

# REACH



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The Language and the Methodology of Educational Research Group

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## EDITORIAL

The publication of this special issue of *REACH: Journal of Inclusive Education in Ireland* is a reflection of the positive change toward greater inclusion of all students in Irish-medium and Gaeltacht education. This change has come about gradually, as research and experience have demonstrated that students with additional educational needs can thrive in bilingual environments.

Inclusion is not just about access to education; it is about belonging. Being able to attend the same school as family, friends, and the local community is essential to a child's identity and well-being. Every child should have the opportunity to attend their local school or receive their education in the language of their choice, with the right supports in place to help them succeed.

This special issue showcases important research on inclusive education in Irish-medium and Gaeltacht settings. Two articles explore the role of technology; Nic Aindriú's article examines teachers' current practices, while Cummins et al.'s article evaluates a communication system for children on the autism spectrum. Two further articles focus on dyslexia; Barnes reviews assessment and support in Irish-medium and Gaeltacht contexts, while Craven and Bourke investigate the experiences of students with dyslexia in Irish-medium education.

Pedagogical approaches to inclusion are also explored. Ní Aogáin and Dunne discuss the implementation of the Universal Design for Learning (UDL) framework, while Ahern examines the use of Task-Based Language Learning to promote UDL principles in Irish-medium and Gaeltacht schools. De Brún investigates inclusive literacy practices among teachers, and Ní Ghallchóir et al. provide a review of teacher professional learning to support inclusion in Gaeltacht schools. Collectively, these studies highlight the ongoing scholarly efforts across Irish universities to create more inclusive classrooms and identify areas for further development.

None of this progress would be possible without the dedication of teachers, principals, and school staff who foster inclusive learning environments every day. Your belief in students and commitment to equity make a true difference. We are also deeply grateful to the researchers who have contributed to this special issue and to the participants who generously shared their time and experiences.

A special word of thanks is due to Miriam Colum and the *REACH: Journal of Inclusive Education* editorial team for recognizing the importance of this topic and supporting us throughout the process. We also extend our gratitude to the LUMIERE research group at Trinity College Dublin for the funding they provided for this issue, reflecting their commitment to inclusion.

Finally, we would like to thank Jacqueline Ní Fhearghusa and An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta (COGG) for funding the Irish version of this special issue. COGG have worked tirelessly to ensure that all students have access to Irish-medium and Gaeltacht education, without them the path towards inclusion would be very bumpy.

While significant strides have been made, continued policy support and investment are essential to furthering inclusion in Irish-medium and Gaeltacht education. We look forward to the next steps in this journey and to seeing further research, innovation, and collaboration in this critical area.

Ní neart go cur le chéile.

Dr Sinéad Nic Aindriú and Dr Emily Barnes

Guest editors



# 'WHAT DOES ACCESS TO AAC FOR IRISH MEAN TO YOU?'

## GEABAIRE, THE FIRST SYMBOLS-BASED AAC APPLICATION FOR THE IRISH LANGUAGE: PRELIMINARY FINDINGS FROM AN EVALUATION STUDY

**Geabaire** is the first symbols-based AAC app for the Irish language. Users select a series of words that are concatenated into a sentence and spoken by ABAIR synthetic voices. **Geabaire** has been designed to reflect the linguistic structures of Irish and contains a broad, localised vocabulary that empowers those who cannot rely on speech to communicate their thoughts and needs and engage with the curricula, their family, community, and peers. The target users are autistic students in Irish medium education, but it is hoped that **Geabaire** will benefit a broader range of users. This paper discusses the design and development of **Geabaire** and preliminary findings from semi-structured interviews with teachers, parents, speech and language therapists, and an AAC user. It focuses on participants' reflections on what AAC for Irish means to them. Findings indicate that AAC for Irish is necessary to facilitate equal access to linguistic and cultural identity and allow users to participate in their communicative environments.

**Keywords:** Augmentative and Alternative Communication (AAC), Irish, inclusion, Autism, language rights.

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### INTRODUCTION

Irrespective of their abilities, all children should have equal access to their linguistic and cultural identity as a fundamental human right (United Nations, 2006). However, this is often not the case for autistic children in the Irish context. Minimally speaking, autistic children tend to attend either special schools or autism classes, where students in the English medium context are entitled to an automatic exemption from the study of Irish (Department of Education, 2022). Language ability and use are diverse among autistic people. Statistics suggest that 25-30% of autistic children are minimally speaking, although many can understand more than one language (Rose et al., 2016; Digard et al., 2022). Despite evidence to the contrary, there is a lingering misconception among some professionals that learning Irish would be burdensome for autistic students, particularly those with complex communication needs, leading to parents seeking Irish exemptions on behalf of their children or avoiding Irish medium (IM) schools (Nic Aindriú, 2022). However, international research indicates that this avoidance of exposing autistic children to second languages tends to be based on personal belief rather than research (Yu, 2013). Research has consistently shown that bilingualism does not negatively affect the language development or cognitive skills of autistic children and that it can also enhance their social skills and enable autistic individuals to connect with their identity, family, and communities (Romero and Uddin, 2021; Digard et al., 2022). Our collective responsibility is to ensure that autistic people have equal access to language learning and the necessary support to enable this (Digard et al., 2022).

Fortunately, attitudes towards bilingualism are changing, and autistic students now make up a significant proportion of those accessing IM education. Autism was reported as the second most common additional need in IM schools (Nic Aindriú, Ó Duibhir and Travers, 2020). Over the last ten years, there has been a corresponding growth in autism classes in IM settings and Gaeltacht schools (NCSEI, 2024). Many of the students in these classes could benefit from access to Augmentative and Alternative Communication (AAC) (Iacano, 2016). Culturally and linguistically relevant AAC is not just desirable but a pressing necessity for these students and AAC-using Irish speakers in general. It is crucial for these students to participate fully in their communicative environments (Soto and Yu, 2014).

## GEABAIRE, ABAIR AND THE DEVELOPMENT OF AAC FOR IRISH

AAC refers to tools and strategies that can enhance speech or provide an alternative means of communication for those who cannot rely on speech alone to communicate (American Speech-Language-Hearing Association [ASHA], n.d.). Examples of AAC tools and strategies are gestures, Lámh, using picture cards, and writing notes (Buekleman and Light, 2020). **Geabaire**, the AAC system described in this paper, is being developed in Trinity College Dublin at the Phonetics and Speech Laboratory, within the ABAIR research group. It is an AAC app accessed on a tablet that allows the user to select a series of words and images to compose a sentence, which is then read out by an ABAIR synthetic voice in Irish. The voices are developed by the ABAIR project, which is an initiative developing linguistic resources, speech technology, and applications for the dialects of Irish.

**Geabaire** allows users to spontaneously generate words, phrases, or sentences in Irish, enabling them to communicate their thoughts and needs and engage with the curriculum, their family, community, and peers. The system architecture and guiding principles of **Geabaire** are designed to be simple and intuitive, with a deep understanding of the features and structure of the Irish language underpinning the design (Barnes et al., 2022). The layout minimises the number of keystrokes by making the core words, i.e., the most frequently used words, available with fewer hits than fringe words, i.e., less frequently used words such as nouns. Grid arrangement and icon location are consistent across the boards. These elements promote predictability in the motor plan, which research indicates facilitates automaticity, thus reducing the user's cognitive and motor load (Dukhovny and Gahl, 2014).

**Geabaire** contains a broad, localised vocabulary relevant to school curricula. The design aims to facilitate communication and be simple to use and learn. The home board layout is in a grid format, providing efficient access to Irish's core words. Subsequent boards can be accessed via the home board with tabs that provide efficient access to, *RÉAMFHOCAIL* 'prepositional pronouns', *GOB GASTA* 'quick- gab', which includes high-frequency phrases, e.g., *go raibh maith agat* 'thank-you' and *STAD* 'stop' which contains self-advocacy phrases such as *tá sos uaim* 'I need a break' among many more functions. **Geabaire** is currently in the beta testing stage with limited users. The full release is pending the development of a grammar checker that will automatically implement morphophonology such as the initial mutations *séimhiú* and *urú*, for example, the synthesis of children's voices, the development of a bilingual Irish/English system to allow for code-switching, and crucially the ability to use **Geabaire** offline.

