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DOES EDUCATION IN IRELAND MEET THE NEEDS OF GIFTED STUDENTS?

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This paper focuses on education in Ireland and questions if it currently meets the needs of gifted students. Gifted students from Mensa Ireland were questioned on their experiences in primary and post-primary schooling, and the overall response was that students were not being adequately challenged in school, nor were there adequate resources or additional activities available to address their needs. Moderate and gradual acceleration were the most popular types of intervention suggested by the students, in the form of university classes and fast-paced classes with older advanced students.

This paper looks at education in the Republic of Ireland from the perspective of gifted students. The term gifted refers to high-ability students but has many definitions. Cigman (2006, p.6) defines it as 'exceptional high achievement in at least one significant area of learning'. Mayer (2005) defines giftedness as potential whilst Renzulli (1978) defines it as actual achievement. Gagné (1985) differentiates between giftedness and talent, equating giftedness with natural ability and talent with performance. Gardner (1999) identified nine types of intelligence which could characterize the gifted: musical, logical mathematical, visual-spatial, bodily and kinesthetic, interpersonal, intrapersonal, verbal-linguistic, naturalistic and existential. The National Association for Gifted Children (2015) in the United States outlined 50 different state definitions for the term. While there is no broad agreement on the definition of giftedness, the term generally refers to students whose IQ scores are in the top 10, 5, 3 or 2 percent of score distributions. These are the respective cut-off points used by the National Association for Gifted Children, the Centre for Academic Talent (CAT) and the Centre for Talented Youth Ireland (CTYI), both at Dublin City University (DCU), and by Irish Mensa, which is affiliated to the high IQ international organisation.

As is the case generally for students with special needs, a key issue is early identification to enable access to an education that is appropriate to their needs (Hansen, 1992). According to Whybra (2000), gifted students need: to

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have educational challenges; to feel valued by the education system; to find a peer group; and to be accepted as an individual. In Ireland, however, no research or study has been carried out that has consulted gifted students about their experiences in school. This paper addresses the gap, beginning with a description of current provision. It also considers the performance of students in Ireland at the top levels in international assessments (PISA) and competitions (Mathematical Olympiads) to see how these students, which include the gifted, perform relative to their counterparts in other participating countries.

PROVISION FOR STUDENTS WITH SPECIAL NEEDS

Current policy in Ireland is that of inclusive education, whereby students with special needs are taught in mainstream schools. At primary level there are national schools (85%), Gaelscoileanna, where Irish is the working language (9%), independent fee-paying schools (2%) and special schools (4%) (DES, 2017a). Typically, 97.8% of students are in mainstream primary schools; a further 0.8% who have special educational needs are also in mainstream primary schools, and 1.4% are in special schools. Special schools include schools for students with physical disabilities, hearing impairments, visual impairments, emotional and behavioural problems, general learning disabilities (GLDs) that are mild, moderate or profound, autism spectrum disorders, specific learning disabilities and multiple disabilities. There are about 140 special schools providing lower student-teacher ratios and reduced timetables. Additionally, in some mainstream schools at both primary and second level, students with special educational needs are enrolled in one or more special classes, of which there are 741 in total (NCSE, 2017).

Provision also exists to address the needs of students from disadvantaged backgrounds. Schools in the DEIS (Delivering Equality of Opportunity in Schools) programme can access additional literacy and numeracy support, home school liaison services, free school meals, book rental schemes, and planning and professional development supports (see DES, 2017b). The gifted and talented, however, are accommodated without additional resources. Gifted students learn in mainstream schools and any provision that is dedicated to their needs lies mainly outside of the school system. The mainstream curriculum is, it seems, expected to meet the needs of special needs students, mainstream students and gifted students.

In fact, little attention was given to provision for gifted students in Ireland until the Report of the Special Education Review Committee (Department of

Education, 1993). This report advised that gifted students have a right to an education that offers sufficient stimulation and that special arrangements should be provided for this cohort, including acceleration practices (working with older students for so me subjects), compacting (moving through a course quickly), and target grouping (where the teacher audits what the student knows and moves on to new material). A 1994 Council of Europe recommendation also highlighted the special educational needs of young people with exceptional potential (Council of Europe, 1994). The Education Act 1998 (Government of Ireland, 1998) obliged schools in Ireland to offer all students the opportunity to reach their potential, with Part 1, Section 2 defining special education needs as 'the educational needs of students who have a disability and the educational needs of exceptionally-able students'. However, the subsequent Education for Persons with Special Needs Act (EPSEN) (Government of Ireland, 2004), which was intended to address provision, did not include the exceptionally-able in its definition of special education needs. The National Council for Special Education (NCSE), which was set up at the end of 2003 to improve delivery of education services to people with special educational needs, does not include gifted and talented students within its remit either.

