The Challenges of Irish Language Acquisition for Students with Special Educational Needs in Irish-medium Primary Schools

Sinéad Nic Aindriú, Dublin City University

Abstract

This study investigated the challenges faced by students with special educational needs (SEN) when acquiring Irish as a second language (L2) in Irish-medium (IM) primary schools. Case studies were undertaken on four students with autism spectrum disorder (ASD), three with a specific speech and language disorder (SSLD), and three with dyslexia enrolled in four IM primary schools. Three of these schools were situated in the Republic of Ireland (RoI) and one was situated in Northern Ireland (NI). As part of the research, class teachers (N=10) and parents (N=9) undertook semi-structured interviews. These categories of SEN are listed within the five most frequently reported categories of SEN in IM schools. They were chosen as the focus of this study because students with these SEN often experience language and communication difficulties. Also, there is often a lot of debate as to whether bilingualism and/or learning through an L2 is appropriate for children with these categories of SEN. The research question addressed within this study was: what are the challenges faced by students with SEN learning through Irish as an L2? The findings of the present study suggest that some students with these categories of SEN can be slow at acquiring Irish as an L2 and that some do encounter challenges when learning through Irish. However, some of the challenges encountered by this group of students are also encountered by students learning through Irish without SEN. It was also reported by a number of parents and teachers, that the Irish language did not pose a challenge for some of the students.

Keywords: special educational needs, Irish-medium education, autism spectrum disorder, specific speech and language disorder, dyslexia.

Introduction

In Irish-medium (IM) schools, students come mostly from households where Irish is not their first language (L1) (McAdory & Janmaat, 2015). Early total immersion programmes are provided by these schools to those living mainly in cities and small towns outside of the heartland Irish-speaking areas known as the Gaeltacht (Údarás na Gaeltachta, 2021). In these schools in the RoI, students receive up to two school years' total immersion in the Irish language, before they commence English as a curriculum subject (Department of Education

and Skills (DES), 2019). In IM schools in Northern Ireland (NI), students receive up to three years' total immersion in the Irish language before they engage with the English curriculum in Key Stage 1, Year 3/4, age 6-8 years old (Ó Duibhir et al., 2015). At the time of the present study (academic school year 2017/2018), there were 180 IM primary schools throughout the island of Ireland (Gaeloideachas Teoranta, 2017). Most of these schools (N=145) and students were situated in the RoI. There were 35 schools in NI, of these 28 were stand-alone schools and seven were Irish language units attached to English-medium host schools (Department of Education, 2021). In these units the curriculum is delivered through the medium of Irish even though they are under the governance of an English-medium host school.

The outcomes for students in Irish immersion education are positive overall (Parsons & Lyddy, 2009a, 2009b; Shiel et al., 2011; Strickland & Hickey, 2016). Recent studies have shown that students in these schools perform as well as or better than their English-medium, mainstream counterparts in the curriculum areas of English and mathematics (Shiel et al., 2011). However, little research exists in relation to the outcomes of this form of education for students with special educational needs (SEN) or the challenges that they face when accessing the curriculum in these schools. In order to address the gap in this area, this study investigated the challenges of Irish language acquisition for students with SEN in IM schools. This was done using case study research as outlined further in the methodology section below. Within this article an overview of IM education and SEN will be presented along with a discussion on the international research surrounding bilingualism for children with ASD, SSLD, and dyslexia. Following this, the research methodology and method of data analysis will be presented. The findings of this study are then presented using the following themes: the challenges of Irish language acquisition for children with ASD, the challenges of Irish language acquisition for children with SSLD, and the challenges of Irish language acquisition for

students with dyslexia. In the concluding section, there is a discussion on the implications of these findings for teaching and learning in IM schools.

Students with SEN in IM Schools

It has been estimated that 9.4% of students in primary IM schools in the RoI present with a diagnosis of SEN (Nic Aindriú et al., 2020a). Dyslexia is reported to be the most prevalent category of SEN in these schools (Barrett et al., 2020; Nic Aindriú et al., 2020a; Nic Gabhann, 2008). The other most frequently reported categories of SEN are; dyspraxia, autism spectrum disorder, emotional and behavioural difficulties, specific speech and language disorder (Barrett et al., 2020; Nic Aindriú et al., 2020a). This study will focus on students with dyslexia, ASD, and SSLD. A more detailed discussion on immersion education and bilingualism for children with these categories of SEN is provided below. A dearth of research exists on the Irish language proficiency of these students with SEN who are enrolled in an IM primary school (Nic Aindriú et al., 2020a; Nic Aindriú et al., 2021). Barrett (2016, p. 22), investigated teachers' perceptions of the challenges that students with SEN experience in IM schools. Within this study, half of teachers (46.9%, N=59) felt that students found verbal expression through Irish difficult. Almost a third (32.8%) reported that students can become confused between Irish and English. This confusion between languages has also been reported in the early stages of L2 acquisition for bilingual children without SEN (Byers-Heinlein & Lew-Williams, 2013). Almost 40% of respondents claimed that students had difficulty accessing the curriculum through Irish. However, it is important to note that some research has shown that there are advantages of this form of education for students with SEN (Barrett, 2016; Nic Aindriú, 2021b; Nic Aindriú et al., 2020b). The advantages that were referred to were: bilingualism, benefits for third language acquisition, benefits in terms of working memory, academic advantages for

post-primary school, and a sense of pride in the Irish language (Barrett, 2016, p. 22, Nic Aindriú, 2021b, Nic Aindriú et al., 2020b).