## METHODOLOGY

The Research Ethics Committee of the School of Linguistic, Speech and Communication Sciences gave ethical approval for the research project described below. Participants in this study included the parents, speech and Language Therapists (SLTs), and teachers of seven autistic children attending IM schools outside of the Gaeltacht who were invited to trial **Geabaire**. The sampling method used was purposive sampling through existing contacts with snowball sampling, where existing participants suggested other participants. All of the children are autistic and minimally speaking. Two of the seven children are in mainstream settings, while the remaining five attend autism classes. Three children have Irish and English at home (one fluent Irish-speaking parent and one English-speaking parent). Three have only English at home, and one has only Irish at home. To obtain a complete picture, we attempted to interview each child's teacher, SLT, and parent, but this was not possible in every case. The participants comprised the following teachers (n=3), SLTs (n=3), and parents (n=6). Note that the study had one pair of siblings who shared parents and SLTs. In addition, an advisory panel of two SLTs/academics and an adult AAC User were interviewed (n=3). A total of 15 interviews have been conducted to date.

Prior to the study, participants were invited to view a training video explaining the study, the features of **Geabaire**, and some additional instructions on how to use the app. The AAC user, teachers, and parents were asked to use **Geabaire** to communicate or to model as a communication partner with an AAC user in various settings and scenarios during daily routines for ten minutes over ten sessions. Those who were neither AAC users nor communication partners, i.e., academics and SLTs, were invited to assess the system using their clinical judgment. Participants were provided with a list of sample sentences that represent various functions of communication as well as sample core and fringe words to act as a starting point. They were invited to explore **Geabaire** in its entirety however they wished. After four weeks of using the app, they participated in a 45-minute semi-structured interview where they were asked about their experience using **Geabaire** and invited to make recommendations for future adaptations. Thematic analysis (Clarke and Braun, 2017) was used to analyse the data generated through the interviews. The present paper analyses only the first question: 'What does AAC for Irish mean to you?'

## FINDINGS

Themes were coded and recorded according to the interview question, with a high rate of intra-rater reliability. Themes were then combined to form four overarching themes among the four groups: AAC user, teachers, SLTs, and parents. While there was some commonality in responses among the groups, some themes emerged more strongly in certain groups. When viewing this study's findings, the main limitations are (i) the small sample size and (ii) only one AAC user was interviewed. The themes that emerged are as follows:

- Facilitation of Inclusion and Participation
- Tools and Resources for Irish Medium Schools
- Family/Community/Identity
- Language Rights

### Facilitation of inclusion and participation

When describing what AAC for Irish meant to them, the AAC user indicated that participating in local 'Pop-Up-Gaeltacht' events would be possible for them with an AAC that supported Irish. They also pointed to the possibility of engaging more actively in language learning. AAC for Irish would enable them to practice conversing in Irish; they would have a way of 'speaking' the language. They added that with AAC for Irish, they could communicate and use the language should they visit the Gaeltacht areas.

The parents, in particular, emphasised the social opportunities that would come with access to AAC for Irish, with one parent noting that AAC for Irish would bring opportunities for their child to mix socially in the context of an IM school, *"So if he wants to speak Irish with the rest of them, he can do that"* (Parent 2). Another parent highlighted the significance of AAC in facilitating participation in the mainstream class if the child chose to do so, saying that *"if he wants to integrate into the mainstream class, he needs to be able to communicate in Irish, ... it is seriously important to us"* (Parent 3).

When asked what AAC for Irish meant to them, one SLT opened her comments with the words *"Inclusivity and opportunity,"* going on to state that;

*"... if you work in the disability field, you are worried about including people, and then, of course, if some of those people come from families that value Gaeilge 'Irish' or are in a school where Irish is spoken, then there has to be a means for them to participate with AAC that's as Gaeilge 'in Irish'"* (SLT 2).

Another SLT said that it meant that users of AAC for Irish would have the *"ability to be part of the community"* (SLT 1). SLT 5 noted that more autism classes were opening in IM schools and that while the need for AAC for Irish may not have been pertinent in the past, it is now. They emphasised the importance of facilitating access: *"Making sure that the kids that need robust communication access have that no matter what kind of language medium school they have access to"* (SLT 5).

They also touched on the idea of 'buy-in' for AAC from Irish medium schools, referring to *"Irish-speaking schools who are maybe slightly more reluctant to have English-speaking devices in there constantly as well"* (SLT 5).

This need for an Irish language AAC app to get buy-in for AAC use in the classroom was a theme also prevalent among the parent group in the study. The question of whether or not their AAC-using child would be permitted to use their English-language AAC in an IM school, particularly during the first two years of schooling before English was spoken, was such a concern for one parent that it was the first question that they asked the principal when enquiring about the school, *"Because it is really important. It is his only way of accessing the curriculum. So, obviously, he communicates his thoughts and wants and so on. So, to have Irish is massive..."* (Parent 3).

### Tools and Resources in an Irish Immersion Setting

AAC for Irish as an additional, necessary tool or resource was a recurring theme among the teachers. Teacher 1 said AAC for Irish *"was another tool for total communication."* Going on to say, *"The more resources we have as Gaeilge 'in Irish,' the better it has been for the Gaelscoil (IM school). So, it is a very valuable tool for use, even for others in the class, not just the people that need AAC."* Teacher 2 described **Geabaire** as a *"tool to communicate and just to facilitate the boy in my class who needs it."* going on to say, *"It just opens up a whole new form of communication for me in my classroom. It is really essential, and we need it; we really, really need it"*.

Teacher 2 also takes a total communication approach, i.e., creating an environment where a variety of means of communication, e.g. AAC, gestures, Lámh keyword signing, etc., are used to be understood, describing **Geabaire** as a

*"way to communicate along with Lámh and along with all of our visuals, it is something extra, an added resource" (Teacher 2).*

Teacher 3 described Geabaire as a part of a suite of communication tools, saying,

*"It is really positive, and it has enabled us to do a much wider scope of things in the classroom now that we have access to a broader range of communication devices and methods for the children who have different communication methods themselves" (Teacher 3).*

### **Family, community, and identity**

The study includes one family where Irish is spoken exclusively at home and two families where Irish is spoken alongside English with one L1 parent. AAC for Irish has meaning beyond school life and curriculum access for these families. It has a more fundamental meaning as it connects the parent and user with family, community, and identity. In one family where Irish is the home language, the mother said, *"I hope as his Mom that I love Irish, so it is really important to me and for this identity and for his identity as part of the family that he is able to communicate ..."* (Parent 1).

To the AAC User, access to AAC for Irish meant it would be possible to *"actively participate in passing on the language to children [they] may have and to [their] nieces and nephew"*. One SLT spoke about how *"fundamental [AAC for Irish] is from an identity point of view"* (SLT 1). A parent spoke about how AAC for Irish means her child can communicate most appropriately for him, stating that *"sometimes Irish is better."* She said, *"Sometimes he will know the Irish word for something, and sometimes he will know the English word for something. But it is up to him to have the choice; that is so cool"* (Parent 1). A father spoke about how powerful it would be for him to hear the word 'Daidí' in the vocative case with the grammatically required séimhiú included, i.e., 'a Dhaidí' (Parent 4).

### **Language rights**

Among the strongest themes that came through was that of language rights. One SLT described access to AAC for Irish as a 'human right' and pointed to the statutory rights afforded to people with speech-related disabilities to enable them to access education, public services, speech and language therapy, etc., through Irish<sup>1</sup> (SLT 2). A teacher stated that children had a right to the language. As Irish is the primary form of communication, instruction was through Irish in their IM school (Teacher 3).

The parents were particularly strong on this, with one parent saying that there is a tendency to view Irish as a privilege reserved for the middle class and a cultural marker rather than a rights issue, going on to say they felt strongly that *"any service that's available to the English speaker should be available to the Irish speaker"* (Parent 4). Another parent said that access to AAC was "vital" because she is bringing her children up with English and Irish so that her son, who is nonspeaking, *"...gets the same access to be able to communicate and advocate for himself in whatever language is appropriate"* (Parent 1). Another parent said that access to Irish was *"An equality piece"* (Parent 2). Finally, a parent stated that AAC for Irish meant that their child *"has absolutely every chance of becoming bilingual as much as any of the other kids"* (Parent 3).