In 2007 the National Council for Curriculum and Assessment (NCCA) drafted guidelines to raise awareness of the social, emotional and academic needs of high-ability students though there was no statutory obligation on schools to provide differentiated lessons. The guidelines considered several issues including identification of gifted students, development of whole-school strategies, and implementation of classroom strategies such as mixed-ability grouping, acceleration practices, compacting and target grouping as described above. Specific guidance was issued in relation to the classification of exceptional intelligence: able IQ range (120-129), exceptionally-able IQ range (130-169), and profoundly-exceptionally-able IQ range (170+). A range of measures was suggested to identify exceptional students: observation, parent/guardian referral, peer referral, self-referral, referral by other individuals or organisations (sports clubs, drama clubs, music clubs, after school clubs, enrichment classes), identification by psychologists and teacher referral. A system for documenting the progress of gifted students was also suggested. This involved updating information on paper or electronically and making it available to staff and parents, identifying the particular exceptional abilities, reviewing records twice a year at staff meetings, and replacing existing targets as appropriate.

The first formal source of gifted education in Ireland was provided by the DCU CTYI programme which was set up in 1992 with support from a private donation in collaboration with John Hopkins University in the United States. Participants attend courses outside of school hours (at weekends and during summer holidays) that are self-funded, though some financial assistance is available to students from disadvantaged backgrounds. Initially, the programme received state funding, but this was withdrawn in 2008 due to cutbacks imposed during the economic recession. As part of the CTYI talent search, schools are asked to provide details of students who have scored at or above the 95th percentile on a standardised test. Over 60,000 6 to 17-year-olds have participated to date, with 5,000 enrolling in 2016. This represents between one-fifth and one-sixth of gifted students in Ireland as the total number is estimated to be between 25,000 and 30,000 (C. O'Reilly, CTYI Director, personal communication, March 15, 2017).

A second formal source of education for gifted students has also been provided by DCU since 2009. This is known as Early University Entrance and allows high-ability Transition Year students (who have completed the junior cycle or first three years of second-level education) to attend the university for one day a week for one or two semesters. Courses are subject to change but students currently enrolled can choose two modules in one of four degree courses: B.Sc. (Financial Mathematics), B.Eng. (Common Entry Engineering), B.Sc. (Psychology), and B.A. (Economics, Politics and Law). About 500 students have participated to date and there are 130 students enrolled in 2017 (C. O'Reilly, CTYI Director, personal communication, April 8, 2017). Accreditation is not given on completion of the course though participants may in the future, as third-level students, be eligible for exemptions in the modules completed.

A third source of provision for exceptional students is available on an occasional basis from Irish Mensa, which offers workshops in science-related topics. These are delivered by a network of volunteers in various educational institutions around the country.

PERFORMANCE IN INTERNATIONAL CONTEXTS

In this section, the focus is on the performance of students in Ireland at higher levels of achievement in international assessments and competitions, relative to their peers in other countries. Specifically, results from the Programme for International Student Assessment (PISA) are examined, along with results of the Mathematical Olympiads. PISA is an international assessment in which 15-year-olds from a range of countries, including members of the Organisation for Economic Cooperation and Development (OECD), are assessed in reading literacy, mathematics and science at three-yearly cycles. Students in Ireland have been involved in PISA since its inception in 2000. The results for PISA 2015 show that Ireland had a higher mean score than the average across OECD countries in science, reading literacy, and mathematics (Table 1). Ireland also had lower percentages of students, compared to the OECD average, at the lower levels of proficiency (below level 2) in all three subjects – a trend that is evident since 2000 (Shiel, Kelleher, McKeown & Denner, 2016). However, fewer students in Ireland than on average across OECD countries achieved at the highest proficiency levels – Levels 5 and 6 – on science and mathematics (Table 2). Again, this is also broadly consistent with earlier rounds of PISA, and suggests that, relative to their counterparts in other countries, higher-achieving students in Ireland are not performing at their potential.

