & Moon, 2002; Riley, Bevan-Brown, Bicknell, Carroll-Lind, & Kearney, 2004); experiencing social isolation, as well as feeling undervalued and demoralised (Cross, 2011); having low self-esteem (NCCA, 2007); and experiencing serious undermining of their confidence, motivation to learn, and readiness for new cognitive challenges (Plucker et al., 2004). Cross (2011) sums it up strongly, stating that it is incumbent upon adults to act proactively on behalf of exceptionally able pupils, as by doing nothing, adults " become complicit in the decline of their psychological well-being" (p. 26).

In addition to meeting the needs of individual pupils, gifted education can be considered as a vehicle to drive economic prosperity. Any country that wishes to remain internationally competitive can ill-afford to lose talent by failing to identify and nurture the full potential of its pupils, as its future prosperity rests not only on its ability to improve the

performance of its lowest-achieving pupils, but also on its ability to support and advance the performance of its most able learners (McClarty, 2015). Looking at the issue from a more positive view, Freeman et al. (2010) maintain that a focus on gifted education can enhance whole school improvement, and that by focusing on the learning and pastoral needs of their exceptionally able pupils "schools can create a much more positive environment in which diversity and innovation are valued" (p. 23).

Identification Process

The identification of exceptionally able pupils is a complex process and schools face considerable challenges when implementing an identification strategy (Pfeiffer, 2013; Plucker & Callahan, 2014). The guidelines on exceptionally able pupils (NCCA, 2007) acknowledge that assessment and identification processes for high-ability pupils are not as clearly set out as for other pupils with special educational needs, but note that, as identification is linked to context, it should be an ongoing, schoolwide process, feeding directly into both the planning of provision for pupils and a review of policy and practice, and be an integral part of the wider school improvement cycle. The current trend of moving beyond simplistic categorisation of pupils as gifted or non-gifted contributes to making the teacher's job of effectively identifying high ability pupils even more difficult. Moreover, common prejudices regarding what constitutes exceptional ability, as well as the vast array of definitions, can often hamper the establishment of clear, useful criteria which are needed to identify the most able pupils in education (Council of Curriculum, Examinations & Assessment [CCEA], 2006). The main methods of identifying exceptionally able pupils, as reported in the literature, are shown on Table 2.2, and, as can be seen, all have disadvantages as well as positive features.

Standardised Tests

Internationally, a high score on a standardised test, particularly on ability tests, is still by far the most common criterion for identifying pupils as highly able or gifted (Foley Nicpon & Pfeiffer, 2011). In their US national survey, McClain and Pfeiffer (2012) found that the majority of states rely primarily, and in some cases almost exclusively, on IQ scores to identify exceptionally able pupils, a situation that is replicated in Australia (Victorian Government Education and Training Committee [VGETC], 2012).

Table 2.2. Advantages and Disadvantages of Main Methods of Identification

Method of identification	**Advantages**	**Disadvantages**
Ability /IQ tests:	Valid/ reliable predictors of school achievement, future academic success (Warne, 2016); examiner can judge pupil's level of attention, persistence in the face of challenge, problem-solving strategies (Cao et al., 2017).	Only give estimate of ability at a particular point in time; tap analytic ability only, do not identify creative or adaptive thinkers (Sternberg, 2003b); pupil's energy, health, emotional state, and background may impact performance; administration demanding in terms of time and cost; pupil may be gifted in specific domain rather than across all areas (Pierson, Kilmer, Rothlisberg, & McIntosh, 2012).
Achievement tests	Provide evidence of academic functioning relative to peers; predict success in school achievement.	Low ceilings limit scope to display depth of knowledge; may not identify underachieving pupils as focus is on acquired knowledge rather than ability (McBee, 2010).
Teacher observation	Teachers observe pupils in variety of situations, have substantial knowledge of ability and potential (Siegle & Powell, 2004).	Tend to pick conforming, well-behaved, pupils (Szymanski & Shaff, 2013); prone to class and cultural bias (Gross, 1999); often ad hoc approach to identification; teachers may lack understanding of characteristics of gifted pupils (Taylor, 2016).
Checklists/ Rating scales	Objective, useful tools for teachers; allow for assessment of broad range of skills and competencies (Pfeiffer, 2002; Pierson et al., 2012); raise awareness of traits/behaviours that indicate giftedness; many have strong psychometric properties (Cao et al., 2017).	Lack of teacher training on different manifestations of giftedness (McCoach & Siegle, 2007; Siegle, Moore, Mann & Wilson, 2010); typical behaviours on scales may overlook underachieving/disengaged pupils.

Ability tests are not used in all Irish primary schools but standardised tests of achievement are mandatory in core subjects in certain grade levels, and findings from Irish research have pointed to a reliance on standardised tests to identify exceptionally able pupils. The primary teachers in Ní Chéilleachair's (2013) study used standardised achievement testing as one of two main strategies to identify exceptionally able pupils, although when asked to elaborate, teachers were quite vague.

In their larger study, Cross et al. (2014), reporting on the combined responses of both primary and post-primary teachers, found that psychometric tests, which included IQ, achievement, and creativity tests, were the most frequently cited measures of identification. The guidelines (NCCA, 2007) remind schools not to rely solely on IQ measures. Teachers need to be aware of atypical development in the lives of exceptionally able pupils which requires going "beyond traditional psychometrically-based findings in order to explore their educational, emotional and psychological needs" (NCCA, 2007, p. 12).

Although achievement tests are designed to measure what pupils already know about a subject rather than measuring general ability, the results of standardised achievement tests are commonly used by teachers to assess pupils' ability (Worrell & Erwin, 2011). But identification via pupil achievement may be unreliable if teachers do not realise that often the regular curriculum does not engage high-ability pupils, resulting in underachievement (Persson, 2010; Taylor, 2016). Another difficulty is the lack of standardised tests with sufficient range to capture very high levels of ability (ceiling effects). It is felt that the high ceilings in above-level tests are more compatible with the knowledge and capabilities of exceptionally able pupils than tests based on their chronological age, and above-level testing is one way to find their base level of ability (Cao et al., 2017; Rambo-Hernandez & Warne, 2015; Warne et al., 2016). Above-level tests are used in the Talent Search model,[10] and could probably be used to identify the learning needs of high-ability primary pupils in regular classrooms (Warne, 2014).

[10] The Centre for Talented Youth, Ireland (CTYI), based at Dublin City University (DCU) uses the Talent Search model to identify pupils of high ability. CTYI offers residential summer courses to pupils from 13 to 16 years and runs Saturday courses for primary pupils at various third-level institutions around the country. Both summer and Saturday courses are often in non-curricular subjects, giving pupils the opportunity to study topics that they would not normally be exposed to in school (O'Reilly, 2013). As far as the researcher is aware, the Talent Search model is not used here in primary schools.

Teacher Observation and Ratings

The NCCA (2007) guidelines recommend that teachers' observations of pupils' aptitudes, behaviours, and, importantly, their approach to tasks, be used in addition to pupils' performance on assessment tests or school tasks. Schools favour this method and teacher judgement is one of the most common means of identification (Freeman et al., 2010; Hammerschmidt, 2016; Sears, 2016; Taylor, 2016). Yet some debate continues on whether teachers, who frequently rely on their own personal ideas of exceptional ability, and who may not understand the diverse manifestations of giftedness, are in the best position to identify exceptionally able pupils (Acar, Sen, & Cayirdag, 2016; Foreman & Gubbins, 2015; Siegle et al., 2010).

Checklists and rating scales are useful for refining teacher observation, and they offer teachers a broader base for evaluating competencies that are separate from intelligence measures and could help to build up profiles, not alone of pupils' learning strengths but also of their learning needs (Cao et al., 2017; Pierson et al., 2012). Rating scales are regarded as the main means of assessing psychosocial factors, such as level of engagement with tasks, persistence, and self-regulation in the face of challenge, all of which play a major role in the manifestation of outstanding ability and achievement (Subotnik, Olszewski-Kubilius & Worrell, 2011).

The NCCA (2007) guidelines include three different checklists for teachers for identifying exceptionally able pupils in specific areas and across the curriculum. One of the issues with the NCCA checklists is that the characteristics of exceptionally able pupils are consistently presented in a positive light, and teachers using them may not consider disengaged, disruptive, or very retiring pupils whose exceptional ability may not be as evident. In a small-scale Irish study, McCafferty (2011) found that her specially devised behaviour checklist proved to be a useful tool for identifying exceptionally able pupils for an after-school enrichment club in that a diverse group of pupils was identified. However, the checklist did not identify what she termed "underground students" (p. 94), that is, less vocal and less assertive pupils. McCafferty concluded that a multi-dimensional referral system is more appropriate for identifying pupils who might be most suitable for enrichment activities in terms of maturity, commitment and enthusiasm.

Multiple Methods of Identification

Gifted education policy in Ireland, in the form of the NCCA (2007) guidelines, supports a holistic approach, in which the identification net is spread very widely and includes information from all individuals who have contact with a pupil. In general, parents have been found to be excellent judges of their children's abilities and skills. In her well-known longitudinal study, Freeman (1991) found that parents in England were very effective identifiers of giftedness in their children, with 90% of children reported to the National Association for Gifted Children (UK) by their parents correctly identified as being gifted "even when the teachers were dismissive of the child's exceptional potential" (Freeman, 1998, p. 14). Research into peer assessment is limited and what is available seems to have had negative results. One study found that peers tended to confound popularity with ability (Paunonen & O'Neill, 2010), and other research has found only fair-to-adequate reliability and limited evidence of validity (Blei & Pfeiffer, 2007).

A strategy that has traditionally been used to identify areas of weakness in pupils who have academic difficulties and need support, that is, curriculum-based measurement, could also be used to assess the performance of pupils who have advanced learning needs. From this perspective, the emphasis is on identifying current mismatches between the educational challenges on offer and pupils' capabilities in particular subject areas (Matthews & Dai, 2014). VanTassel-Baska (2009), an expert in curriculum issues, recommends the use of challenging, open-ended problems that require higher-order thinking and problem-solving, and which emphasise advanced reasoning processes rather than fast right answers. Data from curriculum-based measurement procedures may be more useful in targeting a pupil's specific strengths and for deciding on provision options rather than a standard score (Worrell & Erwin, 2011), and can bring attention to pupils who are unable to show ability via standard measures (Sarouphim & Maker, 2010). This method would work well with the Response to Intervention (RtI) approach which, with regard to gifted education, emphasises proactive responses to high-ability pupils who demonstrate the need for more intensive interventions to advance their learning (Hughes et al., 2009; Hughes & Rollins, 2009).

It would appear that multi-method identification has the potential to be inclusive as it provides the opportunity to identify the abilities and talents of many different pupils (Geiser, Mandelman, Tan & Grigorenko, 2016; Plucker & Callahan (2014), but research

that examined the identification of pupils from minority and disadvantaged families does not support that view. A compelling study looked at various ways of combining measures and compared the advantages and drawbacks of each combination (McBee, Peters & Waterman (2014). Examining the mandatory multiple-criteria assessment process in one US state, the researchers showed that common multiple criteria policies may not have the predicted outcome of improved identification of exceptional ability among all pupil groups, as up to a quarter of truly gifted pupils were missed and almost one fifth of pupils were identified who should not have been. It would seem that simply using more measures is not as important as how those measures are used.

While the NCCA (2007) guidelines recommends using a broad range of identification strategies, the lack of research in Ireland in the area of gifted education means that the knowledge base regarding actual identification practices in primary schools is limited. Half of the responding classroom teachers (n = 16) in one study did not identify any pupils as being gifted (Ní Chéilleachair, 2013). The other half reported identifying an average of 6% of pupils, which is within the range recommended by the NCCA (2007), and most of these were identified not by teachers but by other personnel, including CTYI, parents, and psychologists, suggesting that teachers rarely identify pupils in their classrooms as exceptionally able (Ní Chéilleachair, 2013).

Using multiple methods of identification invites the question of how teachers can synthesise or summarise all the information to arrive at a judgement, and, crucially, how to effect the transition from profile information to actual classroom experiences. Rather than being an end in itself, the identification process is only a means to an end, that of essentially recognising a mismatch between a pupil's level of ability and/or achievement and the curriculum being offered, in order to provide differentiated instruction to promote greater alignment. Identification and provision are inextricably linked, and this review looks next at current practices in provision.

Approaches to Provision

The Irish educational system is based on an inclusive approach which expects that all pupils' needs can be met within the regular classroom. The vast majority of pupils in Irish primary schools are taught in mixed ability classrooms; thus the regular class teacher has

responsibility for catering for the needs of pupils with a wide range of abilities and interests. There has been criticism of mixed ability teaching on the grounds that it does not address the specific needs of either low-achieving or high-achieving pupils as teachers need to target their instruction to the majority of the class (Olszewski-Kubilius, 2013).

The SERC (1993) report concluded that a more positive response to the particular special needs of exceptionally able pupils was required than that which was generally provided at that time. Such pupils need to be challenged in tasks to reach beyond their comfort zone into what SERC (1993) called "pushing into the frontiers of their competence" (p.161). SERC (1993) further adds that the more exceptional the ability of an individual, the greater the need for some form of special or supplementary arrangements to assist the pupil in "developing educationally at a pace and to such extent in breadth and depth as is compatible with capacity" (SERC, 1993, p. 161). SERC recommended a form of in-school organisation which enables exceptionally able pupils to participate in mixed-ability groups and find ways of having them work with pupils of generally comparable levels of ability, but gave no guidance as to how this would happen.

The NCCA (2007) guidelines outlined a range of organisational strategies through which flexible educational provision can be implemented. These include working with older pupils for some subjects "some of the time" (p. 59), compacting (reducing amounts of introductory activities and drills,) and target grouping (grouping exceptionally able pupils together for more difficult work). The guidelines also expect that exceptionally able pupils will work in mixed ability classes or groups most of the time, as all pupils "need to learn how to work together, how to appreciate each other's strengths and support each other's needs" (p. 59). It is recommended that school and classroom organisation maintain sufficient flexibility to allow adjustments to be made so that exceptionally able pupils have the opportunity to receive differentiated education whenever their specific learning needs become evident (NCCA, 2007). This is what 'appropriate' means in the context of gifted education (Worrell & Erwin, 2011). Flexibility of curriculum for exceptionally able learners refers to what Van Tassel-Baska (2003) terms "a speeded-up curriculum" (p. 176). This can take many forms but the focus of this section is on three of the main organisational strategies that are considered in the literature as suitable for implementation in primary schools.

Acceleration

Academic acceleration of high ability pupils is one of the best researched topics in the field. A key literature in this area is the seminal work of Colangelo and colleagues, *A Nation Deceived* (Colangelo, Assouline & Gross, 2004) and *A Nation Empowered* (Assouline, Colangelo, VanTassel-Baska & Lupkowski-Shoplik, 2015). A wide range of practices is covered under the umbrella term of acceleration in these two reports, in which experts in the gifted field outline the various types of acceleration available (Southern & Jones, 2004, 2015), review meta-analytic studies that cover decades of controlled studies into the effects of acceleration (Kulik, 2004; Rogers, 2004, 2015), review longitudinal studies to ascertain the long-term effects of accelerative practices on pupils (Lubinski, 2004; Wai, 2015), and review the social and emotional effects of acceleration (Cross, Andersen & Mammadov, 2015; Robinson, 2004). Reviewing studies on acceleration from 1990 to 2013, Rogers (2015) found strong average academic effect sizes[11] for gifted pupils across most acceleration types (including grade-skipping), moderate academic effects for early entrance to school and single-subject acceleration, and slight but positive academic effects for curriculum compacting. These reviews and meta-analytic studies comprise a significant body of evidence regarding accelerative practices, and they reveal a remarkably consistent pattern of overwhelming support for all forms of academic acceleration (albeit with some caveats) as viable options for providing an optimal educational match for exceptionally able pupils.

Much of the educational community views acceleration with some scepticism despite the positive effects of acceleration found in numerous studies, and entrenched concerns about social and emotional issues are often voiced (Robinson, 2004; Siegle, Wilson, & Little, 2013; Taylor, 2016). While the evidence generally shows that high-ability pupils as a group suffer no negative socioaffective consequences as a result of acceleration, it is important to note that negative effects for individual pupils have been reported at times (Rogers, 2007). In particular, it is the separation from same-grade peers in grade-skipping that raises the greatest concern with educators (Southern & Jones, 2015), concerns that often refer to pupils who might experience lowered self-concept as a result of accelerative

[11] Effect size quantifies the size of the difference between two groups (Coe, 2002). In meta-analysis, an effect size of .30 or higher is generally regarded as being of practical significance to classroom practice. An effect size of .30 suggests a grade equivalent improvement of about three additional months of achievement for the treatment group over the control group (Rogers, 2015).

practices. This drop in self-concept, termed the Big-Fish-Little-Pond effect and exemplified in the findings of Marsh and Hau (2003), arises when an accelerated pupil becomes less self-satisfied when taught more challenging material with intellectual peers. However, the opposite scenario has been mooted, and some experts believe that boredom (Plucker et al., 2004), underachievement, isolation from peers of similar ability, demotivation (Gross & van Vliet, 2005), and succumbing to the effects of peer pressure (Neihart et al., 2002) are the inevitable results of a mismatch between pupil ability and the level and pace of instruction.

Despite the NCCA (2007) guidelines emphasising the importance for exceptionally able pupils of a good match between their ability and the level of challenge, and despite the considerable evidence-base reported in the literature for acceleration, particularly for grade-skipping, neither grade-skipping nor early entrance to school are mentioned in the NCCA (2007) guidelines and these are not practices generally seen in Irish primary schools. Pupils are expected to stay in each grade for one year with peers of similar age, and neither repeating nor skipping a grade is normally accepted. Almost all primary schools restrict pupil intake to the beginning of each school year, and new pupils must be aged four years or older. There is no flexibility in the primary system to accept pupils younger than that. Research has shown that Irish teachers, in line with international counterparts, hold entrenched views regarding accelerative practices. In their nationwide study, Cross et al. (2014) found that while most respondents, especially those from primary schools, supported provision for exceptionally able pupils overall, they were strongly opposed to grade acceleration. Two of the main provision options available to teachers of pupils in mixed-ability classes are ability grouping and within-class differentiation, topics to which this review now turns.

Ability grouping

Ability grouping refers to organisational strategies that place pupils into different groups based on their ability, or, more usually, on their prior attainment. It is based on the assumption that grouping allows teachers to more clearly focus their teaching to match the needs of individual pupils **(**Collins & Gan, 2013; Olszewski-Kubilius, 2013). In contrast to the numerous studies on acceleration, the literature on ability grouping is not as extensive or the results as clearcut, and there is evidence to support strong arguments both for and

against it regardless of the type. Overall, according to the meta-analysis by Hattie (2009), ability grouping is one of the influences that has close to zero effects, but he did note more positive effects for high-ability pupils, and he cited Goldring (1990) who found that exceptionally able pupils in homogeneous groups with challenging curricula achieved more than highly able counterparts in regular classes.

Opponents argue that ability grouping reinforces educational inequalities. It is believed that pupils in top groups are exposed to higher teacher expectations, and have greater access to more experienced teachers, higher quality instruction, more challenging curriculum, and better resources but at the expense of greater negative effects on low-achieving pupils (Ansalone, 2010; McGillicuddy & Devine, 2018). Crucially, critics note that pupils rarely move out of lower ability groups (Hamilton & O'Hara, 2011; McGillicuddy & Devine, 2018). The majority of respondents (almost 68%) to McGillicuddy and Devine's (2018) national survey of DEIS schools in Ireland indicated there was movement between groups, but the researchers found little evidence of this in practice when they interviewed pupils and teachers in three DEIS Band 1 urban schools. The teachers felt that pupils were in the group that was appropriate for their ability and that the pace of learning suited them, thus it was difficult to see how upward movement between groups could occur, leading the researchers to conclude that ability grouping "sets limits, a glass ceiling" on how teachers teach and ultimately on how pupils learn (McGillicuddy & Devine, 2018, p. 95).

On the other side of the argument are those who support the premise that grouping enables teachers to effectively adjust their instruction to the diverse learning needs of all pupils. Teachers generally hold positive beliefs about the effects of ability grouping for pupils of all ability levels, including both the social and academic benefits to pupils from associating with others of similar intellectual ability (Gallagher, Smith & Merrotsy, 2011; Lleras & Rangel, 2009). Research supports these beliefs. Using a large data set from one school district in the US (incorporating data on over 9,000 pupils aged 8–10) to investigate the effect of various grouping strategies on pupil achievement, Collins and Gan (2013) revealed results which showed strong evidence that grouping pupils by previous performance significantly improved their reading and maths scores. What is interesting is that the effect of grouping was beneficial for pupils of all ability levels. There were slightly larger effects for high ability pupils, but there were still large and positive increases in

scores of the lower ability groups, and estimates for the two groups were not significantly different.

Not all research supports the positive effects of ability grouping on pupil achievement however, and many studies report mixed or neutral results. No significant effect of grouping strategy was found for reading (Hodum, 2016; Velechko, 2016; Wood, 2017) or for maths (Rogers, 2012) when different types of grouping strategies were compared. Other studies reported positive effects of grouping strategies on maths but not on reading achievement (Johnson, 2016; Matthews, Ritchotte & McBee, 2013), while Smith (2017) found no clear obvious advantages of either homogeneous or heterogeneous grouping for literacy, maths or science.

Pupils also seem to hold mixed or even negative views of ability grouping. In one study, exceptionally able pupils regarded being in a group with high-ability peers as offering the greatest number of academic advantages and mixed-ability grouping as offering the greatest number of social/emotional advantages (Adams-Byers, Whitsell, & Moon, 2004). Many pupils seemed to value being with peers of similar ability in homogeneous classes but they also enjoyed the social diversity of heterogeneous classes. Many of the pupils also recognised a dilemma – participating in homogeneous groups meant that they often lost the top spot in the class, but staying in mixed-ability classes generally led to boredom at the slow pace and repetitive content. While most of those pupils could see advantages and disadvantages to both settings, this was not the case for pupils in a UK study which used observation, questionnaires, and interviews to explore the attitudes and experiences of pupils of all ability levels who were grouped for maths (Boaler, Wiliam & Brown, 2000). Pupils had moved from mixed-ability grouping to homogeneous groups and a large majority of pupils (over 80%) interviewed from homogeneous groups were unhappy with their placement. Pupils in lower sets were offered restricted learning opportunities and they realised that their opportunities for learning were being minimised. Pupils in the top groups were required to learn at a pace which led, for many of them, to a lack of understanding, and almost half gave a negative response when asked whether or not they enjoyed maths lessons. These findings suggest that teachers do not necessarily adjust their teaching to effectively meet the needs of pupils in the different groups.

Within-class ability grouping, as distinct from cross-class grouping, tracking, or special classes, is regarded as a flexible strategy for organising pupils so that teachers can deliver the "the right content to the right student at the right pace and at the right time" (Olszewski-Kubilius, 2013, p. 1). There is less written about this form of grouping but research has shown that this is a commonly used strategy in regular primary classrooms to cater for the learning needs of all pupils (Chorzempa & Graham, 2006; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016).

Reviews of the existing evidence suggest that the more flexible approach of within-class grouping is associated with positive effects for all pupils (Lou, Abrami, Spence, Poulsen, Chambers & d'Apollonia, 1996; Puzio & Colby, 2010; Steenbergen-Hu et al., 2016). Lou et al.'s (1996) well-known meta-analysis and Steenbergen-Hu et al.'s (2016) more recent second-order meta-analysis of the academic effects of within-class grouping found that, on average, the practice had positive effects on the achievement of pupils of all ability levels. They differed, however, with regard to pupils of high ability. Lou et al. (1996) found that exceptionally able pupils achieved equally within homogeneous and heterogeneous groups, while Steenbergen-Hu et al.'s (2016) analysis showed that such pupils benefitted most from being taught in high-ability groups. Although their analyses were published 20 years apart, there was considerable overlap in the analysed studies, the majority of which were carried out during the 1980s and early 1990s, with the latest study in either being published in 1994. Although within-class grouping, particularly for reading and maths instruction, seems to be a largely accepted practice, there is no meta-analysis of recent research to indicate definitively whether or not the practice positively increases achievement in primary schools.

While academic and achievement benefits have been recorded for ability grouping, research does not support the claim of social or emotional benefits of it (Rogers, 2007). Research summarised by Neihart (2007) suggests that ability grouping has differing socioaffective effects on different pupils, having positive effects for some, neutral or mixed effects for others, and a negative effect on more. The literature, in general, seems to bear that out. The Irish teachers in the McGillicuddy and Devine (2018) study acknowledged that ability grouping created greater ability related awareness among pupils in the class and impacted on the nature of friendships among peers. On the other hand, principal teachers in Scotland felt that ability grouping did not have any appreciable impact upon pupils' social

interactions or friendship patterns, and they overwhelmingly noted that the practice had a positive impact upon pupil motivation, attitudes to learning, and self-esteem as the pupils were attaining high levels of attainment 'within their own level' (Hamilton & O'Hara, 2011).

Little in the way of guidance regarding ability grouping is offered to teachers in the NCCA (2007) guidelines. It is clear, however, that there is an expectation that teachers will group pupils for instruction, Noting that there is no one right way to group pupils in order to maximise their learning opportunities as each organisational strategy has its merits and pitfalls, the guidelines point out that if the ethos of the school demonstrates that all pupils are valued and their wide variety of achievements celebrated, then it becomes "educationally and socially equitable" to group pupils in different ways for different purposes (NCCA, 2007, p. 59). The guidelines also note that schools need to monitor the effectiveness of the different grouping practices and ensure that there is enough flexibility to move pupils if and when necessary (NCCA, 2007). Research has shown that ability grouping is frequently used in Ireland, particularly for the core subjects of maths and literacy. A recent Irish study found that 65% of participating primary teachers in disadvantaged schools use within-class ability grouping for these subjects (McGillicuddy & Devine, 2018).

A consistent message from studies of various provision strategies is that it is not the organisational mode alone which promotes success – instruction, materials, and activities must be adapted to accommodate the needs of pupils at their different levels of ability (Hattie, 2009; Smith, 2017). Differentiation is the main method available for all class teachers to challenge pupils at their appropriate level, and it is the most popular method of providing for exceptionally able pupils in primary schools (Barrington, 2014).

Differentiation

Differentiation is regarded as not just an option, but a necessity in meeting the needs of exceptionally able pupils in mixed ability classes. The NCCA (2007) guidelines claim that in most cases, the needs of exceptionally able pupils are best delivered as part of the normal differentiated classroom provision which is often regarded as the ideal approach in an era which emphasises inclusion (Eyre, 1997; Lydon, 2011). Differentiation involves

teachers taking into account the differences among their pupils in relation to ability, aptitude, interests and experience (DES, 2007), and in order to be effective, this requires that teachers are able to add advanced content and adjust pacing for pupils who are ready to move ahead (Olszewski-Kubilius, 2013). Integral to understanding and applying differentiated instruction is the acceptance that every teacher can access and use a "core arsenal of strategies" (Van Tassel-Baska, 2003, p.184) with which they feel comfortable and know when and with whom these should be used. For example, curriculum compacting is recommended in the NCCA (2007) guidelines. Compacting is a process through which the teacher assesses pupils at the beginning of a new topic, to determine who has already mastered basic skills, and therefore does not require the same amount of practice as others (NCCA, 2007; Renzulli & Reis, 2009). It allows exceptionally able pupils to move ahead rather than waiting in class, which was found to be a "universal ingredient of being gifted in regular classrooms" (Peine & Coleman, 2010, p. 220).

Teachers in Ireland are familiar with the concept and practice of differentiation as they frequently use it with pupils who experience difficulty in learning. However, research shows varying levels of differentiation being used with pupils at the other end of the spectrum. At post-primary level, almost three-quarters of teachers gave a negative response when asked if lesson content is generally differentiated to take account of the needs of exceptionally able and dual exceptional pupils (Daly, 2015). In contrast, at primary level, most teachers (85%) in the Cross et al. (2014) study reported that they differentiate instruction for their high ability pupils. The greatest differentiation for high-ability pupils was in their assignment of reading more advanced-level work, using a more advanced curriculum unit, and greater expectation of sophisticated products and responses. In addition, some teachers reported that they used technology to differentiate instruction while others allow gifted pupils to work independently in class. Ní Chéilleachair (2013) found that some strategies for differentiating were used more frequently than others. Differentiation by outcome, by dialogue with the teacher, and by support was reportedly used frequently by half of the teachers surveyed, while differentiation by pace, by choice, and by dialogue in small groups was used less often.

However, both Ní Chéilleachair (2013) and Cross et al. (2014) question the adequacy of differentiation as teachers report that these practices happen only a few times a week or even weekly. Furthermore, Ní Chéilleachair (2013) noted that the variety of strategies used

was not reflective of those recommended in the guidelines, while Cross et al. (2014) found that the frequency of some practices that most benefit exceptionally able pupils, such as curriculum compacting, is low. It seems as if primary teachers find differentiated instruction more desirable than feasible, and questions can be raised regarding their understanding of how to translate curriculum and instruction in appropriate ways with diverse populations (Brown, 2012; Tomlinson et al., 2003).

Conclusion of Section

It can be argued that one of the strengths of the newer theories of giftedness is that they can broaden teachers' perspectives and enable them to view ability as a complex, multifaceted construct, which, theoretically at least, may lead to a greater emphasis on a broad, differentiated curriculum reflecting and providing for a diversity of pupils (Dai, 2003; Worrell & Erwin, 2011). However, there seems to be a "substantive disjuncture" (Mazzoli Smith & Campbell, 2016, p. 258) between newer developmental theories and the more traditional model that dominates the views of many teachers (Freeman et al., 2010; Koshy, Pinheiro-Torres & Casey, 2010). Much depends on teachers' views of what constitutes giftedness and gifted practice. Research internationally suggests that while classroom teachers are supportive of the idea of identifying and supporting exceptionally able pupils, they find it difficult to implement the necessary strategies in practice. Quality of teaching is one of the key issues in meeting the needs of diverse learners in primary classrooms (Hattie, 2009). It is to the role of teachers that this chapter now turns.

Section 3: Importance of Teachers

One area of agreement in the field of gifted education is the key role that teachers play in identifying and supporting exceptionally able pupils in typical classroom settings (Allen, 2017; Laine, Kuuisto & Tirri, 2016; Siegle et al., 2010). Identification of exceptionally able pupils in schools largely depends on teachers' conceptualisations and understanding of giftedness and on their attitude to such pupils, and these can ultimately affect whether or not exceptional pupils' needs are taken into consideration and addressed in the school setting (Brown, 2012; de Wet & Gubbins, 2011).

VanTassel-Baska and Stambaugh (2005) outlined the major obstacles that impede teachers in providing differentiated instruction for exceptionally able pupils in mainstream schools:

1. Lack of sufficient subject matter knowledge
2. Limited classroom management skills
3. Attitudes and beliefs about learning
4. Appropriate modification of the curriculum
5. Responding to diverse populations
6. Difficulty finding and utilising resources
7. Lack of planning time
8. Lack of administrative support for differentiating practices
9. Lack of relevant pedagogical skills.

In addition, certain pupil factors seem to make it difficult for teachers to recognise exceptional ability in some learners, with the consequence that modified provision is not offered to them. Underachievement, misbehaviour, and boredom/ disaffection are some of the most common pupil characteristics that can mask giftedness, making pupils who display such behaviour very difficult to identify (Balchin, 2009; Fraser-Seeto, 2013; Gallagher et al., 2011; NCCA, 2007). However, it is probably the teacher's response to such pupil factors that is at the root of identification problems rather than the pupil factors themselves.

Teachers' Attitudes

The quality of teacher involvement is greatly dependent on the opinions that teachers hold and the accompanying attitudes they have developed in relation to exceptionally able pupils. Reviewing the history of gifted education in Australia, Fraser-Seeto (2013) noted that teacher perceptions, beliefs and attitudes are the "most instrumental forces in quality education of the gifted and talented" (p. 33). Although the relationship between attitudes and behaviour is not straightforward (Bohner & Wanke, 2002; Vogel & Wanke, 2016), there is some evidence that teacher attitudes impact on the way in which teachers structure curriculum and instruction. If teachers have high expectations of pupils and expect them to do well, they are more likely to do so (Barrington, 2014; Gardner, Kornhaber, & Wake,

1996). A dramatic demonstration of this phenomenon was seen in the well-known Pygmalion studies (Rosenthal & Jacobsen, 1968) in which experimentally created teacher expectations resulted in changed pupil performance. At the beginning of the school year, teachers were told that certain pupils, randomly selected from each class, were of higher intelligence than others, even though, in fact, the measured intelligence of the two groups was the same. Nevertheless, the potential 'bloomers' fulfilled the prophecy, showing greater IQ gains over the course of a year than a group of control pupils, indicating that teachers had adjusted their expectations and practices based on the information they had been given. This raises the question of what attitudes primary teachers hold towards the highest ability pupils in their classrooms.

Internationally, research findings on teacher attitudes have shown mixed results. Many studies have reported largely negative attitudes to pupils who are academically gifted (Baudson & Preckel, 2013; Kim & Gentry, 2008) and especially those who are studious, although the same does not apply to pupils of exceptional ability in areas such as sport and music (Taylor 2016). In a study using an experimental vignette approach, German teachers rated exceptionally able pupils as less extroverted, less emotionally stable, and less agreeable compared to their average-ability peers (Baudson & Preckel, 2013). These results support findings from a well-cited previous study showing that teachers from England, Scotland and Australia held very negative attitudes towards highly able pupils, focusing particularly on the pupils' psychosocial traits (Geake & Gross, 2008). Attitudes such as these may lead to exceptionally able pupils being denied opportunities to develop their abilities, as teachers may focus on the pupils' perceived socioemotional weaknesses rather than addressing their advanced learning needs.

More positive attitudes have also been reported. Laine et al. (2016) found that, overall, Finnish teachers held positive attitudes towards pupils of high ability. Positive mindsets about implementing gifted inclusion were reported also by Sears (2016) who used interviews, focus groups and journaling to explore the experiences of a small number of regular classroom teachers. The participants reported that, by being more mindful of pupils of exceptional ability in their classrooms, their teaching style changed - they explored skills and concepts in more depth, offered more choices, and planned lessons differently. Participants affirmed that teaching exceptionally able pupils had improved their teaching

overall so that they felt better able to differentiate instruction and meet the needs of the diverse learners in their classes.

Research in Ireland on teachers' attitudes is scarce. Based on the results of a survey of 44 primary teachers, Ní Chéilleachair (2013) reported that overall, Irish teachers hold a "slightly positive attitude" towards exceptionally able pupils (p. 61), and Cross et al. (2014) found that most respondents to their survey, particularly primary teachers, supported the idea of gifted education, although translating that support into practice was more problematic. This seems to be a common theme in the literature – that teachers are generally positive towards the idea of supporting exceptionally able pupils but that they lack understanding and knowledge on what approach should be taken, and this has the potential to significantly impact classroom practices in identification and provision.

Teacher Knowledge and Understanding

In addition to holding ambiguous attitudes towards exceptionally able pupils, teachers who do not understand the cognitive, social, and emotional needs of this cohort of pupils may not see that special provision is necessary to help them develop their potential (Szymanski & Shaff, 2013). This lack of understanding would help to explain participants' lack of awareness about exceptional pupils' need for provision found by Taylor (2016), leading her to conclude that practising class teachers may be in possession of no more knowledge about giftedness and gifted provision than the general public. Moreover, teachers lack confidence regarding both the process of identification (Scott, Webber, Aitken & Lupart, 2011; Szymanski & Shaff, 2013) and their ability to support exceptionally able pupils in the classroom (Brevik, Gunnulfsen & Renzulli, 2018). Some teachers, realising this, acknowledge that as a result there are likely to be potentially unidentified highly able pupils in their classes (Taylor, 2016). The NCCA (2007) guidelines suggest the use of profiles (Betts & Neihart, 1988) as one way of getting a better understanding of exceptionally able pupils, by looking closely at their feelings, behaviour, and needs.

It seems that developing knowledge and understanding can bring about change. In a small-scale, phenomenological study, the most impactful learning experience for the primary teachers was discovering the learning characteristics of gifted learners (Sears,

2016). The teachers, during their first three years of instructing high-ability pupils in their regular classrooms, noticed that these pupils (a) were extremely knowledgeable about topics of interest, usually more so than the teachers; (b) were capable of much more than the teachers expected of them; and (c) displayed diverse behaviours including "perfectionism, high or low motivation, being inquisitive and observant, and other little 'quirks'" (p. 127). The teachers realised that these three main groups of characteristics - knowledge, ability, and behaviour – resulted in these pupils having special educational needs which required differentiated provision, and the teachers' increase in understanding led them to change their practice to provide challenge, support and opportunity to meet the learning needs of this cohort of pupils.

Beliefs and Stereotypes

A lack of understanding regarding pupils of exceptional ability has been posited as the main reason for teachers' inaccurate beliefs that influence their attitudes towards exceptional pupils (Fraser-Seeto, 2013; Taylor, 2016). One of the most prevalent beliefs is that high ability learners will be successful and do not require any special support or intervention due to their advanced abilities (Berman, Schultz, & Weber, 2012; Chamberlain & Chamberlain, 2010). In general, it appears that both pre-service (Almulla & Fateel, 2017; Berman et al., 2012) and inservice (Sears, 2016) teachers believe that exceptionally able pupils can make it on their own without teachers' direction, and that they are easy to identify in the classroom. Irish teachers hold similar beliefs. Teachers who are more likely to think that exceptionally able pupils will be fine in a regular classroom and less likely to think they need a differentiated curriculum are also less supportive of gifted education in general, and they expect to identify fewer disadvantaged or minority pupils as having exceptional ability (Cross et al., 2014). These findings suggest that many teachers do not understand the varying manifestations of exceptional ability nor see the need for all pupils, including the most able, to be challenged in their work, and point to a need for further training.

Research over a number of years has shown that teachers tend to more often identify conforming pupils who are neat workers, and rarely identify more active, non-compliant pupils, who might really be the most gifted (Balchin, 2007; Laine et al., 2016; Szymanski & Shaff, 2013). Post-primary co-ordinators reported that teachers often nominated pupils

who, as one participant said, are "articulate and hard working – what you might cruelly call teacher pleasers" (Radnor, Koshy, & Taylor, 2007, p. 288), while primary co-ordinators expressed concern that, despite in-service training, teachers continued to identify pupils who "work quickly, do not struggle, and complete tasks without asking questions of the teacher" (Szymanski & Shaff, 2013**,** p. 15). There is nothing new about findings such as these, as similar views were reported more than 40 years ago by Jacobs (1973). Betts and Neihart (1988), in their influential work on profiles of exceptionally able pupils, estimated that as many as 90% of pupils world-wide, nominated as exceptionally able by teachers untrained in gifted education, are likely to be high-achieving conformists who are frequently bored in school but who learn to use the system to get by with as little effort as possible.