## **DISCUSSION AND CONCLUSION**

The findings clearly show that AAC for Irish is essential and meaningful to the participants, and that there is a significant need for the resource among the group. It is also clear that the lack of access to AAC for Irish has been a significant barrier to inclusion and participation both at home and at school. The absence of AAC for Irish effectively excludes those who need AAC to communicate from meaningful participation in Irish language learning and, in doing so, denies them access to a core element of their cultural and linguistic heritage as well as all of the well-documented benefits of IM education (Cummins, 1998; Dunne, 2024). Access to AAC for Irish may be a factor for parents deciding whether or not to send AAC-using children to IM schools. There is a question over whether or not English-language AAC systems, are permitted, especially during the first years of schooling characterised by full Irish immersion. There is also a suggestion that a lack of access to AAC in IM settings is a barrier to autistic students integrating with their peers in the mainstream class in a meaningful way.

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1 The Education Act 1998 highlights the importance of inclusivity and equal access, ensuring accommodations for disabled students or those with additional learning needs while also affirming parents' rights to choose a school for their children, including IM schools (Government of Ireland, 1998). The Education for People with Special Education Needs EPSEN Act 2004 outlines the right of students with disabilities to access appropriate education tailored to their needs (Government of Ireland, 2004). Article 8 of the Irish Constitution recognises Irish as the first official language of Ireland meaning that public services should be available to all through Irish (Bunreacht na hÉireann, 1937 Article 8). The Policy on Gaeltacht Education 2017-2022, supports the availability of educational services, including speech and language supports, through Irish for children in Gaeltacht areas. (Department of Education and Skills, 2016).

The importance of the availability of tools and resources in IM and Gaeltacht schools is well documented. The situation is improving, but IM schools need access to the same tools and resources available to English-medium schools to enable them to teach children with additional learning needs (Nic Aindriú and Ó Duibhir, 2022). The advances in speech and language technologies for the Irish language, as documented in the Digital Plan for the Irish Language, are encouraging (Government of Ireland, 2023). Interestingly, all of the teachers who have responded so far see AAC for Irish as being a tool or resource in a total communication approach for multi-modal communication, i.e., using a variety of modalities, e.g., Lámh, visual schedules, and AAC to communicate and to develop language and communication skills. Communication as a multimodal process for many with speech-related disabilities is well-supported by research (Beukelman and Light, 2020). Where Irish is the language of the home, there is an even greater urgency to provide AAC for Irish. Using a sociocultural perspective on bilingualism and AAC, Soto and Yu (2014) contend that language use significantly impacts children's social development since language develops through involvement and mediates participation in sociocultural activities. The findings show that participants view Geabaire as a means to facilitate the right to equal access to Irish for AAC users and this is congruent to a greater desire for full inclusion and participation in Irish society in general, whether that be from the point of view of access to inclusive education or full participation in family, community and cultural life.

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# DYSLEXIA IN THE IRISH-MEDIUM AND GAELTACHT CONTEXT: CONSIDERATIONS FOR EDUCATORS

This article reviews key research on dyslexia for educators, focusing on definitions, the suitability of Irish-medium and Gaeltacht schools for students with dyslexia, identifying dyslexia in bilinguals, and providing support within these educational settings. Using a narrative review approach, the study emphasises bilingual contexts. The weight of evidence suggests that immersion schools are suitable for students with dyslexia, though outcome studies are needed in the Irish-medium (IM) context. The review highlights the development of assessment tools tailored for IM and Gaeltacht settings and discusses the integration of evidence from multiple assessment sources. While international research offers valuable insights into literacy support, further studies are needed to assess how well these findings apply within Irish-medium education contexts.

**Keywords:** Dyslexia, immersion, Irish, bilingual, literacy.

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## INTRODUCTION

Dyslexia is the most common additional educational need in Irish-medium schools at both primary (Nic Aindriú et al., 2020) and post-primary (Nic Aindriú, in press) level. This article aims to provide a focused review of the literature to address key questions that practitioners frequently encounter.

This review takes the form of a narrative literature review, exploring the themes related to dyslexia and additional educational needs which are the focus of this article. Unlike systematic reviews, which offer an exhaustive analysis of research on a specific question, this review provides a targeted synthesis of information (Sukhera, 2022) that is particularly relevant for practitioners within the IM and Gaeltacht context. The databases searched were EBSCOhost, Taylor & Francis, Springer and PsycINFO. The keywords used in the review were strategically selected based on relevant theoretical frameworks. For example, Frith's (2001) framework guided the selection of terms related to the definition of dyslexia, such as "dyslexia" AND "genetic" OR "neurobiological" OR "cognitive" OR "behavioural" OR "environmental". Articles were selected for the robustness of their methodological rigour as well as, where possible, their applicability to the Irish context. The review includes primary research articles, review articles, and practitioner-oriented resources, including books and handbooks. The references of relevant articles were also examined to identify sources. There are several limitations to the present article; these include that the review is not comprehensive or exhaustive, as well as the lack of research derived from the IM and Gaeltacht context to inform the review.

Regarding terminology, this article adopts person-first language (e.g. "a person with dyslexia"), and refers to dyslexia as a learning difference, though it is recognised that language preferences vary among individuals (AHEAD, 2024).

## WHAT IS DYSLEXIA?

Dyslexia is a learning difference characterised by challenges in word recognition and spelling, resulting in lower reading fluency and/or accuracy than is typical for readers of the same age (Vellutino et al., 2004; Peterson & Pennington, 2015). Dyslexia may involve difficulties in information processing and organisation skills (British Dyslexia Association, 2024), and often co-occurs with a number of other learning differences, most notably ADHD and specific language impairment (Peterson & Pennington, 2015). Dyslexia is a heritable trait; children who have a parent with dyslexia have a 40-60% probability of having dyslexia, and this likelihood further increases if other members of the family are dyslexic (Schumacher et al., 2007). Importantly for educators, this genetic component means that family history can assist in identifying dyslexia. While individual studies have identified particular strengths such as creativity (Bigozzi et al., 2016) and certain visual-spatial tasks (Duranovic et al., 2015), a recent review of the literature suggests that findings are inconsistent (Odegard & Dye, 2024). Though people with dyslexia undoubtedly have strengths, these strengths vary from person to person, and are not expected to be the same for everyone with dyslexia (Odegard & Dye, 2024).

Importantly, factors in the classroom environment – discussed below - which teachers have control over can affect a person's experience of dyslexia. Central to any learning process is motivation, which is often shaped by social factors (Eccles & Wigfield, 2020). Therefore, creating a supportive learning environment that aligns with a child's interests is paramount. Additionally, the attitudes of educators themselves play a significant role, as positive attitudes have been shown to predict better literacy outcomes for students (Hornstra et al., 2010). A further environmental factor is the methods of literacy instruction used. For example, phonics methods of literacy instruction led to higher attainment than other methods which are not rules-based (Galuschka et al., 2014). Phonics approaches should be used as part of a balanced approach to literacy instruction, along with other effective literacy instruction techniques which will be explored later in this article.

## **IS IRISH-MEDIUM EDUCATION SUITABLE FOR CHILDREN WITH DYSLEXIA?**

This section reviews research on the suitability of immersion education for those with dyslexia, focusing on international research on literacy-related outcomes and Irish research on the perceptions of stakeholders. At present, there is no comparative research in the Irish context on literacy outcomes; however, international research (see Genesee & Fortune, 2014 for a review), provides valuable insights. Evidence from French-immersion programmes in Canada indicates that there is no significant difference between the reading attainment of students with additional educational needs (AEN) in French immersion programmes compared to their peers in English-medium schools (Genesee, 1978) and that students who transfer to English-medium schools do not make more progress than their peers who stay in immersion schools (Bruck, 1985). In the North American context, students with AEN in two-way (Spanish-English) immersion programmes have the same attainment on English standardised assessments as their peers in English-medium programmes (Myers, 2009), and another found that immersion students outperformed their English-medium peers in reading and maths (Thomas & Collier, 2010). It is worth noting, however, that more recent research is needed, specifically with students with dyslexia to extend these findings. Current evidence suggests that while people with dyslexia typically have lower literacy attainment than their peers without dyslexia in both of their languages (Morfidi et al., 2007), they still manage to become literate at a level comparable to their English-medium peers with dyslexia, with the advantage of being bilingual.

With regard to stakeholder attitudes, research in the Irish context demonstrates largely positive attitudes towards the participation of students with AEN in IM education (Patton & Mathews, 2020; Nic Aindriú & Ó Duibhir, 2023). The vast majority of principals in IM schools believe that students with AEN, including dyslexia, perform as well as, or better than, they would in English-medium schools (Patton & Mathews, 2020). Principals highlight key challenges to inclusion, such as the limited focus on these areas in initial teacher education and the lack of research specific to the Irish context to underpin such education. Additionally, principals express concerns about the extent to which decisions made by stakeholders recommending a transfer to an English-medium school are evidence-based, rather than personal opinions (Nic Aindriú, in press; Patton & Mathews, 2024). Interestingly, parents of children with AEN do not view language as a barrier, and some identify benefits of immersion education, such as creating future opportunities for their children (Nic Aindriú & Ó Duibhir, 2023).