Autism Spectrum Disorder and Bilingualism

ASD is a continuum of developmental disorders that can range from mild to severe (Lauritsen, 2013). Deficits and impairments in the social and communicative abilities are often a characteristic of this disorder, along with repetitive behaviours, narrow restricted interests, and difficulties initiating and sustaining relationships (Centre for Disease Control and Prevention, 2017). Language delays may be apparent through difficulties in using and interpreting language; pragmatics, expressions, metaphors, and conversational rules (Howlin et al., 2014). Some people with ASD display oppositional behaviour, which can be presented as being disobedient, hostile, or defiant (Mandy et al., 2014). Research findings suggest that children with ASD can become bilingual and that this does not cause additional language delays or have a negative impact on their L1 development (Dai et al., 2018; Gonzalez-Barrero & Nadig, 2018; Hambly & Fombonne, 2014; Ohashi et al., 2012, Valicenti-McDermott et al., 2013). No difference has been found in the cognitive functions, receptive language skills, expressive language skills, number of words, presence of word combinations, or the autistic features of simultaneous/sequential bilinguals and monolingual children with ASD (Hambly & Fombonne, 2014, Ohashi et al., 2012; Valicenti-McDermott et al., 2013). Furthermore, it has been suggested that these children reach early language milestones at the same rate as their monolingual counterparts (Hambly & Fombonne, 2014).

Specific Speech and Language Disorder (SSLD) and Bilingualism

Students who present with SSLD experience severe difficulties understanding or expressing themselves through the medium of spoken language, even though their non-verbal ability is in the average band or higher (SERC, 1993, pp. 91-92). They can have difficulties with their receptive language skills, expressive language skills, both of these areas, or the use of speech when interacting with other people (DES, 2007; SERC, 1993, pp. 91-92). The difficulties that they experience in these areas are not attributable to defective hearing, emotional/behavioural disorder, or a physical condition (SERC, 1993, pp. 91-92). There are many different terms used to describe the difficulties outlined above, such as, development language delay and language impairment. The term specific language impairment (SLI) is most frequently used in international literature and therefore will be used in this literature review. Similar to SSLD, SLI is defined as a communication disorder that can affect a student's expressive and receptive skills, such as, speaking, listening, reading and writing, that can persist into adulthood (Leonard, 2014). As students with SLI attending Irish immersion education are mostly sequential bilinguals, the research based on sequential bilinguals is discussed in this section. When this cohort with SLI is compared to monolinguals with or without SLI, their language impairments are identifiable regardless of the language (L1/L2) that they are tested in, the language outcome measures used, and at which age they were tested (Blom & Paradis, 2013, 2015; Kay-Raining Bird et al., 2016). Research findings suggest that sequential bilinguals with SLI can acquire proficiency in an L2. However, it may take them a longer period of time to reach similar levels of ability in their L2 compared to their monolingual SLI peers speaking only the L2 (Verhoeven et al., 2012). This may be because they make less efficient use of their L1 knowledge when learning an L2, when compared to their peers without SLI, and that they need a longer period of L2 exposure to attain the same levels of proficiency (Blom & Paradis, 2015). Research in relation to the suitability of immersion education for

children with poor L1 skills is limited and dated (Bruck, 1978, 1982). Bruck (1978) investigated the L1/L2 skills, cognitive development, and school achievement of Canadian French immersion students with language impairments from Kindergarten to Grade 3. It was found that by Grade 3, they had scored comparably to their monolingual peers with the same difficulties on the assessments undertaken. Furthermore, it was found that they had higher levels of L2 proficiency than the monolingual group who received only conventional L2 instruction.

Dyslexia and Bilingualism

Dyslexia is a specific learning difficulty in which children and adults experience difficulties in reading, writing, and spelling even though they have had the opportunity to access appropriate teaching and learning (Snowling et al., 2020). Children with dyslexia experience cognitive difficulties in the areas of phonological processing which is of importance for those learning how to read due to the grapheme- phoneme alphabetic correspondence (Snowling et al., 2020). Retrieving information from working memory and the ability to retrieve information from their long-term memory at speed can be a difficulty for students with dyslexia. The difficulties they experience can range from mild to severe. They may experience difficulties in numeracy and have co-morbid conditions, such as Attention Deficit Disorder. Research has found that students with dyslexia who learn to read in a transparent orthography often find it easier then to learn to read in English as an L2 (Siegel, 2016). When compared to English, the Irish language orthography is reasonably regular and transparent (Hickey & Stenson, 2011). Studies have been conducted on children with Dutch (van de Leij & Morfidi, 2006), Chinese (Chung & Ho, 2010), Italian (Bonifacci et al., 2017), and Norwegian (Helland & Kaasa, 2005) as their L1, and English as their L2. The findings of these studies suggest that children with reading impairments in their L1 experience the same level of reading impairment

in their L2. The limited research available on the suitability of immersion education for children with reading difficulties suggests that bilingual students with reading difficulties can perform as well as their monolingual peers in reading assessments (Erdos et al., 2014; Genesee & Geva, 2006).