Table 1
Mean Scores in PISA 2015 – Ireland and OECD Average

	Reading Literacy Mean	Mathematics Mean	Science Mean
Ireland	**520.8**	**503.7**	**502.6**
OECD Avg.	492.5	490.2	493.2

Source: Shiel et al. (2016), Tables 4.1, 5.1, 5.5
Significantly higher mean scores than the corresponding OECD average scores are in **bold**

Table 2
Percentages of Students Achieving the Highest Proficiency Levels PISA 2015 – Ireland and OECD Average

	Reading Literacy		Mathematics		Science	
	Level 5	Level 6	Level 5	Level 6	Level 5	Level 6
Ireland	9.4	1.3	8.3	1.5	6.3	0.8
OECD Avg.	7.2	1.1	8.4	2.3	6.7	1.1

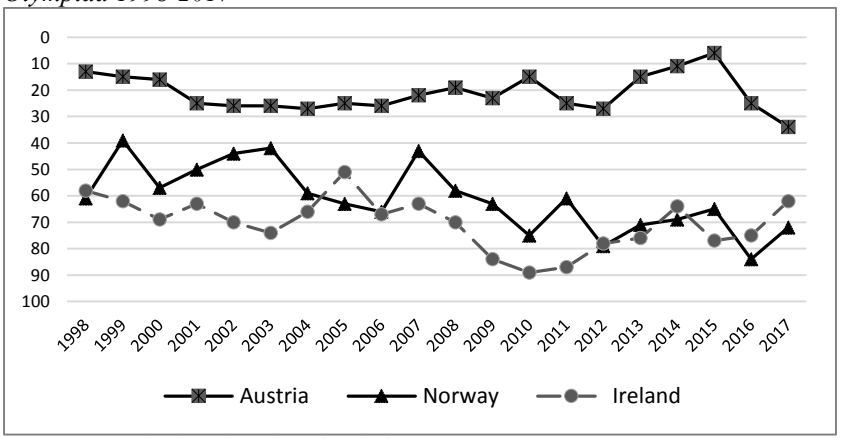
Source: Shiel et al. (2016), Tables 4.3, 5.3 and 5.7

The Irish Mathematical Olympiad is a national mathematics contest for second-level students who receive training at enrichment centres around the country prior to competing. The highest performers then compete at the International Mathematical Olympiad. In 2015 almost 14,000 students from 290 second-level schools in Ireland participated in Round 1 (Krussler, 2016).

Ireland's placements in the International Mathematical Olympiad are shown in Figure 1 from 1998 to 2017 along with those for Norway and Austria. Ireland had a mean score at about the same level as these two countries in Mathematics in PISA 2015 (Ireland = 503.7, Norway = 501.7 and Austria = 496.7) but has been placed below Austria in all years, and below Norway in 14 out of 20 years since 1998 in the International Mathematical Olympiad. In 2017, Ireland placed 62nd out of 109 countries. Its highest position was 51st place in 2005.

Figure 1

Placements of Ireland, Norway and Austria in the International Mathematics Olympiad 1998-2017



Source: International Mathematics Olympiad (IMO) (2017)

LITERATURE REVIEW

In the following review of literature, interventions designed to support gifted students are discussed. A key term is acceleration. This refers to the practice of using competence rather than age as the criterion for advanced academic experiences (Benbow, 1998). Acceleration programmes of various kinds are used worldwide to advance learning for gifted students (the main types are identified in Table 3). Australia, for example, uses five main types of acceleration (Bailey et al., 2004): subject acceleration; grade skipping; early entry; telescoping, where students complete two years of school in one year; and radical acceleration, where students skip a number of grades.

The literature on acceleration indicates positive academic achievement for students (Swiatek, 1993). Kulik and Kulik (1991) found that accelerated classes and extracurricular enrichment activities (not included in Table 3) were positively associated with achievement, though Daurio (1979) argues that enrichment activities not covered in the curriculum may only defer boredom. Roger (1991) and Kulik and Kulik (1991) found that acceleration worked better than enrichment activities as high-ability students with access to an accelerated curriculum outperformed peers by almost a year. A study by Gross and Van Liet (2005) supports the academic and social benefits of acceleration as students interact with their intellectual peers. The study advocates the use of acceleration along with support programmes such as counselling, study skills and opportunities to interact with other students, all of which may help to mitigate against unfavourable outcomes. Benbow, Lubinski and Suchy (1996) reported that accelerated students received more national awards and attained higher professional degrees than non-accelerated students in the studies they reviewed. Janos et al. (1988) reported that students who entered college a year early had higher grade point averages (GPAs) than non-accelerated students. Radically-accelerated students who entered college four years earlier than the average also had higher GPAs than other gifted peers who were not accelerated.