From a linguistic perspective, one of the most pertinent factors affecting literacy acquisition in alphabetic writing systems is orthographic depth. Orthographic depth is a measure of how complex and inconsistent a writing system is (Katz & Frost 1992). It is often thought of as a continuum, with transparent orthographies such as Spanish to opaque orthographies such as English (Ziegler et al., 2010). The orthographic depth of a language significantly affects the time it takes to become literate in a language (Seymour et al., 2003). Orthographic depth also plays a key role in how dyslexia manifests. In languages with complex orthographies, such as English, dyslexia typically affect both reading accuracy and fluency (e.g. Vellutino et al., 2004). In contrast, in more transparent orthographies like Spanish, dyslexia is most often characterised by slow but accurate reading (Serrano & Defior, 2008). While Irish has a relatively complex writing system (i.e. it has many spelling rules), it is much more consistent than English (i.e., it adheres to the rules) (Stenson & Hickey, 2016). In order to take advantage of the consistency of the orthography, however, it is necessary to be familiar with the spelling-sound rules.

The language of schooling is just one of many factors which impact school choice. Previous research highlights the importance of social factors – including teachers' attitudes and expectations of students, and the presence of good peer support – as factors central to dyslexic students' experience of schooling (Gibson & Kendall, 2010). In light of this, the effect of recommending a transfer to an English-medium school on students' academic self-concept – as well as their existing peer group support – are additional factors which should be considered.

## HOW CAN DYSLEXIA BE IDENTIFIED IN BILINGUAL STUDENTS?

The Continuum of Support (DES, 2007) recommends that teachers gather a variety of evidence to help identify student needs. This evidence should come from several sources: classroom-based data (e.g. assessment results, observations, work samples), the student's perspective (insights into their challenges and possible strategies for support), the parents' perspective (their view of the child's development and suggestions for support), as well as other relevant information (e.g. reports from previous schools). Best practice suggests that bilingual students should be assessed in both of their languages (Murphy & Travers, 2012; de Villers, 2015), with findings interpreted in relation to the amount of experience they have in each language.

There are several Irish language screening assessments currently available or under development. These include the *Áis Mheasúnaithe sa Luathlitearthacht* (Clay & Nig Uidhir 2017) and a bilingual whole class screener of literacy (Barnes & Ó Duibhir, 2023). In addition, a standardised early literacy screener in Irish, the Diagnostic Test of Early Literacy, is currently being developed by the Educational Research Centre (ERC, 2024). For those in the post-primary context, the *Measúnú agus Diagnóisic don Iar-bhunscoil – Gaeilge* is being standardised by the ERC in September 2024 (ERC, 2024) with the prospect of being available to all schools in the coming years.

While screening tests provide a snapshot of a student's skills at a specific moment in time, collecting work samples over an extended period offers a more comprehensive view of their development (Reid, 2009). When analysing work samples, examining the types of errors made can yield valuable insights to guide literacy support. Spelling errors, for instance, can be categorised as phonological, orthographic, or morphological (Silliman et al., 2006; see Table 1 for Irish examples). For older students, assessing features such as sentence length, the number of clauses within a sentence and the accuracy of punctuation may also be informative. Discrepancies between a student's oral and written language skills may indicate reading challenges (Reid, 2009), given adequate literacy instruction in the language. To explore this, teachers can ask a child to narrate a story on a given topic and then write a similar story, allowing for a comparison between the two. One way to do this is ask students to narrate a story based on 4 pictures depicting an event, and then ask them to write a story based on a similar set of pictures (Fey et al., 2004). Teachers can evaluate the story quality (e.g. content and structure) as well as linguistic factors (e.g. vocabulary richness, grammatical accuracy, sentence length) (Fey et al., 2004).

Table 1. Examples of phonological, orthographic and morphological errors in the Irish language

Phonological errors	Letters do not accurately represent corresponding sounds	e.g. <dal> for <i>dubh</i>
Orthographic errors	Letters accurately represent sounds, though the spelling is atypical	e.g. <dumh> for <i>dubh</i>
Morphological errors	Errors relating to prepositions, accurate conjugation of verbs etc.	e.g. <ar Seán>

Several observational checklists designed for English-speaking contexts can be adapted for use with Irish-English bilingual students. Examples include Hannell's (2013) checklist, which features statements related to language and literacy skills, memory, and motivation, as well as Tod's (2000) checklist focuses on student behaviour, literacy practices, and academic attainment. Additionally, Reid's (2009) checklist offers a comprehensive evaluation of executive function (e.g., attention, organisation, and sequencing skills), language and literacy abilities, self-concept, and learning preferences. When adapting these checklists for IM education, language and literacy statements (e.g. "often has difficulty sounding out words") need to be assessed in both English and Irish to accurately reflect students' bilingual abilities and behaviours.

In some cases, students may be referred to educational psychologists for a formal diagnosis. As there are currently no dyslexia diagnostic tools available in Irish, assessments are typically conducted using English-language versions (Nic Aindriú et al., 2021; Murtagh & Seoighe, 2022). Results and reports based on these assessments should be interpreted with caution. Research indicates that students in IM schools initially lag behind their peers in English literacy during the early years of schooling, but generally catch up by Second Class (fourth year of schooling) (Parsons & Lyddy, 2016). However, it is important to note that this finding applies to the group as a whole - individual students may catch up faster or slower depending on their learning pace. This lag affects the extent to which students in IM and Gaeltacht schools can be compared to norms for English-medium students. In addition to the challenge of accurate norms, evaluating attainment in just one of a bilingual's languages provides only a partial picture of their attainment (Murphy & Travers, 2012).

Where possible, it is advisable to select an educational psychologist with expertise in bilingual development (Nic Aindriú & Ó Duibhir, 2023; Murtagh & Seoighe, 2022). There is still evidence of some educational psychologists providing recommendations which are not evidence-based or aligned with current research findings on bilingualism (e.g., Patton & Mathews, 2024; Nic Aindriú & Ó Duibhir, 2024). Note that the National Educational Psychological Service (NEPS) have a Gaelige (Irish) working group with specific expertise in this area in both IM and Gaeltacht schools.

## HOW CAN STUDENTS WITH DYSLEXIA BE SUPPORTED?

Supporting students with dyslexia requires attention not only to the linguistic and cognitive aspects of literacy but also to the social, cultural, motivational, and emotional dimensions. This includes considering factors such as family literacy programmes, whole-school culture, and creating a supportive classroom environment (e.g. Au & Raphael, 2011; Brown et al., 2018). Equally important are approaches that nurture students' motivation by offering opportunities for success and making reading an enjoyable experience, given the relationship between motivation and literacy attainment (Morgan & Fuchs, 2007). These factors are important for all readers, but particularly for students with dyslexia, who often have higher levels of anxiety and lower self-esteem than their peers (Novita, 2016). A strengths-based approach focussing on areas in which the child excels – as opposed to areas of low attainment – is recommended (Rappolt-Schlichtmann et al., 2018). The handbook *Scéalta den Scoth: ag cothú fonn léitheoireachta* (Dunne, 2024) offers valuable suggestions for fostering a positive and engaging literacy environment while also developing critical literacy skills.

The brief review below centres on the linguistic and cognitive components of literacy, particularly effective strategies within literacy programs designed for readers with dyslexia. Most of the research is based on English-language contexts, and further studies are needed to assess the relevance of these findings in the Irish context. For practical strategies to enhance the skills discussed below, refer to Hickey and Stenson's (2019) and Dunne's (2024) handbooks.

When considering early reading skills, phonemic awareness interventions have been shown to be more effective for younger readers compared to older ones (Ehri et al., 2001a; Ehri et al., 2001b). These interventions are particularly impactful when letters are included to provide a concrete representation of sounds (Ehri et al., 2001a). In bilingual settings, explicit, language-specific instruction is often necessary to develop phonemic awareness in a second language (Barnes et al., 2024). While certain phonemic awareness skills can be expected to transfer across Irish and English (the skill of deletion, blending or segmenting phonemes), others need to be taught in each language (the skill of differentiating between the individual sounds of a language, for example, being able to indicate that the first sound in the word *capall* and last sound in *bealach* are different) (Barnes et al., 2024). Building on this foundation, structured phonics programs are effective in enhancing reading accuracy (Ehri et al., 2001b).