Method

Case study research allows for the collection of multiple perspectives using semi-structured interviews (Yin, 2018). The findings of this study are from the second stage of a mixed methods doctoral study (Andrews, 2020). In the first stage of the doctoral research, a randomised stratified sample of IM primary schools (20%, N=29) completed an anonymous online survey on the prevalence and types of SEN in IM schools (Nic Aindriú, Ó Duibhir, & Travers, 2020a) and the assessment methods used in these schools to identify students with SEN (Nic Aindriú, Ó Duibhir, & Travers, 2021). At the end of the survey, schools were asked whether they were interested in participating in the case study research. Four schools were selected using convenience sampling, based on their geographical location, size, and willingness to take part. Ethical approval was granted for this study from the Research Ethics Committee in Dublin City University (DCUREC/2017/162). Informed consent was obtained from the Board of Management of each school before commencing the research. Participants in the study were given plain language statements informing them about the study and they gave informed consent before undertaking an interview. The interviews were recorded and transcribed verbatim with their permission. There were two different interview schedules used in this study, one for parents and one for teachers, however, you will see in Table 1 that there are some similarities in the questions asked to both groups. Interviews with the class teachers (N=10) and two of the parents were undertaken through the medium of Irish. The interviews with the remaining parents (n=7) were undertaken through the medium of English. Where

direct quotes are provided in this paper from the interviews undertaken through Irish, an English translation is also provided.

Table 1

A sample of Questions Used in this study for Interviews with Parents and Teachers

Interview Schedule for Parents	Interview Schedule for Teachers
- What does your child find hard about learning through Irish? - Do you think that he/she would have these difficulties if learning through English? - Can you list the three greatest challenges you face as a parent of a child with SEN being educated through Irish, if any? - What supports might help your child when learning through Irish?	- What do children with SEN find hard about learning through Irish? - Can you suggest any additional supports that would help pupils with SEN learning through the medium of Irish?

Data Analysis

The interviews were analysed using Braun and Clarke's (2006) six step framework of thematic analysis. This method was chosen as it allowed for the analysis of data in terms of examining the perspectives of both teachers and parents and highlighting the similarities and differences between their responses (Braun & Clarke, 2006). It also enabled the researcher to identify patterns and themes within the qualitative data while addressing the research questions (Braun & Clarke, 2006). The data gathered was analysed on a semantic level, where what the participant said was analysed for 'surface meaning' and on a latent level, where ideas, assumptions, and ideologies were identified and examined (Braun & Clarke, 2006, p. 84). In the first stage, data familiarisation, the interviews were transcribed verbatim. They were then read and re-read to ensure familiarisation. Notes were taken using a research journal of early

impressions and emerging themes (Braun & Clarke, 2006). The transcribed interviews were then imported into Nvivo for data management purposes (QSR international PTY Ltd, 2018). Open coding or the generation of initial codes occurred in the second stage. Definitions were constructed for each open code. During this process the researcher read through each transcript, applied codes, compared codes, modified existing codes and generated new codes. In the third stage, the themes that were generated in the second phase were analysed further and reconstructed into sub-categories, or broader themes (Braun & Clarke, 2006). This allowed for a more in-depth understanding of the data, as it was analysed for divergent views, attitudes, beliefs, behaviours, and negative cases. Stage four involved reviewing these themes further. In stage five themes were defined, codes were consolidated into more abstract, philosophical, and literature-based themes. This created a final framework of themes for analysis and allowed for the exploration of inter-relatedness for the purpose of reporting findings. In stage six, the analytical memos that were written by the researcher throughout all the above stages were analysed. Data analysis validation involved testing, validating, and revising the analytical memos taken.

Participant Profiles

In total, four students with Autism Spectrum Disorder (ASD), four with dyslexia, and three with Specific Speech and Language Disorders (SSLD) were included in the case studies. These students were enrolled in four mainstream IM schools (3 in the RoI and 1 in NI). The age range of the students with a diagnosis of SEN included in this study was from 4 to 12 years old. These students were from a range of classes from Junior Infants (4-5 years old) to 6th Class (11-12 years old). The profiles of these students are further outlined in Table 2 in terms of their class level, home language, where their SEN was identified, when it was diagnosed, and the location of their school. For each student, the class teacher and their parent were interviewed,

with the exception of students 5 and 10 whose parents were unavailable for the interview at the time of the study. Also, two of the students in school B (dyslexia/ASD) had the same class teacher.