A compelling study used individual interviews to probe deeply into the perspectives of a small group of primary teachers working with a diverse cohort of pupils, including those who were exceptionally able (Szymanski & Shaff, 2013). They found that teachers relied on personal beliefs when trying to understand the learning characteristics of the most able pupils. For example, some participants expressed the idea of the 'truly gifted' pupil, a mental model that seemed to imply extremely rare pupils performing at levels far above even the high-achieving pupils in their classrooms. It is likely that teachers using an unrealistic image of exceptionally able pupils will fail to identify pupils using accepted criteria and instead identify only the very occasional pupil who conforms to their personal expectations. As a result, it is probable that they will not see that exceptionally able pupils in their classes are underachieving.

There is a very extensive literature on the issue of underachievement which is outside the scope of this review. It is worth noting, however, that mainstream class teachers lack awareness of underachievement among some exceptionally able pupils (Seedorf, 2014), and expect that pupils of high ability will automatically achieve highly in the regular classroom (Taylor, 2016). Teachers who expect exceptionally able pupils to be "showy high achievers" (Olthouse, 2014, p. 130) may not realise that these pupils can often hide their ability to avoid social stigma (Cross, Coleman & Stewart, 1993). Eyre (1997) agrees, noting that when it is 'not cool to be bright', some exceptionally able pupils coast along in order to retain credibility with their peers. Furthermore, Taylor (2016) suggests that teachers may relate underachievement to exceptionally able pupils' poor work habits rather

than acknowledging it may stem from an environment that is unresponsive to these pupils' abilities and needs.

Importance of Training

From half (Hammerschmidt, 2016; Laine et al., 2016) to three-quarters (Taylor, 2016) of teachers reported that they received no training on identifying or instructing exceptionally able pupils in their preservice courses. Frequently, modules on exceptional pupils focus on pupils with learning and behavioural difficulties. This suggests that newly qualified teachers may be expected to deal with exceptionally able pupils in their first years of teaching with only a superficial understanding of the characteristics and needs of exceptionally able learners. As a result they feel unprepared or lack confidence to address those needs (Bangel, Moon, & Capobianco, 2010; Chamberlin & Chamberlin, 2010; Johnsen, 2013; McCafferty, 2011; Taylor, 2016).

In contrast, trainee teachers who participate in targeted gifted education courses develop more positive attitudes to exceptionally able pupils, a greater awareness of their needs, and increased ability to differentiate the curriculum for them (Bangel et al., 2010; Chamberlin & Chamberlin, 2010; Jung, 2014; Plunkett & Kronborg, 2011; Taylor, 2016). Plunkett and Kronborg (2011) revealed changes in teachers' attitudes and knowledge in a mixed method study of pre-service teachers undertaking a new university elective course on gifted education. The findings indicated strong positive growth in the teachers' opinions relating to high-ability pupils, and also clearly demonstrated their realisation of the value of the course for their teaching in general. While the report gives a very clear description of the analysis process of both the quantitative and qualitative data, it is not clear what the term 'pre-service' covers, as quotes from some of the participants seem to indicate that they had been teaching for a number of years.

If knowledge about teaching exceptionally able pupils is not developed in teachers' pre-service courses, it seems obvious that in-service professional development in this area will need to be offered to practising teachers. Studies conducted in many areas of the world have found that providing in-service to teachers on topics related to gifted education can mould teachers' attitudes in a positive way towards high ability pupils (Berman et al., 2012; McCoach & Siegle, 2007), improve teacher efficacy in providing for them (Plunkett

& Kronborg, 2011; Rowley, 2012), and increase pupil outcomes (Hong, Greene, & Hartzell, 2011; Hunsaker, Nielsen & Bartlett, 2010). Ní Chéilleachair (2013) found that Irish teachers who had training specific to exceptionally able pupils used a wider variety of strategies, both formal and informal, to identify high ability pupils than those who had no specific training.

However, Berman et al (2012) found that teachers' preconceived, stereotypical ideas about pupils of high ability remained "stubbornly intact" (p. 22) even after participation in a semester-long course specific to the education of high-ability learners. Participants overwhelmingly displayed beliefs that exceptionally able pupils would be more of a problem in the classroom than a blessing, they were concerned about the extra workload necessary to cater for these pupils, and most felt that this extra work was an unfair imposition on their time (Berman et al., 2012). It may be that there is a need for both training to increase teachers' knowledge of gifted education and opportunities to put that knowledge into practice.

Despite the overall positive effects of targeted training for teachers, professional development opportunities for practising teachers is reportedly uncommon (Johnsen, 2013; Koshy & Pinheiro-Torres, 2013; Nowikowski, 2011; Plunkett & Kronborg, 2011; Taylor, 2016). Ireland is no exception in this. The SESS delivered some evening lectures in education centres around the country for interested primary teachers in 2012 and 2013, although the focus was mainly on dual exceptional pupils and their needs. Apart from that, professional development in the area of gifted education in Ireland is extremely rare.

Effect of Experience

Engaging in actual teaching experiences with exceptionally able pupils has been shown to mediate teachers' attitudes towards those pupils (Chamberlin & Chamberlin, 2010). Teachers with no personal experience of exceptionally able pupils hold narrower and more rigid views, tend to list negative behavioural characteristics of these pupils, and focus mainly on potential classroom management issues, such as boredom and behaviour problems (Endepohls-Ulpe & Ruf, 2005; Gallagher et al., 2011). On the other hand, teachers with experience of teaching high-ability pupils hold fewer stereotypical ideas

about them, display a much more precise concept of giftedness, and name significantly more positive pupil characteristics (Carman, 2011; Hammerschmidt, 2016).

The conclusion that experience is the best teacher is borne out by research in which teachers gain practical experience of dealing with exceptionally able pupils. A study which included a practicum experience for pre-service teachers found that many of the participants were previously unaware that these pupils were present in most regular classes, and thus lacked awareness that such pupils may have learning needs in an educational setting (Bangel et al., 2010). Following a nine-week Saturday morning enrichment programme for highly able primary pupils, participants perceived an increase in their knowledge of the needs and characteristics of such pupils. In addition, their confidence increased, not alone as it applied to exceptionally able pupils, but also in respect of their general teaching (Bangel et al., 2010), an experience supported by findings from Sears (2016) and endorsed by the NCCA (2007) guidelines which point out that "good practice for exceptionally able pupils is also good practice for all pupils and can improve the quality of teaching and learning throughout the school" (p.7).

Having experience of teaching exceptionally able pupils was found to mediate teachers' attitudes in Ireland also in two small-scale studies, one of which compared teachers of enrichment courses in CTYI with final year trainee primary teachers (Flynn, 2005), and the other which looked at the views of both pre-service and in-service teachers (Whelan, 2003). Cross et al. (2014) also noted that experienced teachers seem to have developed a more nuanced sensitivity to the needs of exceptionally able pupils in their classroom, are less likely to believe that these pupils will be fine in the regular classroom, and more readily recognise their boredom and frustration in classes with chronological peers than less experienced teachers.

Conclusion

Teachers are expected to accommodate considerable diversity in their classrooms, and, as high ability can manifest in diverse ways, exceptionally able pupils are not always easily identifiable. Teachers need to have a good understanding of the characteristics of giftedness, as well as both the effective and inclusive means to identify exceptional ability in some pupils and a good understanding of instructional practices to cater for advanced

learning needs. Teachers' attitudes and beliefs have a significant bearing on outcomes, as these factors have been shown to have a significant effect on gifted provision. As gatekeepers to services for exceptionally able learners, teachers play an influential role in the educational experience of diverse, high-ability pupils. Failure to recognise and implement appropriate learning experiences can lead to underachievement, boredom, and frustration causing pupils to disengage from learning. Thus, it is essential for exceptionally able pupils, as for all pupils, to have full teacher support so that high quality learning opportunities are available to them. Teachers' beliefs, attitudes, and practices are important aspects in understanding the context of this research, as it is necessary to understand how teachers perceive their position on recognising and providing for their more able learners.

The research topics explored in this study are teachers' perceptions and practices with regard to exceptionally able pupils. The study is set in the context of special education, as exceptionally able pupils are classified in Ireland as pupils with special educational needs. The problem addressed is the lack of research in Ireland in the area of gifted education, and this project sought to address that lack through an exploration of teachers' conceptualisations of exceptional ability and their practices in identifying and making provision for the exceptionally able pupils in their schools.

Research Questions

There is an extensive literature internationally on theories and practices regarding exceptionally able pupils, but limited research evidence is available on what actually happens at the classroom level in Ireland. This study aims to address that gap by exploring the perspectives of key stakeholders – mainstream primary teachers – by exploring their views and practices in relation to exceptionally able pupils. The next chapter presents the study design and methodology which was devised to answer the following three research questions:

- How do primary teachers in the Cork region conceptualise exceptional ability and how do they define exceptionally able pupils?
- How do they identify these pupils?
- What provision do teachers make for exceptionally able pupils?

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

There is a considerable body of research on exceptionally able or gifted pupils, particularly in the US and Australia, and to a lesser extent in the UK, but there is a lack of information about Irish classroom teachers' views and practices with regard to meeting the needs of exceptionally able pupils. The purpose of this study is to add to the limited research information and evidence that is available on exceptionally able pupils in this country through an investigation of teachers' perspectives and practices regarding this cohort of pupils. In particular, the focus is on how mainstream primary teachers see their role in meeting the special educational needs of exceptionally able pupils. The research questions explore how primary teachers define and conceptualise exceptional ability, as well as investigating issues around identification and provision for these pupils.

Following consideration of the research strategy adopted for this study, this chapter describes the research design that was deemed most appropriate and justifies its selection. Next, a detailed account is given of the data collection methods utilised in the project and a brief outline of the data analysis is included. Finally, consideration is given to the matter of quality assurance and to ethical issues.

Research Strategy

A research strategy is a broad approach to planning a project that involves underlying philosophical assumptions about the nature of social reality and how it can be studied, as well as the purpose and design principles of the study (Denscombe, 2010). One of the critical decisions a researcher has to make in designing a study is the paradigm or paradigms within which the study is situated (Maxwell, 2013). Kuhn (1970) used the term *paradigm* to refer to an "entire constellation of beliefs, values, techniques and so on, shared by members of a given community" (p. 175). When applied to the area of research, the term paradigm is now taken to refer to general philosophical assumptions about the nature of the world or of social reality (ontology) and how it can be understood and accessed (epistemology), as well as specific methodological strategies linked to those assumptions (Cohen, Mannion & Morrison, 2011; Maxwell, 2005; Morgan, 2007). This

study is based on pragmatic principles and uses mixed methods as the research paradigm that best suits the research questions.

Mixed Methods as the 'Third Approach'

During the second half of the 20th century, two main research paradigms, positivism which largely relied on quantitative research methods, and constructivism and interpretivism which were linked to qualitative methods of enquiry, dominated research in the social sciences (Greene, 2006). The reaction to the polarisation between the two paradigms led to another approach gaining credence, that of mixed methods (Johnson & Onwuegbuzie, 2004).

The term *mixed methods* is used as an umbrella term for many procedures and approaches that combine or integrate multiple methods. Based on an analysis of definitions offered by 19 experts in the field, mixed methods research has been defined as the

> type of research in which a researcher … combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (Johnson, Onwuegbuzie & Turner, 2007, p. 123).

As an approach to research in the human and social sciences, mixed methods has gained broad acceptance (Creswell, 2009) and there is now a "trilogy of major research paradigms" (Johnson & Onwuegbuzie, 2004, p. 24), with quantitative, qualitative, and mixed methods research "all thriving and coexisting" (Johnson et al., 2007, p. 117).

Schwandt (2000) argues that all research is interpretive and that a multiplicity of methods are available that are suitable for different kinds of understandings. By using qualitative and quantitative techniques and strategies within the same framework, mixed methods research can incorporate the strengths of both methodologies, and often provides more informative, balanced and useful research results than either qualitative or quantitative studies on their own (Creswell, 2009; Johnson et al., 2007).

Greene (2006) notes the complexity of school settings and maintains that a mixed methods approach "not only provides but actually creates spaces for a full engagement with the challenges of understanding teaching and learning as complex processes" (p. 211). Thus, paradigms and methods can be mixed and matched, in order to achieve the combination most appropriate for any particular research problem (Johnson & Onwuegbuzie, 2004). While some debate continues, many researchers have been moving towards a pragmatic approach as a philosophical underpinning for mixed methods research.

Pragmatism

Pragmatism offers a useful middle position both methodologically and philosophically, and provides a set of assumptions about knowledge and enquiry that distinguishes it from purely quantitative or purely qualitative approaches (Denscombe, 2008). Ontologically, there is a single 'real' world and individuals have their own unique interpretation of that world, while epistemological assumptions see knowledge as both constructed and based on the reality of the world as experienced by individuals (Morgan, 2007). Pragmatism is concerned with 'what works' and with solutions to problems, and is thus another option open to researchers if they decide that neither quantitative nor qualitative research alone will provide adequate answers for the particular research question they have in mind (Johnson et al., 2007). Mixed methods research includes the use of induction (uncovering patterns), deduction (testing of hypotheses and theories) and abduction (discovering the best explanation for understanding the results) (Morgan; 2007; Johnson, Onwuegbuzie & colleagues, 2004; 2007). For example, deductive results from the quantitative phase of a study can serve as inputs to the inductive goals of the qualitative phase (Morgan, 2007).

Following Cohen et al. (2011), who advise that 'fitness for purpose' must be the guiding principle regarding which paradigm to work under, and based on a pragmatic approach, a combination of both qualitative and quantitative approaches was deemed the best option for the particular research problem being explored in this study.

Mixed Methods Study Design

This research study aimed to investigate how a purposive sample of primary teachers from one region in Ireland (Cork) views exceptionally able pupils and whether and/or how they are meeting the special educational needs of these pupils. A quantitative survey of schools in one geographical region in Ireland provides a broad sweep of information regarding practices around exceptionally able pupils, and the subsequent qualitative phase delves deeper into the issues. A mixed methods design was deemed necessary as the quantitative strand on its own, while giving a broad picture, could not get at teachers' day to day experiences. Thus, the qualitative strand is used to enrich the understandings by allowing for deeper dimensions to emerge (Jick, 1979). According to Cochran-Smith's (2006a) idea of *evidence-plus,*[12] many questions in educational research "require empirical evidence that describes, interprets, and discovers" (p. 10). In the current study, the 'evidence-plus' is gained through adding the qualitative dimension to the quantitative survey.

Following Leech and Onwuegbuzie's (2009) typology, this study was planned as a partially mixed, sequential, equal status design, that is, as a study with two phases that occur sequentially, with the quantitative and qualitative phases having equal weight (Figure 1). Consistent with a partially mixed methods design, it was not planned to mix the quantitative and qualitative phases within or across stages. Instead, both quantitative and qualitative phases were carried out sequentially in their entirety before being mixed at the data interpretation stage.

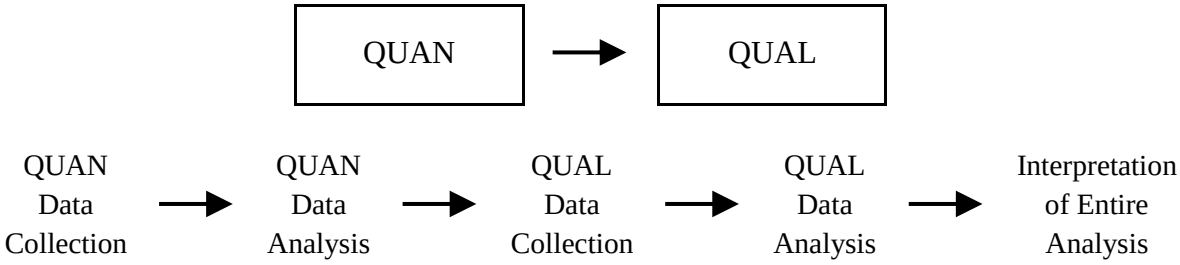

Figure 1. Sequential mixed methods design.

[12] Following Eisenhart (2005), who calls for educational policy and practice that are informed by *science plus*, Cochran-Smith (2006a), in reference to teacher education, uses the term *evidence-plus* to argue that researchers need to access "diverse and multiple perspectives" leading to "credible and persuasive evidence" (p. 3/4).

The researcher was aware of the challenges associated with mixed methods research. The collection and analysis of both types of data take time and resources, and it requires clear presentation to ensure clarity for the reader (Creswell & Plano Clark, 2007). A considerable challenge of mixed methods research is dealing with contradictory findings from the two different data sets (see section entitled Organisation and Analysis of Qualitative Data). A strategy to counteract this is to identify and discuss conflicting findings. In fact, clearly articulating differing results can open new avenues of study for researchers (Creswell, Plano Clark & Garrett, 2008).

Timeline for Study

Table 3.1 distils the key steps taken during the two phases of the research. A brief outline of the information in the table is given here but more detailed information is included in the rest of the sections in this chapter. Reading across the table, phase 1 involved the design, piloting and administration of the questionnaire between December 2012 and September 2013. The quantitative data were inputted into SPSS, checked for errors, cleaned and reviewed. Analyses were run to obtain descriptive statistics. The open questions were transcribed and coded, and they linked forward to the questions in the focus group interviews.

In phase 2, the design, piloting and carrying out of the focus group interviews took place between November 2013 and March 2014. The data were transcribed and checked for accuracy, and field notes were written up. The transcripts were member-checked with three participants. Thematic analysis was carried out by repeatedly combing through the data for patterns and themes, and through memoing and coding. One transcript was checked with two other coders for inter-coder agreement.

Mindful of the need to ensure that this study could be replicated, a very rigorous audit trail was maintained of all the raw data (questionnaire responses, focus group transcriptions, field notes) as well as a diary of work, reflective journal, and details of coding and analysis.

Table 3.1. Timeline for study

Phases	**Instrument Design, Piloting, and Administration**	**Data Collection, Analysis, and Quality Assurance**
Phase 1 Quantitative	Instrument: Questionnaire Design: Dec 2012 – Feb 2013 Pilot: March – April 2013 Survey administration: Sept 2013	SPSS: input, cleaning, immersion and iterative review etc.; Descriptive statistics Open questions: transcription; coding and linked to questions in phase 2
Phase 2 Qualitative	Instrument: Focus Group Interviews Design: Nov – Dec 2013 Pilot: Jan 2014 Conduct of interviews; Feb – Mar 2014	Transcription, immersion and iterative review; Thematic analysis, memoing, coding (manual and computer-based) Member checking; inter-coder agreement

Data Collection Methods

Following a brief outline of the broad parameters of the project as a whole, this section addresses, first, the quantitative phase of the study, followed by the qualitative phase, considering the particular data collection methods used, the participants involved, piloting of instruments, and the procedures that were followed.

A survey approach was used to enable a broad picture of teachers' views and practices to be drawn regarding these pupils. This was followed by focus group interviews which gleaned a deeper insight into teachers' perspectives on the issues at school and class level. The study comprised two distinct phases:

- Phase I involved a quantitative survey of mainstream primary schools in one geographical area in order to obtain a broad picture of how teachers conceptualise, identify and make provision for exceptionally able pupils.

- Phase II extended the findings of the survey through qualitative focus group interviews with interested teachers in order to explore, in depth, teachers' views and practices in relation to this cohort of pupils.

Phase 1: Quantitative Survey

Surveys are particularly good when looking for patterns of activity within groups or categories of people (Denscombe, 2010) as is the case in this project. To that end, a questionnaire was designed specially for this study with the questions informed by insights from the literature. A well-structured questionnaire has advantages over other methods of data collection as it allows for large amounts of data to be collected in a short space of time, and provides anonymity for respondents which encourages accurate information and frank responses (Cohen et al., 2011; Robson, 2002). In addition, all respondents are presented with the same questions in the same order, thus the stimulus offered to all respondents is controlled. In this way, standardised information is obtained so that any variety in the answers is a "true reflection of variety of views and circumstances among the respondents" (Munn & Drever, 2004, p. 35).

Participants

The population of interest was all mainstream primary schools in Ireland. There were a total of 3152 mainstream primary schools on the Department of Education and Skills (DES) website on September 2013. However, this list is not always complete as private primary schools are not usually listed on it. A purposive sample based on a single geographical area – namely Cork city and county – was chosen for the project. Given the scarcity of current research, the researcher could choose from a number of study options, but this was considered to be the obvious next step in building such research. In addition, the decision was based on what was feasible in the time allowed for such a project.

There are 347 mainstream primary schools in the geographical area chosen. The DES website gave details of 344 of the schools and there are three private primary schools in the region. The sample schools reflect a range of relevant school factors including: size; rural/urban location; socioeconomic status; single sex/co-educational; Irish-medium/English-medium. Thus this sample is large and varied enough to get a broad indication of what is happening at the grassroots level in primary schools. As exceptionally

able pupils come under the category of pupils with special educational needs in the Education Act (1998), it was decided to address the questionnaire to the teacher who takes a lead role in co-ordinating special educational needs in each school.

Questionnaire

The final questionnaire (Appendix A) was printed on cream coloured paper in A4 booklet form and the overall layout and design was attractive and clutter-free, with well-spaced questions allowing for clarity and ease of completion. In order to enhance the success of the survey and lessen the risk of a poor response rate – a frequent limitation of questionnaires – short, easily understood questions and clear, concise directions were used. Mindful that questionnaires can be time-consuming to complete, the researcher was clear about the research problem and key constructs, and attempted to ask questions in "parsimonious ways" (Berends, 2006, p. 627).

The questionnaire was divided into five sections, each with its own heading so that the respondents could see the overall logic of the design (Munn & Drever, 2004):

- Section A: School information
- Section B: Policy
- Section C: Provision
- Section D: Identification
- Section E: Additional information

Straightforward, easily-answered questions to elicit basic demographic and school information were placed at the start of the questionnaire. The second section covered written school policy and also asked for the definition used by the school or the respondent personally if the school did not have a definition in a policy. This section also investigated if the respondents had had professional development in the area of providing for exceptionally able pupils, and how well prepared they felt, as professionals, to meet the needs of this group of pupils. Section C explored what additional supports, if any, were provided by the school, as well as factors that impede the provision of additional supports for these pupils. In section D, participants were asked about pupils in their school who had been identified as exceptionally able, and how and by whom identification should be

carried out. In addition, they were asked to indicate, from a given list, their opinion of characteristics that research has shown often apply to exceptionally able pupils. In the last section, respondents were asked about the learning needs of exceptionally able pupils and whether pupils with disabilities could be exceptionally able. They were asked if they had used the NCCA (2007) guidelines and if so, how useful they found them. Finally, respondents were asked to rate their school's practice in addressing the needs of exceptionally able pupils.

The questions were mainly closed questions with easy to colour-in or tick box response format (a format familiar to most respondents) but the useful catch-all category of *Other* was also included. Categorical scales, or fixed alternatives (e.g. Yes/No), which have the advantage of achieving greater uniformity of measurement and therefore greater reliability (Munn & Drever, 2004) were used for many basic questions. Continuous scales (e.g. 'strongly agree' to 'strongly disagree') were used in order to collect opinions (Creswell, 2009). Other questions asked for factual information such as numbers of pupils, while checklists were used in some cases to make it easy for respondents to respond (e.g. factors that impede additional supports for exceptionally able pupils).

The questionnaire contained a number of open questions so that respondents could elaborate on their answers or put forward their views on issues that they felt were important. The advantage of open questions is that the information gathered is more likely to "reflect the full richness and complexity" of the views held by the respondents who have space to express themselves in their own words (Denscombe, 2010, p. 165). However, the number of open questions was kept intentionally small as they may represent a more onorous task for respondents.

Piloting of Questionnaire

The questionnaire was piloted in order to check the clarity of the questions and the response format, ascertain the length of time it took to complete the questionnaire, and find out whether the questionnaire was user-friendly. In addition, piloting the questionnaire ensured that the respondents and the researcher had a common understanding of concepts (Berends, 2006). As Jaeger (1997) notes, "you don't want every respondent to give you the same answer, but you do want every respondent to hear or read the same question" (cited

in Berends, 2006, p. 631). The pilot respondents were members of the target population but not members of the study sample. The issues of validity and reliability are core concerns of all research and these are addressed later in this chapter.

The questionnaire was initially piloted on 12 mainstream primary teachers from outside the targeted geographical region. Following useful and insightful feedback from this pilot, some questions were amended. For example, in Section C on Provision (see Appendix A), two questions, one asking if the school provides within-school support for exceptionally able pupils and the other listing possible types of support, were conflated into one question combining both elements. The sequence of questions in Sections A and B was also changed slightly.

Following these amendments, the questionnaire was further piloted on a larger sample of primary teachers. Twenty-six responses were received to the second pilot. Again, all respondents were from outside the Cork region. The average time taken to complete the questionnaire was 20 minutes. The respondents felt that the format was clear and user-friendly. Following the second pilot, Section B on Policy was amended to ensure that all respondents had an opportunity to give a definition of exceptionally able pupils as this is an area of great debate in the literature, and a school's conceptualisation of what it means for a pupil to be exceptionally able influences which pupils are identified and supported.

Procedure

The methodology literature is divided on the merits of postal versus online questionnaires. Denscombe (2010) argues that an online questionnaire has the advantage that it is relatively easy to complete and respondents can 'submit' the completed form at one stroke. Glover and Bush (2005) concluded that the 40% response rate to their online survey of newly appointed head teachers in the UK was higher than for postal questionnaires. In contrast, James (2007) compared response rates to a short postal and online survey in a study involving almost 1,000 Irish schools, half of whom were sent the questionnaire through the post and half via e-mail. He found that the response rate for posted questionnaires was almost twice that for e-mailed questionnaires. However, it is

likely that schools have become more accustomed to working online since James' study in 2007.

In this study, schools were given a choice of completing an online or a postal questionnaire. As it was not possible to gain access to a reliable list of school e-mail addresses, the questionnaires were posted to all the schools. A stamped addressed envelope was enclosed for postal returns and a web address for completing the online version was given in bold on the cover letter. The online survey tool used for the online version was Google Docs, and using a custom template, the wording and sequence of the sections/questions were exactly the same as on the paper version.

The envelope that contained the questionnaire was addressed to the principal of each school by name. Inside, a letter to the principal (Appendix B) briefly explained the reasons for the research and its importance, and asked for the principal's co-operation in giving the questionnaire to the teacher who takes the lead role in co-ordinating special educational needs provision in the school – referred to hereafter as the special eductional needs co-ordinator. It was explained that each school was being given an identification (ID) number in order to keep track of which schools returned the questionnaire. Confidentiality was assured and the principal was thanked for her/his co-operation. Contact details for the researcher were included in case the principal wanted to discuss or clarify any issue relating to the research.

The main cover letter (Appendix C) was printed on coloured paper so that it stood out, and was addressed to the special educational needs co-ordinator in each school. In it, the researcher introduced herself and outlined the purpose of the research. The ID number and its purpose were explained. An assurance of confidentiality was given as well as reassurance regarding the voluntary nature of completing the questionnaire. Respondents were asked to return the completed questionnaire within two weeks. The tone of the letter was friendly but businesslike. It was translated into Irish for Gaelscoileanna and Gaeltacht schools (Appendix D).

The front page of the actual questionnaire (Appendix A) reiterated the aim of the study, gave assurances of confidentiality again and thanked the recipients for their willingness to complete the survey. Brief instructions for completing the questionnaire

were given and the return date for completed questionnaires was emphasised. A web address was supplied for those who wished to complete the questionnaire online. Space was allowed for the names and contact details of teachers who were interested and willing to participate in follow-up focus groups.

Careful consideration was given to the timing of the survey and five of the principals who were involved in the pilot were consulted to ensure that it would not clash with statistical returns to the Department of Education and Skills (DES) or another busy school period. The principals considered it best to receive the questionnaire at the start of a week near the beginning of the school year, and this advice was followed.

Response Rate

A follow-up reminder to non-respondents is the most productive factor in improving response rates (Bryman; 2004; Robson, 2002). Following Creswell's (2009) advice, an informal reminder on a postcard was sent to all schools ten days after the initial mailing, thanking those who had already responded and encouraging those who had not yet responded to do so. Two weeks after the initial return deadline, another cover letter with handwritten signature, another copy of the questionnaire, and a preaddressed, stamped envelope were sent to the principals of all schools that had not responded. In that follow-up letter (Appendix B), the researcher empathised with the demands on teachers' time but urged the principal to do his/her best to get the questionnaire completed and returned.

In all, 347 questionnaires were distributed to the schools. Nine schools contacted the researcher by telephone, e-mail, or post to notify her that they were unable to complete the questionnaire at that particular time. Many of these gave recent amalgamations or pending Whole School Evaluations as the reasons for non-participation. In all, 209 valid, completed questionnaires were received, a response rate of 60%. Of these, a surprisingly small number (six, or less than 3% of the total number completed) were completed online, while 97% were returned by post. These response rates certainly support James' (2007) findings regarding response rates for postal and online surveys. Sixty-six respondents indicated an interest in participating in focus groups to further discuss the issues around meeting the needs of exceptionally able pupils. A brief card was sent to all respondents thanking them

for their participation, and notifying the focus group volunteers that a meeting would be arranged in the near future at a time and location suitable for them.

Phase 2: Qualitative Phase: Focus Groups

The purpose of the focus group phase was to give voice to key informants who were willing to discuss and articulate their own views and practices. Focus groups are a planned series of group discussions designed to obtain, through an emergent, open process, a greater understanding of people's experiences and perceptions about the focus of enquiry (Kruger & Casey, 2000; Morgan, 2007).

There are a number of reasons why focus group interviews were considered the most appropriate method for the second strand of the study. First, they enabled the researcher to explore, in depth, participants' views and experiences of dealing with a particular group of pupils, and thus allowed her to gain more in-depth information that illuminated and enhanced the findings from the survey strand of the study. In addition, through the discussion and questioning, the reasoning used by the participants allowed the researcher to develop an understanding about *why* people feel the way they do, and it enabled her to get beneath the surface of policy implementation to illuminate the "lived realities of complex educational situations" (Simons, 2009, p. 104). The technique gave the researcher an opportunity to study the ways in which individual teachers, in conjunction with one another, construed and made sense of the issues around dealing with pupils of exceptional ability in everyday school life, in terms of the knowledge they had acquired through their experiences as teachers. The process of understanding social phenomena is not undertaken by individuals in isolation from each other, but rather reflects the processes through which meaning is collectively constructed in everyday life. To that extent, focus groups mirror real life and can thus be regarded as more naturalistic than individual interviews (Bryman, 2004). The "homogeneity of background" (Cohen et al., 2011, p. 437) of the participants in this study, all of whom are practising teachers, facilitated communication among the group participants and promoted the exchange of experiences and opinions.

Advantages and Limitations of Focus Groups

Focus groups are a highly efficient technique for collecting qualitative data as the amount and range of data are increased by collecting from several people at the same time

(Robson, 2002). The focus group is a social experience and participants tend to enjoy taking part as they are empowered and able to make comments in their own words, while at the same time being stimulated by ideas and comments of others in the group (Krueger & Casey, 2000; Robson, 2002). The focus group is an iterative process, in that participants' views and understandings are shared, challenged and debated during the discussion (Field, 2000). Group discussion, agreement and disagreement all help participants to clarify their own stances and possibly revise their views on issues. Thus, participants tend to provide checks and balances on one another, leading the researcher to gain a more realistic account of what people think (Bryman, 2004; Robson, 2002).

Focus group interviews are not without limitations. The researcher was mindful of the possible problems of group effects. The group dynamics may lead to a low level of participation by some members and dominance by others (Cohen et al., 2011). The phenomenon of 'groupthink', that is the tendency for participants to uncritically embrace an emerging group view, can mean that a perfectly legitimate perspective held by just one individual may be suppressed (Bryman, 2004; Cohen et al., 2011). The strategies employed by the researcher to deal with these issues are outlined in the section below on running the groups. From a practical point of view, focus groups can be difficult to organise; for example, it is not easy to get people to turn up when they say they will and at a certain location and time (Bryman, 2004). The issue of the size of the groups must be addressed also. If the group is too big, it becomes unwieldy and may be difficult to manage. If it is too small, intra-group dynamics exert a disproportionate influence (Cronin, 2006; Cohen et al., 2011). In this study it was planned to divide participants into groups of manageable size, preferably about six people. Care was taken to hold the groups at a time that best suited participants, and a reminder was sent beforehand to encourage people to turn up.

Participants

Sixty-six teachers expressed an interest in participating in further discussion by giving their names and contact details on the completed questionnaires. The number of participants in the focus groups was thus dependent on the participants self-selecting to engage with the second phase of the research. The researcher wanted to facilitate the teachers as much as possible, thus geographic location was the criterion used to divide participants into groups. A total of seven groups were held, three of them in urban areas

and four in rural towns. In all, 27 teachers took part, and the number of participants per group ranged from two to six.[13] The groups were small enough to afford all participants an opportunity to share insights, but most were large enough to provide diversity of perceptions (Krueger & Casey, 2000).

Piloting

Prior to convening the focus groups proper, one group was run as a pilot with three teachers who had completed the pilot questionnaire. The purpose of the pilot was to inform the final schedule and process, to ensure that questions were clear and appropriately paced, and that audio equipment was reliable for the purpose. Lasting 70 minutes, the meeting covered all key questions and also followed the topics that most interested the participants. The allocated time seemed to be just right in that it allowed the topics of interest to be explored in depth. The researcher decided that no change to the focus group schedule was required.

Focus Group Schedule

A semi-structured approach was taken which allowed the researcher as interviewer to probe and adapt the line of enquiry when appropriate, and afforded the participants a measure of flexibility of response thus enabling other issues relevant to them to emerge (Yin, 2003). The guiding principle was Kerlinger's (1970) succinct definition of open-ended items as "those that supply a frame of reference for respondents' answers, but put a minimum of restraint on the answers and their expression" (cited in Cohen et al., 2011, p. 416).

The focus group schedule (Appendix E) was designed based on issues similar to those covered by the questionnaire, as well as on issues highlighted by the questionnaire respondents, leading to questions that were most salient to the participants. The general areas covered by the key questions included how the teachers define or conceptualise exceptional ability; how exceptionally able pupils are identified; what types of provision work well, and the factors which hinder support for these pupils. Both descriptive and

[13]In reality, extreme weather conditions (Storm Darwin) led to far less people turning up than anticipated, and many of the non-participants sent apologies afterwards.

evaluative information was sought, for example, the ways in which different types of provision work, as well as how well, and why, they work.

Since it is in contrasting and comparing data from the various groups that patterns and themes emerge, the researcher had to strike a balance between, on the one hand, addressing the research questions and ensuring a measure of compatibility between sessions, and, on the other hand, allowing participants to raise specific issues they saw as significant (Bryman, 2004). In order to achieve this, the key questions remained consistent across groups, while a substantial degree of flexibility accommodated the groups' capacity to lead the discussion in new directions, providing new and unexpected insights at times.

Running the Groups

The researcher tried to make sure that each venue provided an appropriate social setting for the group discussions (Cronin, 2006). Name cards were prepared for each participant beforehand; recording equipment was set up and tested to ensure that all comments in the room could be captured, even if spoken quietly. Refreshments, including tea, coffee and scones, were served.

The researcher, who was the sole interviewer, began each session by welcoming the participants and introducing herself and the study. A short presentation outlining the goals of the research and the main findings from the questionnaires followed. The conventions of focus group participation were presented: confidentiality and anonymity of data; recording of the session with everyone's permission; only one speaker at a time; the importance of everyone's experiences and viewpoints. Participants were then asked to sign a consent form (Appendix F) giving permission for the session to be recorded, and all agreed to this.

The opening question, which was designed to break the ice and get all participants to say something early in the session, asked for participants' comments on how they felt about completing the questionnaire. That question underscored the common characteristics of the participants and that they all had some basis for sharing information. This was followed by an introductory question asking participants about issues and areas of concern that they would like to see discussed in the session, thus allowing the participants to bring to the fore issues that they regarded as significant. Following the transition questions, the

interview moved on to the key questions (Appendix E), that is the questions that drive the study (Cronin, 2006; Krueger & Casey, 2000).

The researcher was careful to manage the groups so that less articulate and quieter participants were enabled to share their views. She emphasised the fact that everyone had experience of schools and that all participants had important perceptions and ideas that could be expressed. No pressure was exerted to have the groups reach consensus. Rather, attention was focused on understanding the perceptions and meanings of participants as they discussed the main issues (Krueger & Casey, 2000). The participants had self-selected to take part and all contributed to the discussion.

The focus groups lasted between 60 and 90 minutes. At the end, the researcher summarised the main points and asked participants to verify those summaries, thus adding to the interpretative validity of the accounts (Eisenhart, 2006). In the final question, a quick overview of the purpose of the study was provided and participants were asked if anything had been missed or left out. It was explained very briefly what would happen to the data they supplied. Participants who were interested in a feedback meeting at the end of the research project were invited to leave their names on a sheet.

The data from the focus groups were transcribed verbatim and typed up as soon as possible afterwards. Immediately after the sessions, the researcher jotted down notes covering important aspects of the groups such as the general atmosphere, overall group dynamic, and the enthusiasm and reactions of participants to the issues discussed. These observational notes were used as a focus for reflection during the duration of this phase of the fieldwork. The examination of, and reflection on these notes facilitated the conducting of ongoing analysis and interpretation, as well as tentative identification of themes. It thus contributed to the validity and reliability of the research (Cohen et al., 2011). An e-mail summarising the main points of the discussion was sent to one participant in each of the first three groups to determine if the transcripts were an accurate reflection of what had arisen in the groups. The mail was sent to the person who spoke first in each group. This member-checking was a valuable means of guarding against researcher bias and it also let participants know that the researcher valued their contributions and perceptions (Robson, 2002).