Beyond phonemic awareness, morphological awareness is another important skill that supports reading and spelling. This involves recognising the smaller components that make up a word. For example, the word *míchairdiúil* 'unfriendly' consists of the prefix *mí*, the base noun *caird[e]*, and the suffix *-iúil*, which indicates that the word is an adjective. In Irish, morphological awareness also includes understanding concepts like lenition (e.g. a teach), eclipsis (e.g. a dteach), and noun cases (e.g. bean an tí). A sequenced approach can be taken to developing morphological awareness, and The Primary Language Curriculum provides guidance on when awareness of each feature typically develops. Research shows that enhancing morphological awareness can effectively improve the spelling skills of dyslexic students (Arnbak & Elbro, 2000). While certain aspects of morphological awareness can be expected to transfer across languages (e.g. understanding what a noun, adjective, prefix or suffix is), others need language-specific instruction (e.g. knowing that the consonant of the second word in a compound word such as *seanbhean* must be lenited).

Moving on towards text-level reading skills, developing a sight word vocabulary is key to becoming a fluent reader. Sight words are words that do not need to be decoded, and instead are read effortlessly from memory as a whole word. Readers with dyslexia need extensive opportunities to read a word in order to store it as a sight word (Share and Shalev, 2004). The *Cód na Gaeilge* games (CCEA, 2024) provide a good platform for students to develop a sight word vocabulary in an enjoyable way. Reading fluency can also be enhanced through repeated reading, a strategy that is especially effective when corrective feedback is provided (Therrien, 2004). This technique involves rereading a short text until a target reading rate is achieved (Meyer & Felton, 1999). Note that this type of task may not suit all students due to its repetitive nature, and more engaging alternatives can be found in Dunne (2024).

Students with dyslexia do not struggle with oral language comprehension, unless there is a co-occurring language impairment (Robertson & Joanisse, 2010), so reading comprehension challenges likely stem from decoding and fluency issues. Nevertheless, explicitly teaching comprehension strategies is recommended, as recent research in the Irish context (de Brún, 2022) highlights this as an area in which teachers' practice is in need of development. Examples of reading comprehension strategies include questioning, activating prior knowledge, summarising, predicting and

clarifying (see Educational Endowment Foundation, 2021). A robust oral vocabulary may compensate for reading comprehension difficulties in dyslexic readers (Cavalli et al., 2016), and as such it is worth spending time developing the depth and breadth of students' vocabularies.

Assistive technologies can be another source of support for students with dyslexia. A sociotechnical view of assistive technology – one which emphasises the person, the environment and the available technologies - should be taken when choosing the most suitable technologies (Wynne et al., 2016). Assistive technologies which may be useful for those with dyslexia are reviewed by Nic Aindriú (this issue). Successfully incorporating assistive technologies requires thoughtful consideration. One tool which is useful to guide the process is the SETT (Student, Environment, Tasks, Tools) framework by Zabala (2020) which supports stakeholders in selecting appropriate assistive technologies.

## CONCLUSION

Dyslexia is a learning difference that affects reading and/or spelling attainment and often co-occurs with other traits such as ADHD. The weight of evidence suggests that immersion education is suitable for students with dyslexia, provided the necessary resources are available. Progress has been made in relation to dyslexia screening tests, though Irish language tools for educational psychologists to formally diagnose dyslexia are still needed. Supporting students with dyslexia requires focusing on literacy as a social, cultural and emotional, as well as a linguistic and cognitive skill. There are high quality, research-informed resources available to educators, as well as a growing range of Irish language technologies to assist students. Key areas for future research include outcome studies of students with dyslexia in Irish-medium and Gaeltacht schools, as well as research on the efficacy of different types of intervention in the Irish-medium and Gaeltacht context.

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# ICT TO MEET THE ADDITIONAL EDUCATIONAL NEEDS OF STUDENTS IN IRISH IMMERSION AND GAELTACHT EDUCATION

The benefits of using information and communication technology (ICT) for the inclusion of students with additional educational needs (AEN) have been widely publicised internationally. The use of ICT allows students to access curriculum content and demonstrate their learning in a variety of ways. The limited data available suggests that there are benefits in relation to the use of ICT for bilingual students. Immersion education schools and teachers often have difficulty accessing appropriate ICT resources in the language of instruction of the school. This is particularly the case if it is a minority language. Using mixed methods research, this study investigated the challenges that teachers face when accessing ICT through the medium of Irish and the resources that they require in this area. The findings suggest that there has been some improvement in the availability of ICT through the medium of Irish, however some teachers are still unaware of the products available. More developments need to be made in this area to enable teachers to overcome the challenges that they face.

**Keywords:** information and communication technology (ICT), additional educational needs (AEN), bilingual, immersion education, Irish.

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## INTRODUCTION

The use of information and communication technology (ICT) has been recommended for students with additional educational needs (AEN) to enable them to access and respond to the curriculum (Florian & Hegarty, 2004; Istenic Starcic & Bagon, 2014). The availability of bilingual or minority language ICT resources for students with AEN can vary depending on the context and resources available in each region or educational institution (Howard, 2023). For example, resources may depend on factors such as educational policies, funding, collaboration and partnerships, and customization or language adaptation possibilities (Al-Muwil et al., 2019; Turner-Cmuchal & Aitken, 2016). Collaboration between educational institutions, technology developers, and language experts is often necessary for the creation and availability of bilingual or minority language ICT resources. Unfortunately, these resources are not always available. In some cases, teachers or educational professionals may need to adapt existing ICT resources to meet the specific needs of bilingual/minority language students with AEN. This can involve modifying the language, interface, or content to ensure accessibility and usability for these students (Maldonado-Manso et al., 2018). Internationally, immersion and bilingual education teachers have spoken about the challenges that they face when accessing ICT in the language of instruction of the school (Durán-Martínez & Beltrán-Llavador, 2020; Wojtowic et al., 2011). Furthermore, teachers have discussed how they need more training on how to make ICT resources adaptable for their bilingual/minority language context (Gómez-Parra, 2022; Pérez Cañado, 2016).

This study focused on the use of ICT for the inclusion of all students in Irish immersion (IM) and Gaeltacht schools in the Republic of Ireland. In these schools the day-to-day language of communication and instruction is Irish (Ó Ceallaigh & Ní Dhonnabháin, 2015). Students undertake a period of immersion in the Irish language in IM primary schools to help build their Irish language skills in a positive environment (Department of Education and Skills, 2016). There are IM schools located in Gaeltacht areas, where traditionally the language of the community has been Irish (Údarás na Gaeltachta, 2023). However, over the last few decades, this area has experienced much cultural and linguistic diversity and data suggests that fewer families living in the Gaeltacht have Irish as their home language (Ó Giollagáin & Charlton, 2015). Also, there are IM schools outside of the Gaeltacht areas, where the majority language of the community is English. In these schools, most students enrolled come from homes where they do not speak Irish as their first language, therefore most students start school with limited Irish language proficiency (McAdory & Janmaat, 2015). As outlined in Table 1 below, there are less primary and post-primary IM schools located in Gaeltacht areas than in areas outside of the Gaeltacht. This study included primary and post-primary schools from both regions.

**Table 1:** The number of schools and students being educated in Irish-medium schools (Gaeloideachas, 2024)

	Primary students	Primary schools	Post-primary students	Post-primary schools
Outside of the Gaeltacht	37,500	153	11,951	3,832
In the Gaeltacht	7,360	105	47	29

### Digital plan for the Irish language

Digital plan for the Irish language The Digital Plan for the Irish Language is focused on leveraging digital technologies to support and promote literacy in the Irish language (Government of Ireland, 2022). The goal of the plan is to enhance the learning, teaching and everyday use of the Irish language through the innovative use of digital technologies (Government of Ireland, 2022). The goal of the plan is to enhance the learning, teaching, and everyday use of the Irish language through the innovative use of digital technologies (Government of Ireland, 2022). It also aims to develop and disseminate high-quality digital resources in the Irish language, such as e-books, educational apps/websites, online courses, and multimedia content, with the aim of making learning Irish more accessible and engaging. The focus is on providing teachers with digital tools and resources to effectively teach Irish, along with providing them with professional development programs that focus on integrating digital technologies into Irish language education. Another aim of the policy is community and cultural engagement with the Irish language through using Irish in digital communications and social media to promote its use in everyday life, e.g., campaigns, online communities and digital content that celebrate and use the Irish language. Partnerships and collaboration between educational institutions, tech companies and cultural organisations is central to the implementation of the plan, further promoting the development of digital initiatives that support Irish literacy. Accessibility and inclusion is promoted through ensuring that digital resources for Irish literacy are accessible to all, including those in rural areas and individuals with disabilities, so that everyone has the opportunity to learn and use the Irish language. The plan emphasizes the need to develop a robust digital infrastructure, through investments in high-speed broadband and 5G networks, to ensure connectivity in urban and rural areas.