Table 2

The Profiles of the Students Participating in the Case Studies

	Class Level	Home Language	SEN Identified	Formal Assessment	Class Level at which Diagnosed	Location of School
Student 1: ASD (School B)	4th Class (9-10 years old)	English	IM primary school	Privately	2nd Class (7-8 years old)	RoI
Student 2: ASD (School C)	3rd Class (8-9years old)	English	IM preschool	Publicly (local health board)	Junior Infants (4-5 years old)	RoI
Student 3: ASD (School C)	6th Class (11-12 years old)	English	IM preschool	Privately	IM Preschool (3-4 years old)	RoI
Student 4: ASD (School D)	3rd Class (8-9 years old)	English	IM preschool	School	Junior Infants (4-5 years old)	NI
Student 5: Dyslexia (School A)	5th Class (10-11 years old)	English	IM primary school	School	Unknown	RoI
Student 6: Dyslexia (School B)	4th Class (9-10 years old)	English	IM primary school	Privately	2nd Class (7-8 years old)	RoI
Student 7: Dyslexia (School C)	4th Class (9-10 years old)	English	IM primary school	School	3rd Class (8-9 years old)	RoI
Student 8: Dyslexia (School D)	5th Class (10-11 years old)	Irish	IM primary school	School	3rd Class (8-9 years old)	NI
Student 9: SSLD (School A)	2nd Class (7-8 years old)	English	Before school age	Publicly (local health board)	Before primary IM school (before age 4)	RoI
Student 10: SSLD (School C)	Senior Infants (5-6 years old)	English	Before school age	Publicly (local health board)	Before primary IM school	RoI
Student 11: SSLD (School D)	Senior Infants	Irish/ English	Before school age	Publicly (local health board)	Before primary school	NI

Results

The Challenge of Irish Language Acquisition For Students with ASD

For those attending IM schools with ASD, two class teachers (N=4) and two parents (N=4) referred to the fact that students with ASD can sometimes be slower at understanding and speaking Irish as an L2. The children of the two parents who commented on this had speech and language difficulties whilst the other two children with ASD in this cohort did not have speech and language difficulties. The parents and teachers who referred to this challenge discussed how Irish (as an L2) has had an impact on these students' ability to interact in the class and access the curriculum content.

Uaireanta bíonn siad beagánín níos moille ag labhairt na Gaeilge, nó beagánín níos moille ag tuiscint an teanga. (Class Teacher of Student 2, ASD, School C)	Sometimes they are a bit slower at speaking the Irish language, or a bit slower at understanding the language.

The difficulties that these students with ASD experienced with the Irish language were explained further by one of the teachers (Class Teacher of Student 3, ASD, School C).

Nuair a éiríonn siad faoi bhrú, nó má tá frustrachas orthu chailleann siad an teanga Gaeilge más é an Bhéarla an mháthairtheanga atá acu.	When they are under pressure or frustrated, they lose the Irish language if English is their mother tongue.

However, this teacher discussed that the challenges that students with ASD face in terms of Irish language acquisition are often similar to those learning Irish without an SEN, for example, grammar and syntax.

Cosúil le an-chuid páiste, an syntax den abairt, go meascann siad suas é	Like a lot of other children, the syntax of the sentence, they mix that

| go minic agus ceapaim go bhfeiceann tú é sin píosa beag níos mó. | up regularly and I think that you see that a little bit more. |

Two of the parents (N=4) spoke about how their child's oppositional behaviour impacted on their Irish language development. Due to the fact that oppositional behaviours are common in children with ASD it is not surprising that their ability to acquire an L2 can be impacted by this characteristic of their diagnosis (Mandy et al., 2014).

> I don't know if he finds it hard, but he just refuses to, because... I don't know if it's because he feels it's being pushed on him, or because everything he says as Béarla, (in English) and they repeat as Gaeilge (in Irish). (Parent of Student 2, ASD, School C)

The second parent also gave a practical example of how oppositional behaviour has influenced their child's participation in school life.

> He just refused to do the ceilí[1] in front of the whole school and just point blank refused. (Parent of Student 1, ASD, School B)

However, in contrast, three of the parents of the students with ASD, spoke about how their children were doing well in school and that mostly their difficulties now related to motivation, behaviour, and social interactions.

> He does well in most of the subjects. He's excellent at his reading. He struggles with mostly the social interactions, just how to behave in general, how to bring appropriate conversation. I wouldn't say that would be specifically through learning Irish that he was having difficulties, no. (Parent of Student 4, ASD, School D)

Another parent also spoke about how learning through the Irish language was not a difficulty for their child and that he was doing well academically in school. This parent discussed how

---

[1] A céilí is an occasion where people gather to Irish dance, sing, and tell stories.

the additional supports their child required were not related to the Irish language. This is interesting, as this student had speech and language difficulties when they started in the IM school and were initially slower at speaking Irish.

> He's not top of the class, but he's not bottom of the class either, he's kind of somewhere in the middle. So, the language isn't a huge issue, so the supports that he needs aren't related to the language as such. (Parent of Student 3, ASD, School C)

The third parent also spoke about their child's academic ability and how the Irish language posed no additional challenge for them.

> He is a super reader, really really good at English and Irish and he understands it all really well. So any of his challenges, the fact that he's doing anything in Irish is not an issue for him at all. (Parent of Student 1, ASD, School B)

These findings suggest that some students with ASD may be slower at acquiring Irish as an L2, but in many instances these students can acquire Irish as an L2. This finding corresponds with international research in the area of bilingualism for children with SEN (Dai et al., 2018; Gonzalez-Barrero & Nadig, 2018; Hambly & Fombonne, 2014; Ohashi et al., 2012, Valicenti-McDermott et al., 2013).