Data Analysis

Data analysis can be viewed as consisting of three concurrent flows of activity – data reduction, data display, and conclusion drawing or verification (Miles & Huberman, 1994). The reduction of the data mountain is achieved through descriptive and summary statistics for quantitative data, and through the production of summaries, coding, and written memos for qualitative data. Quantitative data is displayed through graphs and tables in the main, from which some conclusions are drawn. Qualitative data is displayed through commentary, tables and figures, while conclusions are drawn by noting patterns and regularities, and positing possible explanations (Miles & Huberman, 1994; Robson, 2002). These three flows of activity, together with the activity of collecting the data itself, form a continuous iterative process (Miles & Huberman, 1994). In this study, different approaches were used to analyse the data in each of the two strands in keeping with the mixed methods approach used. The findings from both sets of analysis are fully described in Chapter 4.

Organisation and Analysis of Quantitative Data

As outlined previously, questionnaires were circulated to all 347 mainstream primary schools in the Cork region. The analysis was based on the 209 completed questionnaires that were received. Each returned questionnaire was examined for legibility and omissions. In three instances, the researcher contacted the respondents because of incomplete answers. Two of these referred to pupil numbers, and the respondents were able to supply the numbers electronically. The third related to a major section of the questionnaire being incomplete. In that case, the researcher returned the incomplete questionnaire to the respondent who completed it in full and returned it by post. When the survey was being carried out, each questionnaire was assigned an identifying number which related to the list of schools on the Department of Education and Skills (DES) website in order to check which questionnaires were returned. When the questionnaires were returned, a new code was assigned to each, starting with R001 and ending with R209.

Data from the open questions in the questionnaire were typed into a separate word-processing file and checked for accuracy. The same steps to analyse these data were followed as for the data from the focus group transcripts. It is important to note that analysis of the open-question data form the questionnaire was carried out before the second

phase of the study began. To avoid repetition, the reader is directed to the section on Organisation and Analysis of Qualitative Data.

Prior to inputting information from the closed questions into Statistical Package for Social Science [SPSS] for Windows, Version 20, a codebook was prepared (Appendix H). All closed questions were converted to the numerical format necessary for inputting to SPSS. Each of the variables was defined and labelled, and a number was assigned to each of the possible responses.

Table 3.2. Examples from the codebook

Variable	**SPSS variable name**	**Coding instructions**
Identification number	A1 ID	Number assigned to each questionnaire
Number of teachers	A3 Staff Nos	1.5 = 1 or 2 teachers 3.5 = 3 or 4 teachers 6.5 = 5 to 8 teachers 10.5 = 9 to 12 teachers 16.5 = 13 to 20 teachers 22.5 = more than 20 teachers
Role of principal	A4 Prin	1 = administrative principal 2 = teaching principal
School status	A71 Disadvan	1 = Yes 0 = No
Category of disadvantage	A72 DEIS	1 = Urban DEIS Band 1 2 = Urban DEIS Band 2 3 = Rural DEIS
Level of preparedness	B12 Prepared	Enter the number shaded from 1 (very well) to 5 (not well at all)

Some examples are given in Table 3.2 which documents the name of some variables, the abbreviated variable names that were used in SPSS, and the way in which the responses were coded. The data, that is the values obtained from each respondent for each variable, were entered into the SPSS data file. Following input, the data set was then checked for

errors, in particular for scores that were not within the range of possible scores, and one error was found and corrected. Analyses were then run to obtain descriptive statistics which are displayed and described in the next chapter.

Organisation and Analysis of Qualitative Data

There is no clear, accepted single set of conventions for analysing qualitative data that corresponds to those used in quantitative analysis, but there are ways in which qualitative data can be dealt with systematically (Robson, 2002). The process of basic qualitative analysis consists of preparing the data for analysis, analysing it for themes or perspectives, moving ever deeper into understanding the data (this part of the process has been compared to peeling back the layers of an onion), representing the data, and making an interpretation of the broader meaning of the data. It is an ongoing process involving continual examination of and reflection on the data. Repeated combing of the various data sets eventually yields themes. It is mainly inductive in nature, as it argues from specific facts or data to more general themes and/or conclusions.

The researcher sought to identify and describe patterns and themes from the perspective of the participants, and then attempted to understand and explain those patterns and themes (Creswell, 2009). She was aware that while quotes from the focus group interviews present the participants' voices directly to the reader, this requires careful selecting, editing and interpreting of participants' words by the researcher (Eisenhart, 2006). Miles and Huberman (1994) note that decisions about what to select and to summarise, and how these are then to be organised, are analytic choices. Aware of the potential for bias in this process, the researcher focused on transparency in carrying out the analysis and in reporting the findings, in addition to providing examples that give the reader an insight into the process of the analysis and interpretation (Guerin, 2013). This included the comparison of themes across data sources, examining divergent cases, considering the coherence of the overall analysis, and presenting extracts so that the reader could make his/her own evaluations.

The central feature of qualitative data analysis is the coding process which groups evidence and labels ideas "so that they reflect increasingly broader perspectives" (Creswell

& Plano Clark, 2007, p. 132), and the following recommended steps were used for this process:

1. Preparation of data: The audio-recorded focus group interviews were transcribed into a word-processing file, and field notes and responses to the open questions in the questionnaire were written up. The transcripts were checked for accuracy.
2. Exploration of data: This stage entailed reading through all of the data to develop a general understanding of the database. Initial thoughts and ideas were recorded by writing short memos on the margins of the transcripts. Making these memos was an important first step in forming broader categories of information such as codes or themes (Cresswell & Plano Clark, 2007).
3. Analysis of data: Codes are retrieval or organising devices that enable the researcher to find and collect together all instances of a particular kind (Robson, 2002). Creswell and Plano Clark (2007) note that "multiple layers of analysis" are involved in the coding process (p. 131). This process involved breaking the transcripts, notes and open question responses into units of information (such as phrases, sentences, or paragraphs), and assigning a label to each unit. This label came from the exact words of the participants (*in vivo* coding), from a concept in the literature, or it was a term composed by the researcher. Miles and Huberman (1994) refer to this process as first-level coding. A qualitative codebook (a statement of the codes from the database) was developed. The process of generating a codebook was one element which helped to organise and reduce the data. Units of information were then grouped together into themes on the basis of common features, a process that involved 'cycling through' the data and marking all relevant passages related to each of the emergent themes. This process represents Miles and Huberman's second-level coding. In order to verify the emerging themes, two independent markers (both PhD graduates) each coded a transcript and then compared their work to that of the researcher in order to see whether they assigned the same or different codes to the text passages. The researcher and coders discussed and compared codes until consensus could be reached. The number of codes that all three agreed on was counted and was well over the 80% mark that Robson (2002) recommends. A number was assigned to each participant and each focus group. For example, P1F1 referred to participant

one in the first focus group, P3F5 referred to participant three in the fifth focus group.

4. Representation of the findings: Eisenhart (2006) observes that better representation leads to more credibility, and she describes representation as a "descriptive summary with interpretation, constructed by the researcher to reveal what has been learned and filtered through the researcher's choices of what is important for readers to know" (pp. 569-570). Writing strategies used by the researcher to build a credible account included describing subthemes or subcategories, citing specific quotes, using different sources of data to cite multiple items of evidence, and providing multiple perspectives from individuals in the study to show divergent views. The findings are also presented in visual form (such as figures, graphs, and tables) which reflects the different themes, where appropriate.
5. Validation of Findings: Three of the strategies used to validate the accuracy of the findings have already been noted: piloting the focus group schedule, member checking the main points arising from the focus groups with a sample of participants, and achieving inter-coder agreement of at least 80%. The other strategies used are described in detail below in the section on Plans for Quality Assurance.

Three main themes were identified. Each of these themes is discussed in turn in Chapter 4 which describes the main findings from the analyses of both quantitative and qualitative data.

Plans for Quality Assurance

The issue of quality assurance, especially validity and reliability, are key elements in research, whether the approach used is quantitative, qualitative or mixed methods. Validity is concerned with the accuracy and precision of the data, and also refers to how appropriate the data are in terms of the research question(s) under investigation (Denscombe, 2010). Reliability is concerned with consistency and asks if the research instrument(s) would produce similar findings on different occasions (Denscombe, 2010; Robson, 2002; Teddlie & Tashakkori 2009).

Quantitative Survey

Limitations of surveys have been well highlighted, for example, respondents may give incorrect responses, such as socially desirable answers. Furthermore, not knowing why a study is being conducted might produce incorrect responses. For example, if respondents in this study regarded the questionnaire as a means of evaluating their adherence to the NCCA (2007) guidelines, they may have responded defensively to it. These problems were addressed in the covering letters (Appendices B and C) which openly declared the purpose of the study and made assurances with regard to confidentiality and the ethical parameters in place. High reliability of response to the questionnaire was obtained by the use of carefully-worded, standardised questions which were refined through piloting.

Piloting was important also to establish the content validity of the questionnaire and to improve questions, format and scales (Creswell, 2009). Robson (2002) refers to the need for clear, unambiguous questions which add to the internal validity. Careful attention to the design and piloting of the survey and restricting the number of items to be included minimised potential threats due to the incidence of missing data and respondent error. The laborious but vital process of checking and rechecking the data was carried out to ensure that no errors occurred from mistakes with data entry.

External validity refers to the degree to which the findings can be generalised to wider populations, cases or situations (Cohen et al., 2011). A particular form of external validity threat relates to the possible discrepancy between what people say they do in a survey to what they do in practice. Awareness of this particular issue was one of the considerations which contributed to the particular design proposed for this research project. The qualitative phase was partially designed to address this potential discrepancy by exploring in greater depth the actual practices of teachers.

Qualitative Focus Groups

The question of quality assurance is no less important in qualitative research, but the issues present in a different manner. Reliability is generally understood to refer to replicability, the issue being whether the same or similar results would be obtained if the study were replicated under similar circumstances. As a check on reliability, an audit trail,

which is the strategy recommended to ensure replicability, was maintained (Robson, 2002; Denscombe, 2010). The audit trail consists of a transparent, reflexive account of the methods, analysis and decision-making, showing the lines of inquiry that led to particular conclusions (Seale, Gobo & Gubrium, 1999). It includes raw data (transcriptions of focus group interviews, field notes), reflective journal, diary of work, details of coding and data analysis. Thus, the replicability of the qualitative element of this study was enhanced through the construction of "accurate, valid and insightful explanations" of what was discussed, so that similar interpretations might be reached on other occasions (Chioncel, Van der Veen, Wildemeersch, & Jarvis, 2003, p. 501).

Validity, also referred to as credibility and trustworthiness, is regarded as one of the strengths of qualitative research (Creswell, 2009), and it is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, and the reader. Robson (2002) warns that there is no foolproof way of guaranteeing validity. The researcher took cognisance of Chioncel et al.'s (2003) list of elements that add to the validity of the findings. These included clear research questions which provided relevant answers; careful time-keeping so that all research questions got adequate attention; awareness of groupthink (counteracted by using probing questions); accurate recording; and feedback from participants.

Mindful of Maxwell's (1992) typology of categories of validity, three of which can be applied to focus groups according to Chioncel et al. (2003),[14] the researcher used the following strategies to validate the findings from the focus group interviews:

- Member checking: A summary of the main points of the focus group discussions was provided for comment to a sample of participants (see the section Running the Groups).
- Triangulation: Data collected from both focus groups and questionnaires were triangulated and used to build a coherent justification for themes (Creswell & Plano Clark, 2007; Denscombe, 2010) Triangulation was used both as a means of

[14] These are (a) descriptive validity, that is the factual accuracy of the account, including what is omitted as well as what is included; (b) interpretative validity which refers to grounding the accounts in the language of the participants; and (c) theoretical validity, also called internal or concept validity, which covers the explanatory function of accounts and the inferences from the data, as well as the suggested relationships between themes (Chioncel et al., 2003).

validating the findings in terms of their accuracy and authenticity, and as a means of producing complementary data that enhanced the completeness of the findings.

- Reporting disconfirming evidence: Negative or discrepant information that ran counter to the themes is reported. This, in fact, confirms the accuracy of the analysis and the credibility of the findings as it mirrors real life which comprises "different perspectives that do not always coalesce" (Creswell, 2009, p. 192).
- Grounding in examples: Rich, thick description (Geertz 1973) was used to convey the findings. Key excerpts and direct quotes from the focus group data, supported by data from field notes and responses to open questions in the questionnaires, are used in the next chapter to give the discussion an element of shared experiences (Creswell & Plano Clark, 2007) and to help the reader to assess whether the interpretations made are appropriate.

The aim of the generalisability of the findings from the qualitative phase of the study was reframed in terms of the contribution that this in-depth exploration of the issues around exceptional ability could offer schools in similar circumstances. This is in line with Lincoln and Guba's (1985) idea of transferability and it depends on the data being sufficiently rich and saturated to allow for the emergence of general themes and patterns. In addition, as noted already, two independent individuals known to the researcher, both PhD graduates, checked the data for codes, achieving agreement of at least 80%. The trustworthiness of the study was thus enhanced through intercoder agreement.

Mixed methods studies enjoy a dual advantage in terms of inference transferability (Teddlie & Tashakkori (2009). On the one hand, the larger sample in the quantitative phase provides greater confidence in transferring the findings to other schools. On the other hand, the rich and inclusive understandings from the qualitative phase provide the detailed information necessary for a comprehensive assessment of the settings and circumstances from which the inferences were made and to which practice recommendations may be applicable. Johnson and Onwuegbuzie (2004) refer to this as the legitimation step which involves assessing the trustworthiness of both the quantitative and qualitative data and the subsequent interpretations made from the whole study.

Ethical Considerations

Ethical issues need to be considered at all stages of the research (Creswell, 2009). Prior to commencement, ethical approval was sought from the relevant authorities. The special educational needs co-ordinators who were involved directly as respondents to the questionnaire were informed of the purpose, nature and approach of the study in the covering letter. It was pointed out that completion and return of the questionnaire would be taken as acceptance of the data being used in the thesis report, and any journal articles or conference presentations that might arise from it.

The researcher adhered to ethical principles of confidentiality and consent as she carried out the fieldwork. The idea of consent as ongoing (Simons & Usher, 2000) informed her approach. This means that consent was understood to mean allowing participants to withdraw at any time or not to answer specific questions if they so wished. Every effort was made to ensure that the identity of participants is protected. During the analysis stage, real names were replaced by codes. Schools and teachers are not identifiable in this report.

The execution of this research project has relevance and importance for the Irish education system as a whole. In addition, it is expected that teachers who responded to the questionnaire, and in particular, those who participated in the focus groups, will benefit directly from their particpation through reflection on their own practice. In fact, many commented on how participation in the project gave them the opportunity to consider their own schools' practices with regard to exceptionally able pupils.

In the context of this study, the researcher was aware of her own position and biases in relation to the teachers, and she consciously sought to incorporate reflexivity into her work. Her background as a primary teacher enabled her to see things from the teachers' perspectives and to appreciate the enabling and constraining factors that operate in schools. Furthermore, through her work as an educational psychologist, the researcher gained a different view of the educational system, and this assisted her in adopting the role of sympathetic observer. Nevertheless, while acknowledging the advantages that her background experiences allowed her to bring to the role, the researcher could not claim to

be entirely neutral and objective, and she, therefore, engaged in ongoing reflection throughout the study.

Conclusion

This chapter introduced the research design and mixed methods approach chosen for this study, and justification was given for the adoption of a pragmatic framework. A discussion of mixed methods as an approach to research was followed by a detailed description of the data collection methods used in both phases of the research. Prior to discussing strategies for quality assurance, an outline of the plan for data analysis was given. Finally, ethical issues were considered. The careful planning and meticuluous attention to detail, combined with the comprehensive strategies for quality assurance used by the researcher, ensured that the findings which are reported in the next chapter are robust and trustworthy.

CHAPTER 4 FINDINGS

This study aimed to explore how primary teachers think about and identify exceptionally able pupils and how they cater for the needs of these pupils. To this end, all primary schools in one geographical area (Cork city and county) were surveyed (N = 209) and focus group interviews were conducted with 27 teachers who volunteered to participate. This chapter reports the findings of the study. It is organised into four main sections, the first, a short section, reports on the analysis of the questionnaire data with regard to the demographic features of the responding schools. This sets the context for the main findings of the study which combine both quantitative and qualitative data from the questionnaire and the focus groups. These findings, presented in the following three sections, outline the answers to the three research questions which asked about the teachers' definitions/conceptualisation of exceptional ability or giftedness, the identification of exceptionally able pupils, and the provision made for them in primary schools.

The most significant findings in the study are predominantly the result of qualitative work, with these findings being the most nuanced, rich, and revealing of teachers' own preoccupations and perspectives. Indeed, the interplay and at times the tension between qualitative work in the focus groups and the questionnaire responses added to the richness of understanding of teachers' thinking and practices that arose during the study. The central focus that emerged in the qualitative work on identification and provision is reflected in these sections in the present chapter being detailed and extended.

Section 1: Demographic Information from Questionnaire

The findings from part A of the questionnaire (School Information) and some of Part B (Policy) are outlined in this section. In the questionnaire, the category of 'Other' was included in many questions to allow respondents to indicate an alternative option to those given.

School Size

One tenth of the responding teachers (*n* = 21) reported that their school had 50 or less pupils, while 7% (*n* = 14) had more than 400 pupils. The majority of the schools were mixed schools (*n* = 170), while 11% (*n* = 24) were boys only schools and 7% (*n* = 15) were girls only schools. A small number of the mixed schools were, for example, predominantly girls' schools with just a small number of boys or vice versa (e.g., 114 boys and 3 girls). In those cases, it is likely that the school is a single sex school with a mixed special class (such as Autism Spectrum Disorder or language unit) attached.

The Department of Education and Skills (DES) frequently uses numbers of teachers as a guide to the size of schools. Table 4.1 indicates the number of teachers on the staff, including principal, class teachers and support teachers. According to the teachers' responses, schools with between five and eight teachers were the most common, with just over one third of schools (*n* = 72) falling into that category.

Table 4.1. Staff numbers

Number of teachers[15]	1-2	3-4	5-8	9-12	13-20	>20
Frequency *n* (%)	14 (7%)	21 (10%)	72 (34%)	37 (18%)	41 (20%)	24 (11%)

Other Background Variables

Data about the role of the principal, the main language of instruction, disadvantaged status and location of the school are summarised in Table 4.2. Almost half and half had administrative and teaching principals. An administrative principal is appointed to schools with 178 or more pupils. There are some variations to this number for DEIS schools and those operating a specialist autism unit.[16]

[15] There are a number of one-teacher schools in Ireland situated mainly in remote rural areas or on off-shore islands. According to DES, in most circumstances schools with 18 pupils will have a second teacher for the school year 2018/2019. There were four one-teacher schools in the Cork area when data for this study were being collected.

[16] In ordinary primary schools and Gaelscoileanna, 178 pupils are needed for appointment of administrative principal. This becomes 115 pupils if the school is operating a specialist autism unit. There are further variations for DEIS schools as follows: Deis Band 1 schools need 116 pupils (81 if operating a specialist autism unit), and DEIS band 2 schools: 145 pupils (115 if operating a specialist autism unit).

Table 4.2. Role of principal, language of instruction, disadvantaged status and location of school**.**

Background variable		**Frequency** ***n*** **(%)**
Role of principal	Administrative principal	100 (48%)
	Teaching principal	109 (52%)
Language of instruction	English	188 (90%)
	Irish	21 (10%)
*Disadvantaged status	Urban DEIS band 1	15 (7%)
	Urban DEIS band 2	7 (3%)
	Rural DEIS	7 (3%)
**Location of school	City/suburbs	45 (22%)
	Large town	18 (9%)
	Small town	36 (17%)
	Village/Rural	110 (53%)

*14% (*n* = 29) of the responding schools have disadvantaged status.
**A town with a population of greater than 10,000 is regarded as large, while a town with a population with 1,500 to 10,000 is considered to be small.

Over half the schools were located in a rural or village area. Of the 21 Irish-medium schools, five were rural schools in the Gaeltacht or Irish-speaking communities, while 16 were Gaelscoileanna in a more urban setting. A review of the dataset did not suggest any differences between the schools that participated in the study and the schools that did not.

Respondents' Role(s)

Keeping in mind that respondents were able to specify more than one role in the school, almost two thirds (*n* = 134) were school principals or deputy principals, and an equal number were involved in special education. It must be noted that the questionnaire was addressed to the principal of each school, with a request that the teacher who takes the lead role in co-ordinating special educational needs in the school complete it. This may explain the small number of class teachers (*n* = 25) who filled out the questionnaire.

Continuing Professional Development (CPD)

Over a quarter of the responding teachers (*n* = 54) have had CPD in the area of providing for exceptionally able pupils, with some reporting more than one source. The most common sources of CPD were the Graduate Diploma in Special Education (*n* = 22), a SESS course (*n* = 18) and online courses (*n* = 15). Other sources included higher degrees, summer courses, guest speakers and day-long workshops.

Designated Co-ordinator and Interested Teachers

Forty-four respondents reported having a designated person to co-ordinate provision for exceptionally able pupils in their schools. This role was carried out by an individual teacher (*n* = 26) or by a team (*n* = 18). Forty-one percent of responding teachers (*n* = 85) were aware of someone in their school with an expressed interest in exceptionally able pupils, and of course, that person may have been the respondent. Almost 60% (*n* = 124) were not aware of any teacher in their school with such an interest.

Written School Policy

Just over a quarter of the responding teachers (*n* = 55) reported that their school has a policy that specifically addresses the needs of exceptionally able pupils, mainly as either part of the special educational needs (SEN) policy (*n* = 34) or the learning support (LS) policy (*n* = 10). Eight respondents reported that their school has a stand-alone policy for exceptionally able pupils. As part of their policy on assessment, schools are reminded to specify their procedures regarding standardised testing, one of whose purposes is to identify pupils "with exceptionally high scores so that appropriate learning experiences can be provided for them" (NCCA, 2007a, p. 61). In the NCCA (2007) guidelines, a whole-school policy for the education of exceptionally able pupils is recommended as good practice which will help guide the teachers towards a "consistent and effective approach" (p. 57), and a sample policy as well as a sample audit of school practice is included in those guidelines.

Section 2: Definition and Conceptualisation of Exceptionally Able Pupils

This section outlines the responses to the first research question which was concerned with teachers' definitions and conceptualisations of exceptionally able pupils. The whole area of conceptualising and defining exceptional ability generated many responses from the questionnaire respondents and was thoroughly discussed by participants in all seven focus groups. The discussions and comments indicated clearly the confusion and uncertainty experienced by teachers regarding what constitutes exceptional ability. These ideas and their subcomponents (Figure 2) are outlined in the rest of this section.

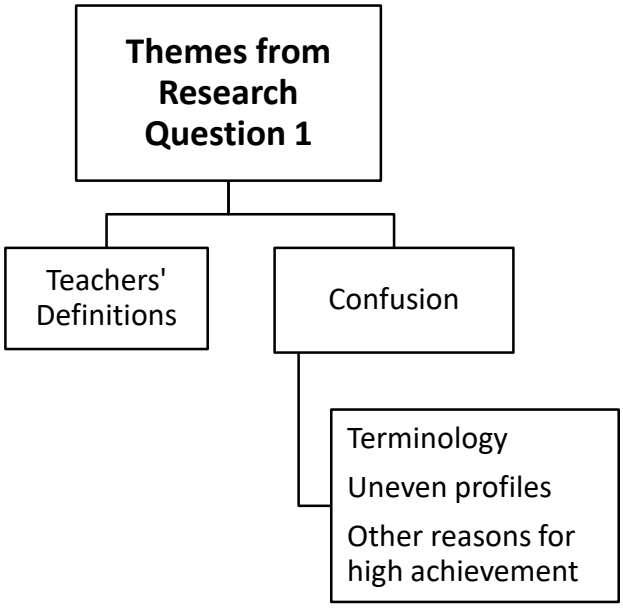

Figure 2. Themes from research question 1

School and Teacher Definitions

Twenty-nine of the responding schools gave the definition that is in their policy. These were many and varied but the most common elements were:

- Pupils achieving a certain cut-off score in standardised achievement tests and/or ability/IQ tests;
- Combination of measures, including teacher observation, test scores, parent information, and psychological report;

- Five respondents quoted a definition taken from Eyre (1997) as something that informs their understanding: “An able child is one that achieves or has the ability to achieve at a level significantly in advance of their peer group. This may be in all areas of the curriculum or in a limited range” (p. 67).

Teachers whose schools did not have a written policy or whose policy did not include a definition were asked to give their own definition. Just over 70% (n = 148) of questionnaire respondents gave their own definitions. Some were very general such as “displays high ability in one or more areas” (R044), but overall, four main criteria emerged, two of which, test scores and a combination of factors, correspond to the first two in the policy definitions above. Two other criteria were put forward:

- Abilities compared to peers: e.g. “higher than average competence in academic areas relative to their peers” (R115), a definition that aligns with Eyre’s (1997) definition above.
- Need for challenge: phrases like “need to be extended and given opportunities to learn at a more challenging level” (R167) and “require extra challenges and/or enrichment opportunities beyond the standard curriculum” (R095) were used. This definition mirrors that in the NCCA (2007) publication which describes pupils who “require opportunities for enrichment and extension that go beyond those provided for the general cohort of students” (p. 7).

Teacher Confusion

Teachers’ comments regarding how to conceptualise exceptionally able pupils indicated that they were very uncertain about the whole issue. The extent to which some teachers were unsure was indicated by respondents who stated that despite teaching for many years, they had rarely if ever come across such pupils. These two comments typify these sentiments:

> I have never come across a gifted child in 25 years teaching. I have taught children who came close to giftedness. I referred these children to classes in UCC [University College Cork] but I don’t feel I could adequately teach a gifted child. (R179)

> In my 35 ½ years (!) teaching experience (27 years in a city school – a well-off area) and 8 ½ years in a well-to-do rural farming community I've come across one child who may be considered exceptionally able. (R201)

This view has also been found in previous research (Szymanski & Shaff, 2013) and suggests that some teachers have a mental model of the 'truly gifted' pupil that cannot be satisfied, hence their references to rarely having taught such a pupil throughout their teaching career.

The issues that caused the most confusion for the teachers included the different terminology used, whether gifted pupils have exceptional ability across all areas or in specific areas only, and the uneven profiles of many of these pupils including those with dual exceptionality. The idea was also put forward that there might be other reasons apart from exceptional ability for some pupils demonstrating high achievement in school, and this will be discussed later in the chapter.

Terminology Relating to Exceptional Ability

One of the main issues for teachers was uncertainty as to how an exceptionally able pupil is defined and identified. One focus group participant summed up that uncertainty by asking, "How exceptional does a child have to be to be exceptional?" (P2F4), a sentiment echoed by one of the questionnaire respondents: "I remain confused as to how the exceptionally able pupil is defined. When does the high achiever become exceptionally able?" (R205). One thing was clear – teachers were looking for a definition, and in all the groups they grappled with this issue, trying to arrive at some clarity.

One teacher felt that the term 'exceptionally able' is "a bit more descriptive than talented or gifted … it gives you a better idea of what kind of ability you're looking for, that you're able, but you're exceptionally able; whereas talented or gifted are less quantifiable" (P2F6). However, many teachers were not clear about it, with one asking, "You have exceptionally able, very bright, gifted, where is the cut-off point?" (P2F3). Another, noting that the issue is complicated, wondered, "I don't know if, like, there's one pocket of exceptionally able kids, if you can do X, Y, and Z you're exceptionally able,

other than that you're just the same as everybody else" (P4F5). Yet another felt that "there's a difference there between well able and exceptionally well able" (P1F1), an idea supported by the teacher who claimed that "people would say some are in the grey area between being in that category [exceptionally able] or just being, you know, very good" (P3F3). These comments reflect Warwick's (2001) "semantic minefield" (p. 30) used to refer to the difficulty in agreeing on a common language with which to define and identify exceptionally able pupils.

Some teachers could see the consequence of not having a clear definition, and one commented: "I'd love to know, what is exceptionally able, so I can justify then taking them and working with them" (P6F4). It is clear from that last response in particular, that teachers recognise that lack of clarity around what constitutes exceptional ability has negative consequences for pupils at this level of ability. The literature makes it clear that the definition used has significant implications for teacher practices in the classroom in the areas of identification and differentiated provision (Matthews & Dai, 2014; Mazzoli Smith & Campbell, 2016).

Uneven Profiles

Adding to the difficulty for teachers is the idea that exceptionally able pupils "could be gifted in so many different areas" (P2F2), with teachers asking, "should we consider the exceptionally able pupil to be exceptionally able in one, more than one, or lots of areas?" (R205). A participant in one of the groups felt that "you can be exceptionally able in a specific thing as opposed to in everything" (P1F2), but not everyone was so sure. Some felt they were all-rounders – "pupils who possess high general intellectual ability across all domains" (R131). In conceptualising exceptional ability, the vast majority of teachers referred to academic or intellectual ability. However, "in line with the theory of multiple intelligences" (R165), a few teachers warned against focusing only on ability in academic areas, noting that "honing in on the academic isn't quite fair really" (P2F7), and that teachers "need to be mindful of children with special talents in other areas, e.g. art, sport" (R028).

The idea that a pupil could have both exceptional ability and a disability was something that also caused considerable confusion for teachers. A very large majority of

respondents (*n* = 177) agreed that exceptional ability and disability can co-exist (Figure 4). The teachers who were unsure or disagreed mainly lacked knowledge or experience in the area, as typified by the teachers who stated that they were "unsure because of lack of experience in this area" (R163) and who found it "difficult to conceptualize this scenario – have never encountered this mix in a child" (R074).

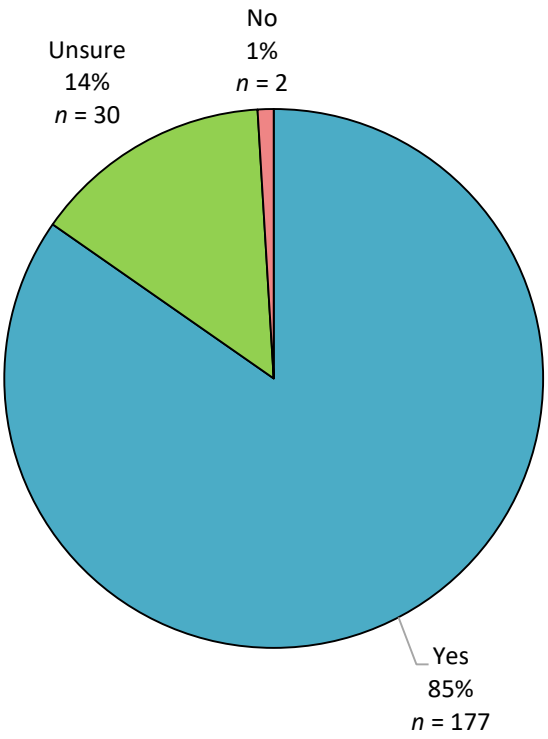

Figure 3. Dual exceptionality

Respondents referred to various types of disability in their comments and many listed more than one disability. In particular, they felt that pupils with autism/Aspergers, specific learning disabilities, physical disabilities, and social/emotional difficulties could all be "exceptionally able in certain areas" (R005). Stephen Hawking was referred to by a number of teachers as an example of a person who was both gifted and disabled.

With reference to pupils with Autism Spectrum Disorder (ASD)/Aspergers, a number of respondents commented on how they may "restrict the focus of their interest on very few areas, showing deep knowledge as a result; they may be exceptionally able in these narrow areas" (R131). One respondent tried to clarify his/her ideas on this:

> A child may, e.g. have Aspergers Syndrome and have a specific interest in one area – may even be an expert in <u>one</u> area. However, he may be weaker in other academic areas and may have social/emotional needs. I don't consider this child to be exceptionally able. My notion is that to be termed 'exceptionally able' he should excel in all/lots of areas. (I am now wondering about this!!!). (R205)

Participants in focus group 5 tried to tease out the issue further, but reached no consensus about the matter as the following extract shows:

> P4F5: We have one child, profoundly autistic, but he has a retention ability when it comes to scientific facts that is unbelievable … he can remember stars' names, he can remember scientific formulas … he'd bamboozle you once he gets on to it. Like if he wasn't autistic, and had that ability, I'd say he was exceptionally able. So, I'm just challenging myself here now, is he exceptionally able and just happens to be autistic, am I underselling his abilities because there's a tag? … I suppose it's something I'll have to go away now and think about.
> P3F5: Is he exceptionally able, or exceptionally able in science?
> P4F5: Yes, that's it.
> P6F5: But do you have to label it then?
> P4F5: Yea, do you have to narrow it down?
> P3F5: Would you give him a general, *He's exceptionally able*. Is he?

Despite most questionnaire respondents agreeing that pupils with disabilities can certainly have exceptional ability, it was clear from the focus group discussions, as in the above example, that the teachers still struggled with the nebulous idea of what constitutes an exceptionally able pupil, indicating perhaps, that many teachers hold a stereotypical view of such a pupil as one who displays exceptional ability across all areas.

A number of teachers voiced the idea that "special educational needs can mask each other as well" (P2F6). Some saw that "the 'need' might be masking the 'talent' (R065), while others looked at it the other way round, with one teacher asking: "Is their intelligence covering up something else that could be a very basic need, from a dyslexia point of view

or dyscalculia, because they're bright enough, they figure out the system?" (P4F5). The idea of one effect masking another was referred to by Gilheaney (2003), a former director of CTYI, who claimed that around 10% of the gifted group may have a learning disability, leading to a situation in which the pupil may get no specific provision on either front. The study participants were also uncertain regarding where their instructional level should be pitched. Some noted that "the focus is usually on the learning difficulty" (R098) and that teachers "tend to focus on these children's needs and plan work for them accordingly" (R015). However, other teachers maintained that the pupils' "exceptional interest and knowledge in specific areas … has to be nurtured as well as dealing with the difficulties they may have" (R059), and that it is "important that we don't dwell on the child's disability and maybe miss seeing the child's potential to be exceptionally able in certain areas of the curriculum" (R013).

Having a disability obviously added to the complexity of the issue for teachers. In general, although a large majority of questionnaire respondents agreed that pupils with disability can be exceptionally able, when dealing with individual pupils, teachers often felt that having exceptional ability in one area may not be enough to define a pupil as exceptionally able, and they held conflicting views regarding whether, from an instructional perspective, the focus should be on the disability or the high ability.

Other Reasons for High Achievement

An interesting point was made by some teachers that perhaps a pupil's high achievement in school may not necessarily be the result of exceptional ability, and they posited three situations in which this might occur. One cited good teaching: "When you say gifted, what do you mean by gifted? Ourselves, if you have very good teachers for instance … you could have say ten children in the class scoring over the 90th percentile; that comes down to good teaching as well, so not all of those would be actually gifted" (P1F4).

Another teacher attributed high achievement to "pure hard slog": "I wonder can you actually cultivate, you know like the Chinese system where you could get them to learn, learn, learn, from a very early age so that they do on paper look like high achievers, but in actual fact it's pure hard slog, that they get the high standard?" (P4F4), a sentiment echoed

by another participant: “If they have 9s and 10s in their standardised tests … that situation could be due to work, work, work” (P1F3). Newer conceptualisations include task commitment as a necessary factor in the expression of exceptional ability or giftedness (Renzulli, 1978; Plucker & Callahan, 2014).

A third suggestion was that family background might play a big part: “I wonder, a very bright child from an advantaged family, with professional parents etc. – I’m following through all the stereotypes here - would they be more likely to be in that setting than a child who might be equally naturally bright, but mightn’t have the same opportunities in life?” (P6F5). The implication from these comments seems to be that exceptional ability is innate, and that pupils who achieve high attainments through good teaching, hard work or supportive background are not necessarily exceptionally able.

Several teachers called on the DES to give them more guidance in this area. This would help schools to share a common understanding of what constitutes exceptional ability, as they would all be working from a common definition, as noted by one teacher: “It would be great, I think … if somebody came out with a guideline saying, ‘This is gifted and this is exceptionally able’, just so that all schools would be standardised” (P4F4). These results suggest that the definition used in NCCA (2007) guidelines may not be sufficiently familiar to classroom teachers to be of practical use.

Conclusion to Section

The teachers in this study reflected the idea, common in the literature, of giftedness or exceptional ability as a contested concept (Mazzoli Smith & Campbell, 2016; Sternberg, 1990). The idea that exceptional ability is multifaceted seemed to underline, for these teachers, the complexity in arriving at an appropriate definition. Despite their uncertainty regarding how to define exceptional ability, teachers attempted to work out their own definitions or tried to tease out what an exceptionally able pupil might look like, and how they might identify one. The second research question focused on how gifted pupils are identified, and it is to the idea of using scores and other criteria as a basis for identifying pupils with exceptional ability that the next section turns.

Section 3: Identification – Methods and Challenges

The second research question was concerned with the identification of exceptionally able pupils and this section outlines the responses to that question. The themes and sub-themes arising from the analysis of both sets of data are presented (Figure 4). The identification of exceptionally able pupils was closely bound up with teachers' definitions and conceptualisations of exceptional ability, and they tried to grapple with issues that were related to both areas. Included in the analysis and discussion on identification are the criteria teachers use, common or typical characteristics of exceptionally able pupils, and the challenges teachers face in implementing the identification process.