Student perceptions of acceleration are also reported to be positive. Gross (2003) found that profoundly gifted students, who were accelerated by a number of grades, reported positive friendships with older students whilst similarly-gifted students, who were accelerated by one grade, reported lower self-esteem. King's (2012) study showed that students at an American high school reported positive social and emotional outcomes arising from subject-area acceleration.

Table 3
Types of Acceleration/Support Available to Gifted Students

Type of Acceleration/Support	Description
Early entrance to kindergarten	Admission to school at age younger than typical
Early entrance to first grade	Admission to school at age younger than typical
Grade skipping	Student moved ahead by one or more academic years during the school year or at the end of term
Continuous progress	Course material is made available to student on completion of given tasks
Self-paced instruction	Student decides on speed of advancement
Subject-matter instruction	Student takes classes at higher grade level
Combined classes	Grade levels are combined which allows academic and social communication between students of different chronological ages
Curriculum compacting	Repetition is removed from classes allowing for the inclusion of more advanced material
Telescoping curriculum	Course is compressed and student moves onto the next stage at a faster rate
Mentorship	Student links with a mentor to allow focus on a particular specialisation
Extracurricular programmes	Student participates in after school/weekend activities
Concurrent enrolment/dual enrolment	Student takes part in a course at a higher level than chronological peers
Advanced placement	Student has access to college-level course material at school
Correspondence courses	College/high school level courses offered remotely
Early entrance to junior high/high school/college	Student enters a higher level at least one year earlier than is customary
Acceleration in college	Student completes course at least one year earlier than expected
Early graduation	Graduation from high school or college takes place in a reduced time; three-and-a-half years or less

Adapted from Southern and Jones (1991) and Southern and Cross (2004)

Gross (1992), who has conducted numerous studies in this area, argues that acceleration has not shown any negative effects on students' development. This view is supported by Pollins (1983) and by Hoogeveen, Van Hell and Verhoeven (2011) who report that accelerated students appear more socially competent than their non-accelerated peers. In Ireland, Ledwith (2013) found that the Early University Entrance programme in DCU was associated with positive change in students who developed independent learning and coping skills and improved both their writing and studying skills. Some students

reported a drop in self-concept (a collection of beliefs about oneself) during the course but this reversed to pre-course levels by the end of the programme. Overall, students integrated well into the programme though some found it difficult to retain links with school friends.

There is some concern in the literature about the impact of homogenous settings on gifted students and the so-called 'Big Fish Little Pond Effect', whereby gifted students undergo a drop in self-esteem when placed in specialised settings with other gifted students (Craven & Marsh, 1997; Marsh, Chessor, Craven & Roche, 1995; Marsh & Craven, 1994, 1997). Research findings are mixed, however, with Gross (1997) attributing any change in self-esteem to student motivation rather than to academic setting. The literature on radical acceleration points to positive outcomes (Gross, 2006; Thacker 2014; Needham 2012; Rinn 2007). Jin and Moon (2006) found that social and emotional problems can be alleviated for gifted students once their educational needs are met, as academic underachievement can lead to both social isolation and depression. Research consistently shows evidence of the positive impact of gifted education and the need to provide instruction for students based on ability (Feldhusen & Moon, 1992; Kim, 2016; Batterjee, 2014; Steenbergen-Hu & Moon, 2011). The impact of pull-out programmes in schools (where gifted students learn with older students) also shows a positive effect on the cognitive and socioemotional development of students (Gubbels, Seyers & Verhoeven, 2014). Overall, studies point to the positive outcomes of acceleration and there is little evidence that acceleration is counter-productive. The National Association for Gifted Children reports that studies show that 71% of high-ability students were satisfied with their acceleration experience whilst the majority of those who were dissatisfied would have preferred more acceleration (NAGC, no date).