The Challenges of Irish Language Acquisition SSLD

All the class teachers (N=3) and parents of students with SSLD (N=2) participating in the study commented on how acquiring Irish as an L2 can be challenging for these students. References were made (1 parent/3 class teachers) to the fact that these students are often slower at starting to speak in Irish. One teacher gave an example of the Irish language development of pupils with SSLD over time. This teacher discussed how initially these students often found it hard to understand what was going on in the classroom and to access the curriculum.

Ansin tar éis tamaill, feiceann tú go dtuigeann siad gach rud, ach fós labhraíonn siad i mBéarla leat, ach ansin tosaíonn siad ag cur cúpla focal agus abairt le chéile.
(Class Teacher of Student 11, SSLD, School D)

Then after a while, you see that they understand everything, but that they still speak English to you, but then they start to put a few words and sentences together.

Another teacher discussed how these students can often find learning two languages and switching between these languages difficult.

Bíonn deachtracht acu leis an Bhéarla agus ansin tá said ag iarraidh a gceann a fháil timpeall ar an Ghaeilge, ceapaim go bhfuil sé sin deacair, mar tá said ag díriú ar dhá theanga seachas teanga amháin.
(Class teacher, Student 9, SSLD, School A)

They have a difficulty with English and they have to get their head around Irish, I think that this is hard, because they are focusing on two languages instead of one.

One of the parents spoke about how their child is not able to keep up with the class work and is falling behind. Due to this, their child is undertaking additional teaching support mostly through individual and group withdrawal. This parent was concerned about their child's progress in school.

Because he can't keep up, I do sometimes think he's going behind rather than forward.
(Parent of Student 9, SSLD, School A)

The other parent discussed the improvements that their child had made in terms of speaking in Irish in the classroom. Nevertheless, this student still had considerable language and communication difficulties.

Dúirt an múinteoir ranga go bhfaca sí feabhas tagtha ar a gcaint amach ós comhair

The class teacher said that she has seen an improvement in his speaking on front of the

an rang.…. Dearfainn go bhfuil teanga s'aige (Gaeilge) ar leibhéal coinneal le tús naíoscolaíocht faoi láthair, sin an caint labhartha, ach tuigeann sé gach rud. (Parent of Student 11, SSLD, School D)

class……I would say that his language ability (Irish) is at the level of those at the beginning of preschool, that is in terms of his speech, but he understands everything.

These findings are comparable to international research that found that sequential bilingual children with SLI are often slower to acquire an L2 (Blom & Paradis, 2013, 2015; Kay-Raining Bird et al., 2016; Verhoeven et al., 2011). Findings from the literature also show that the level of L2 proficiency acquired by these bilinguals depends on the level of exposure to the L2 that they receive and also their L1 abilities (Kay-Raining Bird et al., 2016).

The Challenges of Irish Language Acquisition for Students with Dyslexia

All the class teachers interviewed (N=4) and three parents (N=4) stated that acquiring the Irish language can be challenging for students with dyslexia. It was said that these students often get confused between Irish and English, the examples given included spellings, grammar, and phonics. This is a factor which was reported in a previous study of IM primary school teachers (Barrett, 2016). However, difficulties in the areas of spelling, grammar, and phonics are to be expected with a diagnosis of dyslexia (Snowling et al., 2020).

Uaireanta feicim páistí ag éirí meascaith suas, go háirithe sa litriú idir Gaeilge agus Béarla. (Class teacher of Student 5, Dyslexia, School A)

Sometimes I see children getting mixed up, particularly in spelling, between Irish and English.

Another teacher stated that Irish reading and spelling were also a difficulty that were experienced by students with dyslexia in their class.

Ós rud é go bhfuil gach rud trí mheán na Ghaeilge, bíonn an léitheoireacht Gaeilge agus an litriú Gaeilge an- dheacair dóibh. (Class teacher of Student 7, Dylsexia, School C)

Because everything is through Irish, the Irish reading and spelling can be very hard for them.

One of the parents of this cohort gave a practical example of the confusion that their child experienced in terms of reading and writing in Irish and English.

> She'd be doing it as 'I' (the letter) in English and she wouldn't be doing it in Irish. There's a difference between what she's trying to do, and she gets herself confused and flustered. (Parent of Student 7, Dyslexia, School C)

However, interestingly, this parent discussed how their child was better at Irish than English. This may be due to the fact that the Irish language has a more transparent orthography and thus, they should find it easier to learn to read in (Hickey & Stenson, 2011; Siegel, 2016). When reviewing these findings around the confusion students experienced, it is important to note that it has been found that bilingual children without SEN can experience this confusion also (Byers-Heinlein & Lew-Williams, 2013).

> Her Irish is better than her English. For her pronunciation and her speech, her language. (Parent of Student 7, Dyslexia, School C)

Another parent discussed how things can get 'lost in translation' for their child and that their child often finds English easier.