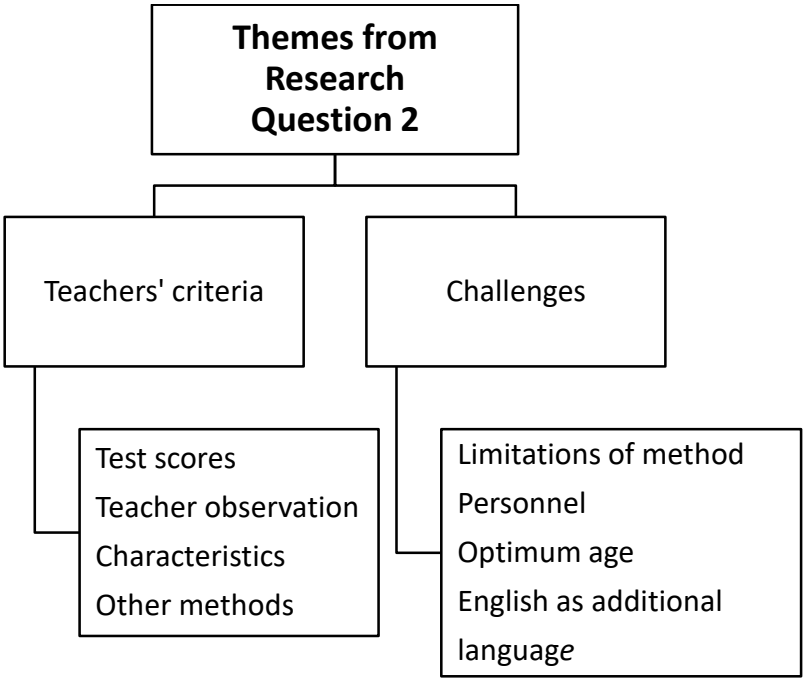

Figure 4. Themes from research question 2

A small number of teachers were not sure if there was any need to identify exceptionally able pupils, for example one said, "I am not so sure that boxing the area too definitely is of any value; the very able pupils are sustained by the very able teacher anyway and their parents are supporting them" (R025). Others were critical of particular pupils being identified as exceptionally able, noting that it can sometimes be a "dangerous practice to 'single out' some children as being exceptional" as it tends to give their parents and themselves "heightened opinions of their ability – 'I'm brilliant, I don't need to do ordinary classwork' type of attitude" (R033). The attitude of the majority of teachers to the

issue, however, was summed up by the participant who stressed the need to identify these pupils, but acknowledged that it is a challenging process:

> I think, identifying the child, it's very difficult as they could be gifted in so many different areas… but you really do have to…. I think it's identifying them that is so important for seeing what their needs are. (P2F2)

As can be seen in Figure 6, a majority of schools had identified pupils as exceptionally able. However, a sizable minority – almost one third – of respondents reported having no exceptionally able pupils in their schools. Taylor (2016) reported a similar finding, and Ní Chéilleachair (2013) found that half the Irish primary classroom teachers in her study did not identify any pupils as being exceptionally able. These findings seem to suggest a high proportion of classes without any exceptionally able pupils, although it seems more likely that there are pupils in these classes who have not yet been identified, as, according to the NCCA (2007) guidelines, 5% to 10% of the school population may be exceptionally able.

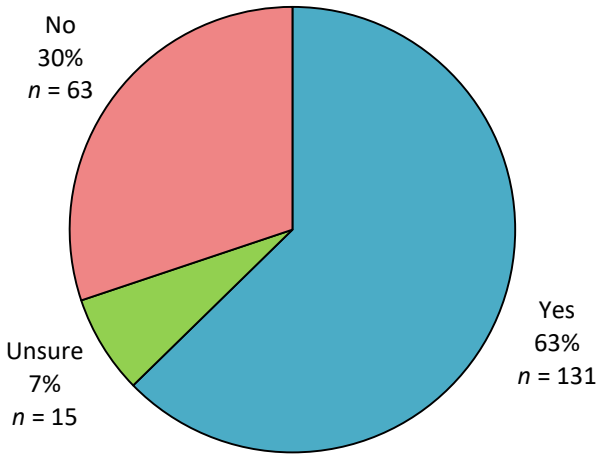

Figure 5. Number of schools reporting pupils identified as exceptionally able

Table 4.3 gives information regarding the numbers of pupils identified as exceptionally able relative to the size of the school (as indicated by the number of teachers). Note that 23 schools responded that they had identified pupils as exceptionally able but did not give the number of pupils who had been so identified, while fifteen respondents were unsure if pupils had been identified as exceptionally able in their school.

There was substantial variation in the number of pupils identified as exceptionally able and as shown in Table 4.3 variations were linked to the size of school as determined by the number of teachers on staff. Over half of the smallest schools, that is schools with 1-2 teachers, did not identify any pupils as exceptionally able, while one third of medium sized school (i.e., schools with 5 – 8 and 9 – 12 teachers, respectively) did not identify any pupils. At least four of largest schools (24+ teachers) identified no pupils as exceptionally able; on the other hand, at least four reasonably large schools (schools with 13 to 20 teachers) each identified over twenty-five pupils as being exceptionally able.

Table 4.3. Pupils identified as exceptionally able according to school size

School size as determined by the number of teachers on staff	Number of pupils identified as exceptionally able by size of school						
	0	**1**	**2 – 5**	**6 – 10**	**11 – 25**	**25+**	**Unsure or unspecified**
1 – 2	9	1	2	0	0	0	2
3 – 4	7	7	5	0	0	0	2
5 – 8	27	17	14	6	1	0	7
9 – 12	10	1	4	8	1	1	12
13 – 20	6	3	13	5	3	4	7
Over 20	4	1	4	3	2	2	8

Teachers' Criteria for Identifying Exceptionally Able Pupils

Question D3 of the questionnaire listed 10 methods that, according to the literature, are used to identify exceptionally able pupils. Respondents were asked to indicate, on a scale from Strongly Agree to Strongly Disagree, the extent to which they agreed with these methods. Their responses are summarised on the stacked graph in Figure 6. The mean rating for each method was also calculated on a scale ranging from 1(equal to Strongly Agree) and 5 (equal to Strongly Disagree). Hence, a mean rating of 1.56 signalled that the average response for this item was between Strongly Agree and Agree.

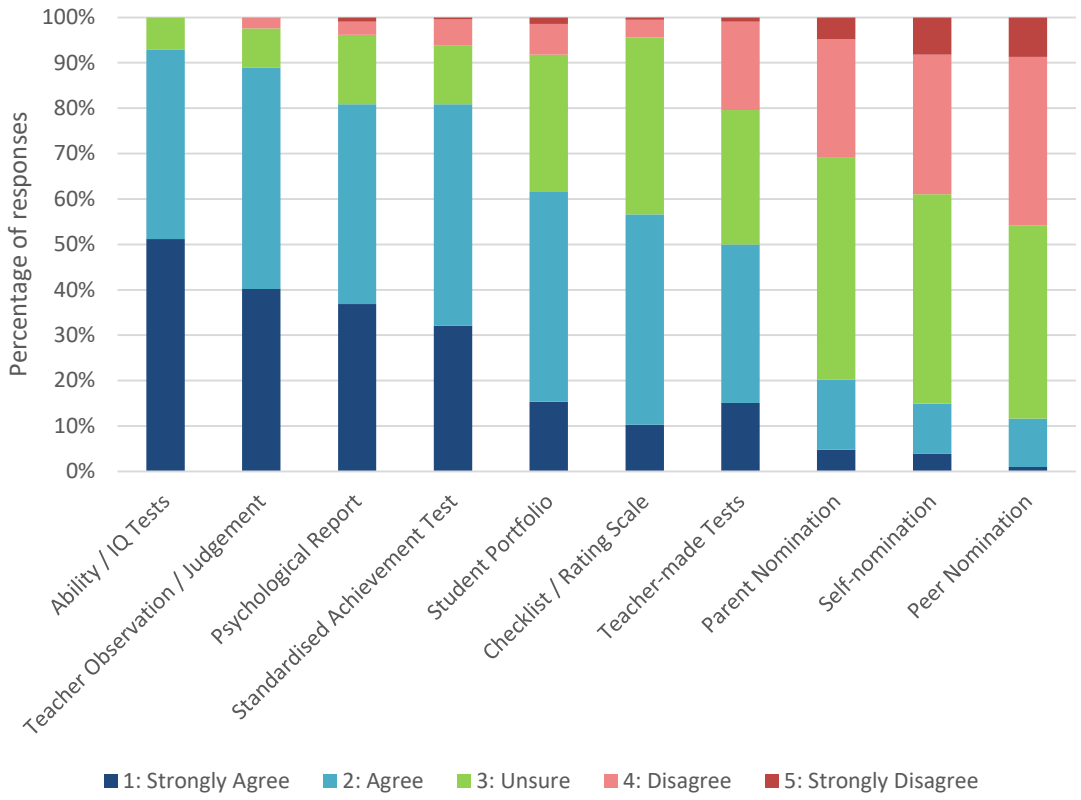

Figure 6. Teachers' agreement with identification methods

As shown in both Figure 6 and on Table I1, the methods that received the highest levels of agreement from the respondents were ability/IQ tests (*M* = 1.56, *SD* = 0.63), teacher observation (*M* =1.73, *SD* = 0.72), psychological reports (*M* =1.87, *SD* = 0.84), and standardised achievement tests (*M* = 1.94, *SD* = 0.85). The methods that received low levels of agreement from respondents were parent nomination (*M* =3.11, *SD* = 0.89), self-nomination (*M* = 3.28, *SD* = 0.91) and peer nomination (*M* = 3.42, *SD* = 0.83). With each of these three methods, a large proportion of respondents were unsure or disagreed with them as methods of identification. In the focus group discussions also, nobody mentioned peer or self-nomination, and very few teachers mentioned parent nomination. Those that did, spoke of parents in the context of children being brought to be "assessed in UCC, CTYI"[17] (P2F2) or, less frequently, parents informed the school about their child's exceptional ability - and their judgement was not always accepted, as this short excerpt indicates:

[17] CTYI (Centre for Talented Youth Ireland) based in Dublin City University (DCU) runs outreach courses for gifted pupils in University College Cork (UCC) among other centres around the country.

P2F3: From my experience, the parents will identify them for you …

P3F3: Wrongly sometimes!

Others agreed with this, with one respondent claiming that "sometimes parents whose children are 'over-prepared' when starting school assume/believe that their children are in the 'exceptionally able' category but this is not necessarily so" (R167). This contradicts findings from the literature as parents generally have been found to be reliable judges of their children's abilities (Freeman, 1991).

It is interesting that some of the methods listed in the questionnaire and supported by the responding teachers, and which are also recommended in the literature, were not mentioned at all in the focus groups. The focus group participants favoured standardised achievement test scores and teacher observation as identification methods that they could use in practice. The remainder of this section considers these methods in more detail and also looks at teachers' views on characteristics that are considered in the literature to be common in many exceptionally able pupils.

Test Scores

The results of standardised achievement tests are one of the main criteria on which teachers base their identification of exceptionally able pupils.[18] Many teachers agreed that exceptionally able pupils are "those who would in standardised tests reach Stens[19] of 10, nearly every year" (P1F1), and they stressed the need for a pupil to "consistently get scores of 10" (P3F7), they would not base it on just one year's scores. One participant mentioned advice from inspectors which was "someone standing out in their scores" (P3F3). However, not everyone agreed with using the results of achievement tests, and one respondent was very clear on the matter: "Identification is a challenge if the main focus is

[18] The most common standardised tests in use in Irish primary schools are the *Mary Immaculate College Reading Attainment Test, MICRA-T* (Wall & Burke, 2004), the *Standardised Irish Graded Mathematics Attainment Test, SIGMA-T* (Wall & Burke, 2007), the *Drumcondra Primary Reading Test* (Educational Research Centre, 2007), and the *Drumcondra Primary Mathematics Test* (Educational Research Centre, 2006). Since 2012, all primary schools are required to implement standardised testing in English reading and mathematics for all pupils in 2nd, 4th, and 6th classes. Irish-medium schools have to administer an Irish reading test also. Many schools use standardised tests in other classes too.

[19] Sten scores are a ten-point scale derived from standard scores with 1 representing the lowest category and 10 the highest (www.ncca.ie/media/1354/standardised-testing.pdf).

on standardised tests" and recommended "ability testing … if a school could afford it" (R172) instead.

Indeed teachers in two of the focus groups mentioned ability tests, naming the Non-Reading Intelligence Test [NRIT] (Young, 1989) as one that they used to determine pupils' ability level: "I would say they would be exceptionally able if they come out high in that NRIT test; it's actually testing their mental intelligence" (P3F1). Other teachers explained that their National Educational Psychological Service (NEPS) psychologist recommended that they carry out ability testing every year "generally to assess the ability of weaker pupils or low-achieving pupils" (R063), but as they pointed out the results could be used with high-ability pupils "to identify who they are and then to push them and to challenge them so that they are reaching their potential" (P1F1). Not everybody agreed with either achievement or ability testing, and a questionnaire respondent warned that "until there is a test that can legitimately identify an EA [exceptionally able] child there will be debate in schools as to what defines a child as EA" and then asked, "Do we want to go there at primary level?" (R076).

Teacher Observation

Many of the teachers in this study depend on their own judgement regarding a pupil's level of ability, arguing that they "all recognise in [their] own way, without an official test, children who are exceptionally bright" (P2F1). One teacher commented that **"**they can teach themselves; you always have those children, you explain it and they get it, you don't have to do much with them" (P3F5). Another agreed that they have "no difficulty with what you're teaching them, they fly through it" (P1F1). One participant strongly favoured teacher observation over any test, claiming that "a lot of these tests aren't worth the paper they're written on really; a teacher has a far better idea about the kids" (P3F3)[20]. Another teacher gave an example of how this works in practice:

[20] Standardised achievement tests (see footnote 17) have been specially developed for an Irish population and with reference to the Irish primary school curricula. The tests draw on up to 40 years of experience in test development. The MICRA-T, the most commonly used test, was first developed in 1988 and was redeveloped and standardised on a nationally representative sample of more than 10,000 pupils during the 2002-2003 school year. There are sections on both validity and reliability in all the MICRA-T and SIGMA-T manuals which are entitled MICRA-T Test Manual 1 (2004) and SIGMA-T Test Manual 1 (2007), authored by E. Wall and K. Burke, published in Dublin by CJ Fallon.

> Sometimes, we found, you could have a child who might say score in the 88th percentile in English, but from observation in class, he stood head and shoulders above the rest of them, and maybe he had a bad day or something the day he did the test. (P6F4)

Teachers reported that it is easy to identify pupils as exceptionally able if they are at a completely different level to their peers - "they would be just across the board, way above the others" (P2F6). Examples given were "children … who come into school reading" (P3F3), "a child in senior infants who got a reading age of thirteen and a half" (P5F4) and "being able to read the clock at junior/senior infant level" (R050). One participant described a new junior infant who was easy to identify as he "was at such a different level to the other kids", and while the class teacher was "teaching them inside how to do the number 'one' … he could add and subtract and everything, he was just off the scale completely" (P2F6). And that idea seems to be part of the difficulty of identifying pupils as exceptionally able – if teachers believe that pupils must be "off the scale completely" in order to be identified as exceptionally able, then many pupils will be overlooked.

Characteristics of Exceptionally Able Pupils

As part of their battery of signifiers of exceptional ability, there was some agreement among teachers that "there are certain characteristics that are typical" (P2F6). Question D7 of the questionnaire listed 18 characteristics that, according to the literature, often apply to exceptionally able pupils. The list consisted of a mixture of what could be regarded as both positive and negative traits. An example of a positive characteristic was 'are very articulate', and an example of a negative trait was 'lack self-discipline'. Respondents were asked to indicate, on a scale from Strongly Agree to Strongly Disagree, the extent to which they agreed with these statements. Their responses are summarised on the stacked graph in Figure 7. The mean rating for each characteristic was also calculated, with 1 = Strongly Agree and 5 = Strongly Disagree. These are presented in Table J1 in Appendix J, and are referenced in the following discussion.

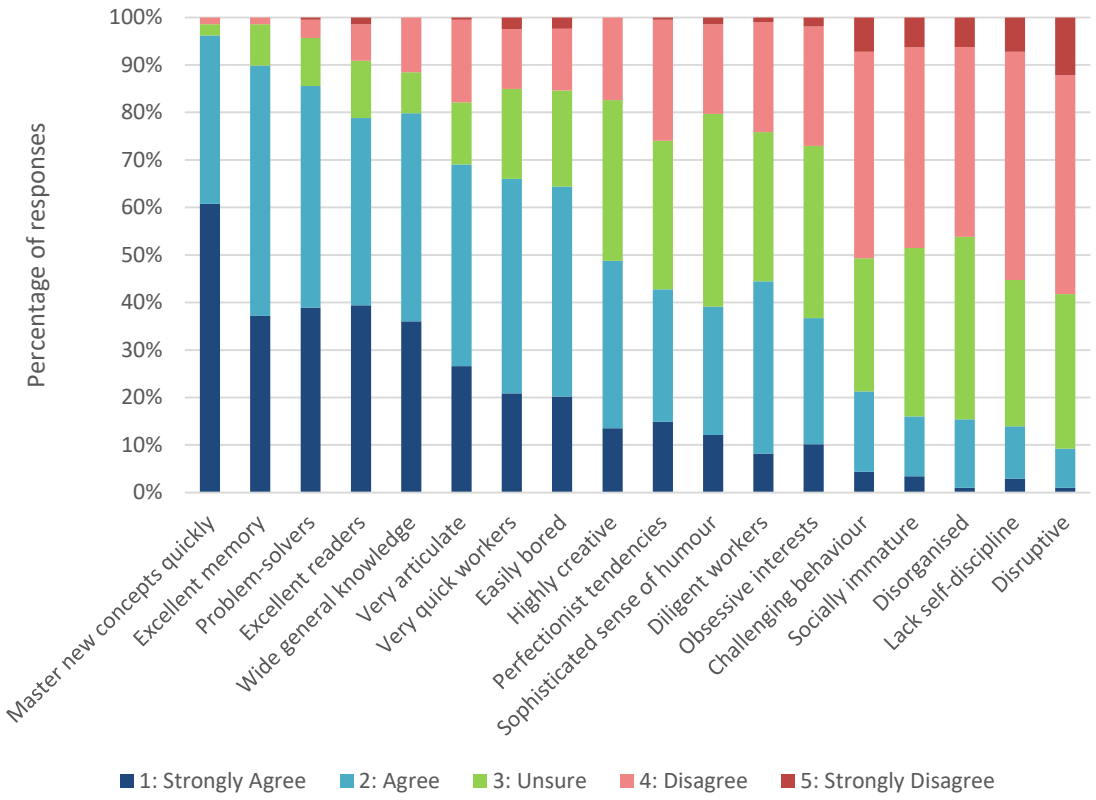

Figure 7. Teachers' agreement with characteristics of exceptionally able pupils

As is shown both in Figure 7 and in the mean ratings in Table J1, there was strong agreement among respondents that exceptionally able pupils displayed the strong learning skills of mastering new concepts quickly (M = 1.44, SD = 0.62), having excellent memory (M = 1.74, SD = 0.67) and reading skills (M = 1.92, SD = 0.97), being good problem-solvers (M = 1.80, SD = 0.81), and having a wide general knowledge (M = 1.96, SD = 0.95). There was also agreement to a slightly lesser extent among respondents that exceptionally able pupils are very articulate (M = 2.23, SD = 1.04), work quickly (M = 2.31, SD = 1.02), and are easily bored (M = 2.33, SD = 1.02). The latter was one of the few characteristics that might be considered negative in nature that was widely attributed to exceptionally able pupils by respondents. Most of the other characteristics which might be considered negative in nature received low levels of agreement from respondents, *viz*. being disruptive (M = 3.60, n = 0.84), exhibiting challenging behaviour (M = 3.32, SD = 0.98), lacking self-discipline (M = 3.46, SD = 0.89), being disorganised (M = 3.36, SD = 0.84), and being socially immature (M = 3.35, SD = 0.90). With each of these, a large proportion of respondents were either unsure or disagreed that they are characteristics of exceptionally able pupils.

One respondent painted a complex picture thus: “Some are disorganised, others are perfectionists with obsessive tendencies; some lack self-discipline whilst others can be very well behaved and introverted so one size doesn’t fit all exceptionally able students” (R124). However, overall, the questionnaire respondents seemed to suggest that exceptionally able pupils are ‘ideal’ pupils – they have a “great quest for knowledge and they enjoy being challenged and being exposed to a wide variety of learning experiences” (R159) and they “do not have behavioural issues generally” (R012).

Analysis of the comments in the open questions revealed a more nuanced picture, especially in relation to the behavioural presentation of these pupils. A small number of teachers mentioned that “these children are often bored and/or disruptive in class” (R190) “due to the lack of challenge or slow pace of work” (R024). One teacher summed up that attitude by explaining that “exceptionally able pupils … can become bored while waiting for the class to progress academically, and let you know it!” (R045). It is likely that a focus on more positive traits leads to non-identification of pupils who may not be “compliant teacher-pleasers” (Radnor et al., 2007, p. 288).

In line with most questionnaire respondents, the focus group participants also generally commented on the positive characteristics that exceptionally able pupils display, such as “they're just excellent really, excellent all round in all aspects of their learning in school” (P1F1). One teacher used a vivid figure of speech to describe these pupils:

> Someone described it very well to me once, who said the child who is gifted, it’s like the foreman on the building site, when the rest were all throwing sand around the place, they're thinking in a different way. (P2F1)

The generally held positive view of exceptionally able pupils has implications for which pupils are identified as needing further challenges, as pupils displaying more negative characteristics, such as disruptive behaviour, may go undetected. It has been suggested that teachers with experience of teaching exceptionally able pupils recognise that negative characteristics may be manifestations of boredom and frustration, whereas less experienced teachers see them as poor behaviour. This scenario was reported in the focus groups, and a few teachers reported being alerted to a pupil’s exceptional ability through disruptive behaviour:

> We would have found too that … other issues might have started first; there could have been behavioural issues or emotional issues; and then once you started investigating that, you realise that the root cause was a child who was exceptionally able … and we've had a few children that were identified like that; we realised in actual fact that the root of the behaviour was the fact that they were bored out of their minds. (P1F6)

A questionnaire respondent agreed that experience taught them that "disruptive behaviours might be indicative of exceptionality and [they] worked backwards from the poor behaviour to 'Why' the behaviour is presented" (R169). As a corollary to this, it was noted that it could be very difficult to identify quiet pupils, as one teacher noted that "a lot of children go under the radar because they're nicely behaved children and they sit there and listen and they never let on that they are so bright, and it took quite a while for us to click that this child is exceptional" (P2F6). McCafferty (2011) refers to these as "underground students" (p. 94). The literature suggests that exceptionally able pupils, particularly girls, can hide their abilities in order to fit in with peers and are thus not easily identified (Cross, 2011; NCCA, 2007; Neihart et al., 2002).

Other Methods of Identification

As noted earlier, few participants mentioned parent nominations as a means of identifying exceptionally able pupils, but in one focus group, the teachers agreed that family history played a part in teachers identifying some pupils. One teacher reported that they "knew they were very able children … because of their older siblings … they were more than likely coming in and going to be able to read" (P2F6). A co-participant said the same happens in their school – they "pick out children [they] know from family experience who are gifted" (P1F6).

Two other identification methods that were listed in the questionnaire – psychological report and checklist/ rating scale – were only briefly mentioned in the focus groups, and student portfolio, peer nomination and self-nomination were not mentioned at all. As seen earlier, over 80% of questionnaire respondents agreed or strongly agreed with psychological reports as a means of identifying pupils of exceptional ability. However,

while teachers may feel that, in theory, a psychological assessment is a very good method for identifying these pupils, in reality, as noted by some participants, the few assessments that schools obtain are taken up assessing pupils with learning and other difficulties. Again, rating scales and student portfolios are probably theoretically a good method (over half the questionnaire respondents agreed or strongly agreed with them), but teachers may not be accustomed to using them in school. A majority of questionnaire respondents disagreed with peer and self-nomination, and this was reflected in the lack of comment about these in the focus groups. A wide range of identification methods is recommended in the literature (see NCCA, 2007), but it appears from the findings of this study that, in common with teachers in other countries (McClain & Pfeiffer, 2012; VGETC, 2012), teachers in Irish primary schools rely on just one or two methods. Most teachers (over 90%) agreed that identifying exceptionally able pupils is not easy, and there was considerable agreement that there are challenges inherent in the identification process.

Challenges in Identification

Most teachers felt that pupils who are exceptionally able should be identified in primary school but they were aware that "access to objective, relative assessment methods is a big challenge" (R076) and that no method is without limitations (Table 4.4). Teachers suggested that pupils who have become disengaged from learning and those whose exceptional ability lies outside the core subjects of maths and reading may not be identified through standardised test results. Others articulated that primary teachers do not necessarily have the expertise to be able to identify pupils of exceptional ability.

Limitations of Identification Methods

One teacher, claiming that "there is no clear line separating exceptionally able from 'ordinarily able' pupils", argued that it is "difficult to say one child 'qualifies' while another doesn't, even using IQ tests; ability is a sliding scale not a yea/nay decision" (R045). However, in the focus groups, participants discussed a situation that happens occasionally, where they find out through ability testing, or through attendance at a CTYI course, that a pupil is exceptionally able, but that would not have been apparent to them beforehand. This suggests that standardised test results and teacher observation may not always be enough to identify exceptionally able pupils. Some participants outlined their experience of this as follows:

We do the NRIT and you'd be amazed there … we did actually have it with two children in particular; they came out low in their standardised tests and they came out low in their class tests, but … they came out on top on the intelligence test. (P3F1)

There is one child and the parents have taken him to UCC [to CTYI course]… his presentation in school wouldn't suggest that he is exceptionally able … his great ability wasn't apparent, we haven't picked up on it. (P1F2)

I have seen … children who would have an IQ of 130+, and they're not the ones who are performing at the highest level in class. (P2F6)

Table 4.4. Limitations of identification methods

Identification method	**Sample quotes**
Standardised tests	Gifted and talented children might only ever get a 5 or a 6 out of lack of interest, lack of motivation, boredom. (P3F3) [Tests] only identify a very narrow type of high ability … there are other children … gifted and talented in so many other ways, and we need to have strategies of identifying them as well. (P1F3) There's a cut-off in all the testing results, you see, but how far above that are they? (P2F4)
Ability tests	Some exceptionally able pupils may not show up in NRIT … their ability may be artistic subjects and may not be identified so easily. (R140)
Teacher observation	We are unqualified to identify these children and untrained in managing them for the most part. (R074)

This discrepancy between a pupil's ability and his or her achievement may not be evident to teachers confused by pupils' uneven profiles which were discussed in an earlier section. It may also have to do with exceptionally able pupils not being a homogeneous group, as noted by a questionnaire respondent who said that "children with high IQ seem to come in all 'types' just like the rest of us!" (R045), and by a focus group participant who

claimed that "they are as different in their ability as other children are in their disability" (P1F6).

Personnel Involved in Identification

One of the main ideas leading to conflicting views among the participants centred around who is best placed to identify exceptionally able pupils. Information from the teachers' questionnaire responses to this issue is summarised in Tables 4.5 and 4.6.

Table 4.5. Where identification is best carried out

Identification is best carried out	Within school by school staff	Outside of school	Combination of both
Frequency *n* (%)	14 (7%)	5 (2%)	190 (91%)

A large majority of respondents (*n* = 190) felt that personnel from outside of school in combination with school staff are needed to identify gifted pupils. This echoes findings from Ní Chéilleachair (2013) who found that primary teachers largely relied on personnel other than teachers, such as parents, psychologists or CTYI, to identify exceptionally able pupils. Over half of the 75 teachers who commented in the open question (Question D8, Section D: Identification, Appendix A) indicated uncertainty as to who should carry out the identification, as the following comments typify:

> Who decides if a child is exceptionally able – psychologist/teacher/parent? Class teachers and resource teachers have a role in identifying, but outside 'checklists' or opinions vital for fairness. (R062)
>
> Identification needs to be done sensitively, and by someone who is experienced, trained and interested in this area. (R121)

Only 7% of respondents (*n* = 14) felt that school staff were best placed to identify exceptionally able pupils. This suggests that teachers may lack confidence in their own ability to identify these pupils, a view summed up by one respondent who said that s/he was "not sure if any one of us is qualified to do so" (R019). Research has found that teachers with high confidence are more likely to identify exceptionally able pupils and use more strategies suited to their needs (Sears, 2016; Siegle et al., 2010).

When asked whom they considered the best-placed person within the school to identify these pupils, almost every teacher (*n* = 208) responded (Table 4.6). Respondents could indicate more than one preference. A very large majority (*n* = 188) indicated that they considered the class teacher to be the best-placed person to identify. Sixteen percent (*n* = 35) of responding teachers felt that members of the school management team (i.e., principal and deputy principal) would be best, while 38% (*n* = 80) felt that teachers involved in special education were best placed.

Table 4.6. Within-school person best placed to identify

Best placed to identify	Principal	Deputy Principal	Class Teacher	LS teacher	Resource teacher	Pupil	Other
Frequency *n* (%)	28 (13%)	7 (3%)	188 (90%)	46 (22%)	34 (16%)	8 (4%)	27 (13%)

An examination of the 'Other' responses showed that some respondents believed identification would be best carried out by a "combination of all the adults in the child's life" (R035). This view is mirrored in the NCCA (2007) guidelines which recommend the involvement of all adults in the pupil's life. Interestingly, other teachers mentioned that the "opinions and observations of SNAs [special needs assistants] can be invaluable" as "they often see more clearly the bigger picture within a classroom as they don't have to micro-manage as much as the teacher" (R038).

Optimum Age for Identification

The question of the optimum age at which a pupil should be identified was not included in either the questionnaire or the focus group interviews, but the participating teachers raised the issue in both, and conflicting views were expressed. Some of the participants argued for early identification, with one teacher commenting that "often the ignored gifted child becomes frustrated, may exhibit challenging behaviour and can be ostracised by peers" (R032), a situation acknowledged in the NCCA (2007) guidelines which recommends early identification in order to avoid later underachievement. Another teacher insisted that the "early identification of these pupils is key so as that appropriate

strategies are put in place early on" and "as a result the pupil feels more comfortable with them as they progress through the education system" (R099).

However, in contrast to these views, teachers could see a disadvantage to this, and one argued that "children develop at different rates, early identification may … result in unrealistic expectations for a child in the future" (R118). Another participant summed up several teachers' views, surmising that it may be more beneficial not to identify or provide anything additional for these pupils too early:

> [There are] dangers of focusing in too much on children like that too early. A lot of curriculum is very broad for a good reason, so they do their academics, they do their bit of social skills, you do your SPHE [Social, Personal & Health Education], they play their sport (whether they like it or not), and they're all part of it. Whereas these kids, they go ahead flying in [academic work], but they may be very poor socially … and they may not want to play sport because they're geeky or whatever it is, and very often keeping them with the pack is actually doing them more good maybe. (P2F3)

The literature recommends that the identification process should start when pupils are young and be continuous, systematic, and ongoing (Subotnik et al., 2012).

English as an Additional Language

Question A6 in the questionnaire asked about the number of pupils eligible for English as an Additional Language (EAL) provision as it might be expected that there could be considerable challenges in ascertaining if these pupils have exceptional ability.[21] At the time, 30% of respondents (n = 63) reported their schools had pupils who were eligible for EAL provision. In some schools less than 1% of the school population were eligible, while in others almost 10% were eligible, with a small number of schools having a very large percentage of their school population eligible, for example, one school had just

[21] Pupils with English as their second language are now included in the general allocation support and receive support as the school deems fit.

short of 60% of their population eligible and two others had almost half of their pupils eligible.

In view of these numbers, it is surprising that responses to a later question in the questionnaire suggest that these pupils were not a cause of major concern for the schools. Question D6 asked respondents, if to their knowledge, there were any concerns in their school that there may be pupils with EAL who have not been identified as exceptionally able. Almost 90% of respondents (n = 185) were not aware of any concerns, and it was clear from their comments that most of those schools have very few or no EAL pupils in their schools. Three respondents noted that as they work in a Gaelscoil or a Gaeltacht school they do not have pupils in that category. Schools that have EAL pupils but reported no concerns about them feel that they are being catered for and are coping well, as these responses indicate:

> We have several EAL children who go to extra maths classes for exceptionally able, so we feel they are catered for. (R093)
> All EAL pupils are seen to be working within the 'average range' even with English language being a second language. (R099)
> The pupils we have at present as presenting are coping well or as well as their peer group. (R025)

Twenty respondents commented on the concerns within their schools regarding the identification of exceptionally able EAL pupils. Some see problems of language difficulties leading to weaker test results, "the language barrier inhibits their ability to perform in testing – standardised or otherwise" (R090), thus masking their abilities - "often lack of English masks their abilities" (R067). However, it was clear from the teachers' comments that their concerns applied to ascertaining the ability and achievement level of all EAL pupils, not just those who might be exceptionally able. In addition, the issue of EAL pupils was not raised in any of the focus group interviews, suggesting that this was not a major issue for the schools that participated in this study.

Summary of Section

Most participants felt that exceptionally able pupils need to be identified, but they differed in their opinions regarding when and by whom this identification should be undertaken. Teachers acknowledged that the identification process is challenging and that all identification strategies have limitations. Although a majority of questionnaire respondents favoured ability tests, psychological reports, standardised achievement tests, and teacher observation as the main means of identifying exceptionally able pupils, the focus group discussions showed that, in practice, teachers rely on one or two methods. It was notable how, when given the opportunity to discuss and debate the issues, the focus group participants painted a more nuanced picture of the complexity of the identification process as it applied to individual pupils and individual schools. The debate around identifying exceptionally able pupils led the participants to the problem of what to do once they have been identified, summed up by the participant who asked, "After that, it's like, where or what do you do with them?" (P3F3). What to do with them, or what provision to make for them, is the main focus of the next section.

Section 4: Provision

If schools identify pupils as exceptionally able, then the question arises regarding what provision is provided in response so that this group of pupils can benefit from their school experience. The third research question in this study focused on provision and sought teachers' views on the need for specific provision for exceptionally able pupils, types of additional support currently being offered to address their needs, and the barriers teachers face in trying to make day-to-day provision for these pupils. The themes identified in the data from that question are shown in Figure 8.

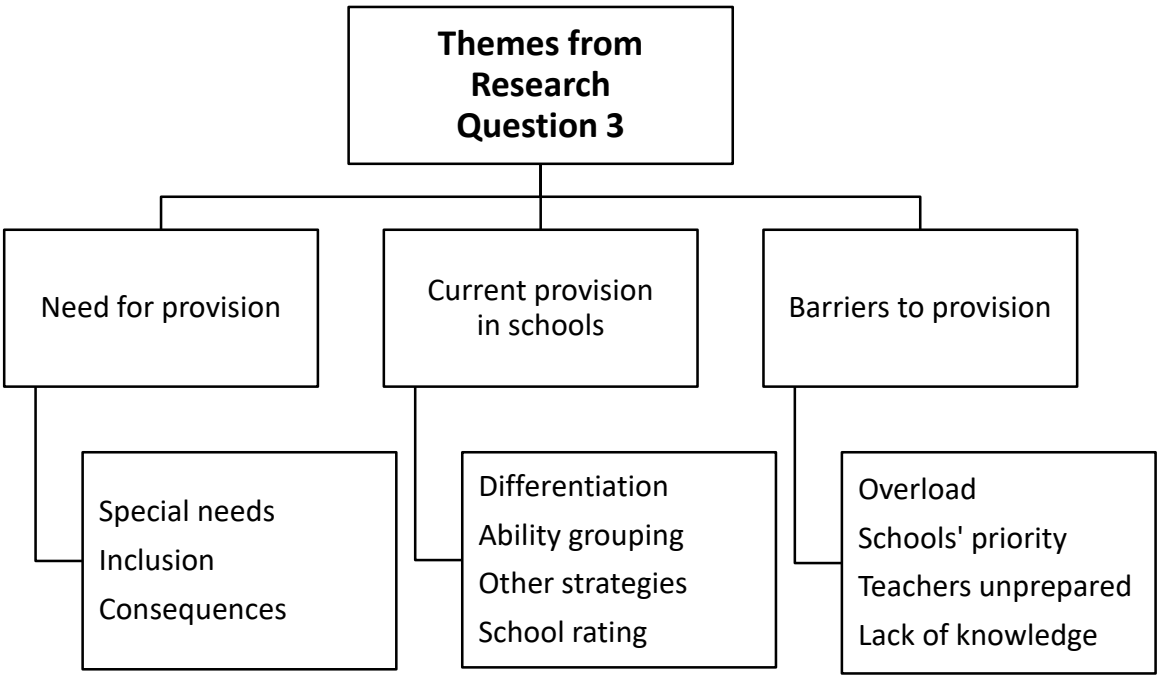

Figure 8. Themes from research question 3

Need for Specific Provision

Over three-quarters (n = 162) of the questionnaire respondents were of the opinion that there is a need for specific provision for these pupils (Figure 9).

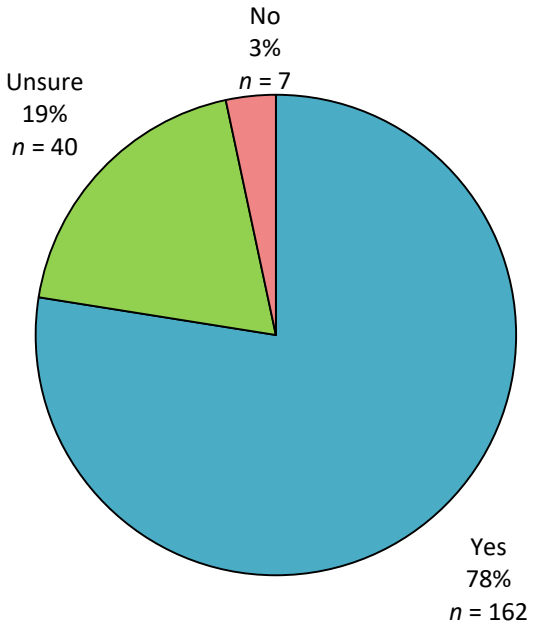

Figure 9. Need for specific provision

Most of the focus group participants were also very positive that "the school has an obligation to cater for … the exceptionally able" and that teachers "have a responsibility to cater for them" (P6F4). A small number of teachers expressed a contrary view such as:

> I would be against making it obvious in class that some pupils are more able than others … children thrive better overall, if they feel that all are treated equally … overall, I feel that it's best, where possible, to make all pupils feel that they have equal learning ability. (R039)

However, the view of the majority of teachers in the study is summed up by this participant:

> They're not part of the mainstream, in that just turning up and teaching fifth class maths to them isn't good enough, so they need special attention … they need you to do something special to teach them effectively. (P4F5)

The main reasons given by teachers that these pupils require specific provision centred on three areas: (i) exceptionally able pupils fall into the category of pupils with special educational needs and thus their needs must be addressed; (ii) these pupils are neglected – "the forgotten cohort in primary school" (R090) - and they require specific provision as a matter of inclusion so that they have the opportunity to attain standards consonant with their capacity (DES, 1999); and (iii) the teachers were concerned about the consequences of not providing appropriate learning experiences for this group of pupils.

Special Educational Needs of Exceptionally Able Pupils

A very large number of teachers (n = 181) were of the opinion that exceptionally able pupils have special educational needs (Figure 10). When asked to indicate from a given list of 15 items what their main learning needs were, respondents could select as many options as they thought applied. Of those who choose the 'Other' option, sharply contrasting views were put forward, typified by the following quotes:

> Need to learn how to relax, to avoid burn-out. (R151)

Need to be kept busy, otherwise bored. (R178)

Overall, the respondents felt that the main needs of exceptionally able pupils related to academic areas and far fewer teachers felt that they needed support in social or emotional areas (Figure 11). For example, over 70% (*n* = 148) did not regard the need to improve self-esteem as an important area requiring special attention. However, the focus group discussions gave teachers an opportunity to tease out the learning needs of this cohort of pupils, and they emphasised two main areas: social and emotional needs, and the need to be challenged.