Teachers who have not studied modules on gifted education may not be sufficiently aware of the needs of gifted students (Kronborg & Moltzen 1999; Davison 1996; Clark 2002). In their study of educators' attitudes and behaviours regarding gifted education in the Republic of Ireland, Reidl Cross, Cross, O'Reilly and Mammadov (2014) analysed over eight hundred responses from staff in primary and post-primary schools. They found support for gifted education generally, but opposition to grade acceleration – almost 20% of respondents did not agree that special services should be provided for gifted students. Lack of resources (funding and staff), insufficient knowledge of how to teach gifted students, and a perceived need to focus on weaker students,

were all cited as reasons not to provide extra services for gifted students. The majority of schools, almost 60%, did not believe that access to specialists for gifted students was available to them. Primary school teachers, compared to post-primary teachers, were more likely to agree that the curriculum needed to be modified for gifted students. More-experienced teachers, compared to less-experienced ones, believed that gifted students would feel bored in a regular classroom. Principals (80%) and teachers (57%) confirmed that their school had a system to identify gifted students, though most post-primary schools (62%) had no acceleration policy, nor had 47% of primary schools. Most teachers (85%) reported that they differentiated instruction for their gifted students, with primary teachers and more-experienced teachers more often reporting that they modified curriculum compared to post-primary teachers and less-experienced teachers. Teachers also commented that they needed support to identify gifted students and accommodate their educational needs, and that smaller classes were needed to provide differentiated lessons. Ledwith (2013) reported a mixed reaction from post-primary teachers to the DCU Early University Entrance Programme, noting that only 2 of the 17 schools involved in her research had representatives at the graduation ceremony.

Whilst the literature indicates positive outcomes, acceleration is rarely practised in schools in Ireland and it is sometimes suggested that students' social and emotional needs will be neglected when the focus is on academic needs. This is in spite of the evidence that social, emotional and cognitive needs are all inter-related (Coleman, 1995). In Australia, it was found that accelerated students thrived academically, socially and emotionally from the accelerated experience, notwithstanding resistance from educators and administrators (Vialle, Achton, Carlon & Rankin, 2001). The overview of provision in Ireland presented here suggests that the needs of gifted students are not being met in schools but there is a lack of research evidence to support this assertion. The study described in the next section set out to address this gap by consulting gifted students about their interests and their experiences of primary and post-primary education.

METHODOLOGY

In order to establish whether gifted students are satisfied with their current educational experience, the researcher contacted young Mensans aged 4 to 20 years in Ireland, on her own volition. Mensa is an organisation for people

whose IQ is in the top 2% of the population.[1] Its aims are to: foster human intelligence for the benefit of humanity; encourage research on the nature, characteristics and uses of intelligence; and promote stimulating, intellectual and social opportunities for its members. In order to qualify for Mensa, students undertake two separate supervised industry-standard tests: the Cattell Culture Fair IIIA, which is a non-verbal test (diagrams and images); and the Cattell IIIB test which includes verbal reasoning. A score of at least 132 on the Cattell Culture Fair IIIA test is needed to be in the top 2%, or 148 in the Cattell IIIB test, in order to qualify for Mensa membership. The maximum score is 183 in the Cattell Culture Fair III A test and 161 on the Cattell III B test. Tests can be taken once candidates are 10.5 years of age, and younger candidates can submit an Educational Psychologist's Report that indicates that the child's IQ is in the top two percent. Parents typically present their children for the test, to confirm their own views that their child is advanced, and they see Mensa membership as a positive way of supporting their child.

The researcher, in her role as Schools Liaison Officer (Republic of Ireland) for Irish Mensa, was aware of anecdotal evidence that parents had concerns about the lack of facilities and activities for gifted students attending primary and secondary schools. To explore these concerns, a set of 10 multiple-choice questions was devised. The questions sought information on the current situation in primary and post-primary schools in Ireland in terms of extra resources/activities for gifted students, additional activities students would like to have in school, subjects young Mensans were interested in and areas they would choose as a career. Information was also sought on personal details such as age, gender and location. A notice printed in the Impress Mensa magazine in September 2013 was then sent to all members of Irish Mensa, advising parents/young members that an anonymous survey was available on SurveyMonkey to complete. This was followed by an email requesting completion of the survey. Given the continuing low response, a second email followed. Finally, the questionnaire was sent by post by the Membership Secretary. The questionnaire was voluntary, and the response rate reached almost 39% of young Mensans in the Republic of Ireland by June 2014. This sample was deemed suitable for analysis.

[1] See https://www.mensa.org/about-us.