> If he has to read the question himself, he'd get lost in the translation of it, I suppose, where if it's read out to him he can understand the spoken... even in Irish a little bit easier and then if you translate it to English completely there's no problem. (Parent of Student 6, Dyslexia, School B)

Similarly, three class teachers for this group (N=4) also discussed how students with dyslexia experience difficulties due to the content 'being lost in translation', particularly when accessing the mathematics curriculum through Irish.

| Muna féidir leat ceist a léamh, ní féidir leat an sum a dhéanamh, ach is féidir leat, an suimiú, an dealú … beidh torthaí Drumcondra (scrúdaithe caighdeánach) dóibh siúd nach bhfuil léitheoireacht maith acu sa Ghaeilge níos ísle, ach má léann tú an triail mhata dóibh, go mbeidh an toradh níos airde. (Class Teacher of Student 6, Dyslexia, School B) | If you cannot read the question, you cannot do the sum, but you can add, subtract, and divide….. the results of the Drumcondras (standardised tests) for those who aren't good at reading in Irish will be lower, but if you read the maths test for them, the results will be higher. |

These findings suggest that some students with dyslexia in IM schools can access information aurally and that this process is invaluable in terms of appropriately assessing their academic abilities across a range of subjects.

Discussion

Participants in this study provided anecdotal evidence in terms of how students with SEN can be confused between Irish/English and the difficulties they experience when accessing the curriculum through Irish as an L2. Nevertheless, it is important to note that it has been reported that bilingual children without SEN can experience this confusion also (Byers-Heinlein, & Lew-Williams, 2013). The findings of the present study suggest that mathematical concepts and the language of mathematics can be challenging for some students with dyslexia learning through Irish as an L2. With some participants stating that students perform better in mathematics when the questions/problems are read out loud to them as the written problems are often too difficult to access when written in Irish. Findings also suggest that some students in these categories of SEN do experience difficulties when acquiring Irish as an L2, particularly the cohort of students with ASD and SSLD who have been reported to be slower than their peers at acquiring the Irish as an L2. However, it is important to note that parents of some students with ASD stated that the Irish language was not a challenge for these students and that they are doing well academically in school. Also, one of the parents of a student with SSLD spoke about the improvements that their child had made in terms of the Irish language.

Nevertheless, both students with SSLD still experienced a lot of difficulty with the Irish language, this may be due to the fact that it took these students longer to acquire their L1 (Leonard, 2014). For the cohort with dyslexia, it was reported that these students experience the same difficulties as their monolingual peers, e.g. phonics and grammar in Irish literacy. Interestingly, one parent reported that their child was better at Irish than English. This further supports the literature that students may find it easier to learn an orthographically transparent language before English (Hickey & Stenson, 2011; Siegel, 2016). Overall, it is clear that there are challenges for some students with these categories of SEN when acquiring Irish in IM education. However, it is important to recognise that the students in this study did have the ability to acquire Irish as an L2 at their own level.

It is also important to recognise that the challenges identified in the study are the same as those identified by bilingual children with SEN internationally and that many of the challenges discussed (e.g. oppositional behaviour) are typically the same as those experienced by monolingual children with the same category of SEN, regardless of the language of their education (Kay-Raining Bird et al., 2016). Therefore, the findings of this study should not cause unease among parents or educators. However, they may have implications for the teaching and assessment of students with SEN in IM schools. For example, students might benefit from the opportunity to access curriculum content and respond to tasks/assessments using different methods as outlined in the Universal Design for Learning (UDL) framework, such as audio, video, and illustrations (CAST, 2021). An example of the importance of this was seen above in terms of the student who performed better on a standardised assessment when the question was read to them. In terms of mathematics it might be worthwhile for teachers to place more of an emphasis on the importance of maths language/discourse in the classroom and teaching mathematical vocabulary through Irish (Barwell, 2010). It may also be important for teachers in these schools to recognise how a student's level of proficiency in their

L1 may influence their level of L2 proficiency, and that they may be slower at acquiring Irish as an L2. Therefore, it is important for these students to have as much exposure as possible to the Irish language and have many opportunities to speak the language (Kay-Raining Bird et al., 2016).

As with all research these findings have their limitations. Research in this area is difficult due to the small sample sizes available and this in turn limits the transferability of the research findings. In order to overcome this limitation, a detailed description is provided in the findings, to enable readers to decide whether the findings are transferable to other situations. The transferability and applicability of the data gathered to other contexts is enhanced through the multiple case study design used. In the future it would be beneficial if a larger scale study of this nature was conducted. A further limitation is the fact that this study is based on anecdotal feedback and that no data was gathered on the students' actual level of Irish language acquisition. In the future, research which measures the level of Irish language proficiency of students with these categories of SEN would be beneficial.

Declaration of Interest Statement

No potential conflict of interest was reported by the author.

References

Andrews, S. (2020). *The additional supports required by pupils with special educational needs in Irish-medium schools*. [Unpublished doctoral thesis]. Dublin City University. https://www.cogg.ie/wp-content/uploads/Taighde-le-Dr.Sin%C3%A9ad-Andrews.pdf

Barrett, M. (2016). *Doras feasa fiafraí: Exploring special educational needs provision and practices across Gaelscoileanna and Gaeltacht primary schools in the Republic of Ireland*. [Unpublished masters thesis]. http://www.cogg.ie/wp-content/uploads/doras-feas-fiafrai.pdf

Barrett, M. Kinsella, W., & Prendeville, P. (2020). Special educational needs in bilingual primary schools in the Republic of Ireland. *Irish Educational Studies*, *39*(3), 273-295.