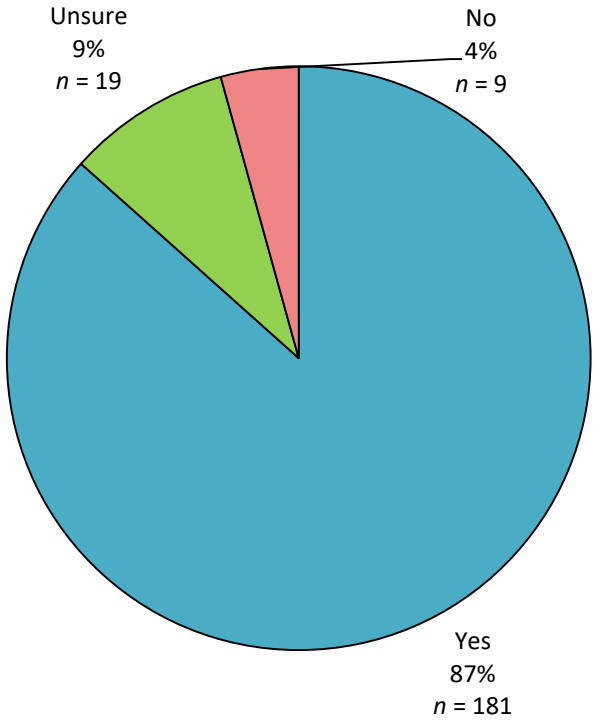

Figure 10. Percentage of responding teachers who feel that exceptionally able pupils have special educational needs

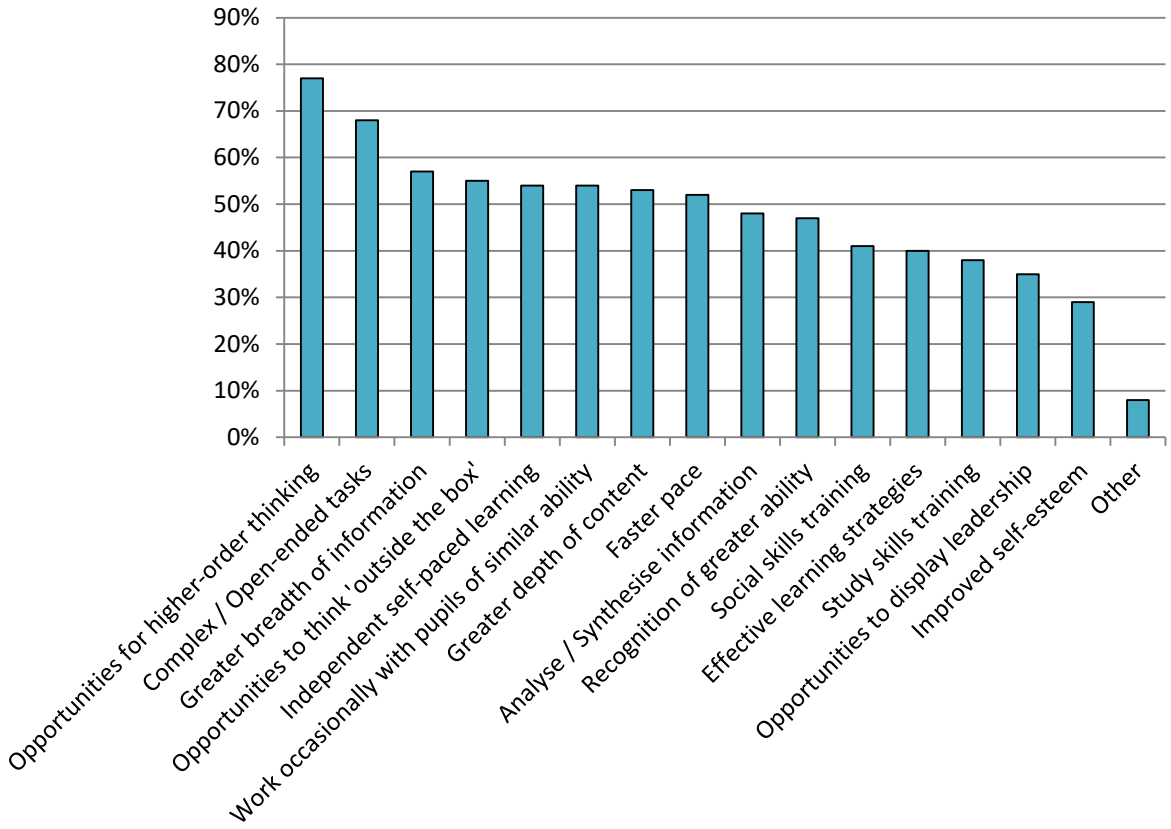

Figure 11. Main learning needs of exceptionally able pupils

Social and Emotional Needs

While almost 60% of the questionnaire respondents (*n* = 124) did not see a need for support in the area of social skills (Figure 11), the idea that exceptionally able pupils have poor social skills and particular emotional needs was a common one among the focus group participants (Table 4.7). Examples of their emotional needs were that "these children are often v intense and put pressure on themselves" (R086) with "a lot of perfectionism going on" (P3F1). One teacher noted that while "they're not challenged [academically] by what everybody else is doing … socially and emotionally they don't necessarily develop any faster than the other child" (P2F7).

One teacher highlighted that "they find it very hard to be dependent on another child" and added that "working in the group, that is something that they find incredibly difficult" (P1F7). Some raised the idea that helping this cohort of pupils to develop social/emotional skills "would be more important than 'pushing them on' academically" (R205). Others agreed with this, as typified by this comment:

> The exceptionally able child may often have a difficulty finding their place in the class socially. Personally I feel by developing their talents more in [academic] areas makes it more difficult for them to fit in. (R086)

Some of these teachers certainly felt it was part of their role to help these pupils "to be street smart … or peer smart or whatever you want to call it, [as] generally speaking, they're not socially smart" (P3F7) or "emotionally smart" (P1F7). The NCCA (2007) guidelines point out that exceptionality can bring challenges in social and emotional development, and many experts agree that many exceptionally able pupils require support (Cross, 2011; Geake & Gross, 2008; Neihart, 2011).

Table 4.7. Social and emotional needs

Social and emotional needs	**Sample quotes**
Poor socially	They might be gifted in one area but they may have difficulties with social skills. (P2F2) They may be very poor socially out in the yard. (P3F3)
Isolated	They feel they are much better than the others, which they are, but they would use that to get at the other kids; and they then socially isolate themselves. (P2F6) I think it's really important that they don't stand out too much, and you don't isolate them so much that they are like little recluses that can't communicate or seen as being very different, and they can be bullied as a result of being different too. (P1F5)
Need for peer group	They need to be included as much as possible and not singled out too much … and they need, especially in senior classes, to belong to a peer group. (P2F7)

Need for Challenge

The need to challenge exceptionally able pupils beyond what the mainstream curriculum provides, or as one participant put it, the need to "keep the coal on the fire of the intelligence" (P3F1), was an issue that was discussed in each of the focus groups. Most

teachers were of the opinion that these pupils do need to be challenged, and the following views are typical:

> I would consider them having special needs in the sense that their special need is to be challenged, that's a special need. (P3F7)
> Definitely if they have abilities beyond their peers they need to be challenged or to have material that will stimulate them. (P1F2)
> They need to be stretched and should be stretched. (P1F5)

One teacher was very clear about the type of challenge needed by exceptionally able pupils:

> They should be presented with the curriculum in such a level that there should be some question or problem thrown in there to get them used to – 'Well, this is a challenge here now', and it's not all about learning just for the weak children. (P3F1)

Participants did not give any specific examples of the type of activities that could be used to challenge exceptionally able pupils, but it is likely that the umbrella term of 'need for challenge' includes several of the items on the list of learning needs that the majority of questionnaire respondents selected (Figure 12), such as faster pace, greater breadth of information and greater depth of learning, and opportunities to use higher-order thinking skills. Research has shown that exceptionally able pupils have mastered between a third and a half of the material to be studied in any given year (Robertson & Pfeiffer, 2016), and there is growing recognition that these pupils require an appropriate challenging education to enable them to achieve highly (Assouline & Lapkowski-Shoplik, 2012).

The focus group participants brought up two other arguments linked to the idea that exceptionally able pupils need to be challenged – the need for them to learn how to learn, and the idea of meeting failure. Many teachers agreed that "very clever children quite often don't learn to learn" (P1F4) and that "some of them learn how to coast" (P2F1). The problem then, according to the teachers, is that "later on when they have to actually work at something, this is a huge new ballgame for them" (P3F3) and "then they have no coping strategies, they have no kind of problem-solving skills in relation to that area" (P1F6). One

teacher, speaking from her experience of dealing with exceptionally able pupils who "wouldn't have had extra stimulation", noted that some of those got what she called "lazy habits, they never really were faced with something they couldn't do, so work ethic really didn't come into it" (P1F6). This whole idea was summed up by the participant who saw it "as a need to actually get them into their learning zone … to get them to the point where they have to learn" (P3F3). This comment comes close to SERC's (1993) assertion that exceptionally able pupils need provision that pushes them "into the frontiers of their competence" (p.161).

Allied to the idea of exceptionally able pupils not being challenged and not being in their "learning zone" (P3F3) is the idea of the need to face failure, with one teacher arguing that "if you're not being challenged you'll never learn how to face failure", so "gifted pupils need to be given the things they are going to be getting wrong as well" (P3F1). In fact, one participant put it more strongly, "I think it's no harm for failure to be inbuilt, I sometimes feel the children who get 10 out of 10 have no ability to deal with failure. … they have no coping strategy" (P2F1). Some teachers further developed this idea that exceptionally able pupils, not having ever met failure, avoid areas that they are not good at. One gave the example from art, "Like, they know they can't draw so they don't want to draw; so they have a problem with the areas they are not good at" (P1F7), and another noted the example of sport, "If they're not good at sport, they don't want to go there" (P2F7). S/he put this down to the "success mentality" these pupils have (P2F7). Experts in the field of gifted education emphasise the importance of these pupils being intellectually uncomfortable some of the time, and the need for them to be encouraged to take risks, make mistakes, and engage in tasks that push them out of their comfort zone (Betts & Neihart, 2010; Olszewski-Kubilius et al., 2016; Sternberg, 2009).

Overall, teachers in this study agreed that exceptionally able pupils have special educational needs and that special provision should be made for them. There was less agreement on what those needs actually are. The list of special educational needs (Figure 12) was compiled from the literature, but, based on the focus group discussions, it seems that Irish teachers have their own ideas of these pupils' needs. This may be adding to the reason why the participants say that they rarely meet these pupils.

A Matter of Inclusion

A number of respondents expressed concerns that "exceptionally able students are neglected and never reach their true potential" (R108) and some explained their thoughts behind their comments:

> Forgotten cohort in primary school – 'they'll be alright'. We tend to focus all resources on helping low achievers to reach their potential. High achievers expected to reach their potential by themselves. (R090)
> I think that EAPs [exceptionally able pupils] are neglected. May be a sociological thing in this country – 'we' help the 'underdog', 'we' begrudge the high achievers in practically every sphere of life. (R088)

This latter comment echoes opinions elsewhere – in Australia they refer to a desire to "cut down the tall poppies" (Geake & Gross, 2008) and in Japan the idea is encapsulated in a proverb: "the protruding stake is hammered down" (Iwawaki, 1998). One questionnaire respondent gave a specific example where the school gives an ability test to second class pupils every year, but noted that "despite a number of children scoring 130+, we only look at those on the lower end of the scale. Nothing is done whatsoever to provide for the 130+ pupils" (R140).

When teachers spoke about including all pupils, it was clear that inclusion meant different things to different people. One teacher felt that "you don't want to single these pupils out into an elitist category. They should remain equal to their class members and feel included" (R192). However, much more frequent were comments about meeting the needs of all pupils, including the exceptionally able, if schools want to be inclusive establishments:

> To be truly inclusive a school must cater for and meet the needs of all pupils, and all pupils should be provided with a suitable learning experience including exceptionally able. (R011)
> Vygotsky ideals – each child needs to be challenged and supported. (R017)

Inclusion is, to a great extent, dependent on the idea of 'fit', that is, that there is a match between a pupil's ability and the curriculum offered to him/her, or as one participant

put it, “the subject level has to be near to the appetite of the child” (P3F1). That teacher, pondering about children starting school, felt that there can be a misfit at times between the pupil and what is offered to him/her in school:

> You come in to a system that's very rigid, and you find that you don't fit that system, and it may not be because that you have a learning disability, it may be actually because you are not, you know, you're NOT engaged. (P3F1)

Teachers generally were aware that they have to try to “identify where their needs are at … and try to meet that need as best we can” (P1F2), and that teaching has to be “designed to meet a child’s specific needs regardless of a child’s ability” (R068). These ideas are close to the thinking behind the Response to Intervention (RtI) approach which focuses on providing pupils with a differentiated education that is guided by pupils’ educational needs (Brown, 2012; Robertson & Pfeiffer, 2016).

Consequences of Not Making Provision

Participants in the study frequently referred to the consequences that can result if the needs of exceptionally able pupils are not met (Table 4.8). Respondents warned that “such children can be lost in mainstream class, inclined to switch off” (R098), or that they “can ‘coast’ along, never learning how to apply themselves – can lead to laziness, disruptive behaviour or a perfectionist attitude” (R177). One teacher gave an example of a pupil “scoring off the charts in the Drumcondras”[22] (P6F4) whose behaviour s/he construed as arising from a lack of suitable provision:

> He was quite disruptive … he was totally disenchanted with learning … he was so troubled by the time he got to 6th class and his self-image was so harmed … one thing that would have really helped him if there had been more structured provision within the primary school. (P6F4)

Another teacher went so far as to speculate that perhaps a pupil’s attention disorder may have been as a result of an exceptionally able pupil not being stimulated enough:

[22] Refers to standardised tests commonly used in Irish primary schools: the *Drumcondra Primary Reading Test* (Educational Research Centre, 2007) and the *Drumcondra Primary Mathematics Test* (Educational Research Centre, 2006).

> I sometimes wonder if without the exceptional ability, would the ADHD have been there at all? Is it more a product of the fact that they haven't been stimulated … maybe other needs haven't been met earlier, does it more exhibit that? (P2F6)

According to Amend and Peters (2012), traits and characteristics of exceptionally able pupils can be misunderstood and misinterpreted, leading to a misdiagnosis of a disorder such as ADHD when perhaps the pupil's attention disorder may be the result of a mismatch between the pupil's ability and the curriculum available to him/her.

Table 4.8. Consequences of not making provision for exceptionally able pupils

Consequence	**Sample quotes**
Students disengage	If exceptionally able pupils are not provided for they will begin to stagnate in mainstream classrooms and become bored or unmotivated. (R099)
Under-achieve	If not stimulated these children can be bored and frustrated which can lead to underachievement. (R084) I believe the lack of such provision is causing some of these pupils to fail at school. (R174)
Become disheartened	Exceptionally able pupils can become disheartened and feel misunderstood if not challenged academically, and this can lead to further problems – plus a waste of talent! (R037)
Engage in disruptive behaviour	Very often such children are not challenged appropriately … become frustrated and consequently they can exhibit acting out behaviours. (R032)

One participant painted a very stark picture if supports are not in place to meet the needs of exceptionally able pupils:

> Kids can spend a lot of time recovering from their childhood and I would fear that for children with gifted abilities. If there's a perceived misfit between the child and the school, their education, and this goes on, year in

> year out, and they are not engaging, it can take a lot out of a child, and it can take an awful lot of time to rebalance and come right out of it. (P3F1)

A smaller number of participants (seven in all) linked lack of provision with a more general loss to society, pointing out that "these pupils may be the future inventors, they may work in jobs that do not even exist yet" (R198), echoing the view of McClarty (2015).

Ten teachers commented on the other side of the coin – the positive consequences of addressing these pupils' needs. Some observed that when exceptionally able pupils are "encouraged and fostered in a creative learning environment" (R207) schools are able "to maximise each child's potential" (R083). One teacher argued that, by meeting the needs of exceptionally able pupils, "all pupils will ultimately benefit", and noted that "exceptionally able students are an untapped resource in our schools" (R048). Others noted the benefit to the whole class of providing for these pupils in that it "raises the standard of the rest of the class" (R191) and "it is good for classroom management" (R164).

Despite the almost unanimous agreement that exceptionally able pupils require more than is generally offered through the mainstream curriculum, teachers were very aware of the factors that create barriers to providing more for them, an issue that is looked at later in the chapter. Teachers did, however, talk about and outline some of the additional supports that they currently provide in schools, and while these supports are generally not geared specifically towards exceptionally able pupils, many, but not all, teachers felt that they go some way to meeting their needs.

Current Provision in Schools

Questionnaire respondents selected the additional supports their school provides for exceptionally able pupils from a list of 15 items that had been identified in the literature as being commonly provided for these pupils (Figure 12). Differentiation of some classwork, worksheets for early finishers, and within-class ability grouping were the three main types of provision, each selected by over half of the respondents.

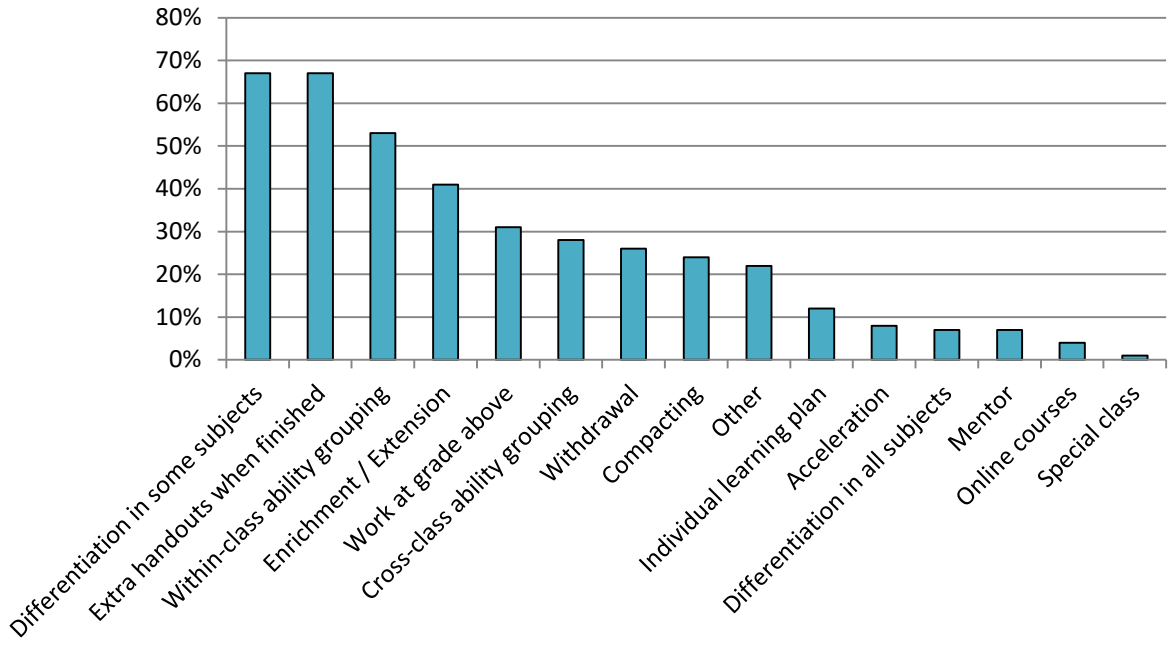

Figure 12. Additional supports

Differentiation

Almost every teacher in the study referred to differentiation in some form or other. Some felt that "providing for the 'primary' needs of every child" is what teachers do anyway and that by "differentiating the curriculum, which is very broad, there is plenty of scope to challenge any child" (R076). However, a majority of teachers felt that it was not as simple as that. They reported on a range of techniques and strategies that they use to try to ensure that all pupils are working at an appropriate level of challenge. These strategies included using differing levels of questioning, teaching metacognition techniques, extra worksheets, projects, and "challenge packs" (P3F3). Teachers also noted how "computers … have made differentiation a lot easier" (P3F7).

An important issue highlighted by the participants, was the idea that teachers' expectations play a big part in whether work is differentiated or not. The following comment is typical:

> I suppose the big thing for teachers is to differentiate the expectations. If you know that a particular child is gifted, you would expect him to give

you a more detailed answer or something like that, where you'd be quite happy to take a literal or factual answer from the weaker child. (P1F2)

It was clear that teachers have 'bought in' to the whole idea of differentiating the curriculum to take account of individual differences in learning, but they find it difficult to put into practice for exceptionally able pupils. One teacher commented that "teachers are very good at differentiating 'downwards' but training should be provided for differentiating 'upwards' also" (R143), a sentiment with which there was general agreement. There is greater awareness of this need now in Ireland and there is an increasing focus on the need to "improve upward differentiation" (DES, 2015g, p. 6) in order to make appropriate provision for exceptionally able pupils.

Ability Grouping

Cross-class ability grouping, that is, pupils from different grades working together, for example, on maths, was reported by 28% (n = 58) of responding schools (Figure 12), and the majority of those were smaller, rural schools with mixed-grade classes. Surprisingly, in view of the fact that over half of the questionnaire respondents (n = 111) reported using within-class ability grouping, the focus group participants rarely mentioned this as a day-to-day strategy for catering for differing ability levels of pupils. There is a number of possible explanations for that. It may be that teachers group their pupils according to ability, for example into three groups for maths, but perhaps they do not regard this as a means of catering for the needs of exceptionally able pupils. It is also possible that teachers engage in whole-class teaching most of the time and rarely group pupils. Or perhaps when they give different work to different groups, they regard it as differentiation, not ability-grouping.

There was general agreement among teachers that it is easier to cater for literacy than it is for maths or other subjects. The most commonly reported strategy used to support literacy was station teaching. It is a strategy for grouping pupils either within-class or across classes according to ability, and providing intense, targeted instruction to the groups, generally on a daily basis for a number of weeks. A team of teachers is involved, with one teacher working with each group at a separate station. This type of provision is consistent with the move towards in-class approaches to supporting literacy learning, and

is becoming more common in Irish primary schools (Kavanagh et al., 2015). However, even while schools are "being more creative about how [they] utilise resource teachers and learning support teachers in the best interests of the children" (P2F2), teachers were aware that there are advantages and disadvantages in schemes such as these. This participant's view is typical:

> It's a huge investment of books, and it's hard to fit it into your timetable as well, 'cos you're using four or five staff members, so that would be our concern, we're trying to fit in everything into the timetable. (P3F4)

Several teachers noted that with station teaching, "you don't specifically go out to target children of exceptional ability", but some teachers felt that "because the groups are differentiated, you are addressing it" (P5F4). Many others were not so sure, and one teacher said that s/he did not "know are they absolutely being stimulated" even though "the exceptionally able … do more challenging material than the other two groups" (P2F4). Another participant found that "the top groups, they can nearly go further" and that the scheme "might even be holding them back", as s/he explained that some 2nd class pupils would be gone beyond the level of the top reading material for that grade but could not move on to the next level as "you must leave them for 3rd class" (P5F4). In the focus groups, as teachers delved deeper into the issue of station teaching, it was clear that they were doubtful whether it was actually addressing the needs of exceptionally able pupils.

Other Strategies

According to the questionnaire responses, less than 10% of the responding schools use acceleration/grade skipping, a strategy that has consistently been shown to provide positive academic effects for exceptionally able pupils (Cross et al., 2015; Rogers, 2015). This issue arose in only two of the focus groups, and even those that have done so expressed reservations about it, particularly from the point of view of pupils fitting in socially. One teacher, referring to two girls who skipped a grade, voiced the concerns they felt at the time: they thought they had "done the wrong thing … because socially they were very different, and they were actually cowering in the corner" (P2F6). And although "it's ironed itself out again now, they seem to be happy again", the teachers actually thought they had done the two girls a disservice, and said that they would be very slow to "skip up

children again" (P2F6). It may be that, prior to acceleration, the school did not carry out a comprehensive and systematic assessment to see if the two girls were ready for the move. Lupkowski-Shoplik, Assouline, and Colangelo (2015) recommend that in addition to assessing a pupil's ability, aptitude, and achievement, it must be ascertained that the pupil is willing and enthusiastic for whole-grade acceleration, that the parents are supportive of the move, and crucially, that the receiving teacher is positive and knowledgeable.

Teachers are more au fait with the strategy of withdrawal, as this occurs in most schools for pupils with learning and other disabilities. However, teachers were almost evenly divided on whether it is a good thing to withdraw exceptionally able pupils for support or not, and relatively few teachers reported actually using it. Those who used it found that it worked well, as described by one respondent: "Currently we are withdrawing pupils from 2nd - 5th who score over the 90th percentile in maths. It is currently working well. There has been no negative response from pupils/parents and teachers" (R093). Others, however, felt that it could have a number of negative consequences including the withdrawn group developing a superior attitude, and teachers and parents feeling that it was unfair to give extra time to pupils who seemed to have so much already.

Some further accounts both within-school and out-of-school provision is given in Appendix K. The restriction on the word count in this thesis necessitated moving some accounts to an appendix, and these accounts were chosen as the issues were generally discussed only by a small number of participants.

School Rating

Questions 7 and 8 of Section E: Additional Information (see Appendix A) asked respondents to rate their schools' practice in addressing the needs of exceptionally able pupils on a scale from Very Good to Very Poor and to give their reasons. Almost all respondents (n = 204) replied and just over 40% (n = 83) of respondents rated their school as Very Good or Good. These data are summarised in Figure 13.

It was enlightening to note the differences in the open question comments of those who rated their school as Good or Very Good compared to those who rated it as Fair, Poor, or Very Poor. Many respondents who rated their schools as Very Good or Good reported

that they try to support and meet the needs of *all* pupils in the school regardless of ability level, and they commented on the level of awareness of teachers regarding exceptionally able pupils and what was done at staff or whole school level. Many also noted the benefits of multiclass situations, common in small, rural schools, where younger pupils shared a teacher with older pupils.

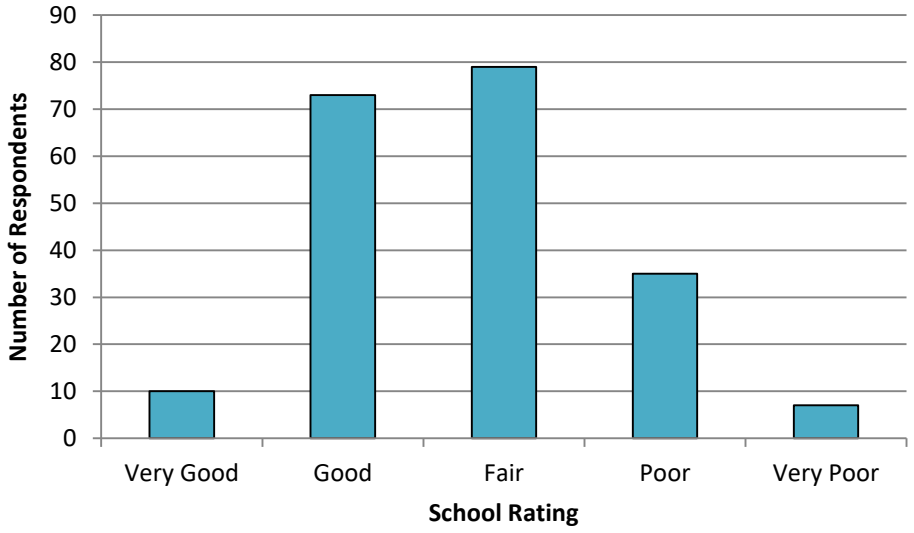

Figure 13. School rating

In contrast, a lack of teacher awareness of exceptionally able pupils was more common in the comments of those who rated their school as Very Poor. They emphasised the difficulties of teaching in a multiclass setting, and they tended to list the barriers that impede them from providing more support for exceptionally able pupils. The idea of not being able to support high ability pupils because of schools prioritising pupils at the other end of the spectrum was a theme that was evident in the comments of those who rated their schools as Fair, Poor and Very Poor, while those who rated their schools as either Fair or Poor tended to emphasise the difficulties of teaching in a multiclass setting. Subsequent, in-depth discussions in the focus groups indicated that teachers were aware that their schools' practices in addressing the needs of exceptionally able pupils were less than optimal.

Barriers to Provision

Almost all the participants in this study were positive about the need to address the special educational needs of exceptionally able pupils in their schools, but they often found

it difficult, in practice, to do so. They admitted that, in reality, “provision for them is ad hoc, it's not formalised in any way” (P1F3) and that it is “very dependent on individual class teachers” (R063). Even schools that do provide for exceptionally able pupils find that “when under time pressure, those lessons are sacrificed for children at the other end of spectrum” (R189).

Many teachers were adamant that, although they would like to provide more specific services for exceptionally able pupils, there were many obstacles in the way. Table 4.9 shows the responses of teachers, selected from a given list of factors, which they think impede the provision of additional supports for exceptionally able pupils. Respondents selected as many options as they felt applied in their circumstances.

Table 4.9 Factors that impede provision

Barriers	**Frequency** ***n*** **(%)**
Lack of time	178 (85%)
Teacher capacity	119 (57%)
Lack of funding	98 (47%)
Conflicting school priorities	85 (41%)
Curricular reasons	49 (23%)
Identification and labelling	46 (22%)
Other	41 (20%)

One teacher summed up the current situation: “time constraints, large class sizes, lower staff numbers (& SNAs), overloaded curriculum, greater emphasis on those with SEN [special educational needs]” (R115). The picture that emerged from the findings was one of teachers being overloaded and feeling overwhelmed.

Teachers Overloaded

Teachers perceived lack of time as the greatest barrier to making instructional adaptations to meet the needs of pupils who excel. Lack of time, of course, is likely to be

the result of some of the other barriers listed in Table 4.9. Over half the respondents (*n* = 119) marked 'teacher capacity' as a factor that impedes provision and teachers commented that "the main issue … in providing for the children in question is teacher availability" (R188). Equally, class size was mentioned as a barrier, with one participant noting that "teachers are mainly taken up with large classes … sometimes with crowd control too" (P1F1), and another pointing out that "it's very difficult for the class teacher to provide differentiation for these children due to the huge numbers in our classrooms – e.g. 32 per room – there simply isn't enough time" (R022).

Teachers also spoke of the "highly literacy- and numeracy-based curriculum of Irish schools" (R038) which is now a strong focus in order to raise standards in these areas (see DES 2011, 2017a). Although they would "probably all agree it's valid", teachers are also asking, "but is it narrowing things a bit too much?" (P4F5), and according to some teachers, this overloads the curriculum and, as a result, "precludes additional supports for gifted pupils" (P3F4). Adding further to the feeling of pressure experienced by the teachers is the fact that "there's something constantly coming from the government, if there's any problem, send it back to the primary school" (P2F2). One participant felt that not just the government, but "the whole society seems kind of … using the school as a platform and there's an awful lot more, you know… there's huge demands made on the classroom … that is eroding then a lot of what you're trying to do anyway" (P2F5). This is problematic as "schooling hasn't got longer so something must be suffering somewhere" (P4F5).

A teacher in one of the focus groups went on to give a good summation of the feeling of being overloaded:

> This comes up again and again of course that teachers will say, 'We're put to the pin of our collar to teach the main body of the class, and to help the weak kids, now you're expecting us to have a programme in place for the top-notchers … And the teachers do feel overloaded. (P2F3)

When unpicking these barriers in the focus groups, schools' priority on pupils with learning difficulties was considered to be the greatest barrier to providing additional support to exceptionally able pupils.

Schools' Priority: Pupils with Learning Difficulties

When referring to what actually happens in busy classrooms every day, teachers frequently reported that "work is pitched at the average child in the class, children with learning difficulties are targeted for support" (R124), and the "exceptional kids are forgotten about" (R069). A questionnaire respondent summed up the attitude of many teachers when s/he acknowledged that "the temptation is always there with a class to teach 'down the middle', try to bring on those who are struggling, and breathe a sigh of relief if bright children get it first time!" (R029). There were participants who recognised that this needs to change, as one put it: "We did always teach the average before and then the children with lower ability and needs are now looked after, I think it's the next group, the gifted children that we need to address" (P1F3). This view resonates with the new initiatives launched by DES (2017a, 2017d) which have a focus on exceptionally able pupils among others.

The biggest issue for many teachers was the priority given to the "children with learning difficulties, the low scorers" (P3F4), typically expressed by the respondent who said that "the 'less able student' trumps all others in our system" (R055). This leaves little capacity for additional support for a group such as exceptionally able pupils. A small number of teachers claimed that there was "too much emphasis on children with special needs" (R191), and that the weaker pupils get a "disproportionate amount of class teachers' time" (R100), a view shared by Freeman et al. (2010). Others went further and expressed the opinion that perhaps the focus on the needs of pupils with learning disabilities is to the "detriment of the children who are experiencing no difficulty in learning, maybe they're held back to go forward" (P6F5). However, more common was the view that "schools are so preoccupied with those children who are struggling academically it's easy to forget the children who are at the opposite end of the spectrum" (R162). This, perhaps, is not surprising given the central focus that has been on pupils with learning and other disabilities in primary schools over the past 20 years.

In practice, teachers face a dilemma – aware of the need to make provision for exceptionally able pupils but concerned about those who seem to have greater needs. One teacher spoke for a large number of others when s/he described a common situation:

> If I had to make a choice between a very bright child and a poor little guy who does not seem to be able at all, I'm going to go for the weaker child, which when you think about it, is a disservice to maybe the very bright child. (P2F2)

A questionnaire respondent summed up teachers' uncertainty when s/he commented that "it's difficult sometimes to prioritise the exceptional from the 'special' children", and then asked, "Whose needs are greater??" (R033). This last quote indicates that teachers were searching for answers to their queries around support for exceptionally able pupils, and lack of training in the area was seen as a major barrier to providing adequate support for these pupils.

Teachers Unprepared

It was clear that teachers were generally very aware of exceptionally able pupils and of the need to address their needs in a more organised way, and many would welcome training in the area. This was summed up very succinctly by one respondent: "When to help? How to help? What to do!!" (R091). One teacher commented that "it's one thing knowing that you have to do something about it, but it's another thing knowing what to do", and asked, "when it comes to actually practically putting stuff into the classroom, like, what do we know about it?" (P6F4). The answer, according to other participants, included "guidance from on high … that's the big thing really, the training, the direction" (P3F3) as well as "practical strategies, give a menu of things to do and see do they work" (P1F3).

Teachers' frequent references to the need for "more training in the area of catering for children who have exceptional ability" (R148) suggest that they may not feel prepared or confident to teach this cohort of pupils. When asked in Question B12 to rate themselves on a scale of 1 to 5, where 1 indicates very well and 5 indicates not well at all, on how well-prepared they felt, as professionals, to meet the special educational needs of exceptionally able pupils, one third (n = 70) reported that they did not feel adequately prepared to address the needs of these pupils as can be seen when those who rated themselves a 4 or a 5 are combined (Figure 14). A number of respondents were very frank about how unprepared they feel, typified by the teacher who wrote, "I feel totally ill-prepared, as my focus is almost entirely on the special educational needs of those who find

reading, spelling etc. very difficult" (R010). Even teachers with interest and experience in the area were not confident about meeting the needs of exceptionally able pupils in practice: "As a principal with twenty years' experience, and a particular interest in this area, I haven't yet found a way of differentiating for exceptionally able pupils which works in the school setting" (R193).

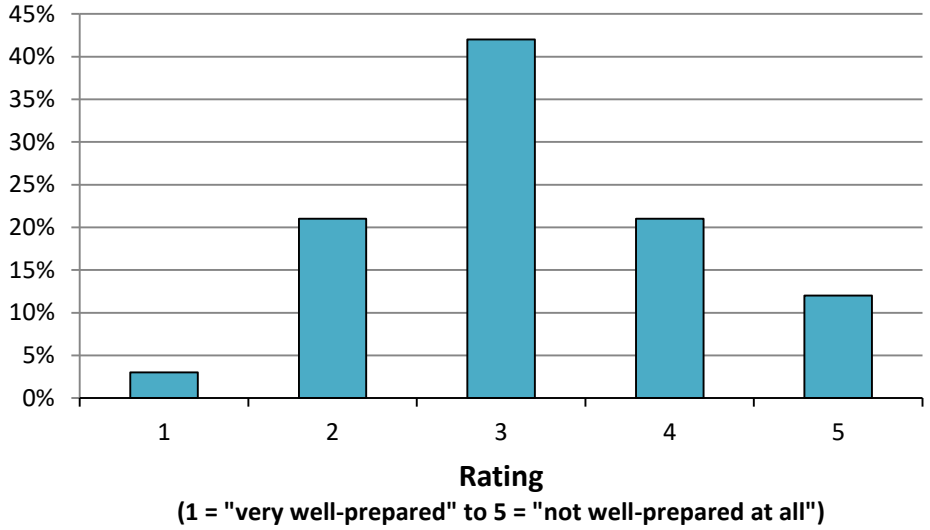

Figure 14. How prepared teachers feel

Combining those who rated themselves as a 1 or a 2 shows that almost a quarter (*n* = 51) of questionnaire respondents reported feeling well- or very well-prepared. The biggest number of teachers (*n* = 88) rated themselves as a 3, suggesting perhaps that they feel reasonably well-prepared, or alternately, that they are not sure how prepared they are. A number of teachers in this category reported that they had never dealt with an exceptionally able pupil, thus, their responses point to their belief that they feel reasonably well-prepared should they identify such pupils in their schools in the future. It is likely that these respondents have, in fact, dealt with exceptionally able pupils – the NCCA (2007) guidelines suggest that 5 - 10% of pupils in any school are exceptionally able – but, not recognising their exceptional ability, have not made provision to meet their educational needs.

One respondent humorously put forward the view that continuing professional development (CPD) courses would have a dual advantage: "providing stimulation for the teachers as well as the pupils!" (R201). As well as providing stimulation and skills

training, others felt that CPD would help to change attitudes, and one respondent commented that "so much more could be done … by shifting attitudes in schools" (R203). This point was underlined by another teacher who saw that a shift in attitude is needed not alone among teachers but among all stakeholders: "the 'less able student' trumps all others in our system presently. I do not agree with this but it requires a major shift in attitude amongst DES, inspectorate, teachers, other professionals, parents and unfortunately now in children also" (R055).