### METHODS

The Research Ethics Committee of Dublin City University gave permission for the research and the guidelines were followed strictly. A sequential mixed methods approach was adopted for this research. In the first stage, all IM and Gaeltacht primary and post-primary schools were invited by email to participate in the study. These schools were sent an email with a plain language statement explaining the study and an online link to the questionnaire. Teachers from 56 IM schools completed an anonymous online questionnaire on the resources available through Irish and the resources that they required through Irish to meet the AEN of their students. The quantitative data collected were analysed descriptively using the Statistical Package for Social Sciences (SPSS) due to the small sample size. The questionnaire consisted of 19 questions comprising of multiple choice and open-ended questions (see Table 2). The questionnaire was piloted and based on the feedback received, several terminology amendments were made.

**Table 2.** Questionnaire design

Background Information	Designed by author
Challenges related to accessing teaching and assessment resources	Andrews, 2020; Ní Chinnéide, 2009.
Education professionals	Andrews, 2020; Ní Chinnéide, 2009
Creating resources through the medium of Irish	Created by author
Assessment	Andrews, 2020; Pert & Letts, 2001; Ní Chinnéide, 2009; O'Toole & Hickey, 2013
Resources	An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta, 2010; National Council for Curriculum and Assessment, 2007; Ní Chinnéide, 2009.

In the second stage of the research, semi-structured interviews were undertaken with teachers from all school types. These interviews gathered in-depth information on the topics covered in the questionnaire (see Table 2). Interviews were conducted for a maximum of 30 minutes with teachers and principals. These interviews were conducted online

due to the COVID-19 pandemic restrictions and the dispersed geographical location of participants. Interviews enabled researchers to gain a deeper understanding of the data collected from the first stage. The qualitative data collected through the interview process were analysed using thematic analysis (Braun & Clarke, 2017). This process enabled the researcher to identify patterns and themes within the qualitative data and to address the research issues (Braun & Clarke, 2017).

### Recruitment and profile of interview participants

Interviews were conducted with a total of 32 teachers from IM and Gaeltacht primary and post-primary schools (see Table 3). The main participants were special education teachers, but teachers with other roles were also interviewed. Special education teachers provide additional teaching to children with AEN (NCSE, 2024). A particular effort was made to ensure that the voice and views of each Gaeltacht area were considered. Participants for this stage of the research were recruited through a plain language statement and informed consent form being sent to all primary and post-primary IM and Gaeltacht schools throughout the country.

**Table 3:** Number of interview participants from each school type and their role within their school.

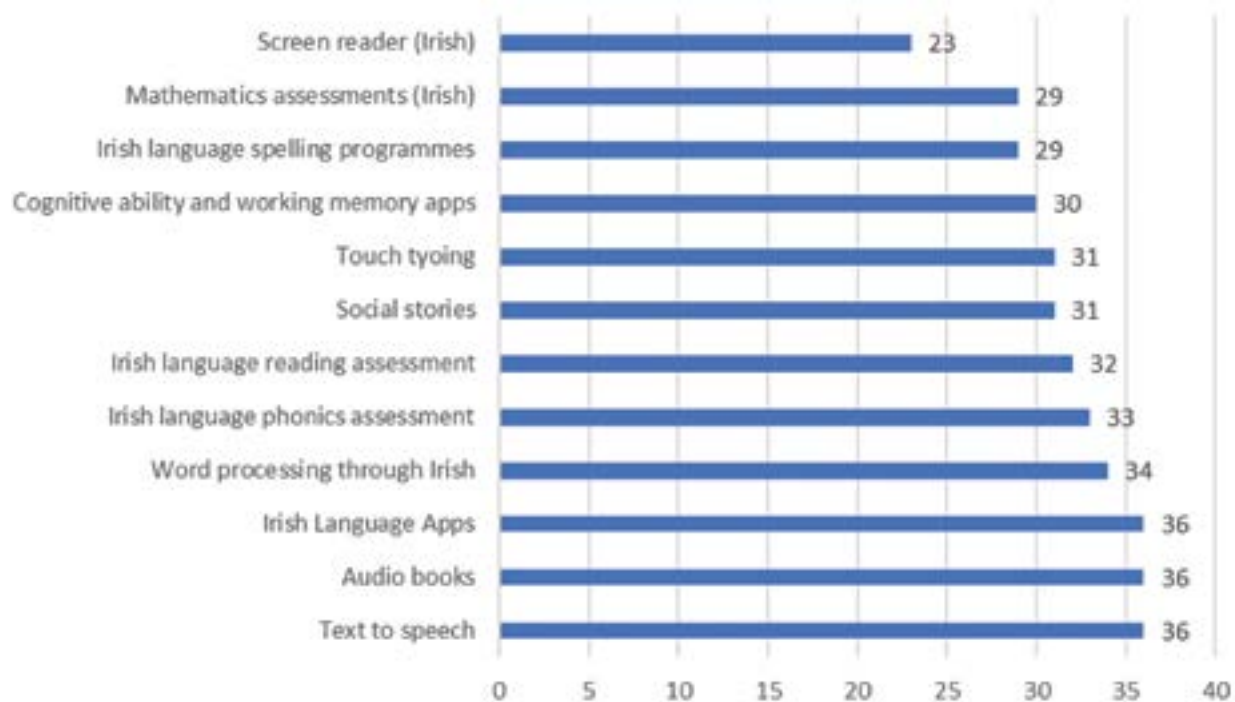
	Administrative Principal	Teaching Principal	Mainstream Teacher (Primary)	Subject Teacher (Post-primary)	Special Education Teacher	Special Class Teacher
IM primary schools outside the Gaeltacht (N=13)	2	2	2	N/A	7	0
IM post-primary schools outside the Gaeltacht (N=6)	0	0	0	3	3	0
Primary Gaeltacht Schools (N=7)	1	2	1	N/A	3	0
Gaeltacht Post Primary Schools (N=6)	1	0	0	0	3	2

## RESULTS

In the questionnaire, participants (n=56) were asked what types of ICT were required through the medium of Irish using a multiple-choice question. Text to speech (n=36), audiobooks (n=36) and Irish language applications (n=36) were identified as the most needed resources (see Figure 1 below). Word processing technology in Irish was listed next (n=34). Applications to assess students' Irish language phonics were listed in fifth place (n=33), followed by Irish literacy assessment applications (n=32). The other ICT resources required through Irish were social stories (n=31), touch-typing programmes (n=31), applications to develop student cognitive abilities and working memory through Irish (n=30), spelling programmes (n=29), mathematical assessments through Irish (n=29) and an Irish language screen reader (n=23).

In the interviews, teachers said that the most challenging aspect of including students in IM education was not having access to resources in Irish. This is a challenge experienced by bilingual and immersion education teachers internationally (Durán-Martínez & Beltrán-Llavador, 2020; Wojtowic et al., 2011). Many teachers indicated that they felt they had no choice but to use ICT resources in English to meet the needs of their students. In some cases, this may be because they were unaware of the Irish language resources available. One teacher spoke about how she adapted an English language mathematics resource by making voice-overs for the English language instructions. Four primary Gaeltacht teachers said that more applications were needed through Irish, and two teachers wanted more interactive websites through Irish. Three teachers reported that there is a need for more mathematics applications and games through Irish.

*More applications are needed, I think. For example, the Cód na Gaeilge, it's excellent, but it doesn't start in Junior Infants. (Interview 1)*

**Figure 1. The types of ICT required through Irish.**

From the Gaeltacht post-primary cohort, one teacher said they that while they use a computer in the classroom, they try to avoid ICT as there are no applications or websites available to them through Irish. Similarly, another teacher spoke about how they try to avoid any English-based website or online resource. Instead, this teacher used online worksheets with no text and a lot of pictures. Regarding ICT use in IM post-primary schools outside the Gaeltacht, the Irish-language, history, and music teacher would like more interactive websites available in Irish. The lack of websites available through Irish can create problems in terms of students accessing and acquiring subject specific Irish language terminology. The teachers in the study described how their students enjoyed using technology and the immediate feedback was an exciting factor for their learning. It also helped students engage with new curricular concepts and reinforce previous learning.