Barwell, R. (2010). *Tensions in teaching mathematics through a second language*. https://carla.umn.edu/immersion/acie/vol13/no3/may2010_rr.html

Blom, E., & Paradis, J. (2013). Past tense production by English second language learners with and without language impairment. *Journal of Speech, Language, and Hearing Research, 56*(1), 281-294.

Blom, E., & Paradis, J. (2015). Sources of individual differences in the acquisition of tense inflection by English second language learners with and without specific language impairment. *Applied Psycholinguistics, 36*(4), 953-976.

Bonifacci, P., Canducci, E., Gravagna, G., & Palladino, P. (2017). English as a foreign language in bilingual language-minority children, children with dyslexia and monolingual typical readers. *Dyslexia, 23*(2), 181-206. doi:10.1002/dys.1553

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Bruck, M. (1978). The suitability of early French immersion programs for the language-disabled child. *Canadian Journal of Education / Revue Canadienne De l'Éducation*, *3*(4), 51-72.

Bruck, M. (1982). Language impaired children's performance in an additive bilingual education program. *Applied Psycholinguistics*, *3*, 45-60. https://doi.org/10.1017/S014271640000415X

Byers-Heinlein, K., & Lew-Williams, C. (2013). Bilingualism in the early years: What the science says. *Learning landscapes*, *7*(1), 95-112.

CAST. (2021). About universal design for learning. https://www.cast.org/impact/universal-design-for-learning-udl

Centers for Disease Control and Prevention. (2017). *Autism spectrum disorder (ASD)*. http://www.cdc.gov/ncbddd/autism/data.html

Chung, K. K. H., & Ho, C. S. (2010). Second language learning difficulties in Chinese children with dyslexia: What are the reading-related cognitive skills that contribute to English and Chinese word reading? *Journal of Learning Disabilities, 43*(3), 195-211.

Dai, Y. G., Burke, J. D., Naigles, L., Eigsti, I., & Fein, D. A. (2018). Language abilities in monolingual- and bilingual- exposed children with autism or other developmental disorders. *Research in Autism Spectrum Disorders, 55*, 38-49.

Department of Education. (2021). *Irish-medium schools*. Department for Education.

Department of Education and Science. (2007). *Criteria for enrolment in special classes for pupils with specific speech and language disorder, Circular 0038/2007*. Department of Education. http://www.sess.ie/documents-and-publications/circulars

Department of Education and Skills (DES). (2019). *Circular letter (045/2019) The primary language curriculum*. Department of Education. https://www.into.ie/app/uploads/2019/09/cl0045_2019.pdf

Erdos, C., Genesee, F., Savage, R., & Haigh, C. (2014). Predicting risk for oral and written Language learning difficulties in students educated in a second language. *Applied Psycholinguistics*, *35*(2), 371-398. https://doi.org/10.1017/S0142716412000422

Gaeloideachas Teoranta. (2017). *Provision of immersion education for the academic year 2017/2018.* Gaeloideachas Teoranta. http://www.gaelscoileanna.ie/en/about/statistics/

Genesee, F., & Geva, E. (2006). Cross-linguistic relationships in working memory, phonological processes, and oral language. In D. August & T. Shanahan (Eds.), *Developing literacy in second language learners*. Report of the National Literacy Panel on Minority-Language Children and Youth (pp. 175-184). Erlbaum.

Gonzalez-Barrero, A. M., & Nadig, A. (2018). Bilingual children with autism spectrum disorders: The impact of amount of language exposure on vocabulary and morphological skills at school age. *Autism Research, 11*(12), 1667-1678.

Hambly, C., & Fombonne, E. (2014). Factors influencing bilingual expressive vocabulary size in children with autism spectrum disorders. *Research in Autism Spectrum Disorders, 8*(9), 1079-1089.

Helland, T., & Kaasa, R. (2005). Dyslexia in English as a second language. *Dyslexia, 11*(1), 41-60.

Hickey, T., & Stenson, N. (2011). Irish orthography: What do teachers and learners need to know about it, and why? *Language, Culture, and Curriculum, 24*(1), 23-46. https://doi.org/10.1080/07908318.2010.527347

Howlin, P., Savage, S., Moss, P., Tempier, A., & Rutter, M. (2014). Cognitive and language skills in adults with autism: A 40-year follow up. *Journal of Child Psychology and Psychiatry*, *55*(1), 49-48.

Kay-Raining Bird, E., Genesee, F., & Verhoeven, L. (2016). Bilingualism in children with developmental disorders: A narrative review, *Journal of Communication Disorders*, 63, 1-14.

Lauritsen, M. B. (2013). Autism spectrum disorders. *European Child & Adolescent Psychiatry, 22*, 37-42.

Leonard, L.B. (2014). *Children with specific language impairment.* MIT Press: London.

Mandy, W., Roughan, L., & Skuse, D. (2014). Three dimensions of oppositionality in autism spectrum disorder. *Journal of Abnormal Child Psychology*, *42*(2), 291-300.