RESULTS

Table 4 shows the location of young Mensans in Ireland, their gender, age group, and whether they are commenting on experience in primary school, post-primary school or both. Most came from Munster and Leinster (36% and 46% respectively). A number of Mensa testing centres (University of Limerick, Institute of Technology, Tralee, County Kerry, University College Cork, and St Conleth's College, Dublin) are located in these provinces, which are home to three of the largest cities in Ireland – Dublin, Cork and Limerick – and where the population is more concentrated. The majority of respondents were male (78%) and in the 16 to 19 years age group (54%). Most (62%) reported on experiences in both primary and post-primary schools.

Table 4
Location, Gender, Age and School Type of Rrespondents

Category	%	Category	%
Gender		Age (years)	
Male	78	8-11	9
Female	22	12-15	29
		16-19	54
Province		19+	9
Munster	36		
Leinster	46	Schooling Level (Discussed)	
Connaught	9	Primary only	12
Ulster	9	Post-primary only	26
		Both	62

N = 36

The most popular school subjects/subject areas were mathematics and science (combined) (33%), followed by mathematics only (28%), English only (16%) and science only (14%) (Table 5). Mathematics and science (combined) were favoured by 38% of male students and 21% of female students; mathematics only was favoured by 31% of males and 21% of females; and science only was preferred by 15% of males and 11% of females. Regarding the subject-related area young Mensans would like to work in after school, 24% opted for science (24% of males and 25% of females). In all, 23% opted for other subjects, including business, architecture, engineering and psychology. Mathematics and science were favoured by 29% of males (but no females) while 19% opted for English (50% of females and 9% of males). Nine

percent opted for mathematics on its own (8% of males and 13% of females). Very few males (4%) and no females opted for music.

Table 5
Favourite Subjects/Subject Areas in School for Future Careers, by Gender

	Male (%)	Female (%)	All students (%)
Favourite subject in school			
English	8	36	16
Mathematics	31	21	28
Science	15	11	14
Mathematics and science	38	21	33
Music	0	11	3
History	4	0	3
Other	4	0	3
Subject area student would most like to work in after school			
English	9	50	19
Mathematics	8	13	9
Science	24	25	24
Mathematics and science	29	0	22
Other	26	13	23
Music	4	0	3

N (males) = 28; N (females) = 8; Total = 36

Table 6
Challenges and Activities in School, by Gender

	Male (%)	Female (%)	All students(%)
Challenged in school			
Always in every subject	0	0	0
Always in some subjects	25	25	25
Occasionally in every subject	14	13	14
Occasionally in some subjects	49	63	52
Never	12	0	9
Extra activities organised by school			
Extra work to complete in class	10	0	8
Extra homework given	4	0	3
Taken out for fast-paced work with other students	15	0	12
Work with outside agencies	0	0	0
None of these	71	100	77

N (males) = 28; N (females) = 8; Total =36; No students selected multiple activities

Table 6 looks at the extent to which students thought they were challenged in school subjects. The majority (52%) reported being challenged occasionally

challenged (these students were commenting on both primary and post-primary schooling). The most frequently-cited acceleration practice was to take students out of class to work at a faster pace (15% of males but 12% overall). Seventy-seven percent of all students reported that they had not experienced any extra activities for gifted students. None of the students had worked with outside agencies to receive expert external guidance (mentorship).

Students' preferred acceleration activity was to attend university classes during the week (32%), followed by opportunities to mix with older advanced students (26%) (Table 7). Meetings with outside agencies related to subject/s and more demanding work in class (all age groups) were also popular (21%).

Table 7
Challenges Gifted Students Would Like at School, by Gender and Age Group

Challenges students would like to have in school	Male (%)	Female (%)	All Students (%)
More demanding work in class			
8-11 years	4	0	3
12-15 years	11	0	9
16-19 years	4	18	6
19+ years	4	0	3
More demanding homework			
8-11 years	0	0	0
12-15 years	1	0	0
16-19 years	0	0	0
19+ years	0	0	0
Opportunity to mix with older advanced students			
8-11 years	0	0	0
12-15 years	10	0	8
16-19 years	12	47	18
19+ years	0	0	0
Opportunity to attend university classes during week			
8-11 years	4	0	3
12-15 years	7	0	6
16-19 years	25	0	20
19+ years	4	0	3
Opportunities to work with outside agencies related to your interest			
8-11 years	4	0	3
12-15 years	4	0	3
16-19 years	7	35	12
19+ years	4	0	3

N (males) = 28; N (females) = 8; Total =36

Table 8 outlines the extracurricular activities students were involved in. The table shows that 24% of young Mensans had attended CTYI classes, with 16% in the 16-19 year age bracket, whilst nearly half (45%) had not attended any of the activities for gifted students. One (3%) had attended Mathematical Modelling Classes at the University of Limerick (see 'Other' category). None of the respondents mentioned attending computer programming classes.