*They really liked the technology — anything related to the computer, and they were able to get immediate and positive feedback, this really helped them. (Interview 6)*

## DISCUSSION

The data presented above suggests that more ICT software through Irish needs to be developed to assist students with AEN. However, the data also identified that many teachers are unaware of the Irish language ICT resources available. The ICT available through Irish is discussed in further detail below. It was identified, that in the area of literacy difficulties, for example, speech to text (Bruce, Edmonson & Coleman, 2003; Chiu, Liou, Yeh, 2007; Gardner, 2008; Higgins & Raskind, 2000, 2004; MacArthur, 2009), text to speech (Parr, 2013; Wood, Moxley, Tighe, & Wagner, 2017), predictive text software (Evmenova, Graff, Jerome, & Behrmann, 2010), and interactive books (Huriyah, 2018) through Irish would be beneficial for teachers and students, however, some of these resources are already available through Irish, for example, text to speech and speech to text (e.g., Microsoft Word, ABAIR.ie). The teachers also spoke about how they felt a touch-typing course in Irish would be beneficial to assist students with reading or motor skill difficulties (Koorland, Edwards, and Doak, 1996; Tenney and Osguthorpe 1990). The limited research available suggests that mathematics ICT programmes help bilingual students develop their mathematics skills, however, teachers in IM schools face a significant challenge accessing these resources through Irish. It is therefore suggested that the further development of mathematics and ICT applications would be beneficial through Irish for both primary and post-primary students (Outhwaite et al., 2018; Outhwaite, Gulliford, & Pitchford, 2020). For example, virtual mathematics games have been shown to promote the learning and motivation of students with AEN (Lämsä et al., 2018). The data also suggests that more ICT applications and resources are needed through Irish to assist with the personal, social,

and emotional development of IM and Gaeltacht students (Boucenna et al., 2014; Mitchel, Parsons, Leonard, 2007). This is particularly important as there is a widening body of research available on the benefits of ICT for autistic students and those with difficulties in these areas (Cabanillas-Tello & Cabanillas-Carbonell, 2020; Scarella et al., 2023).

There have been many developments in ICT Irish language resources over the last decade, with much funded work being undertaken in the Republic of Ireland. As mentioned previously, it would appear from the findings of this study that perhaps some teachers are not aware of the technology available to them through Irish. Microsoft Word now offers many functions through the medium of Irish, such as spell check, dictation, text to speech, and transcription. There are other spelling and grammar checking resources such as [GaelSpell](#) and [Gaelgram. Language Tool](#) is a free AI online and Google Chrome extension for spelling, style, and grammar checking across more than 30 languages including Irish. [Abair.ie](#) (Ní Chasaide et al., 2023a) contains state-of-the-art speech and language technologies in Irish. The site includes access to speech synthesis and recognition resources, a speech chat system for practicing irregular verbs, [an Scéalai](#) (Ní Chiaráin, 2022) which is an intelligent computer assisted language learning platform, Mól an Óige (Ní Chasaide et al., 2023b) which is an Irish pronunciation and pre-literacy app for young people, and a [free screen reader](#) that is suitable for Windows operating systems. [Geabaire](#) which is an Irish Augmentative and Alternative Communication (AAC) device for people without speech is also available (Barnes et al., 2023), a C-Pen which scans texts and read aloud through Irish is also being developed (more information on Abair.ie). Other resources are also available such as LARA –Learning and Reading Assistant (Akhlaghi et al., 2022), this is a platform that creates multimedia annotated texts to support the development of reading skills.

## CONCLUSION

It is clear from the findings of the study that perhaps some teachers in IM and Gaeltacht schools are unaware of the improvements that have been made in the development of Irish language ICT resources over the last decade. It is therefore important that teachers are provided with accessible information in relation to the resources that are available. First and foremost, it is essential that all schools have access to a high-quality digital infrastructure, such as Wi-Fi and modern computers, along with training opportunities for teachers in the area of ICT. These elements set an essential foundation for effectively incorporating technology into teaching, learning, and assessment.

Nevertheless, there is a need for further funding and development in this area in order for students in IM education to have the same access to ICT resources as those enrolled in English-medium schools. However, addressing the challenges outlined in this study is not an easy feat. It requires collaboration among educators, curriculum developers, technology providers, and policymakers to ensure that bilingual/minority language students with AEN have equal opportunities to access and benefit from ICT tools in their educational journey. It would also be worthwhile to ensure that the technology Irish language users, particularly in the context of disability and access, are included in the design and development processes in the future. This would ensure that their needs are directly addressed, rather than determined in a top-down approach by developers or educators.

Internationally, there is a need for more developments in this area, as ICT can provide bilingual children with AEN access to diverse learning opportunities, personalized support, and interactive tools that can foster their language development, cognitive skills and social skills. It can further empower them to engage actively in their education, overcome challenges, and reach their full potential.

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## “YOU LEARNED THE LANGUAGE WITHOUT EVEN REALISING”: RESILIENCE AND CHALLENGES OF SECOND-LANGUAGE LEARNING FOR LEARNERS WITH DYSLEXIA IN IMMERSION EDUCATION

Learners with dyslexia can experience challenges in second language (L2) learning, given how their brain interprets language and processes vocabulary. This study explored the experiences of learning Irish as an L2 in Irish-medium (IM) and English-medium (EM) primary schools in the Republic of Ireland. Semi-structured interviews were conducted with four young adults (undergraduates, aged 19-22) with dyslexia who reflected on their L2 Irish language learning experiences in primary school. The findings indicate similar experience for learners with dyslexia in IM schools and EM schools. The experiences of these learners as they engaged with L2 learning was nuanced, including cognitive and emotional challenges as well as strengths across language learning, such as the use of decoding strategies. The findings highlighted the importance of educational resilience - positive attitudes towards, and personal identification with, the Irish language. Perseverance was also important trait within these learners, as it helped them to learn and engage with the L2 despite the language and literacy challenges that dyslexia can bring.

**Keywords:** Educational resilience, dyslexia, immersion education, second language learning

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### INTRODUCTION

Theorists of second-language learning (L2) have typically diverged in terms of the strength of influence of internal (cognitive) and external (social) factors in the learning process (Saville-Troike and Barto, 2017). Sociocultural perspectives of L2 learning operate from the assumption that there is a significant relationship between culture and mind, and that all learning is, first social, then individual (Saville-Troike and Barto, 2017; Vygotsky, 1987). Thus, social factors and the context of learning, including the culture of the school and the language of instruction, can impact on L2 learning similar to cognitive factors.

Dyslexia is a neurodevelopmental condition that primarily impairs an individual's reading ability, language comprehension, spelling, and phonological processing (Nijakowska, 2020; Snowling, 2014; Reina et al., 2024). At the core of dyslexia is a difficulty in learning to decode and to spell (Snowling et al., 2020). The cognitive difficulties experienced by learners with dyslexia include delayed central processing, poor automatization, impaired phonological processing, and a lower level of working memory and short-term memory (Nijakowska, 2020). Given these difficulties, dyslexia impacts on how the brain interprets language and processes vocabulary, which can impact on both L1 and L2 learning (Helland & Kaasa, 2005; Lundberg, 2002). Although dyslexia is defined by such problems, some individuals with dyslexia can compensate for their difficulties, such as strengthened morphological awareness (Law et al., 2015), and dyslexia may only be disabling if the individual remains unable to cope with the literacy demands despite appropriate intervention (Snowling et al., 2020). While students with dyslexia may be at greater risk of developing negative self-perceptions of themselves as learners, this does not necessarily translate to their overall self-worth, and positive attitudes towards dyslexia and neurodiversity can promote such positive perceptions (Gibby-Leversuch et al., 2021).

### Irish immersion education

Immersion education refers to education in which linguistically homogeneous students, who are typically dominant in the majority language when they start school, attend a school which operates through a minority immersion language. Immersion education is an additive program, enriching the learner's linguistic repertoire without negatively affecting the first language (L1) (Lambert, 1975). It aims to develop additive bi/multilingualism and bi/multiliteracy,

as well as ensuring that learners achieve academically and foster the development of intercultural understanding (Tedick et al., 2011). In Ireland, approximately 8% (n = 256) of primary schools in the Republic of Ireland are Irish-medium schools, where classes are taught through Irish and school business is held through Irish. These include Gaelscoileanna - schools outside the Irish-speaking regions, and schools in the Gaeltacht (Irish-speaking regions).