McAdory, S. E., & Janmaat, J. G. (2015). Trends in Irish-medium education in the Republic of Ireland and Northern Ireland since 1920: Shifting agents and explanations. *Journal of Multilingual and Multicultural Development*, *36*(5), 528-543.

Nic Aindriú, S. (2021a). The reasons why parents choose to transfer students with special educational needs from Irish immersion education, *Language and Education*, https://doi.org/10.1080/09500782.2021.1918707

Nic Aindriú, S. (2021b). The experiences of pupils with special educational needs in Irish-medium schools. *REACH: Journal of Inclusive Education in Ireland*, *33*(2), 101-112. https://reachjournal.ie/index.php/reach/article/view/3

Nic Aindriú, S., Ó Duibhir, P., & Travers, J. (2020a). The prevalence and types of special educational needs in Irish immersion primary schools in the Republic of Ireland, *European Journal of Special Needs Education*, *35*(5), 603-619. https://doi.org/10.1080/08856257.2020.1732109

Nic Aindriú, S., Ó Duibhir, P., & Travers, J. (2020b). Students with special educational needs learning through Irish/Daltaí a bhfuil riachtanais speisialta oideachais acu ag foghlaim trí Ghaeilge. *ETBI Journal of Education*. Education and Training Board Ireland.

Nic Aindriú, S., Ó Duibhir, P., & Travers, J. (2021). A Survey of assessment and additional
teaching support in Irish immersion education. *Languages*, *6*(2), 62.
https://doi.org/10.3390/languages6020062

Nic Gabhann, D. (2008). *Survey of special education needs in Gaelscoileanna*, 2006-2007
[Unpublished Masters' thesis]. University of Wales, Bangor.

Ohashi, J. K., Mirenda, P., Marinova-Todd, S., Hambly, C., Fombonne, E., Szatmari, P.,
Thompson, A. (2012). Comparing early language development in monolingual- and
bilingual- exposed young children with autism spectrum disorders. *Research in
Autism Spectrum Disorders, 6*(2), 890-897.

Ó Duibhir, P., NigUidhir, G., Ó Cathalláin, S., Ní Thuairisg, L. & Cosgrove, J. (2015). *An
analysis of models of provision for Irish-medium education*. An Coiste Seasta Thuaidh
Theas ar Ghaeloideachas.
https://www.forasnagaeilge.ie/analysis-models-provision-irish-medium-
education/?lang=en

Parsons, C., & Lyddy, F. (2009a). The sequencing of formal reading instruction: reading
development in bilingual and English-medium schools in Ireland. *International
Journal of Bilingual Education and Bilingualism*, *12*(5), 493-512.

Parsons, C., & Lyddy, F. (2009b). *Learning to read in Irish and English: A comparison of
children in Irish-medium, Gaeltacht and English-medium schools in Ireland. Final
report to An Chomhairle um Oideachas Gaeltachta & Gaelscolaíochta.* An
Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta.

QSR International Pty Ltd. (2018*). NVivo qualitative data analysis software: Version 12*.
https://www.qsrinternational.com/nvivo/support-overview/downloads

Shiel, G., Gilleece, L., Clerkin, A., & Millar, D. (2011). *The 2010 national assessments of
English reading and mathematics in Irish-medium schools, summary report*.

Educational Research Centre. https://gaeloideachas.ie/wp-content/uploads/2017/06/National-Assessments-of-English-Reading-Maths.pdf

Siegel, L. (2016). Bilingualism and Dyslexia: The case of children learning English as an additional language. In Reid & L. Peer (Eds.), *Multilingualism, Literacy and Dyslexia* (pp. 137-147). Routledge.

Snowling, M., Hulme, C., & Nation, K. (2020). Defining and understanding dyslexia: Past, present and future. *Oxford Review of Education*, *46*(4), 501-513.

Special Education Review Committee (SERC). (1993). Special Education Review Committee Report. Dublin: Government Publications.

Strickland, K., & Hickey, T. M. (2016). Using a national dataset to explore sub-groups in Irish immersion education. *Journal of Immersion and Content-Based Education (JICB)*, *4*(1), 3-32.

Údarás na Gaeltachta. (2021). *The Gaeltacht*. Údarás na Gaeltachta. https://udaras.ie/en/our-language-the-gaeltacht/the-gaeltacht/

Valicenti-McDermott, M., Tarshis, N., Schouls, M., Galdston, M., Hottinger, K., Seijo, R., Shinnar, S. (2013). Language differences between monolingual English and bilingual English-Spanish young children with autism spectrum disorders. *Journal of Child Neurology*, *28*(7), 945-948.

Van der Leij, A., & Morfidi, E. (2006). Core deficits and variable differences in Dutch poor readers learning English. *Journal of Learning Disabilities, 39*(1), 74-90.

Verhoeven, L., Steenge, J., & van Balkom, H. (2012). Linguistic transfer in bilingual children with specific language impairment. *International Journal of Language & Communication Disorders, 47*(2), 176-183. https://doi.org/10.1111/j.1460-6984.2011.00092.x

Yin, R.K. (2018). *Case study research and applications: Design and methods (6th ed).* Sage

    Publications**.**