Table 8
Involved in Extracurricular Activities, by Gender and Age Group

Activity	Male (%)	Female (%)	All Students (%)
CTYI			
12-15 yrs	11	0	8
16-19 yrs	17	24	16
Mensa			
12-15 yrs	8	12	9
16-19 yrs	4	0	3
19+	0	0	0
Two or more			
8-11 yrs	8	0	6
12-15 yrs	4	12	6
16-19 yrs	5	0	4
None			
8-11 yrs	4	0	3
12-15 yrs	11	0	8
16-19 yrs	12	52	25
19+	12	0	9
Other			
8-11 yrs	0	0	0
19+	4	0	3

N (males) = 28; N (females) = 8; Total =36

CONCLUSION

Most of the gifted students who took part in this survey do not believe that their educational needs are being met in primary and post-primary schools in Ireland. The material offered in class and the pace of instruction may not be sufficiently challenging. The penchant for mixed-ability classes is the norm, with some streaming of core subjects (Irish, English and mathematics) in post-primary schools. This is to ensure that students do not feel excluded or different, if they cannot keep up with the group. Commendable as this policy is, it does not meet the needs of the gifted.

Whilst performance at the lower levels of PISA tests is above the OECD average, suggesting that supports such as those available to DEIS

(disadvantaged) schools are helping lower-achieving students, there is continued concern about the performance of higher-achieving students. Special educational needs (SEN) hours are prioritised for those with a learning difficulty/special need whilst gifted students are not given resource hours unless they also have a learning disability (and are considered to be 'twice exceptional') (Gifted Ireland, no date). Some opportunities for gifted children exist, however, to excel in amateur sports and musical productions, within and/or outside of school. Also, under the new junior cycle programme, students have to achieve at least 90% in order to receive the top grade of Distinction, rather than a minimum of 85% for an A grade in the old system, and this slightly higher target may help to further motivate gifted students.

The Project Maths Implementation Support Group states that the needs of high achievers were not being met by the old Leaving Certificate higher level mathematics syllabus (DES, 2010). The new programme uses an inductive rather than a deductive method of teaching (i.e., the teacher presents students with examples showing how a particular concept is used, rather than explaining a concept and then giving examples). This style should help gifted students who tend to be skilled in inductive thinking and able to identify patterns within small details to form bigger ideas.[2] Other changes to the points available for Third-level entry from the Leaving Certificate higher-level mathematics examination results do not favour gifted students. The granting of an additional 25 bonus points to all students who obtain at least a H6 in higher level mathematics – a minimum of 40% – means that those who gain 100% are awarded the same number of bonus points as those receiving 40%. If the extra points were introduced on a sliding scale this would benefit higher achievers.

There continues to be a need to provide more stimulating classes for students at the upper end of the IQ spectrum, especially those in the top 2%, as indicated in the survey results above. If gifted students are not challenged, or are in undemanding classes, they may not develop the necessary skills to learn from oral instruction, as they have not had to concentrate, and may fail to realise their potential (Gross, 1994). All gifted students need personal challenges, and their work ethic needs to be promoted. School inspection reports and school self-evaluations tend to mention, but not emphasise, gifted students and again the focus is on those with learning difficulties and/or special needs. The School Information Form, which is given to all schools to complete before inspections, has 17 questions about provision for special needs but only

[2] See http://www.byrdseed.com/inductive-intro/

one relating to gifted students (DES, 2017c). A more equitable allocation of resources is needed for students across the ability spectrum.

Currently the dual enrolment (Early University Entrance) course is in place at DCU and is available to all Transition Year (TY) students in Ireland whose test scores are at the 95th percentile or above. Evidence points to the advantages for students who complete dual enrolment programmes (Cassidy, Keating & Young, 2010; Bailey, Hughes & Karp, 2002) in the United States. This is a relatively new initiative in Ireland, dating from 2009, and whilst it meets the needs of gifted TY students, it cannot be undertaken by students at higher or lower grade levels; nor is it available outside Dublin. An extension of the programme to include the University of Limerick and University College, Cork would benefit an increased number of students. Ledwith's (2013) study indicates both social and academic gains for participants though some schools were unconvinced of the value of this type of intervention.