In view of teachers' reported need for guidance and training, it might be expected that the NCCA (2007) *Exceptionally Able Students: Draft Guidelines for Teachers* would be a good source of information for them. A copy was sent to all schools in 2007 but over half of the responding teachers (n = 124) have never used the guidelines. One third of questionnaire respondents (n = 69) reported that they had used the guidelines previously, but only eight reported using them regularly. Ní Chéilleachair (2013) also found that very few primary teachers had seen or used them. Among those who used the guidelines, there were conflicting views about their usefulness, with some teachers finding lots of useful tips and strategies in them especially for differentiation, and others stating that they were too general, lacked practical ideas, and were not particularly relevant for primary schools.

The guidelines were mentioned briefly in two focus groups, but the general feeling about them was summed up by one participant who commented, "I gave them a cursory glance, but really haven't grappled with it, I didn't do anything about it in practical terms" (P1F3). Another participant summed up the situation for many teachers when s/he observed that "as they are a once-off document and as there is little support for schools otherwise, they have been of limited relevance" (R167).

Lack of Knowledge

Allied to the issue of lack of training in dealing with exceptionally able pupils, is the issue of teachers' lack of knowledge in some areas. One participant argued that "we have to be realistic about what can be achieved by the average teacher in an average classroom", and put forward the suggestion that "some teachers may be daunted by the fact that they have EAPs [exceptionally able pupils]" (R055). This idea was supported by others who were concerned that that they may not have the knowledge required to teach these pupils,

that “some expertise may be required that is unavailable in the school” (R208). One teacher admitted “if you want to challenge a particularly able child, I don’t know if we have the actual knowledge ourselves to cater for them” (P3F4). This was a concern that arose in two of the focus group discussions, and the following extract from one of them typifies the idea:

> P1F6: I suppose teacher knowledge, if we're honest, is a barrier, teacher knowledge in a certain area. I mean if you have children who are very, very able at maths and you’re not comfortable yourself in maths, it is next to impossible to enrich that child’s experience in class.
> P2F6: ‘Cos we have had that too, a 4th class child on 1st year maths … and that was a challenge for us. Who knows the 1st year maths programme, as most of us were well and truly out of it? I certainly couldn’t.

More positively, however, other teachers could envisage how changes in the future might help with the issue of teachers’ lack of knowledge. They spoke about “all the buzz words that we hear now in relation to education - collaboration, creativity, critical thinking, the four Cs … and communication, a vital one”, and remarked that “it’s more kind of skills, and how you use your intelligence” (P1F3). Another teacher put this in a similar way:

> Education is going in a different direction and then ‘tis all about managing information, finding out which bits do you need out of this big *gabháil* [amount] of information in front of you, what are the pieces you need to put together and stuff like that. (P3F1)

Participants suggested that these changes will benefit exceptionally able pupils in particular. They felt that so too will the greater use of technology as this short extract from one group indicates clearly:

> P1F7: I think the time for the exceptionally able children is coming. I think with computers, once the exceptionally able child is willing to take ownership of their own work and responsibility for their own work, there is so much they can learn online; they can go far beyond what the teacher knows quite happily … and if we can celebrate ability, I think a clever child

can treat the computer like driving a car, and motor off, to where they need to be.

P3F7: The computer really is the enabler, in as much as the teacher is; let's face it, if a child is self-motivated, the computer will act as a far better teacher.

Summary of Chapter

These findings from this study reveal that teachers have differing attitudes towards exceptionally able pupils, and many feel generally unprepared or only moderately prepared to meet their needs. It is not surprising then that they spoke about the need for guidance and training to help them deal with exceptionally able pupils. A large majority of teachers in this study believe that exceptionally able pupils have special educational needs, and that they require special provision to meet those needs. In general, teachers are aware that there are pupils with exceptional ability in their schools and many would like to do more to challenge and support them. Participants could see the possible consequences of not making provision for these pupils, but they described some of the practical dilemmas they face in the classroom every day as well as more systematic challenges they encounter when trying to implement additional supports for pupils of exceptional ability. Despite feeling that there should be a greater focus on the needs of exceptionally able pupils, teachers gave a picture of what is actually happening on the ground, and this picture focused on the high priority given to pupils with learning difficulties and on the other barriers and challenges that schools experience. The implications from the findings outlined in this chapter, along with recommendations arising from them, will be discussed in the next chapter.

CHAPTER 5: CONCLUSIONS

This concluding chapter takes a broad view of the information presented throughout this thesis, identifying some key findings, which capture important aspects of the teachers' beliefs and experiences in relation to exceptionally able pupils. These beliefs and experiences have considerable implications for the education of the pupils in question. Research on how teachers perceive and work with exceptionally able pupils in Irish primary schools is limited, hence the findings from this study add substantially to the current knowledge-base. The in-depth information from the focus groups is particularly valuable given the absence of such rich qualitative data in any previous study.

The overall findings from this study paint a picture of teachers interested in providing support for exceptionally able pupils but overwhelmed by current school priorities, particularly the need to focus on pupils with learning difficulties, and constrained by their own lack of knowledge and training regarding how to identify and provide for pupils of exceptional ability. In every primary school classroom throughout Ireland, it is likely that there are exceptionally able pupils who need opportunities to maximise their potential. As a prelude to identification, it is essential that teachers have a clear conceptualisation of what exceptional ability is and some ideas about the various ways in which it can be manifested. This is not easy when a confusing array of definitions exists, but in practical terms, the definition will often dictate which pupils require differentiated instruction, and will also link in with the provisions the school can make available to these pupils.

In this final chapter, four key findings from the study and their implications for teachers and pupils are discussed:

- Confusion among teachers regarding the definition and conceptualisation of exceptional ability/giftedness
- Identification as a challenging process
- Teacher practices: ad hoc provision
- Professional challenges for teachers.

Following that discussion, the limitations of the study are noted. Recommendations for key stakeholders are then presented and, finally, suggestions for future research are offered.

Confusion Among Teachers Regarding Definition/Conceptualisation

One of the key findings from the study was the widespread confusion among the participating teachers regarding the definition and conceptualisation of exceptional ability, and conflicting ideas regarding what constitutes an exceptionally able pupil. The participants' confusion mainly centered around two areas. First, they were unclear about the different terms that refer to more able pupils, and were uncertain if the different terms denote differing levels of ability. For example, teachers were unsure if there is a difference between a very bright, a gifted, a high-achieving, or an exceptionally able pupil. This situation has been reported previously in Irish research. Flynn (2005) found that preservice teachers were very vague in their conceptions of exceptional ability, while at the post-primary level, Daly (2015) reported that almost all participants felt that staff within their schools had little knowledge of the concept and definition of exceptional ability.

The second issue that led to confusion among the participants was the uneven profiles among some exceptionally able pupils. Considering a pupil who displays high ability across all areas and a pupil who shows significant strengths in one area only, the participants were unsure if both could be regarded as exceptionally able. The differing behavioural presentations of some pupils, particularly those who display unmotivated or negative behaviours, added to the teachers' uncertainty. A majority of questionnaire respondents believed that a pupil with dual or multiple exceptionalities could also be exceptionally able, but the focus group discussions showed that participants felt this is a complex issue. Participants were aware that one exceptionality may mask the other, making it difficult to identify either, and making it difficult for teachers to pitch their instruction at the correct level. The idea of one effect masking another has been recognised in the literature (Amend & Peters, 2012; Gilheaney, 2003), and Amend and Peters (2012) point out that frustration and low self-esteem are likely to follow if interventions are not targeted at a pupil's areas of strengths as well as weakness.

It was striking how some participants assumed that they have pupils of all ability levels, including those of exceptional ability, in their class, while others felt that they have no exceptionally able pupils – this really comes down to how teachers and schools conceptualise exceptional ability. A lack of clarity around definition has implications for teacher practices in the classroom, and thus for the pupils in question. If teachers do not know which pupils are exceptionally able, it is likely that they may not feel a need to provide additional support, thus depriving particular pupils of the opportunity to learn at their capability level.

According to the definition available to Irish teachers in the NCCA (2007) guidelines, exceptionally able pupils are those who demonstrate very high levels of ability or very high levels of attainment in one or more domains, and they need more challenging opportunities than are generally available in the regular classroom. Participants rarely mentioned the NCCA (2007) definition, and, in fact, similar to the teachers in Ní Chéilleachair's (2013) study, few of them consult the guidelines. The participants' responses showed little recognition of newer theories of exceptional ability/giftedness, most of which, in addition to cognitive ability, emphasise contextual factors and psychosocial skills (Cross & Coleman, 2005; Plucker & Callahan, 2014; Subotnik et al, 2011).

There are a number of education-based models and approaches that could help teachers to clarify and expand their ideas of exceptional ability and high achievement. Several of these emphasise the dynamic nature of ability. An approach that focuses on particularly advanced subject-specific ability at a particular point in time (Matthews & Foster, 2005) could be used to match pupils' exceptional learning needs with suitable educational provision (Balchin, 2009). Thus, when a teacher recognises a mismatch between a pupil's ability and the current instruction on offer, more challenging material could be provided (Peters, 2016). The RtI model, when applied to gifted education, considers exceptionally able pupils' learning needs based on their strengths and areas of mastery. This model could be used as a framework to address the needs of high-achieving pupils in the same way that the Continuum of Support is currently used to support pupils with learning difficulties.

Another approach is that of Dweck (2006, 2017) whose idea of a growth mindset views ability as malleable and as developing over time through effort, persistence and opportunity (Dweck, 2006). There is a need to support teachers to view ability as malleable and to view hard work as necessary for high attainment. A few participants in this study suggested that perhaps some pupils' advanced achievement may not necessarily be the result of exceptional ability, and instead attributed it to "pure hard slog" (P4F4). This suggests that the participants felt that somehow innate exceptional ability was missing, and they clearly did not recognise that hard work and effort are now identified as necessary components in most contemporary models (Renzulli, 1978; Plucker & Callahan, 2014).

In particular, Cross and Coleman's (2005) school-based model, which forms the conceptual framework of this study, focuses mainly on academic domains and on the key role that schools have in the development of those domains, such as the core school subjects of mathematics and reading. This model incorporates many of the newer ideas about exceptional ability/giftedness, including the importance of context, personal factors, and developmental trajectories. Giftedness is seen as developmental in that it is dynamic and malleable, and the expression of giftedness depends on the context and on a pupil's personal characteristics such as motivation, effort and perseverance. A responsive context includes the opportunities that are available in schools and classrooms, as well as teacher expertise. This also means that giftedness emerges and wanes at various times depending on the environmental factors at play (Worrell et al, 2012). This is a very different conceptualisation of exceptional ability to that which the participants seemed to hold, and points to a need for professional development for teachers.

Identification: A Challenging Process

According to the definition of giftedness in Cross and Coleman's (2005) model, teachers can identify signs of exceptional ability in primary pupils through the potential pupils display, their actual performance in school, and/or their rapid learning compared to peers in a school-related domain. This may sound simple, but in reality, the participants found the identification of exceptionally able pupils a very challenging process. Their difficulties arise from a number of factors, including lack of clarity regarding the concept of exceptional ability/giftedness, difficulties arising from the identification methods used,

over-identification of positive characteristics, holding unrealistic mental models of an exceptionally able pupil, and lack of confidence in their own ability to identify these pupils.

If teachers have no clear idea of what constitutes exceptional ability, it is very difficult for them to try to identify exceptionally able pupils. The high proportion of respondents who reported that their schools had not identified any pupils as exceptionally able is noteworthy. This is likely to be a reflection of teachers' beliefs regarding what constitutes an exceptionally able pupil, and of a school's lack of an agreed definition. The absence of identified pupils also conflicts with the NCCA's (2007) expectation that there will be a group of exceptionally able pupils in every school who require extended educational opportunities, regardless of how they compare to exceptionally able pupils in other schools.

According to the questionnaire respondents, the four main methods by which exceptionally able pupils should be identified are ability/IQ tests, teacher observation, psychological report, and standardised tests of achievement. In practice, it was clear from the focus group data that teachers rely on just one or two methods, something that has been found in other countries also (McClain & Pfeiffer, 2012; VGETC, 2012). However, the participants' use of both standardised test results and teacher observation seems to be problematic.

Standardised Tests

Standardised tests of achievement are mandatory in core subjects in certain grade levels in Ireland, and findings from previous Irish studies have pointed to a reliance on these tests as one method to identify exceptionally able pupils (Cross et al., 2014; Ní Chéilleachair, 2013). In this study, a tension was noted between participants' responses on the questionnaire and the views expressed in person at the focus group interviews. When asked how they would define an exceptionally able pupil, many questionnaire respondents mentioned pupils who regularly achieve Stens of 9 or 10 on standardised tests of achievement. The focus group discussions however made it clear that, in practice, this did not apply the other way round – when pupils achieved Stens of 9 or 10, teachers did not necessarily consider them to be exceptionally able; they thought these pupils were 'bright'

and working well, and as a result, teachers did not see a need for further provision beyond the regular curriculum. There is growing recognition, however, that exceptionally able pupils may not achieve at their capability levels if denied an appropriately challenging education (Assouline & Lupkowski-Shoplik, 2012; Cross & Coleman, 2005).

It has been found that teachers expect pupils of high ability to automatically perform well in the regular classroom and achieve highly in standardised tests regardless of the curriculum being offered to them (Taylor, 2016). Participants regularly spoke about "the underachieving child" (P2F2) when referring to pupils who were experiencing difficulties in learning. There was little awareness, however, that pupils who achieve highly on standardised achievement tests may actually be underachieving. Even high-achieving pupils who are performing well at school may not be meeting their full potential, as they sometimes realise that they can meet teachers' expectations with little investment of effort (Betts & Neihart, 2010). Using pupil achievement to identify exceptionally able pupils may thus be unreliable if teachers are not aware that the possible underachievement of these pupils in standardised tests may be due to a curriculum and activities that are unresponsive to their advanced learning needs (Persson, 2010; Seedorf, 2014).

There appeared to be no recognition among the participating teachers that the low ceilings of grade-level tests may limit exceptionally able pupils' scope to display their depth and breadth of knowledge, and that despite good results these pupils may be 'coasting' (Cao et al., 2017; Warne et al., 2016). The lack of standardised tests with sufficient range to capture very high levels of ability is a particular problem for pupils who are profoundly gifted (McBee, 2010). The high ceilings in above-level tests are better matched to the knowledge and competencies of exceptionally able pupils than the age/grade level tests that are normally used (Cao et al., 2017; Rambo-Hernandez & Warne, 2015). Above-level tests could be used in primary schools to find the base level of achievement and identify the learning needs of high-ability pupils in regular classrooms (Warne, 2014).

Teacher Observation

The second procedure that the participants reported using in the identification process is teacher observation. This is a commonly used method that is favoured by

schools (Freeman et al., 2010; Hammerschmidt, 2016; Sears, 2016), but questions have been asked as to whether teachers, who often rely on their own personal ideas of exceptional ability, are in the best position to identify exceptionally able pupils (Acar et al., 2016; Siegle et al., 2010; Szymanski & Shaff, 2013). Research has shown that both preservice and inservice teachers hold the stereotypical belief that, due to their advanced abilities, exceptionally able learners are easy to identify and do not require any special support (Almulla & Fateel, 2017; Sears, 2916). This belief was reflected in the comments of some of the participants in this study. One teacher's comment was typical: "They can teach themselves … you don't have to do much with them" (P3F5). Cross et al. (2014) additionally found that teachers who are more likely to believe that exceptionally able pupils will be fine in a regular classroom and less likely to think they need a differentiated curriculum, are also less supportive of gifted education in general. If teachers do not hold informed beliefs about exceptional ability they may feel that these pupils are very easy to identify and/or see no great reason to identify them at all (as 'they will be fine') (Berman et al., 2012; Sears, 2016). These findings point to a need for further training as it seems that many teachers do not realise that exceptional ability can be manifested in varying ways, and that all pupils, including those who are exceptionally able, need to be offered opportunities to display their ability and achievements.

Teachers found it easy to identify pupils who were what one participant called "off the scale completely" (P2F6), such as a child coming into school able to read or already able to calculate well in maths. Some of the primary teachers in Szymanski and Shaff's (2013) study relied on similar personal beliefs, and they spoke about the 'truly gifted' pupil. This mental model seems to imply that exceptionally able pupils perform at a far higher level than even the highest-achieving pupils in the regular class. Teachers holding such an unrealistic image of exceptionally able pupils are unlikely to identify pupils using generally accepted methods, and instead are likely to identify only the very rare pupil who conforms to their personal beliefs. As a result, it is probable that they will not see that exceptionally able pupils in their classes are not achieving in accordance with their capabilities. Indeed, the idea of the 'truly gifted' or 'off the scale' pupil seems to be the basis for the comments of some teachers in this study who, despite teaching for many years, claimed that they had rarely, if ever, encountered an exceptionally able pupil.

The participants tended to attribute positive characteristics to exceptionally able pupils, and were inclined to identify pupils who could be regarded as compliant "teacher pleasers" (Radnor et al., 2007, p. 288). This finding is in line with international trends whereby teachers tend to more often identify conforming pupils who are neat workers, and rarely identify non-compliant pupils although these might be more able (Jacobs, 1973; Laine et al., 2016; Szymanski & Shaff, 2013**).** In fact, it has been estimated that as many as 90% of pupils world-wide, who have been identified as exceptionally able by teachers who have no training in gifted education, are likely to be high-achieving, compliant pupils who have learned to use the system to hide their boredom while investing as little effort as possible (Betts & Neihart, 1988).

The NCCA (2007) guidelines note that the typical picture of an exceptionally able pupil as a hard-working pupil who completes work diligently and is seen by peers as the best in the class, does not reflect the reality which is much more complex. But paradoxically, the checklists for teachers in the guidelines consistently present the characteristics of exceptionally able pupils in a positive light. Thus, as this is the only real guidance available to teachers in the Irish system, the guidelines may contribute further to teachers not considering disengaged, disruptive or very retiring pupils whose exceptional ability may not be as evident.

A corollary to their over-identification of exceptionally able pupils' positive characteristics is the belief among the participants that these pupils rarely exhibit negative behaviours, such as being disorganised or disruptive. This suggests that teachers may not be aware that some exceptionally able pupils experience boredom and frustration leading to, for example, disruptive behaviour, if their advanced learning needs are not met (Lubinski, 2004). This is not to imply that all pupils who display negative behaviour are exceptionally able, but to be aware that occasionally the poor behaviour may be the result of a pupil who is under-challenged and disinterested in the curriculum offered (NCCA, 2007; Radnor et al., 2007).

As participants in two of the focus groups teased out this issue, it became evident that a small number of them recognised that sometimes the negative characteristics of some exceptionally able pupils were manifestations of frustration with inadequate provision rather than poor behaviour per se. In fact, two teachers reported being alerted to

a pupil's exceptional ability through disruptive behaviour. Another teacher went further and speculated that perhaps a particular pupil's attention disorder may have come about as a result of an exceptionally able pupil not being stimulated enough. Of course, that pupil's behaviour and poor attention may be a sign of a pathological condition, but they may also be explained perhaps by an educational mismatch. This may not be an uncommon situation. Characteristics and behaviours of some exceptionally able pupils can be misinterpreted, leading to a misdiagnosis of a disorder such as attention deficit hyperactivity disorder (ADHD) (Amend & Peters, 2012). Amend and Peters (2012) further note that an exceptionally able pupil who is inattentive in class because s/he is not being challenged may respond better to curriculum differentiation rather than to a behavioural programme or medication.

Some participants also reported on the difficulty in identifying quiet, well-behaved pupils, those whom McCafferty (2011) refers to as "underground students" (p. 94). These pupils show little outward signs of exceptional ability and stay "under the radar" (P2F6). The literature suggests that some exceptionally able pupils, particularly girls, may hide their abilities as a way of fitting in with peers in order to avoid social stigma, and are thus not easily identified (Cross, 2011; Cross, O'Reilly, Kim, Mammadov & Cross, 2015; Neihart et al., 2002; Swiatek, 2012).

Need for External Personnel

One of the more surprising findings from this study is the very large majority of responding teachers (91%) who feel that personnel from outside the school are needed to help with identification. Ní Chéilleachair (2013) also found that primary teachers largely relied on personnel other than teachers to identify exceptionally able pupils, and these included parents, psychologists and the CTYI. Taken together, these findings suggest that Irish primary teachers are not confident in their own ability to identify the exceptionally able pupils in their schools. Teachers' lack of confidence has implications for exceptionally able pupils, as research has found that teachers with higher levels of confidence are more likely to identify pupils as exceptionally able and to use more instructional strategies suited to their needs (Sears, 2016; Siegle et al., 2010). Furthermore, if teachers have to wait for outside personnel to help them, identification is unlikely to take place on an on-going basis as recommended in the NCCA (2007) guidelines. In addition,

participants' dependency on the results of standardised achievement tests suggests that a pupil identified as exceptionally able solely on the results of these tests will then be regarded as exceptionally able regardless of his/her performance throughout the rest of the year. Ongoing curriculum-based measurement, which is often used to identify areas of weakness in pupils who have academic difficulties and need support, could also be used to assess the performance of pupils whose advanced learning needs require more challenging provision.

It is interesting to note that although the participants called for external personnel to help in the identification process, they did not always accept the identification from outside. Even when pupils were identified as 'gifted' by an outside agency such as the CTYI, they were not always accepted in school as exceptionally able, as teachers noted that these pupils did not always achieve high scores on their standardised tests or were not observed to produce work of a high enough standard in class. But teachers may be unaware that pupils cannot display exceptional achievement if opportunities for advanced development are not provided by the teacher and school (Cross & Coleman, 2005).

Teacher Practices: Ad Hoc Provision

Most teachers in this study believe that exceptionally able pupils have special educational needs and that specific provision is required to address those needs. They outlined some of these needs and the current provision strategies that they use in school. Overall, the respondents felt that the main needs of exceptionally able pupils related to academic domains. Research has shown that exceptionally able pupils already know up to a half of the material to be studied in any given year (Robertson & Pfeiffer, 2016). It follows, therefore, that the regular curriculum will not meet the advanced needs of these pupils.

The role of the teacher is clear in Cross and Coleman's (2005) model – to provide opportunities to develop pupils' skills and competencies, and good teaching is a vital part of that context (Cross & Cross, 2017). Teachers need to be able to respond to a pupil's rapid learning and have adequate resources relevant to a domain. But pupils' personal factors are also important as advanced development demands that pupils use the

opportunities they are offered. Teachers thus need to consider pupils' interests, motivation, perseverance and work ethic, and they need knowledge and strategies for responding to pupils who display advanced learning.

Participants in all the focus groups brought up the ideas that exceptionally able pupils need to learn how to learn, and need to face failure so that they can cope when faced with tasks that push them "into the frontiers of their competence" (SERC, 1993, p.161). Gifted education experts stress the need for these pupils to be intellectually uncomfortable at times, and emphasise the importance of encouraging them to take risks, make mistakes, and engage in work that takes them out of their comfort zone (Betts & Neihart, 2010; Olszewski-Kubilius et al., 2016; Sternberg, 2009). These ideas support Dweck's (2009) view of the vital role that teachers can play in orienting pupils to the idea of developing a growth mindset in which failure is attributed to a need to work harder or smarter rather than to a lack of ability (Dweck, 2009).

Far fewer questionnaire respondents felt that exceptionally able pupils need support in social or emotional areas, but this issue did arise in some of the focus group discussions. The participants spoke of the intensity and perfectionism displayed by some exceptionally able pupils, two of the characteristics which Neihart (2011) argues are markedly different in highly able pupils than in average ability peers, or even than in older, average-ability pupils. Although a number of participants gave examples of a pupil's uneven development (e.g., gifted academically but poor social skills), overall, there seemed to be little recognition of the central role that atypical or asynchronous development plays in the lives of many exceptionally able pupils (Cross, 2011; Neihart, 2011).

Several of the participating teachers did see a need for a suitable peer group for exceptionally able pupils, as these pupils can have difficulty finding their place in the class socially and frequently are isolated from their classmates. However, awareness of the lack of a meaningful peer group did not lead the participants to suggest that these pupils might be better working with older pupils at least some of the time. In fact, several teachers seemed to imply that perhaps exceptionally able pupils should be held back academically in order to fit in socially with their age peers, instead of at least sometimes being with older pupils with whom they would fit intellectually, a strategy that is strongly recommended in the literature (Lupkowski-Shoplik, Assouline & Colangelo, 2015).

Issues in Teacher Practice

While they are aware of the special educational needs of exceptionally able pupils and of the necessity to address those needs, in practice, the teachers in this study find it very difficult to provide the necessary challenging education. This finding is consistent with international research which suggests that although classroom teachers are supportive of the idea of identifying and making specific provision for exceptionally able pupils, they find it difficult to implement the necessary strategies in practice **(**Koshy et al., 2010). Many of the practices discussed by the participants were neither planned nor implemented in schools with exceptionally able pupils in mind. In this regard, teacher practices do not match teacher beliefs.

In Ireland's inclusive educational system, the class teacher has responsibility for catering for the needs of pupils with a wide range of abilities and interests, including pupils who are exceptionally able. Mixed ability teaching has been criticised on the basis that it addresses the specific needs of neither low-achieving nor high-achieving pupils, as teachers generally target their instruction to the majority of the class (Olszewski-Kubilius, 2013). The participants in this study take a pragmatic approach, which generally sees them, in their own words, 'teaching to the middle' and prioritising pupils with learning difficulties for any additional interventions. In this situation, although the more able pupils are often guaranteed to 'succeed', albeit on material that is not suitable and does not challenge them (Sternberg, 2000), they may indeed, in the words of the participants, be the "forgotten cohort in primary school" (R090) who are "neglected and never reach their true potential" (R108).

Differentiation

Differentiation is considered the main method available for class teachers to provide for exceptionally able pupils in primary schools (Barrington, 2014). Teachers in Ireland are familiar with the concept and practice of differentiated instruction as they frequently use it with pupils who experience difficulty in learning. In this study it was clear that the participants have 'bought in' to the whole idea of differentiating the curriculum to take account of individual differences in learning, but they find it difficult to "differentiate upwards" (R143) for exceptionally able pupils. They reported using differentiation in some subjects but it was clear that this is usually on an occasional, not on a planned, basis.

Previous research in Ireland found that primary teachers reported using differentiation strategies to meet the needs of higher-achieving pupils (Cross et al., 2014; Ní Chéilleachair, 2013). However, both Ní Chéilleachair (2013) and Cross et al. (2014) question the adequacy of the differentiation as these practices happen less frequently than is optimal. Moreover, Cross et al. (2014) found that some practices that most benefit exceptionally able pupils, such as curriculum compacting, are rarely used. In order to be effective for exceptionally able pupils, differentiation requires that teachers are able to add advanced content and adjust pacing for pupils who are ready to move ahead (Olszewski-Kubilius, 2013). However, on the basis of this and the previous studies, it seems as if primary teachers in Ireland find differentiated instruction more desirable than feasible**.**

Ability Grouping

Research has shown that ability grouping is also a commonly used strategy in regular primary classrooms to cater for the learning needs of all pupils (Chorzempa & Graham, 2006; Steenbergen-Hu et al., 2016). The situation is less clear in Ireland. The teachers in both Ní Chéilleachair (2013) and Whelan's (2003) studies were against ability grouping, but more recent research found that it is used frequently in disadvantaged schools particularly for the core subjects of maths and literacy (McGillicuddy & Devine, 2018). The evidence base for grouping is not as robust as for other organisational strategies such as acceleration. The results of a large-scale study showed strong evidence that grouping pupils by previous performance significantly improved their reading and maths scores, and the effect was beneficial for pupils of all ability levels (Collins & Gan, 2013), but other studies found more mixed results (Johnson, 2016; Matthews, Ritchotte & McBee, 2013; Smith, 2017).

According to the participants, pupils are not grouped frequently for maths, and the most commonly reported strategy to support literacy was station teaching. However, reliance on the use of station teaching is problematic on a number of grounds: a team of teachers is required; it runs for a limited timeframe; and not every school can afford to invest in the books and materials required. Furthermore, it is a school-wide approach as distinct from a strategy used by an individual teacher to provide a differentiated curriculum when the need arises in the classroom. As teachers in the focus groups delved deeper into the issue of station teaching, it was clear that they were doubtful whether it was actually

addressing the needs of exceptionally able pupils. They were aware that it is not planned with exceptionally able pupils in mind, and some even felt that it is holding back more able pupils as they have to stay within the level assigned for their grade. Taken together, these issues appear to suggest that there is little ability grouping occurring on a regular basis in individual classrooms. This finding is not surprising, as whole-class teaching has been found to be the most common format for teaching core subjects in Irish primary schools (Clerkin et al., 2017; Kavanagh et al., 2015), and the lack of differentiated teaching and activities has been criticised in government (DES, 2010) and WSE reports.

Acceleration

A large body of research findings supports positive academic and social effects for acceleration (Cross et al., 2015; Rogers, 2015; Wai, 2015). Cross and Coleman (2005) recommend acceleration as the best means of promoting advanced development, as exceptionally able pupils benefit from opportunities to learn with intellectual peers, and acceleration parallels the natural progression of learning in any specific area, such as moving from simple to complex. Less than 10% of the questionnaire respondents reported that their schools use acceleration/grade skipping, a finding that is consistent with that of Cross et al. (2014) who reported that both primary and post-primary teachers were opposed to acceleration. The needs of some pupils, who may require radical acceleration of learning, are thus ignored. This issue arose in only two of the focus groups, and even those teachers whose schools had accelerated some pupils expressed reservations about it, particularly from the point of view of pupils fitting in socially. In line with participants' views, much of the educational community views acceleration with some scepticism, especially with regard to social and emotional issues (Assouline, Colangelo, & Heo, 2012; Robinson, 2004; Siegle et al., 2013). But experts in gifted education argue that for pupils for whom acceleration would seem a suitable or even necessary option, remaining in their regular classes inevitably result in a mismatch between pupil ability and the level and pace of instruction This mismatch can, in turn, result in boredom (Plucker et al., 2004), underachievement (Olthouse, 2014), isolation from peers of similar ability (Cross et al., 2015), demotivation (Gross & van Vliet, 2005), and succumbing to the effects of peer pressure (Neihart et al., 2002).

Barriers/Obstacles

Although participants would like to provide more specific services for exceptionally able pupils, they found it difficult to do so because of obstacles in the way, a finding that is consistent with previous Irish studies (Cross et al., 2014; Whelan, 2003). The picture that emerged from this study was one of teachers being overloaded and feeling overwhelmed. The questionnaire respondents regarded lack of time as the greatest barrier to making instructional adaptations to meet the needs of pupils who excel, but when unpicking the issue in the focus groups, the participants felt that schools' priority on pupils with learning difficulties was the greatest obstacle.

A small number of teachers felt that lower-achieving pupils take up a disproportionate amount of the teacher's time, a view shared by Freeman et al. (2010) who speculated that often there is too much focus on tackling the needs of the lower-achieving pupils. The majority of participants felt that it is easy to forget about the higher-achieving pupils when preoccupied with those who are struggling academically. This, perhaps, is not surprising given the central focus that has been on pupils with learning and other disabilities in Irish primary schools over the past 20 years. In practice, teachers face a dilemma – aware of the need to make provision for exceptionally able pupils but concerned about those who seem to have greater needs.

Exceptionally Able Pupils Present Specific Professional Challenges for Teachers

It is clear that participants were generally aware that the needs of exceptionally able pupils should be addressed in a more organised way, and many would welcome support in the area. One third of the questionnaire respondents reported that they did not feel adequately prepared to address the needs of these pupils, and a number of them were very frank about how totally unprepared they feel. A bigger group of teachers (42% of respondents) rated themselves as neither well nor poorly prepared, suggesting perhaps that they feel reasonably well-prepared, or alternatively, that they are not sure how prepared they are. However, some of those teachers reported that they had never dealt with an exceptionally able pupil, inviting the question of how prepared they actually are. It is very probable that these respondents have, in fact, dealt with exceptionally able pupils – the NCCA (2007) guidelines suggest that 5-10% of pupils in any school are exceptionally able

– but, not recognising their exceptional ability, have not made provision to meet the pupils' educational needs.

Many studies have found that teachers receive no training on identifying or instructing exceptionally able pupils in their preservice courses (Hammerschmidt, 2016; Laine et al., 2016; Taylor, 2016). As a consequence, newly qualified teachers may be expected to meet the needs of exceptionally able pupils with little understanding of the characteristics and needs of these learners. Most teachers in Ireland have come through an education system in which there has traditionally been very little emphasis on the needs of higher-ability learners. It is, therefore, unsurprising that they feel unprepared or lack confidence to address the needs of exceptionally able pupils. There is ample evidence to show that teachers who receive training in gifted education develop more positive attitudes towards exceptionally able pupils, are more aware of their needs, and are better able to differentiate the curriculum for them (Jung, 2014; Plunkett & Kronborg, 2011). Ní Chéilleachair (2013) reported that Irish teachers who had training specific to exceptionally able pupils used a wider variety of strategies to identify high ability pupils than those who had no specific training.

However, despite the overall positive effects of targeted training for teachers, there are few professional development opportunities in this area. The greater emphasis on exceptionally able pupils in the new initiatives (DES, 2017a, 2017d) seem to suggest that these pupils now feature more prominently on the educational agenda. While the impetus for greater focus on this cohort of pupils may have sprung from less than optimal results in international assessments such as TIMSS and PISA, the importance for the DES to afford at least equal opportunity to all pupils to make progress compatible with their capabilities cannot be overstated.

Some participants voiced the opinion that teachers may be daunted by the presence of exceptionally able pupils in their classrooms and expressed concerns that they may not have the knowledge required to teach these pupils. VanTassel-Baska (2009), a leading expert in tailoring curriculum to address the needs of exceptionally able pupils, maintains that primary teachers frequently do not have the necessary working knowledge of the curriculum above their own teaching level. The participants felt that this issue applied particularly to the teaching of mathematics. Irish teachers' views on mathematics are

complex. A majority of pupils in fourth class had teachers who were confident that they could provide appropriate tasks for high-achieving pupils in maths (Clerkin et al., 2017). But paradoxically, a majority of pupils in sixth-class were taught by teachers who agreed or strongly agreed that they would benefit from professional development to improve their own understanding of the mathematics content/processes they teach (separately from strongly agreeing that they would benefit from support in the teaching of mathematics; Kavanagh et al., 2015). Previously, Delaney (2010) found that primary teachers varied greatly in their mathematical knowledge for teaching, and teachers identified a need for greater support in differentiating their teaching to address the needs of individual pupils, including those who are exceptionally able (Clerkin, 2013).

Many of the findings of this study align with those of previous research and present new insights into teachers' perceptions of exceptionally able pupils and their practices to deal with those pupils at the classroom level. As gatekeepers to services for exceptionally able learners, teachers play an influential role in the educational experience of high-ability pupils. Teachers in the Cork area generally displayed positive attitudes towards exceptionally able pupils. In addition, there is already a certain amount of what might be termed gifted practice happening in some classrooms, albeit in an *ad hoc* manner. But overall, there is a discrepancy between recommended strategies in the literature and the results shown in this study, indicating that opportunities for professional development for teachers are essential. Principals, a fulcrum for school reform, are crucial to leading and promoting a vision of a more meaningful education for exceptionally able pupils. This is particularly true in an area such as addressing the needs of exceptionally able pupils which requires attitudinal and behavioural change on the part of many teachers.

One of the strengths of this study was the methodology which provided a platform for classroom teachers in primary schools in Cork to have their voices heard. Many teachers commented on how participating in the study proved to be personally valuable for them. Some reported that it was the first time they had been asked for their opinion on this topic. They acknowledged that participation in this study raised their awareness of the probability of having exceptionally able pupils in their classrooms, and they noted a deepening of their understanding of the nature and the diversity of ability. Coming through their responses also was evidence that the study led teachers to question fundamental aspects of their thinking about all their pupils, and about their attitudes to providing

alternative approaches for diverse learners, with some acknowledging that they would have to question and rethink their ideas about exceptionally able pupils. This interest could be harnessed, and teachers' voices, such as heard in this study, could inform the design of suitable programmes and contribute to the identification of the teaching competencies necessary to increase the achievements of exceptionally able pupils in primary classes.

Limitations of the Study

This study is not without limitations. The pool of participants was limited to teachers within one geographical area in the south of Ireland. However, the wide spread of schools covered, the use of an extended pilot with teachers in a similar position, the satisfactory response rate (60%) to the questionnaire, allied to the in-depth perceptions of the focus group participants, reinforce the conclusions being drawn, and it is likely that this geographical census may map onto the profile of schools nationally, allowing tentative generalisations to be made.

It is acknowledged that the focus group participants, who volunteered to take part, and indeed the questionnaire respondents, were possibly not representative of the general population of teachers. It is possible that the participants were more interested in exceptionally able pupils and had a greater understanding of their needs than non-respondents. Thus the responses from the teachers who participated in the study may reflect more favourable attitudes towards exceptionally able pupils than might be provided by a more representative sample. It can be argued that this adds to the significance of findings: if teachers with an interest in exceptionally able pupils are struggling in relation to definitions, identification and provision, it is probable that the picture in the non-responding schools may well be more negative.

Although this study focused exclusively on teachers' perspectives, there are other perspectives worthy of investigation, particularly those of parents and pupils, but these were outside the scope of this study, and are an issue for future research.

Recommendations For Key Stakeholders

The findings from this study paint a picture of primary teachers who are generally positive towards exceptionally able pupils, but who feel overwhelmed by conflicting school priorities and by the professional challenges these pupils present to them as educators. This situation suggests that, in contrast to the ideals in the 1998 Education Act (Government of Ireland, 1998) regarding equality of access to, participation in, and benefit from education for all pupils, exceptionally able pupils in primary schools are not accessing a curriculum appropriate to their capabilities, participating in activities that challenge them, or benefitting from the curriculum currently offered to them. The greater emphasis on exceptionally able pupils in the new initiatives (DES, 2017a, 2017d) seem to suggest that these pupils now feature more prominently on the educational agenda. While the impetus for greater focus on this cohort of pupils may have sprung from less than optimal results in international assessments such as TIMSS and PISA, the importance for the DES to afford at least equal opportunity to all pupils to make progress compatible with their capabilities cannot be overstressed. Based on this study, the following are a series of recommendations pertinent for key stakeholders – the DES, school leadership, and teachers.