The young Mensans indicated in their questionnaires that they would like to have visits from outside agencies for mentorship purposes. This would be a welcome development though it may prove challenging for schools in more rural areas due to there being relatively fewer local businesses. Currently, schools in the School Completion Programme (part of the DEIS strategy) in post-primary schools, may take part in the Student Mentoring programme, delivered by business in the community, as part of the Schools Business Partnership programme (http://www.bitc.ie/). The mentoring programme focuses on students at risk of dropping out of school early. Students meet with a mentor from a local business/organisation each month and the mentor provides advice, support and guidance on career options as well as on other issues of concern to students.

Students also indicated interest in being taken out of their regular class for fast-paced lessons, a strategy that would suit both rural and urban schools. Acceleration typically involves a more rapid delivery of instruction, and Southern and Cross (2004) advise that a number of teachers deliver the material and therefore take collective responsibility for it. Acceleration includes early school entry, subject acceleration, grade skipping, curriculum compacting and curriculum telescoping and usually occurs as a result of one or more of these strategies. A high level of acceleration takes place in the United States and in Australia, with some provision in the UK, Germany, Russia, Poland and China (Freeman 1998; Nowicka 1995; Shi & Zixiu 2000; Sisk, 1992). In the survey reported in this paper, three of the respondents in Leinster and one student in Munster indicated that they had opportunities to mix with older advanced

students whilst at school. There is no reason why this and other forms of acceleration could not be accommodated more widely in both primary and post-primary schools in Ireland. Whilst teachers and administrators typically advise that the most important part of a child's development is the socioemotional aspect, acceleration could be incorporated into classes in schools in a way that would allow students to accelerate in particular subjects while being with their classmates for other subjects and at break times. A pull-out programme is such a strategy. It is an enrichment measure whereby students, taught in homogenous learning groups, get a break from regular classes and receive instruction with high-ability students, whilst still retaining strong links with classmates. This type of strategy would suit both small and larger schools, in rural and urban environments, as modifications could be made on an annual basis, depending on the ability levels of students. Teachers ideally would receive training and on-going support in how to teach and inspire gifted students. Trainee teachers in Ireland have no individual mandatory modules for teaching the gifted and, whilst teaching special needs students is strongly supported, the main focus is on those with learning difficulties.

The Irish education system rarely offers acceleration options due to fear of students having adjustment difficulties when socialising with older students. Chronological differences occur naturally at many stages of schooling, however. Primary-school pupils are typically between the ages of four and six years in junior infants (first year of school). Fifth Year students in secondary school are aged between 15 and 17 years as some Third Year students go directly into Fifth Year whilst some access TY (Fourth Year). Schools have not reported any adjustment issues in either case and students mix freely within the age groups. The most recent (NCCA, 2007) draft guidelines for teachers of exceptionally-able students contain accurate and up-to-date information regarding acceleration, and these various approaches could be used in primary and post-primary schools to begin a process of structured differentiation in classrooms.

The results of the survey reported in this paper indicate that science and mathematics are the most popular subjects for gifted students. Currently in Ireland, there is a focus on STEM subjects (science, technology, engineering and mathematics), and the Science Foundation Ireland's education and public engagement programmes focus on promoting awareness and engagement with these four subjects, especially amongst girls. Pull-out programmes in two of these subject areas, science and mathematics, would be a starting point for schools at both primary and post-primary level. Students could be identified

by schools and parents, and individual learning plans developed, so that they advance at an appropriate rate commensurate with their abilities. Teacher education colleges could introduce gifted modules as mandatory subjects, thus paving the way for the needs of gifted students to be accommodated, whilst not detracting from the teaching of mainstream students and those with learning difficulties. Currently, all correspondence in relation to gifted students falls under the remit of the Special Needs Coordinator in schools. There is a need for a separate role for a Gifted Students' Coordinator in schools, or across a cluster of schools.

This paper set out to examine if the needs of gifted students are being met in schools in Ireland, and the results show that, on the whole, their needs are not being met. The research presented is limited however, as the sample size is small and the response rate less than optimal. Further, there is a low representation from both Connaught and Ulster. A larger sample size, which includes the top 5% of gifted students, would provide additional information that could be used to help guide educational policy. Further follow-up research on how students progressed after school would be helpful. Finally, a comparative study on the experience of students in Northern Ireland, whose education system is similar to other parts of the UK, could provide additional insights into the needs of this important but overlooked minority.

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