Recommendations for DES

- It is essential that inservice professional development is offered to current primary teachers to both raise awareness of exceptionally able pupils and to help teachers develop professional knowledge and expertise in the area of gifted education.
- Since exceptionally able pupils feature in most, if not all, classes, it is necessary for theoretical and practical experiences of educating these pupils in academically diverse classrooms to permeate the whole of pre-service teacher training. This would include training on the unique characteristics and specific needs of this group of pupils, as well as activities and strategies to meet those needs.
- Particular emphasis should be placed on providing support for principals whose leadership role in bringing about educational change is crucial.

- The NCCA (2007) guidelines were issued to all schools in Ireland in 2007 in draft form, and it is now necessary to ensure that resources are made available to bring them up to date in the light of more recent research, and to re-focus them on primary schools.
- Guidelines on their own, as a one-off document, are of limited relevance for teachers without further support. DES inspectors need to promote those guidelines in the schools and monitor their implementation.
- There is a need to develop a working definition of exceptional ability/giftedness, that would work in the Irish context, to be shared by all key stakeholders.

Recommendations for Schools

- A whole-school, systematic approach is needed to address the needs of exceptionally able pupils and provide them with optimal learning experiences.
- The issue of addressing the needs of exceptionally able pupils needs to be put on the school agenda and space made within school discussions to share practices in gifted education that work.
- Curriculum and instruction need to be modified to meet the advanced learning needs of this cohort of pupils, and this must be supported at school level.
- Each school should incorporate a section into a written policy as to how and what is being done for this cohort of pupils.

Recommendations for Teachers

- It is crucial that teachers become aware that they have exceptionally able pupils in their classrooms – according to the NCCA (2007), 5% to 10% of the school population can be considered to have exceptional ability.
- Teachers also need to be aware of the diverse range of behavioural presentations displayed by exceptionally able pupils and that occasionally poor behaviour may be the result of an under-challenged and bored pupil.
- Teachers need to use good quality reflective teaching in order to develop strategies to direct their own learning with regard to exceptionally able pupils.

- There may be instances of best practice in relation to pupils with exceptional ability in any given school, and teachers should work collaboratively to share that practice, or access support from external experts.

Suggestions for Future Research

Research on exceptionally able pupils and their teachers is in its infancy in Ireland, and as a follow-on from this study, there are many aspects that could be explored. A range of complementary studies is required, including the following:

- One of the main strengths of this study design was the in-depth understanding gained through the focus group discussions. Further, more substantial qualitative studies are needed that explore the views of teachers, allowing them to delve more deeply into issues, challenges, and practices at the classroom level. As part of that, ethnographic case studies could also be used to gather data.
- In a number of instances, the focus group discussions, which provided a "rich reflection of the realities of school life" (Balchin, 2007, p. 26), revealed a different picture of what happens in "street-level bureaucracies" (Lipsky, 2010, p. 3) to that portrayed by the questionnaire respondents. The gap between teacher intentions and teacher actions suggests a need for observation studies.
- Observing teachers in schools that engage in a meaningful way with exceptionally able pupils is needed so that the factors that contribute to best practice are identified and disseminated.
- Historical studies of exceptionally able pupils who have progressed through the system, and of teachers who have retired, would provide further information on the practices that helped exceptional learners.
- Future research might aim to replicate and extend this study with larger and more representative samples of teachers, allowing for more definite generalisations to be made.
- Research to explore differences between teachers who have had professional development in the area of exceptional ability and those who have not had any training is likely to yield interesting findings.

- A vital element of future research is that of giving a voice to exceptionally able pupils in order to explore how they feel their advanced learning needs are being addressed.
- The perspectives of parents should also be included in research, both with regard to deficiencies in current provision and with regard to what provisions they would like to see in place.

Conclusion

This study adds to the body of knowledge in this emerging field of research on exceptionally able pupils in Ireland. With its mixed methods approach, it extends the existing research base to include not only a survey of teacher beliefs and practices, but also interviews with teachers about the nature of those beliefs and practices. The results of this research support previous Irish research (e.g. Cross et al. 2014; Ní Chéilleachair, 2013) but add value through the rich qualitative data gathered in the focus group discussions. These discussions brought out the nuances of different teachers' perspectives and practices on a range of issues to do with exceptionally able pupils. The overall findings of the study paint a picture of teachers who are positive towards exceptionally able pupils but who feel overwhelmed in terms of meeting their needs in practice. While some provisions are in place, these are generally on an ad hoc basis which varies within and between schools. Teachers take a pragmatic approach with regard to what they feel they can accomplish within the constraints of diverse classrooms.

Sternberg (2000) argues that all pupils should be given the opportunity to reach new levels of competence. This idea is echoed by Csikszentmihalyi who observed that "one must develop skills that stretch capacities that make one become more than what one is" (1990, p. 213). While the findings from this study indicate that provision for these pupils falls short of these of these ideals, most of the teachers in this study felt that the needs of this cohort of pupils should be addressed. Moreover, the participants expressed a strong interest in learning more to enable them to provide more appropriate educational opportunities for exceptionally able pupils in their classrooms. For this to happen, there needs to be updated guidelines with a clear definition, and professional training on identifying and responding to exceptionally able pupils. Leadership on a national DES

level as well as at local school level is also required, in addition to documenting and sharing of best practice among teachers, in order to systematically address the needs of advanced learners in Irish primary schools.

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APPENDIX A: Questionnaire

EXCEPTIONALLY ABLE PUPILS IN MAINSTREAM PRIMARY SCHOOLS

The aim of the study is to explore how mainstream primary schools in the Cork area respond to the needs of exceptionally able pupils. In 2007, the National Council for Curriculum and Assessment (NCCA) issued *Exceptionally Able Students: Draft Guidelines for Teachers* to all schools in Ireland. In those guidelines, the term "exceptionally able students" refers to pupils who require opportunities for enrichment and extension that go beyond those provided for the general cohort of students. In line with those guidelines, the term "exceptionally able pupils" will be used throughout this questionnaire.

Instructions for completing the questionnaire
It will take approximately 15 - 20 minutes to complete the questionnaire. Most questions only require you to shade in the appropriate circle. **It is very important that you shade in the circles with a black pen or pencil**.

Please complete the questionnaire and return it to me in the enclosed stamped addressed envelope by **15th October**. Alternatively, you can complete the questionnaire online at **exceptionallyable.wikidot.com** (note no www). Either way, you will need to fill in your **school ID number** which is given on the attached covering letter. Your completion of the questionnaire confirms that you understand the purpose of the study and that you freely consent to participate in it.

I intend to run follow-up interviews (either individual or focus groups) with teachers who are interested in this area. If you are willing to meet me at a time and place that suits you, please fill in your name and contact details here:

Name: _____

Phone: _____

Email: _____

I would like to thank you for your willingness to complete this questionnaire. All information will be treated with absolute confidentiality, and neither your name nor that of your school will be revealed in the research report or in any conference presentation or journal article arising out of the project.

Signature

SECTION A: SCHOOL INFORMATION

A1 School Identification Number (from covering letter): _____

A2 Number of pupils in the school. Complete one option only:

If girls only school, number of girls: _____

If boys only school, number of boys: _____

If mixed girls' and boys' school, number of girls: _____

number of boys: _____

A3 Number of teachers on staff (including principal, class teachers and support teachers).
Please indicate the number by **shading the relevant circle in black**:

○ 1 or 2	○ 5 to 8	○ 13 to 20
○ 3 or 4	○ 9 to 12	○ more than 20

A4 The principal in this school is:

○ An administrative principal
○ A teaching principal

A5 The main language of instruction in the school is: ○ English ○ Irish

A6 How many pupils are eligible for EAL (English as Additional Language) provision?

A7 Does your school have disadvantaged status? ○ Yes ○ No

If Yes, please indicate which category by **shading the relevant circle in black**:

○ Urban DEIS Band 1
○ Urban DEIS Band 2
○ Rural DEIS

A8 Please indicate the location of your school by **shading the relevant circles in black**:

○ City or suburbs
○ Large town (population greater than 10,000)
○ Town (population 1,500 to 10,000)
○ Village or rural community (population less than 1,500)

A9 What is your role(s) in the school? Select all options that apply by **shading the relevant circles in black**:

○ Principal
○ Deputy principal
○ Special educational needs co-ordinator
○ Learning support/Resource teacher
○ Class teacher
○ Other, please specify _____

SECTION B: POLICY

B1 Does your school have a written school policy that specifically addresses the needs of exceptionally able pupils?

○ Yes ○ No ○ Unsure

If you answered No or Unsure to Question B1, please go to Question B6.

B2 If you answered Yes to Question B1, is this policy

○ A stand-alone policy? ○ Part of another policy?

B3 If part of another policy, please indicate which one **shading the relevant circle in black**:

○ Special Educational Needs Policy
○ Learning Support Policy
○ Other, please specify _____

B4 Is there a definition of exceptionally able pupils included in your policy?

○ Yes ○ No

B5 If you answered Yes to Question B4, please provide the definition that is in your policy:

_____

_____

_____

_____

B6 If you do not have a school policy which provides a definition of exceptionally able pupils, please give your own brief definition here:

_____

_____

_____

B7 Does the school have a designated person to co-ordinate provision for exceptionally able pupils?

○ Yes ○ No

B8 If you answered Yes to Question B7, who fulfils that role? Select the option that applies by **shading the relevant circle(s) in black:**

○ Principal
○ Deputy principal
○ Class teacher
○ Learning support teacher
○ Resource teacher
○ Dual position, please give details: _____
○ Other, please specify: _____

_____

B9 Are you aware of teachers in the school with expressed interest in exceptionally able pupils (for example, involved in initiatives for them)?

○ Yes ○ No

B10 In your capacity as special needs co-ordinator, have you had professional development in the area of providing for exceptionally able pupils?

○ Yes ○ No

B11 If you answered Yes to Question B10, please select the option(s) that apply by **shading the relevant circle(s) in black** and give details:

○ Special Education Support Service (SESS) course _____
○ Grad Dip in Special Ed _____
○ Higher degree _____
○ Summer course _____
○ Online course (e.g. ICEP course) _____
○ Other, please specify _____

B12 On a scale of 1 to 5, where 1 indicates Very Well and 5 indicates Not Well At All, how well-prepared do you feel, as a professional, to meet the special educational needs of exceptionally able pupils? **Please select one option only and comment on your answer:**

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Comment:_____

_____

_____

_____

_____

SECTION C: PROVISION

C1 In your opinion, is there a need for specific provision for exceptionally able pupils in mainstream primary schools?

○ Yes ○ No ○ Unsure

C2 Please give reasons for your answer in Question C1:

_____

_____

_____

_____

C3 If your school provides additional supports for exceptionally able pupils, please indicate the **main** methods of provision from the following list. Select all options that apply by **shading the relevant circles in black**:

- ○ Acceleration/Skipping a grade
- ○ Withdrawal (individual or group)
- ○ Within-class ability grouping
- ○ Cross-class ability grouping (e.g. students from two or more grades working together on a particular topic, e.g. maths)
- ○ Work at a grade above in one or more subjects
- ○ Classwork is differentiated in some subjects
- ○ Classwork is differentiated in all subjects
- ○ Extra worksheets/handouts when finished tasks
- ○ Mentoring (student working with specialist in the field)
- ○ Enrichment/Extension (going beyond the standard curriculum to encourage greater breadth and depth in learning)
- ○ Curriculum compacting (moving faster to more difficult work)
- ○ Online courses
- ○ Individualised learning plan
- ○ Special class
- ○ Other, please specify _____

_____

_____

_____

C4 In your opinion, which of the following factors impede the provision of additional supports for exceptionally able pupils? Select all options that apply by **shading the relevant circles in black**:

- ○ Lack of time
- ○ Lack of funding
- ○ Curricular reasons
- ○ Teacher capacity
- ○ Conflicting school priorities
- ○ Identification and labelling
- ○ Other, please specify _____

_____

_____

_____

C5 Any additional comments you might have relating to provision for exceptionally able pupils would be most welcome.

_____

_____

_____

_____

SECTION D: IDENTIFICATION

D1 Are there pupils in your school who have been identified as exceptionally able (either by teachers or external personnel)?

○ Yes ○ No ○ Unsure

D2 If you answered Yes to Question D1, do you know how many? (If you could provide exact numbers that would be most helpful) _____

D3 There are differing opinions as to how exceptionally able pupils should be identified. The main ones are listed below. Please indicate the extent to which you agree with each of the following methods of identification by **shading in black one response per statement:**

Identification method:	**Strongly agree**	**Agree**	**Not sure**	**Disagree**	**Strongly disagree**
Ability/IQ tests	○	○	○	○	○
Psychological report	○	○	○	○	○
Standardised achievement tests, e.g. Micra-T, Sigma-T, Drumcondra Tests	○	○	○	○	○
Checklist or rating scale	○	○	○	○	○
Teacher observation/judgement	○	○	○	○	○
Teacher-made tests	○	○	○	○	○
Student portfolio	○	○	○	○	○
Parent nomination	○	○	○	○	○
Peer nomination	○	○	○	○	○
Self nomination	○	○	○	○	○

D4 Do you consider identification of exceptionally able pupils is best carried out

○ Within school by school staff
○ Outside of school
○ By a combination of both

D5 Who do you consider to be in the best position **within your school** to identify exceptionally able pupils?

○ Principal
○ Deputy principal
○ Class teacher
○ Learning support teacher
○ Resource teacher
○ Pupil
○ Other, please specify: _____

D6 To your knowledge, are there any concerns within your school that there may be pupils with EAL (English as Additional Language) who have not been identified as exceptionally able?

○ Yes ○ No

Please elaborate:_____

_____

_____

D7 Research has shown that the following characteristics often apply to exceptionally able pupils. Please indicate the extent to which you agree with each of the following statements by **shading one circle per statement:**

Exceptionally able pupils, in general:	**Strongly Agree**	**Agree**	**Not sure**	**Disagree**	**Strongly Disagree**
Have wide general knowledge	○	○	○	○	○
Show perfectionist tendencies	○	○	○	○	○
Are very articulate	○	○	○	○	○
Have obsessive interests	○	○	○	○	○
Master new concepts quickly	○	○	○	○	○
Are highly creative	○	○	○	○	○
Lack self-discipline	○	○	○	○	○
Have excellent memory skills	○	○	○	○	○
Work very quickly	○	○	○	○	○
Exhibit challenging behaviour	○	○	○	○	○
Are easily bored	○	○	○	○	○
Are excellent readers	○	○	○	○	○
Are socially immature	○	○	○	○	○
Have a sophisticated sense of humour	○	○	○	○	○
Are disorganised	○	○	○	○	○
Are diligent workers	○	○	○	○	○
Disrupt classes	○	○	○	○	○
Have excellent problem-solving abilities	○	○	○	○	○

D8 Reflecting on the issue of identifying exceptionally able pupils, any additional comments you would like to make that you think might be relevant to this study would be most welcome

_____

_____

_____

_____

SECTION E: ADDITIONAL INFORMATION

E1 Do you consider that exceptionally able pupils have special educational needs?

○ Yes ○ No ○ Unsure

E2 If you answered Yes to Question E1, what do you think their main learning needs are when compared to their peers? Select all options that apply by **shading the relevant circles in black**:

○ Faster pace
○ Greater breadth of information
○ Acceptance and recognition of exceptional ability
○ Complex, challenging and open-ended tasks
○ Greater depth of content
○ Study skills training
○ Independent, self-paced learning
○ Opportunities to use higher order thinking and problem-solving skills
○ Improved self-esteem
○ Opportunities to "think outside the box"
○ Need to work occasionally with students of similar ability level
○ Opportunities to analyse and synthesise information
○ Social skills training
○ Opportunities to display leadership skills
○ Effective learning strategies
○ Other, please specify _____

_____

_____

_____

E3 Do you consider that pupils with learning or other disabilities can also be exceptionally able?

○ Yes ○ No ○ Unsure

E4 Please give reasons for your answer to Question E3:

_____

_____

_____

_____

E5 Do you use the NCCA (2007) *Exceptionally Able Students: Draft Guidelines for Teachers*? Select the option that applies by **shading the relevant circle in black**:

○ I have never used the guidelines
○ I used the guidelines previously
○ I use the guidelines on a regular basis
○ Other: _____

_____

_____

E6 If you have used the guidelines, please indicate how useful you find them on a scale of 1 to 5, where 1 denotes Very Useful and 5 denotes Not Useful At All. **Please select one option only and comment on your answer:**

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Comment:_____

_____

_____

_____

E7 How would you rate your school's practice in addressing the needs of exceptionally able pupils? Please select **one option** only:

○ Very good ○ Good ○ Fair ○ Poor ○ Very poor

E8 Please give reasons for this rating: _____

_____

_____

_____

E9 Thank you very much for completing the questionnaire. Reflecting on the exceptionally able pupils in your school, any additional comments you might like to make that would be relevant to this study would be most welcome.

_____

_____

_____

_____

_____

_____

_____

_____

I am very grateful to you for completing the questionnaire.
Thank you again.

APPENDIX B: Cover Letter to Principal

Address

Date

Dear Principal

As part of my research for an EdD degree into meeting the special educational needs of exceptionally able pupils, I am sending a questionnaire to all primary schools in Cork city and county. Exceptionally able pupils are included under the category of "students with special educational needs" in the 1998 Education Act. I am interested in how primary schools are meeting those needs. It is hoped that this research will give schools in the Cork area an opportunity to voice their views on this group of students.

I would be most grateful if you would pass on the enclosed questionnaire and covering letter to the teacher who takes the lead role in co-ordinating special educational needs in your school. I refer to that teacher as the 'special educational needs co-ordinator'. I understand that you may have a team of teachers involved in organising special needs provision in the school, but I would ask you to choose the teacher who has the lead role (and I understand that this person may be yourself). The questionnaire may be completed on hard copy or online.

This study is strictly confidential. Each school has been given an ID number so that I will know which schools have returned the questionnaires. The information which links school names and ID numbers will be stored separately in a locked filing cabinet, and will be accessible only by me. While sample quotes may be used in reporting this research, nothing will be released which will, in any way, identify a particular school or teacher.

As a former primary teacher and as a current educational psychologist, I understand the demands on teachers' time at present, but I would urge you please (even beg you!) to do your best to get the questionnaire completed and returned to me. If you wish to discuss any aspect of the research I can be contacted at *email.address* or *phone number*.

I am most grateful for your co-operation in this matter.

Yours sincerely,

Signature

APPENDIX C: Main Cover Letter

Address

Dear Special Educational Needs Co-ordinator

I am currently studying for a Doctorate in Education (EdD) in St. Patrick's College, Drumcondra, Dublin. Prior to this, I worked as a primary teacher in Cork city for many years and, more recently, as an educational psychologist. As part of the research for my thesis, I am carrying out a survey of how primary schools in the Cork area are catering for exceptionally able pupils. These pupils are mentioned in the Education Act (1998) under the category of students with special educational needs.

I would be most grateful if you would assist me by completing the attached questionnaire. It will take approximately 15 - 20 minutes to complete. Please use the enclosed stamped-addressed envelope to return the questionnaire to me by 15th October. Alternatively, you can complete this questionnaire online at **exceptionallyable.wiki.com** (no www).

For the purpose of the research, each school has been given an identification (ID) number so that I can keep track of which schools have returned the questionnaire. The information which links school names and ID numbers will be stored separately in a locked filing cabinet, and will be accessible only by me. Your school ID number is **XXX.** This ID number will also be needed if you choose to complete the questionnaire online.

Every effort will be made to ensure that your identity and that of your school are protected, and the confidentiality of the information provided by you will be protected in line with data protection regulations. Data collected will be analysed for the EdD project and also for journal articles and conference presentations. However, the name of any participating school or teacher will not be revealed in those reports. By completing this questionnaire, I understand that you agree to the data being used as outlined here.

I intend to run follow-up interviews (either individual or focus groups) with teachers who express an interest in this area and are willing to meet me. The interviews will take place at a time and location that suit the teachers. If you would be interested in meeting me, there is space on the front of the questionnaire to fill in your name and contact details.

I would like to emphasise that your participation in this study is entirely voluntary (although I would like to stress how much I hope you will take part). There will be no risks to you or your school from involvement in this study. Rather, my hope is to give you the opportunity to voice your views on how we might best respond to the needs of exceptionally able pupils.

If you would like to discuss any issues relating to the questionnaire, you may contact me by telephone on *phone number* or email me at *email.address*

Your co-operation in this research is greatly appreciated and highly valued.

Yours sincerely

Signature

APPENDIX D: Litir do na Gaelscoileanna

Seoladh

An Comhordaitheoir Riachtanais Speisialta Oideachais na Scoile

A Chara

Táimse faoi láthair ag staidéar le haghaidh Dochtúireacht in Oideachas (Ed. D.) i gColáiste Phádraig, Droim Conrach, Baile Átha Cliath. Chaith mé tamall maith de bhlianta ag obair mar mhúinteoir bunscoile i gcathair Chorcaí agus le blianta beaga anuas mar shíceolaí oideachais. Tá suirbhé ar siúl agam, mar chuid den taighde do mo théis, ar conas atá bunscoileanna Chorcaí ag freastal ar dhaltaí sár-éirimiúla. Deintear iad a aicmiú in *Acht Oideachais* 1998 faoin gcatagúir "daltaí le riachtanaisí oideachasúla ar leith."

Bheinn faoi chomaoin mhór agatsa as do chúnamh leis an gceistneoir seo a chomhlíonadh, rud a thógfaidh thart ar 15 – 20 nóiméad. Fáilte romhat an cestneoir a sheoladh ar ais chugam sa chlúdach litreach roimh an 15ú Deireadh Fómhair, nó é a chomhlíonadh ar líne ag an seoladh idirlín seo: **exceptionallyable.wiki.com** (gan aon www).

Tugadh uimhir aitheantais ar leith do gach aon scoil le haghaidh an taighde seo, chun go bhféadfainn cuntas a choimeád ar na scoileanna go bhfuil an ceistneoir seolta ar ais acu. Coimeádfar an t-eolas a nascann ainm na scoile agus an uimhir aitheantais faoi ghlas i gcaibinéad ar leith agus is agamsa amháin a bheidh fáil orthu. Is í **XXX** uimhir aitheantais do scoil-se. Beidh an uimhir seo uait chomh maith, más fearr leat an ceistneoir a chomhlíonadh ar an idirlín.

Déanfar gach iarracht do aitheantas féin agus ceann do scoil-se a choinneáil slán agus cosnófar rúndacht an eolais de réir rialacha cosanta sonraí. Bainfear usáid as an eolas a bhaileofar i gcomhair na dochtúireachta agus le haghaidh altanna acadúla agus cainteanna comhdhála chomh maith. Ní luafar ainm oide nó scoile ar bith in aon tuairisc díobh sin. Ar líonadh an cheistneora seo duit, tuigim go dtoilíonn tú go n-úsáidfinn-se an t-eolas a thabharfaidh tú, faoi mar a mhínítear anseo.

Tá sé ar intinn agam agallaimh (le duine aonair nó le grúpaí fócais) a reachtáil le múinteoirí a léireoidh spéis san ábhar agus a bheidh sásta labhairt liom. Socrófar na hagallaimh úd le haghaidh trátha is áite a oirfidh do na hoidí. Más mian leat bualadh liom, tá spás ag tosach an cheistneora chun d'ainm agus do shonraí teagmhála a lua.

Is mian liom béim a leagadh air seo, gur go deonach ar fad a bheidh tú ag glacadh páirte sa staidéar seo, ach ba mhaith liom go mór dá bhféadfá é a dhéanamh. Tabharfaidh an suirbhé seo deis duit do thuairimí a chur in iúl faoin bhealach is fearr is féidir linn friotháil ar éilimh na ndaltaí sár-ábalta seo. Ní bheidh aon bhaol duitse ná do do scoil ó bheith páirteach ann.

Más mian leat pointe ar bith a bhaineann leis an gceistneoir a phlé liom iarraim ort teagmháil a dhéanamh liom ar *uimhir ghutháin* nó ag *seoladh.riamhphoist*

Is mór agam do chomhoibriú leis an taighde seo.

Le buíochas is le dea-mhéin,

Síniú

APPENDIX E: Focus Group Schedule

- The researcher began by welcoming the participants and thanking them for coming.
- She introduced herself and gave a brief overview of the study and its goals. She presented the main findings from the questionnaires and gave the participants a handout of these.
- The conventions of focus group participation were then outlined:
    - ✓ Confidentiality and anonymity;
    - ✓ Recording of session with participant' permission;
    - ✓ One person to speak at a time (because of recording and transcribing difficulties);
    - ✓ Importance of every person's experiences and views – researcher here to learn from participants.
- The participants were asked to complete a brief consent form.

As a warm-up exercise, participants were encouraged to briefly introduce themselves and their school, and asked to put their name card on the table in front of them so that everyone's name was known.

Opening question:
How did you feel about completing the questionnaire?

Introductory question:
What issues would you like us to discuss here today?

Transition questions:
What comes to mind when you hear the phrase *exceptionally able pupils*?
When referring to these students, what would your preferred term be?

Key questions:

1. Definition /conceptualisation of exceptional ability
    - In your opinion, what constitutes an exceptionally able pupil?
    - What do you think of exceptionally able pupils being categorised as "students with special educational needs"?
        - ✓ In your opinion, what are their special needs?

2. Identification
    - In your opinion, how necessary is it to identify these pupils?
        - ✓ Why do you think that?
        - ✓ How should they be identified?
        - ✓ Who should identify them?

- ✓ Does anyone feel that their school is good at identifying exceptionally able pupils?
- ✓ (If yes) Tell us about that
- ✓ (If No) What are the difficulties around identifying these pupils?

- Do you see a need for a school policy in this area?

3. Provision
   - Do you think your school has a role in supporting exceptionally able pupils?
   - What provision, if any, does your school make for these pupils?
     - ✓ What methods of support work well?
     - ✓ Why do you think these work well?
     - ✓ How does the school evaluate the effectiveness of that support?
     - ✓ What hinders provision for these pupils?
     - ✓ How can these difficulties be overcome?

Ending questions:
All-things-considered question: Of all the aspects we discussed, which do you think is most important?

Summary question, following short summary of the main points of the discussion: How well does that capture our discussion?

Final question, following very brief outline of purpose of study: Have we missed anything? Is there anything we should have discussed but didn't?

APPENDIX F: Consent Form

I have received information about the study in the title and I understand what is involved.

I give my consent to participate in a focus group which will be conducted by the researcher, *Researcher Name*. I also consent to having the session audio-recorded and I understand that my name or that of my school will not be used in any reporting/presentations arising from the research.

Signed ……

Date ……

APPENDIX G: Example of Focus Group 1 Transcript

The following is an extract from the transcript of Focus Group 1.

Three participants: P1F1, P2F1 and P3F1. The last participant had contacted the researcher to say that she would be a bit late but to continue without her until she came.

R = Researcher

R: I would like to find out what do teachers think of exceptionally able pupils?

P2F1: Well I think, from talking to my colleagues in the school, we were debating who would constitute well-able pupils, we came to the conclusion, the children who have no difficulties with what you're teaching them, who fly through it, who need to be challenged and who need to be kept busy, especially if you're teaching to the rest of the children in the class. So once they have a concept understood, you will have more activities to keep them busy, and who would in standardised tests reach STens of ten, nearly every year, I would think really.

P1F1: Well I was thinking of it in terms of when I was learning how to drive the car, do you know when you're changing gears in the car you come across the biting point, and to me the biting point is where your intelligence meets your subject, the subject that you're learning.

P2F1: I'd say they have no problem whatsoever with what you're teaching in the classroom and who would in particular show a shine in certain areas of maths or science or some other subject that they seem to have a great affinity to, who would really achieve high standards in those tests, especially the class tests that the teachers would be doing, you know monthly or weekly, they just seem to have no problem with whatever is taught to them really.

P1F1: And if you look at it in the opposite way of what we're told to do in Special Education, say that instructional level is 95%, that you need to know 95% and then be adding on 5% more, kind of, turn that over if you know what I mean, the subject area has to

be near to the appetite of the child. In a way that keeps people engaged as opposed to, because I think that if you feel yourself, we're only thinking here now about children coming into school, and you have no concept of yourself outside of the home, and you have your own abilities and your own ways of doing things, and then you come in to a system that's very rigid, and you find that you don't fit that system, and it may not be because that you have a learning disability, it may be actually because your interests are not, you know you could be sitting there for a whole week and going, 'what am I doing here?' kind of, so that you're just NOT engaged.

P2F1:You need to set aside a certain amount of time to challenge them or else if they were showing any problems in the class, which we have had now, with one child who comes to mind and we had to actually give him extra time outside of the classroom and the learning support teacher gave him extra time to do science things that weren't on the curriculum and they were doing extra experiments and extra work with him outside of the classroom to keep him busy because he was showing negative behaviour in class, he was misbehaving in other words, he was looking for attention, and when he was given the extra time outside of the classroom it really helped him, and when he came back into the class he was better able to behave really, because you have to think of the other children in the class as well.

R: Ok

P2F1: That was one point I got in the questionnaire, when I looked at our policy, which we've done out for our special education policy, we actually put in a little codicil because we hadn't made allowances for children with exceptional ability, because talking to the staff as a whole, they actually were of the opinion, 'well, they're fine', but are they fine is the thing?

P1F1: So if you want your child to reach his full potential, it must be ok to have a lot of potential, not just, "Look, stay inside this parameter", which school often does, it kind of says, "Stay inside that parameter, you're grand". And I often find the problem is people with exceptional ability lose a lot of talents. They lose, number one, the ability to study, they have never learned how to study, they don't know anything about study, until maybe they go to college and they might find a big difficulty. Learning how to structure and how to study is something you learn when you have to learn it. If you're not being challenged

you'll never learn how to face failure, another important thing. You know, a lot of STen tens never come to that, they never have to say, ‘oh, I only got four of those right, what am I going to do?’ Do you know what I mean? So there's a real learning in that, ‘what am I going to do about that?’, that's where you want the good learners to be at that point I think, where they're challenged.

P2F1: Should we get away from the STens of ten then, because the STens of ten in English and Maths are actually testing them in those special areas, but in relation to exceptionally well-able pupils, what are we talking about? Are they leaning towards one area and specific, like for example getting back to that boy I was talking about who had disruptive behaviour, he actually got 600 points in his Leaving, he is scientifically minded, he wants to go towards engineering, because I meet him from time to time, he was exceptionally well able but presenting negative behaviour in the class.

P1F1: Yea, not engaged. The same way you would be if you had dyslexia but were kept on the same book and thought, "what am I doing here anyway?"

P2F1: Yea, sometimes they're showing negative behaviour, they possibly are just, you know, passing the day and getting on fine, getting all their sums right and all their English, but are they being challenged enough? That's where the special needs comes in then, but how are we going to quantify that then? Because when you're talking about giving them more time if you have to, you really put all the others first before them, you put the children we're dealing with now, with learners who are coming out at the bottom of the standardised tests, which is what we're told, this is the criteria that we take people out for learning support, 15th %ile and lower, that's what we have in our school, we take out the 15th % ile and lower even though it's supposed to be 12th %ile or has it gone down to the 10th %? If they need extra time they're not given it because there's no time there from the general allocation.

P1F1: To be honest, we spent a lot of time tailoring programmes to suit kids, to suit their talents, to suit their learning styles. You'd nearly want to spend nearly as much time tailoring for them, you'd have to have ideas of how to tailor.

P2F2: And that goes down to the class teacher. I was talking to the 5th/ 6th class teacher and she does give the ones in maths, she gives them because actually with the Planet Maths - do ye have that? - there are alternative activities, for the early finishers 'tis called. The alternatives are for the ones who find it difficult, they're easier. If the early finishers have the work done she can give them out extra sheets, extra activities to keep them going and she corrects them then because they're finished, they have the work done in the books. But then you see when you're teaching a class, you're teaching to the middle all the time, to certain extent.

P1F1: Thinking now about one guy that I've come across lately and he's gone to Dublin to be assessed for CTYI thing, and he came out in Maths and in English, and I tell you the thing is how they gauged it, they gave him tests for somebody two years older. But you have to score in the 95th %ile, two years ahead of you. So let's say, talk about Planet Maths, and you're going through stuff and sometimes gifted learners won't even finish the Planet Maths. I noticed that with him, actually he started throwing away his copy onto the floor.

P2F1: So they're probably well able but not exceptionally well able. So there's a difference there between well able and exceptionally well able.

R: And they have different names - we call it exceptionally able, and what do you think of that as a term?

P2F1: Well at parent-teacher meetings, if children are getting 9 or 10, you'll say they are well able, but that is not exceptionally able. For me, they're just excellent really, excellent all round in all aspects of their learning in school.

P1F1: They need to be given the things they are going to be getting wrong as well.

P2F1: The problem I think will be, we wouldn't have the material, we'd have to go sourcing it ourselves.

P1F1: And I find that dealing with my little man I'm trying to find stuff that runs along alongside so maybe Egyptian number systems or Maya number systems ... But that's what you want, you don't want the exceptionally able child to become bored. It's like the

computer there, if you leave it there for a while it goes into hibernation and that happens to a lot of people, and that becomes a bad habit and they may not get their 600 points because the whole lesson has passed them by.

P2F1: I find if you had the time, if the class teacher had the time, she could have a little cohort that could go off …

P1F1: And call it differentiation.

P2F1: Which they are doing, but the fact is we should do it more.

P1F1: I was often thinking this now, since the computers came in or since we had to stop learning the history book off by heart, because it's absolutely not necessary any longer. So education is going in a different direction and then 'tis all about managing information, finding out which bits do you need out of this big *gabháil* of information in front of you, what are the pieces you need to put together and stuff like that, and an awful lot is coming off about that metacognition.

R: And how would that work?

P1F1: I think metacognition should be taught in school and I've often thought about it and in fact I'm compiling a folder as we speak ... where you can teach the skills of learning to the children, and you can teach them all the different orders of thinking, Bloom's Taxonomy, and you could organise it under some kind of a scheme like that. You could, using Bloom's Taxonomy, because any subject area can be as intricate or as simple as you wish to make it.

P1F2: It's like a spiral, you can do it at a higher level of complexity each year. Time is just so important in school, and the curriculum is so full because we are to spend more time now at literacy, more time with numeracy and if the minister for education had his way we'd have no religion. So the extra time needs to be given to both of those for the whole class, because you do need extra time but into that time you could have this differentiation more.

P1F1: And also it wasn't an option before, before technology, but with technology now, iPads and computers and all that, it is more of an option.

R: Do many teachers use IT now?

P2F1: We all have our inter-active white boards and that's one thing I suppose which has added to all the children in the class, technology, because you know, exceptionally well able students are being stimulated as well by it, and the interactive white boards, so that can be used as well to their benefit which will for all children, cos it's visual …

P1F1: To teach people how to learn, all children not just the weak end, including the people who find learning easier. It just means you have to put more out there.

R: Are you saying that there has to be something above their level?

P1F1: Absolutely.

P2F1: Which we don't do enough of.

P1F1: To engage and problem-solve and all that kind of stuff.

[Third teacher P3F1 came in]

R : … What are their needs? And what I'm gathering now is that exceptionally able pupils need to be challenged, they need to work up a level and they need to learn how to learn. Am I summing that up correctly now?

P3F1: I think it depends on the area that you're looking at. Sometimes when it comes to social awareness they wouldn't have the kudos, they have the academic but there can be a discrepancy sometimes.

P1F1: And there's dual and Aspergers and stuff like that.

P3F1: I think you see it more in junior infant classes, more so than in sixth class. Someone described it very well to me once, who said the child who is gifted, it's like the foreman on the building site, when the rest were all throwing sand around the place, they're thinking in a different way, but sometimes by the time that that child gets to sixth class the others are kind of catching up and it's not as obvious.

P2F1: I was speaking to the infant teacher on the way out and she said, "I have two inside there now, they don't bother much with play". Are they going to continue then is the thing? Whereas they might look now as if they were exceptionally well able, but as you say, as they go up along the line, maybe that exception might be just you know, that the others are catching up but, or if they are challenged from the beginning …

P1F1: Or if their's also rises .... dual exceptional. There's research which says people of gifted abilities, when asked what was the treat they'd like after finishing their work, and they said, "Whatever it is, it's not more work anyway". Do you know that thing, "You've just finished that, we'll give you more now, more of the same". It's easy for a teacher to be doing that kind of thing. But I think that looking at education, that whole thing of play, play is an ability, and the ability to play is an exceptional and wonderful thing, and people who don't have that ability to play, it's hard. And people who have an ability, you often find the spatial ability that kids with dyslexia and stuff like that, there isn't half enough of that stuff in school to show for them to be engaging in.

P2F1: With Aistear[23] now, that has really put an emphasis on play and structured play, and learning through play, and learning the rules of play.

P3F1: I think there should be official training for teachers in relation to Aistear. The way it is at the moment, it's up to teachers to do the training after school and I think that there should be some element of it, like everything else, it's relying a lot at the moment on the teachers' goodwill to attend the courses and to read the handbooks.

[23] Aistear is the curriculum framework for children from birth to six years in Ireland which was developed in 2009 by the NCCA in partnership with the early childhood sector. It describes the "types of learning (dispositions, values and attitudes, skills, knowledge, and understanding) that are important for children in their early years and offers ideas and suggestions as to how this learning might be nurtured" (NCCA website www.ncca.ie/en/early-childhood/aistear).

R: Is it to do with …

P3F1: Aistear is a programme in play schools. But it's just a programme, which is, I suppose, based on observations of children learning, from observations and they have to do so many during the week, then it's play and structured play, playing all the time but they're actually doing structured play. The junior infant teacher is supposed to know all about it so we got the handbook but it's up to her then to read through it, but it is quite good. The community is involved in it as well. There are certain structures of it now.

P1F1: There's Numecon with junior infants, I used to do this. I used to put all the Numicon stuff out on the table and say "Come on!" And you could see people, that's what I was talking about, matching your ability with what you do, you can see it very clearly if you don't give any instructions at all, and shortly you can see the people who are able to build and people who are looking for a 3 to fill in the hole here saying, "Send me over a 3". Do you know what I mean, that people are learning piles and piles of maths, but it's not structured and it's not with a whole crowd of people sitting down and the teacher holding up the thing and saying, "This is a 3, everybody look now", and some of them have fallen asleep.

P2F1: It's also self-discovery and problem-solving and I think at the minute we're at the numeracy for the self school improvement plan and we're at fact-finding with the teachers and pupils whatever. The one thing that came out was problem-solving obviously is always a problem because they don't know how to approach a problem. So more should be done on that really, especially for the exceptionally able because then they should shine.
R: And that ties in with what you're saying about learning how to learn.

P2F1: And discovery.

P3F1: But where they have the difficulty then is if you ask them to explain their thought process or how they, I think they're lacking that - language. You might have a very bright child who can do all the maths, say, but they find it difficult to describe it in layman's terms. I suppose as part of the curriculum they do, particularly in SSE and numeracy and to explore and define what they are doing.

R: And what about identifying these pupils, do we need to identify them and how?

P1F1: We haven't got as far as the who yet. What about, how would you feed the music people? We had a boy with dyslexia and he was so disengaged from school and everything like, but he loved ball, so that I used to give him my phone and say "we'll ring? for 5 min and we'll kick the ball for 5 min", and he's on the county team. It's kind of like, where are his needs.

P2F1: Give them opportunities then. If you find out the who, then the school should provide the opportunities for these children to do things by getting in probably outside people into the school. We have a music teacher coming, we do football, we do hurling, you try to get in as many different activities so they can shine at these then. Especially children with learning difficulties, it gives them another outlet, exceptional then in that area.

P1F1: Great boost for them then.

P3F1: I'm the devil's advocate here now. I think that's great and wonderful, but then you have the Department saying, "Why are all the outsiders coming in doing X, Y and Z. I think teachers' workload is phenomenal. We all recognise in our own way, without an official test, children who are exceptionally bright, but I think the huge class sizes at the moment, certainly in our school, with up to 36 in some classes, I think decreasing supports for special education in general, I think all that is militating against. We have fantastic teachers out there, so interested in the pupils. And even the guidelines for the exceptionally able, a book arrives, that's it. You're hoping then that people will have the time to look through it and see what it is. I think without proper training, it's like the Aistear, these things are landed on teachers' desks.

P1F1: At the same time when I started teaching there was no learning support teacher. I had 42 children inside in a prefab down in Kerry, one of them was blind, we had an outside toilet, we had nobody. He used to come to school just to be with his friends for the day and they used to bring him in and out to the bathroom. 42 of them all there together, and at the time people might have said, "We're really too busy now to deal with the needs of those people". I think our education system has come an awful long way and we have found the

time in the day to help the kids with the educational needs. And I'm sure, with a bit of flexibility in curriculum as regards projecty stuff would certainly allow more flexibility for teachers.

R: And is that freedom there?

P2F1: I think we're a long ways from helping these exceptionally well able pupils to the best of their benefit.

P1F1: Depending on what type of class, some classes will have huge needs and are only going at a snail's pace.

P2F1: I find that the teachers are mainly taken up with large classes, like yourself, sometimes with crowd control too. With interaction between children and everything, that time for these exceptionally well able children is hard to find, but that the teacher is teaching her class, to the middle of the road really, the average or the high average, not to the extent that she has the time to give to the exceptionally able children. But she should, you know, because they are a special group.

P1F1: But it has never been a priority. It should be highlighted and prioritised.

P3F1: It's easier to identify them- going back to the 'who' - you have your learning support, whereas the exceptionally able?

R: How do we identify those?

P2F1: By test results and teacher observation and general work.

P3F1: Do you use IQ as a marker? Where does the definition of giftedness stop and start?

P2F1: We, from our NEPS psychologist, we do the NNRIT and you'd be amazed there. We use it for the simple objective of finding out if they're able or if they're not working to their potential. And we did actually have it with two children in particular. They came out low in

their standardised tests and they came out low in their class tests, but very well in that, so he was just lazy …

P1F1: Or with a learning disability, unidentified dyslexia very often.

P2F1: Because he came out on top on the intelligence test.

P3F1: I think that (NNRIT) is useful as well if you have a child who is struggling and they don't do exceptionally well, maybe they're matching …

P2F1: Cos I had to do it for a child, dyslexia was queried and the NEPS psychologist told me to do it and I did it, he came out low in that. So really, you know, his reading matched, so he had general learning difficulties then.

P3F1: So I suppose the question is the upper end of the NRIT, could that be used? Now she told me do it only in 3rd class. I do another one as well which is a visual test, it's an older one. She wasn't that familiar with it, but we use it because it gives the children in that year a chance to do a visual mental test and an auditory one. It gives them a chance, it shows what kind of a learner they are. She did say you can easily spot them 'cos they come on with a standard score or quotient they come out with and you go to your booklet and it tells you high above, one of them is high average and above average, whatever phrase. So I would say they would be exceptionally able if they come out high in that NRIT test. It's actually testing their mental intelligence.

P2F1: It tests their overall understanding of language, their overall general knowledge and as well their way of looking at things.

P3F1: If you have a class and you give it, you know the ones you perceive as being nearly very good, they nearly always come out very good.

R: And what about providing for them?

P3F1: A lot of it is because there are no specific guidelines allocation for children who are gifted or dual exceptional. The learning support or the resource model, it's the class teacher differentiates as best they can.

P2F1: Stage one, they're looked after in the class …

P1F1: But where to make the time to take off the lower order questions for those with higher abilities. Keep the same subject matter but look at it in a different way.

P2F1: The literacy, obviously with comprehension, it's easy to do at your literal level but you're supposed to do all the higher strategies which we're now focussing on with our literacy, our school improvement plan and then, you're actually then meeting their needs to a certain extent because you're going up along, you're doing synthesising, summarising, you're doing all the higher order thinking skills. We actually are more aware of it now. It's easy to ask a question on something in front of you, that's simple, but go on to inferential questions, so you are actually challenging them that way and meeting their needs in that way aren't you? Whereas the ones who are at the lower end of the scale they can answer the literal questions.

P3F1: And in classrooms now there's much more a culture of pupils being able to ask the questions, not trying to catch the teacher out, but a genuine, "But why is this and how is that:"

P1F1: And now it's ok for the teacher now to say, "I haven't a clue", we don't have to be the ones that know everything which is great.

P2F1: That's how in a mixed class situation it's good. Like myself, sure I went to school with four classes in the one room and then we were learning all the time. But for the teacher it is easier to teach one class.

P1F1: But again people do ability groups within their own class. Can people do that within let's say 1st class, 2nd class, and 3rd class, even in a single, is that possible or not possible, to put a 2nd class group with a 3rd class group? What years go together – 1st and 2nd, 3rd and 4th, 5th and 6th. Say for maths, that the 1st class teacher and 2nd class teacher could

both do maths at the same time, that you could have people crossing into the different classrooms, that's a possibility, where you'd have people learning at their own ability.

P2F1: A lot of it too as well, I'm sure you do it as well, we do station teaching where they're grouped.

P1F1: Station teaching is fabulous for exceptionally able children.

APPENDIX H: Codebook for Quantitative Analysis on SPSS

Prior to inputting information from the closed questions into SPSS, a codebook was prepared. All closed questions were converted to the numerical format necessary for inputting to SPSS. Each of the variables was defined and labelled, and a number was assigned to each of the possible responses. This codebook documents the name of each variable, the abbreviated variable names that were used in SPSS, and the coding instructions for the responses. For ease of reading and coding, and due to the large size of the data set, the responses to the open questions in the questionnaire were typed up into a separate Word document.

Section A: School Information

Question	Variable	SPSS variable name	Coding instructions
A1	Identification number	A1 ID	Number assigned to each questionnaire
A2	Pupil numbers:		
	Number of girls/girls school	A2 1 Girlsonlygirls	Number of pupils
	Number of boys/boys school	A2 2 Boysonlyboys	
	Number of girls/mixed school	A2 3 MixedGirls	
	Number of boys/mixed school	A2 4 MixedBoys	
	Total number of pupils [sum of responses to Question A2]	A2 TotalPupils	
A3	Number of teachers	A3 StaffNos	1.5 = 1 or 2 teachers 3.5 = 3 or 4 teachers 6.5 = 5 to 8 teachers 10.5 = 9 to 12 teachers 16.5 = 13 to 20 teachers 22.5 = > 20 teachers
A4	Role of principal	A4 Prin	1 = administrative principal 2 = teaching principal
A5	Language of instruction	A5 Lang	1 = English 2 = Irish

A6	Number of pupils eligible for EAL provision	A6 EAL	Number of pupils
A7	School status	A7 1 Disadvan	1 = Yes 0 = No
		A7 2 DEIS	1 = Urban DEIS 1 2 = Urban DEIS 2 3 = Rural DEIS
A8	Location of school	A8 Location	1 = City/suburbs 2 = Large town 3 = Town 4 = Village/rural
A9	Role of respondent:		
	Principal	A9 1 Prin	1 = Yes 0 = No
	Deputy principal	A9 2 DP	
	SEN coordinator	A9 3 SENCoord	
	Learning support/resource teacher	A9 4 LS/RS	
	Class teacher	A9 5 CT	
	Other	A9 6 O	

Section B: Policy

Question	**Variable**	**SPSS variable name**	**Coding instructions**
B1	Written policy	B1 WPolicy	1 = Yes 0.5 = Unsure 0 = No
B2	Type of policy	B2 Policy2	1 = Stand-alone 2 = Part of another
B3	Part of another policy	B3 Policy3	1 = SEN policy 2 = LS policy 3 = Other
B4	Definition in policy	B4 DefPolicy	1 = Yes

			0 = No
B7	Designated coordinator	B7 Coord	1 = Yes 0 = No
B8	Role of coordinator		
	Principal	B8 1 Prin	1 = Yes 0 = No
	Deputy principal	B8 2 DP	
	Class teacher	B8 3 CT	
	LS teacher	B8 4 LS	
	Resource teacher	B8 5 RT	
	Dual position	B8 6 Dual	
	Other	B8 7 O	
B9	Interested teacher	B9 Interest	1 = Yes 0 = No
B10	Respondent CPD	B10 CPD	1 = Yes 0 = No
B11	Type of CPD:		
	SESS course	B11 1 SESS	1 = Yes 0 = No
	Grad Dip in Special Ed	B11 2 GDip	
	Higher degree	B11 3 HDeg	
	Summer course	B11 4 Summer	
	Online course	B11 5 Online	
	Other	B11 6 O	
B12	Level of preparedness	B12 Prepared	Enter the number shaded from 1 (very well) to 5 (not well at all)

Section C: Provision

Question	Variable	SPSS variable name	Coding instructions
C1	Need for specific provision	C1 Provision	1 = Yes 0.5 = Unsure 0 = No
C3	Main methods of provision:		
	Acceleration	C3 1 Accel	1 = Yes 0 = No
	Withdrawal	C3 2 Withdraw	
	Within-class ability grouping	C3 3 InClass	
	Cross-class ability grouping	C3 4 CrossCl	
	Work at grade above	C3 5 GradeUp	
	Some work differentiated	C3 6 SomeDiff	
	All work differentiated	C3 7 AllDiff	
	Extra handouts/worksheets	C3 8 Handout	
	Mentoring	C3 9 Mentor	
	Enrichment/extension	C3 10 Enrich	
	Curriculum compacting	C3 11 Compact	
	Online courses	C3 12 Online	
	Individual learning plan	C3 13 ILP	
	Special class	C3 14 SpCl	
	Other	C3 15 O	
C4	Barriers to provision:		
	Lack of time	C4 1 Time	1 = Yes 0 = No
	Lack of funding	C4 2 Fund	
	Curricular reasons	C4 3 Curr	
	Teacher capacity	C4 4 Teacher	
	Conflicting priorities	C4 5 Prior	

	Identification/labelling	C4 6 Ident
	Other	C4 7 O

Section D: Identification

Question	Variable	SPSS variable name	Coding instructions
D1	Pupils identified as exceptionally able	D1 EAIdent	1 = Yes 0.5 = Unsure 0 = No
D2	Number of identified pupils	D2 Number	Number of pupils
D3	Method of identification:		
	Ability/IQ test	D3 1 IQ	1 = Strongly agree 2 = Agree 3 = Unsure 4 = Disagree 5 = Strongly disagree
	Psychological report	D3 2 Psych	
	Standardised achievement test	D3 3 StdTest	
	Checklist/rating scale	D3 4 Checklist	
	Teacher observation	D3 5 TObs	
	Teacher-made tests	D3 6 TTests	
	Student portfolio	D3 7 Portfolio	
	Parent nomination	D3 8 Parent	
	Peer nomination	D3 9 Peer	
	Self nomination	D3 10 Self	
D4	Identification best carried out	D4 IdBest	1 = By school staff 2 = Outside of school 3 = Combination

D5	Within-school person in best position to identify:		
	Principal	D5 1 Prin	1 = Yes 0 = No
	Deputy principal	D5 2 DP	
	Class teacher	D5 3 CT	
	LS teacher	D5 4 LS	
	Resource teacher	D5 5 RT	
	Pupil	D5 6Pupil	
	Other	D5 7 O	
D6	Concerns re non-identification of EAL pupils	D6 Concerns	1 = Yes 0 = No
D7	Characteristics:		
	Wide general knowledge	D7 1 Gen	1 = Strongly agree 2 = Agree
	Perfectionist tendency	D7 2 Perfect	3 = Unsure 4 = Disagree
	Very articulate	D7 3 Artic	5 = Strongly disagree
	Obsessive interests	D7 4 Obsess	
	Master new concepts quickly	D7 5 NewCon	
	Highly creative	D7 6 Creat	
	Lack self-discipline	D7 7 LackDis	
	Excellent memory skills	D7 8 Mem	
	Work very quickly	D7 9 WorkQuick	
	Challenging behaviour	D7 10 Chall	
	Easily bored	D7 11 Bored	
	Excellent reader	D7 12 ExRead	
	Socially immature	D7 13 SocialImm	
	Sophisticated humour	D7 14 Humour	
	Disorganised	D7 15 Disorg	

	Diligent worker	D7 16 Diligent
	Disrupt classes	D7 17 Disrupt
	Excellent problem-solvers	D7 18 ProbSolve

Section E: Additional Information

Question	Variable	SPSS variable name	Coding instructions
E1	Special educational needs	E1 SEN	1 = Yes 0.5 = Unsure 0 = No
E2	Main learning needs: Faster pace	E2 1 Pace	1 = Yes 0 = No
	Greater breadth information	E2 2 Breadth	
	Acceptance/recognition	E2 3 Accept	
	Challenging/open-ended tasks	E2 4 OpenEnded	
	Greater depth of content	E2 5 Depth	
	Study skills training	E2 6 StudySk	
	Independent/self-paced work	E2 7 SelfPace	
	Opportunity for problem-solving/higher-order thinking	E2 8 ProbSolve	
	Improved self-esteem	E2 9 SelfEsteem	
	Opportunity ‘think outside box’	E2 10 ThinkBox	
	Work with pupils of similar ability	E2 11 WorkSts	
	Opportunity to analyse/ synthesise information	E2 12 Analyse	
	Social skills training	E2 13 SocialSkills	
	Opportunity show leadership	E3 14 Leader	

	Effective learning strategies Other	E2 15 Strats E2 16 O	
E3	Exceptional ability + disability	E3 LDs	1 = Yes 0.5 = Unsure 0 = No
E5	Use of NCCA (2007) Guidelines	E5 Guidelines	1 = Never 2 = Previously 3 = Regularly 4 = Other
E6	Usefulness of Guidelines	E6 Useful	Enter the number shaded from 1 (very useful) to 5 (not useful at all)
E7	Rating of school practice	E7 Rating	1 = Very good 2 = Good 3 = Fair 4 = Poor 5 = Very poor

APPENDIX I: Identification Methods

Table I 1. Mean ratings for various identification methods

Method of Identification	*n*	Mean Rating (1 = strongly agree, 5 = strongly disagree)	Standard Deviation
Ability / IQ Tests	209	1.56	0.63
Teacher Observation / Judgement	209	1.73	0.72
Psychological Report	209	1.87	0.84
Standardised Achievement Test	209	1.94	0.85
Student Portfolio	208	2.33	0.87
Checklist / Rating Scale	205	2.38	0.74
Teacher-made Tests	206	2.56	1.00
Parent Nomination	208	3.11	0.89
Self-nomination	208	3.28	0.91
Peer Nomination	207	3.42	0.83

In Question D3 of the questionnaire, teachers were asked to indicate on a five-point scale from Strongly Agree (1) to Strongly Disagree (5) their level of agreement with a list of identification methods. Table I 1 shows the mean ratings for each identification method in descending order of magnitude as well as the standard deviations. Figure I1 shows the same information in graph form.

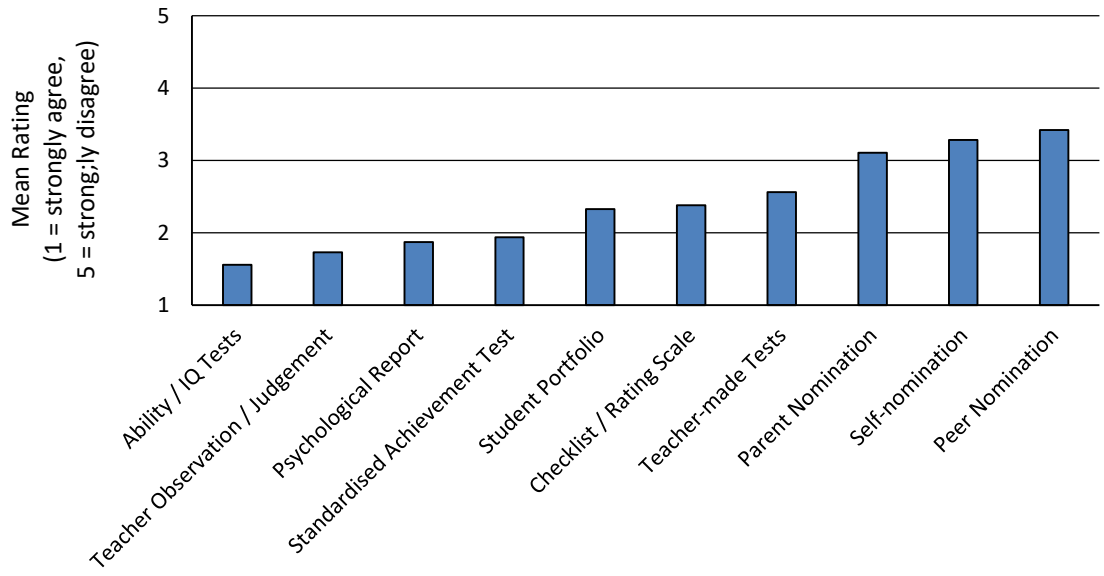

Figure I 1. Teachers' level of agreement with various identification methods

APPENDIX J: Characteristics of Exceptionally Able Pupils

Table J 1. Mean ratings for different characteristics of exceptionally able pupils

Characteristic	*n*	Mean Rating (1 = Strongly Agree, 5 = Strongly Disagree)	Standard Deviation
Master new concepts quickly	203	1.44	0.62
Excellent memory	201	1.74	0.67
Problem-solvers	202	1.80	0.81
Excellent readers	202	1.92	0.97
Wide general knowledge	202	1.96	0.95
Very articulate	201	2.23	1.04
Very quick workers	200	2.31	1.02
Easily bored	202	2.33	1.02
Highly creative	201	2.55	0.93
Perfectionist tendencies	202	2.69	1.03
Sophisticated sense of humour	201	2.71	0.96
Diligent workers	201	2.72	0.94
Obsessive interests	201	2.82	0.99
Challenging behaviour	201	3.32	0.98
Socially immature	200	3.35	0.90
Disorganised	202	3.36	0.84
Lack self-discipline	202	3.46	0.89
Disruptive	200	3.60	0.84

Teachers were asked to indicate on a five-point scale from Strongly Agree (1) to Strongly Disagree (5) their level of agreement with a series of statements depicting characteristics which often apply to exceptionally able pupils. Figure J1 shows the same information in graph form.

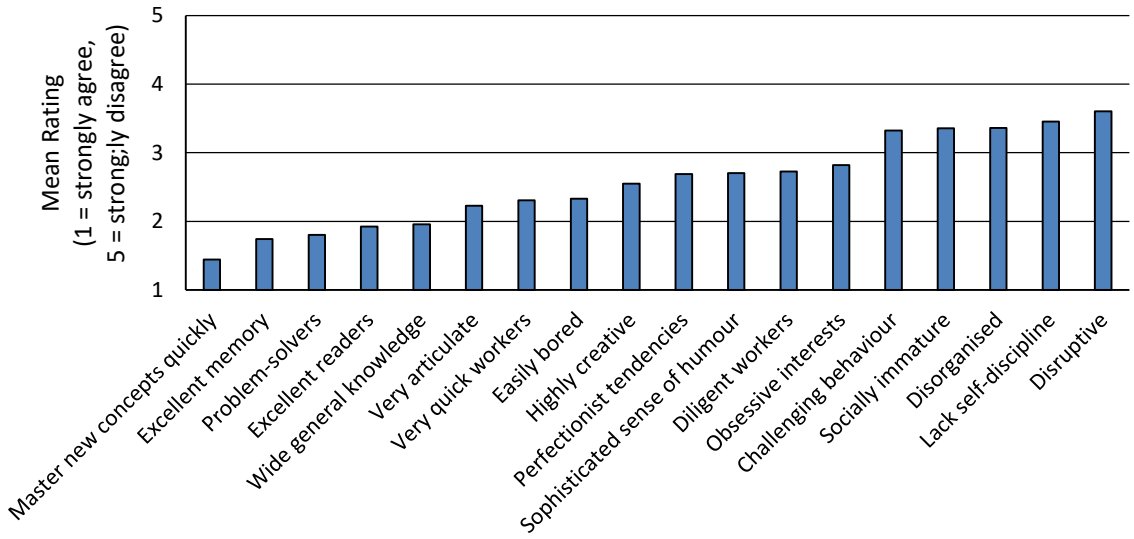

Figure J1. Teachers' level of agreement with various pupil characteristics

APPENDIX K: Additional Discussion on Provision

Within-class Provision

Some teachers spoke of different teaching techniques and different ways of grouping the pupils so that they are working at an appropriate level of challenge:

> There are a lot of strategies that you can use in the class trying to … get them all involved in the subject. Like the KWL chart, what we know, what we want to know, what we'd like to know, and that's where then they should shine, the gifted children. (P1F1)
> I think metacognition should be taught in school ... where you can teach the skills of learning to the children … you could organise it under some kind of a scheme … using Bloom's Taxonomy, because any subject area can be as intricate or as simple as you wish to make it. (P3F1)
> Obviously with comprehension, it's easy to do at your literal level but you're supposed to do all the higher strategies which we're now focusing on with our literacy … you're synthesising, summarising, you're doing all the higher order thinking skills … go on to inferential questions, so you are actually challenging them that way and meeting their needs in that way, aren't you? (P2F4)

A principal gave an example of what s/he perceived as "a lovely way of differentiating" that s/he observed in a 4th class maths lesson:

> You must do 1 - 5, you could do 5 -7 and then have a go at 7+. The children were well able, they had a focus, they were going to get to number 10, but it was quite acceptable for the less able children if they got 1 – 5. So again, it's putting the responsibility back on the child, and it was also a great motivator: 'I got up to 7 today, wouldn't it be great if I could get up to number 8'. I thought that was a lovely way of differentiating for children. (P2F2)

Another participant gave an example from a reading lesson where "you ask one, 'What colour dress was she wearing?' and you ask another, 'Why did she do that?' and you look at the smart guy and say, 'What would the possible outcomes be to this?' (P2F7). The teacher then explained that "you're asking for understanding, you're asking for analysis, but you're asking something a bit harder, and you're asking for extended language; you just expect more, 'How can I get this fellow in a knot?'" (P2F7).

The advent of computers and other technology "has made a big difference" (P1F6) and now offers "great opportunities for differentiation both for those less and those more able" (R045). The teachers who use IT in the classrooms were most enthusiastic about its use in various ways. One teacher uses technology for children to work on individually:

> Right across the spectrum, we use computers for differentiation in a big way. And mine, now I give them Power Points to write; some of them write six slides and others will write 40, you know, so that there are possibilities. (P3F7)

Another uses it for mixed groups, as can be seen in this example:

> Using IT more like adult research, "Here are 20 questions, go find the answers". And then you match up, you put them in groups, there'd often be six or seven, in the computer room, and you have smart, not so smart, and maybe those who are really struggling; and then as they're in a group they can all work together. (P2F7)

"Inter-active white boards" (P1F1) and "overhead projector and things like that" (P1F6) are certainly a great asset to teachers, but it is the children's use of technology that has made the biggest difference, as with "laptops and with the computers at the back of the room, it does allow you to get a child to use maybe a kind of, an open-ended kind of a programme so they're not restricted by just the knowledge within … there's huge possibilities there" (P1F6).
Teachers in the groups were very interested when co-participants described commercial programmes that they use and find very beneficial for their pupils, particularly Accelerated Reading and EDMODO.

A smaller number of participants described extra sheets and more challenging work that they use for their early finishers. For example, one participant reported that they have "boxes at the back of the room … challenge packs, so it's not just more worksheets, we want to extend them laterally" (P3F3). However, that last participant admitted that "more and more worksheets even at a higher level turn them off, so we haven't found a solution" (P3F3).

A number of other programmes, initiatives and strategies were listed by participants that could be used with all pupils, but that were especially suited to those of high ability:

- Project work
- Involvement in, e.g. student council, health promoting schools committee, Green Schools committee
- Clubs such as chess club
- Scratch programming

A couple of teachers gave examples of how they would challenge gifted pupils by getting them to 'mentor' their peers, and noted that they are "actually a fantastic resource to the teacher, you could use them as a resource" (P6F4):

> If someone is pretty handy at maths, I'd kind of say, "I want you to mentor any of the kids who are finding, say, fractions difficult, go way off now and teach them and we'll give them a test". So those kids now that would be gifted or whatever, they'd have to demonstrate how well they understand the concept, by imparting it to the other kids, and they're involved as well, they're part of the classroom too … and they're getting some bit of priority in the classroom, … also they are reinforcing what they've been taught by the teacher, by having to teach it on to someone else … so everyone is giving something to the class and included … And rather than having the label [gifted] as a kind of a disadvantage, they'll be passing on the knowledge, so everyone is doing their little bit for each other (P6F5).
> We would often have some of those children who would be finished first, and if you want help put up your hand, and those little guys would go round to help and it's great for the others that are helping too, and they like it and the others love the attention of another child helping them … they're not going to get bored if they're finished before everybody else, you know, they're actually helping, they're doing something productive. (P2F6)

Maths and Literacy Support

Specific provision for literacy was the most commented upon subject in the teachers' responses. A number of participants noted that they "all tend to know how to cater for literacy in a much more satisfactory way" (P1F4) but that it is more difficult with maths. One participant explained this:

> I think it's much easier to do it with literacy than numeracy because I think with literacy the children are writing, they can write to whatever creative level they're able to write at, so if they're very bright and even if they're going to write a much more extended story, a more elaborate story. Whereas in maths the curriculum is the curriculum, and if a child is very, very good at maths it's very hard to push yourself beyond that … there's nowhere to go. (P3F3)

This respondent gave examples of two children to illustrate the difference:

> We have a child at the moment in senior infants who came into school reading … to hold her at the same level as the rest of the class would be a sin, so you have to move her on but it's easy because of the graded reading schemes. (P3F3)
> I remember teaching a child some years ago [who] was superb at maths and we actually started doing the GCSE maths programme with him in 6th class … but that wouldn't now be acceptable because the difficulty was when he went into secondary school they had nothing for him. (P3F3)

Teachers gave examples of how they group pupils for literacy activities. They invest in what they call "instructional readers" (P1F2), group the pupils in a grade according to ability, using standardised test results and/or teacher observation, each group will have a different level of reader, a team of teachers go into the classroom and each takes a group at a station. They move from station to station. Teachers spoke about doing blocks of perhaps 10 weeks. However, teachers were aware that "you can only do that if you have the personnel" (P1F2), and that "it is time consuming" and "you have to have the variety of books" (P1F1), but that "it's worth it" (P1F1).

Lack of resources was the main reason for not running programmes such as Literacy Lift Off according to teachers who did not have those programmes. One teacher commented that "you need a huge amount of money to get these up and running; you spend thousands at the initial stages to get enough books and that, and train staff as well" (P2F6) and another participant in the group agreed that "you want an awful lot of material, at a similar level but a different scheme … you're talking about having six to eight copies of every book at every level" (P1F6). Teachers in two groups spoke about DEIS schools having an advantage over non-disadvantaged schools with regard to funding:

> The DEIS schools, they get all that paid for, you see, Lift Off and all that. (P1F1)
> I think those not in DEIS are disadvantaged as regards resources. (P2F1)
> The DEIS schools got large grants plus they got training for teachers which we can't afford. (P2F6)
> The DEIS schools, they get all that paid for, you see, Lift Off and all that. (P1F1)

Two teachers put forward the idea that perhaps cross-class grouping could be used, but it was clear that they were speculating, and not necessarily using this method:

> Perhaps group work based on ability on a cross class, cross curricular basis could be done in learning support, i.e. 3 children, 3 different classes but of similar ability. (R124)
> People do ability groups within their own class. Can people do that, is that possible or not possible … say for maths, that the 1st class teacher and 2nd class teacher could both do maths at the same time, that you could have people crossing into the different classrooms, that's a possibility, where you'd have people learning at their own ability. (P3F1)

A number of schools use class novels, especially in the senior classes, and as one teacher explained, "the good thing is, once you get up past 3rd class, we all go on to novels and then you only need much fewer novels" (P3F1). Another reported that "the whole class would be working on a particular novel and there would be three or four novels through the year, novels right down to 2nd class … even in 1st class, we introduced in the last term just

one novel" (P2F6). This teacher then noted that in the junior classes they "have CAPER - children and parents enjoying reading … we do that in junior and senior infants with them, and 1st class, and then we have various different types of readers for that" (P2F6). Another teacher whose school also uses CAPER pointed out that the parents are very important, "as you know you have to have them on board and to explain to them the whole situation, there's no reader done at this time because they take home their book and they use it" (P1F1). Many teachers believe that it is crucial to have a wide range of books, and one participant explained how they went about increasing their stock of books:

> We asked the children what they wanted us to buy, so they gave us names of authors, because very often we wouldn't know … we asked the avid readers in all the classes to give us ideas. (P1F6)

A debate on class readers and their usefulness and otherwise took place in three groups as part of the discussion on literacy supports. Teachers had ambivalent attitudes to these, with one participant asking, "Why should everyone have the same reading book?" (P3F5). One teacher who was not in favour of class readers noted that many of the pupils "could pick it up probably two years before and read it" (P1F6). The following short extract from one of the focus group interviews gives an idea of teachers' views:

> P2F1: We are actually thinking of abandoning readers, they cost a lot, the graded readers.
> P3F1: But the main thing about the little small reader though, for any struggling child to have it as a foundation.
> P1F1: And they practise it at night time and at least then they can read it next day.
> P3F1: [Before] when people used to get the reader in September and they'd have to read it for the whole year and the very good readers would have it read fine by the end of the day.

With all the other literacy supports now available to schools, the class readers, which "were the huge focus of attention at one stage … now are considered just another element of it" (P1F6). It was heartening to hear one teacher describe the progress s/he has seen in the standard of children's reading:

> I think that is one of the greatest things that I have seen over my career, that reading has really taken off. You know we have decent libraries, we are churning out books. Whereas I remember going into 6th classes when I was working in three schools and I remember saying in the middle of 6th class, 'Who is your favourite author? What's the best book you've ever read?' and I was getting silences. I used to think, 'My God, what are we doing?' whereas that would not happen now. Now they'll tell you they've read the lot, which is marvellous. (P2F5)

Acceleration

One focus group participant had seen a television programme on gifted children and her comment that "they were talking of genius, 0.2% in America" (P1F1) started a short discussion on acceleration or grade skipping. The differing views of the teachers in the group can be seen from the following excerpt:

> P1F1: And then they skip so many classes and then they go on and they can go to university when they're … I wouldn't agree with that either from a social point of view.
> P2F1: In Ireland now, children can't skip grades, can they? They can't jump from 1st into 3rd?
> P1F1: We had a Polish boy, he was quite good and we pushed him on, maybe two classes.
> P2F1: So he was two years younger than the others in his class?
> P1F1: He was, yes.
> P3F1: But that whole notion of allowing him to do work with children of a different age and do better or be challenged more, the multiple classes come in there.

A participant in another group also expressed unease about the social implications of acceleration, commenting that though a student may be "way above the others", s/he may not be "socially able to advance class-wise" (P2F6). This participant noted that they are reluctant to accelerate pupils unless they really have to, and that they "prefer to put them on an accelerated programme in their own class" (P2F6). Despite these reservations, the school does accelerate children occasionally, but are not sure if it is the right thing to do or not. The participant gave an example of a junior infant who was "just off the scale completely … he could add and subtract and everything" and he was so far beyond the class that they put him into senior infants. Even that was not the right level for the child and he was on an accelerated programme. However, "his ability was only in maths … it didn't transfer to English at all; he found it quite difficult to write; he wasn't able to read or write, and he found those things very difficult, so he was behind the class in English because they were senior infants and they could read and he couldn't, but he was way above the class in maths" (P2F6). This vignette exemplifies the difficulties that teachers feel accompany the acceleration of pupils to a higher grade. They are more au fait with the strategy of withdrawal, as this occurs in most schools for pupils with learning and other difficulties, and this strategy is looked at next.

Withdrawal

Contrasting views about withdrawing gifted pupils for more challenging work were put forward, as the examples in Table K1 show.

Table K1. Views on withdrawal

View	Sample quotes
In favour	They are catered for by LS teacher once a week, 45 minute session. (R159) The 6th class are very able, so the [learning support] teacher asked if he could take them out and do problem-solving with them. So that's an area where they were quite able and they were taken out because of that, to give them a bit of a burst. (P1F2)
Against	If a child or group was withdrawn it should not be obvious to the other children that they were 'exceptionally able' as that could cause its own problems. (R139) I have found that withdrawal of EA pupils can result in dividing the class and an often 'superior' attitude developing among EA pupils. (R193) Some teachers felt that the kids who have it all anyway, to a point, were now getting more, and that's a big part of the problem. (P3F3)

The small number of schools that use the withdrawal system see the benefits for the pupils. One school has "2 slots per week which the LS teacher uses in mid – senior classes for challenging activities" as they "believe that the LS teacher should be seen by all as a person who supports a wide variety of learning" (R119). Another teacher told of how s/he "worked through a 2nd class Maths Challenge Book as well as problem solving" with a group of 1st class pupils who "loved the class and the more challenging work". However, the teacher noted that a "challenge would be that some teachers may not want children withdrawn due to timetabling issues" (R093). Dissent arose in two other schools, one from the child in question whose teacher "considered withdrawal, but the particular pupil in mind would not entertain being treated differently" (R201), and the other from parents, as a principal explained:

> We included this in our learning support for a six week period (as a trial) with pupils receiving a Sten of 10 in maths and English. Unfortunately, while it worked for the six individuals the response (negative) from the rest of the parental body caused so many problems …. I now use material within my classes and adapt accordingly. (R123)

Out-of-School Provision

The question of providing out-of-school support for exceptionally able pupils was not addressed in either the questionnaire or the focus group schedule. However, in view of the large number of references (from over 40 individuals) made by teachers to the CTYI, a brief look at teachers' views on this is included here.

Many teachers see it as their job to inform parents and leave it up to them then as they feel that "it is up to the parents to follow through" (R130). Teachers were also aware of the cost to parents. Some were sceptical about the whole business, but others, particularly those who had experience of pupils attending CTYI, were very positive. Table K2 shows some typical views.

Table K2 Teachers' views on CTYI

Views	**Sample quotes**
Parents informed	Have recommended to parents of 2 pupils about going to UCC for extra classes but didn't pursue. (R091) Parents are referred to CTYI. (R031) Parents are contacted and given guidelines (instructions) on how to commence suitable tuition with Centre for Learning in Cork. (R010)
Cost to parents	Parents may not be financially able to pay for courses or in a position to travel to UCC on Saturdays to attend. (R123) It's expensive I know for parents. (P2F2) It will be a cost on parents to take a child to UCC. (R037)
Negative	The pupils often just want to be normal and do as their peers are doing. Pushy parents sometimes overload pupils with afterschool activities – e.g. course for gifted kids on SATURDAY in Cork – takes whole day to travel etc. (R151) Could be an issue with parents of very bright children trying to force a label onto their child – see CTY model as an example. (R076)
Positive	We heard about the Centre for Talented Youth Ireland and actually we send them off to that then, anyone that consistently got a 10 in their Sigmas and Micras. 'Tis fantastic really, it gives them a great outlook; and they do, like, project work and things inside with them, and then they come back and, you know, sometimes they present it to the class and it gives them a great bit of a boost. (P3F7) [Referring to a boy from Russia who was attending CTYI] He was very interested in computers … he was actually writing code as well as part of his assignments; and computers was really his area of expertise, you know … and maths was really his strong suit as well. (P1F7)

A few teachers were sceptical of the service provided by CTYI ("it's a business, so they have to have enough bums on seats" P4F5), but many, particularly those who had experience of children going there, were very appreciative of the courses that are provided for pupils, as this interview excerpt suggests:

> P3F7: I think they work better there as they generally do things that maybe they wouldn't do in a primary school.
> P2F7: They broaden the horizons, but they don't cover what I'd be doing next year in the primary school either … one of my little kids, she's doing forensic science.
> P3F7: Or they do archaeology, things that are outside what we'd have.
> P1F7: It's a social thing too. I spoke to a mother actually who had a gifted child and she said … for the four years he was in secondary he caused mayhem; his teachers were kicking him out of class he was so disruptive, he was failing everything. And then he'd go to the DCU camp for the summer and he'd come out with the top marks and he was so focused and driven in that setting. I suppose maybe, was it that he was among like people?

Another teacher gave an account of a scheme which linked UCC and the school for one year, although s/he was unsure if it were connected to CTYI or not:

> At one stage about 7 years ago funding from Bridging the Gap allowed a programme take place for a year where lecturers from UCC came every Friday and conducted courses in different areas such as law, psychology, science etc. for students (exceptionally able) within the school. Funding has since ceased. It proved very stimulating and enjoyable for students. Name of programme was 'Expanding Horizons'. (R196)

Others made recommendations that indicated their interest in having easier access to CTYI or a similar programme, suggesting, for example, that it would be useful "if CTYI held workshops in centralised towns to promote what they have to offer" (R031) or "if there was a bridging programme to cater for children in school who would otherwise have to be sent to the centre for gifted children in UCC" (R073).