Immersion education supports bilingualism, which has been shown to accelerate children’s development of metalinguistic awareness, particularly in tasks that require high levels of executive control (Bialystok et al., 2014). However, the oft cited advantages in executive function for bilingual children has been questioned, particularly in terms of publication bias, and the bilingual advantage may only be marginal (Gunnerud et al., 2020).

The suitability and outcomes of immersion education for students with Special Education Needs (SEN) is an area of contention (Kay-Raining Bird et al., 2016; Nic Aindriú et al., 2020). The proportion of individuals with SEN enrolled in immersion schools is lower than that of the general school population (Fortune, 2008; McCoy & Banks 2012; Nic Aindriú, 2020; Zehrbach, 2011). Evidence suggests that parents with children who have been diagnosed with SEN may be privately discouraged from enrolling in immersion education due to professionals’ concerns about delays in language acquisition and additional cognitive demands on the child (Fortune, 2011; Kay-Raining Bird et al., 2016). Nonetheless, research indicates that for the most part children with SEN in IM education have a positive experience (Nic Aindriú, 2021a). While students with an SEN encounter challenges when learning through Irish as an L2, specifically spellings, grammar, and phonics, these challenges were similar to their monolingual peers (Nic Aindriú, 2021a; Nic Aindriú, 2021b). Furthermore, many of the challenges apply to the broader context such as teacher education, access to bilingual services (Nic Aindriú & Ó Duibhir, 2023), difficulties in relation to parents helping their child with homework (MacIntyre-Coyle & Nic Aindriú, 2023; Nic Aindriú, 2020), and the lack of standardised assessments for dyslexia in the Irish language or students of immersion education (Barnes, 2017).

### **Learning Irish in English-medium education**

In EM schools, the English language is the working language of the school and Irish is taught as a subject. Irish is one of the core subjects on the primary and post-primary school curriculum in Ireland. Learners in IM and EM schools follow the same Primary Language Curriculum which supports teaching and learning in English and Irish. The amount of time for teaching Irish in EM primary schools was 3.5 hours when the current participants attended school. In Ireland, all students must study Irish unless they qualify for an exemption. Students in English-medium primary and post-primary schools may access an exemption from studying the subject of Irish due to their SEN.

The aim of the current research is to add to this growing field of research and explore the experiences of learners with dyslexia in L2 learning in Irish-medium and English-medium primary schools.

## **METHODOLOGY**

### **Design**

A qualitative approach was taken when conducting this research, using semi-structured interviews. This research received ethical approval from the Dublin City University Research Ethics Committee. The research questions explored were as follows:

1. What were the experiences of learners with dyslexia in learning Irish in IM and EM schools?
2. What challenges and supports did individuals with diagnosed dyslexia experience while learning Irish in either an IM or EM primary school?

### **Sample**

Purposive and convenience sampling was used for this study. The sample consisted of four female majority language (English) speaking participants who were dyslexic and learned Irish as an L2 in IM or EM schools. The intention of the study was not to examine the experiences of L2 learning to be generalised to all learners with dyslexia, but to examine the lived experiences of this sample in the learning of Irish in both contexts. All participants were of a similar age to explore the experiences of individuals with a relatively recent experience of formal primary and post-primary education. All four participants had been diagnosed with dyslexia in their later primary school years (approximately 10-13 years). Participant 1 was 19, attended an IM primary school, and was studying Irish in university. Participant 2 was 21, grew up in a Gaeltacht area, attended an IM primary school, and was also studying Irish in university. Participant 3 was 21, attended an EM primary school, and was studying Law in university. Participant 4 was 22, attended an EM school, and was studying Engineering in university. Both IM participants (P1 and P2) were not offered an exemption from Irish in primary school or secondary school. Participant 3 was offered the exemption from Irish in secondary

school but did not take it due to her love and passion for the language. Participant 4 was encouraged not to study Irish in secondary school despite her wish to do so. She studied it externally to the school up to Junior Certificate level (age 15 approximately) and availed of an exemption for her Leaving Certificate (age 16-18 approximately). All student participants were diagnosed in their later primary school years.

### Procedure

We conducted one-to-one semi-structured interviews over Zoom. Each interview lasted for 10-15 minutes as the researcher asked a set of 10 structured questions from an interview schedule tailored to the participant's medium of education attended. All interviews were conducted by the first author.

### Data analysis

The data were thematically analysed (Braun & Clarke, 2006; Clarke & Braun, 2017). The first author carefully transcribed the data and read through the interviews several times for familiarisation. An inductive coding technique was employed (Braun & Clarke, 2006). The first author generated initial codes by reading through the transcriptions line by line and identifying codes in the data. The codes were then sorted into initial themes based on similarity and broad relationships to each-other. The first author then reviewed the existing themes in relation to the coded data and entire data set. The first and second author then reviewed, refined and named the themes. The final step was the production of this report as outlined in the findings below.

## FINDINGS

The findings included in this section include the following themes, educational resilience in L2 learning, challenges of L2 learning, and learning strengths.

### Theme 1: Educational resilience in L2 learning: Positive attitudes and perseverance

Resilience is defined as the ability to overcome adversity and positively adapt to challenging life circumstances (e.g., Rutter, 1979). Within the educational context, "resilient" students are those who succeed in school despite the presence of adverse conditions (Waxman et al., 2003). In this context of SEN, we conceptualise it as the ability to cope with and overcome the challenges that dyslexia may bring with regard to learning and engagement with school. Both IM and EM participants reported having positive attitudes and motivation in their L2 learning despite the challenges of dyslexia. Participant 2 reported "*I was constantly surrounded by the language, so I've always had a really positive outlook.*" (P1-IM). Participant 4 reported a sustained positive attitude despite the challenges of L2 learning "*I've always kind of had quite a positive attitude towards the Irish language even though I struggled with it.*" (P4-EM), highlighting the resilience shown throughout this L2 learning process, such that the participant's interest and positive attitude towards the language helped them overcome some of the challenges of L2 learning.

While previous research indicated that challenges with language comprehension tend to create feelings of discouragement (Snowling, 2014), participants still showed high levels of motivation "*I still like speaking Irish even though it just means I have to put in more work than everyone else.*" (P2-IM). Participant 3 stated "*I really enjoyed the subject, so I just powered through and just tried to learn how to spell.*" (P3-EM). The interest in Irish also supported the resilience of both EM and IM participants; "*Although I still struggle with Irish, I'll continue to use it throughout my life*" (P1-IM). "*After the Junior Cert, I was told to drop it...but I didn't because I love the language*" (P3-EM). Of note here is that only one of the participants availed of the exemption from studying Irish, and she availed of this for senior cycle only. She had previously studied it outside of school for Junior Cycle but found it "*too stressful*" to continue it for Senior Cycle. Not availing of the exemption from Irish is a possible reflection of the participants' positive attitudes towards the language.

All four participants indicated considerable commitment and persistence in their L2 learning. One participant noted "*obviously like you feel that practice and persistence is very important*". (P2-IM). Strategies of persistence included "*just sticking to it even when you're feeling like you're not getting anywhere*" (P4-EM).

Participant 1 reflected on the positive impact attending an IM school had on her as a learner with dyslexia.

*It's only had a positive effect... When I was attending the Gaelscoil (IM school), I didn't really see it as you know, having to learn the language...you learned the language without even realising* (P1-IM)

This illustrates some of the benefits of immersion education that has been identified previously in the literature (e.g., Bialystok et al., 2014; Nic Aindriú, 2021a). On the other hand, Participant 2's responses were mixed. She noted that "*It was difficult like with the grammar and everything*" while also stating "*I've always had a really positive outlook*" (P2-IM). While this quote revisits the positive attitudes to the language, it also illustrates the challenges she experienced in learning her L2.

## **Theme 2: Challenges of L2 learning**

L2 learning was noted as a challenge by the participants in both mediums of instruction.

### *Subtheme 1 – Academic challenges*

Dyslexia impacts a person's ability to read, write, and spell (Snowling, 2014) and this was reflected in both the IM and EM participants' responses. *"I would know the subject material, but I kept not getting them right because I couldn't spell them properly."* (P2-IM). Nic Aindriú (2021) argues that although the orthographic rules are different across both languages, students with and without a diagnosis may struggle with the same difficulties in both languages (e.g., syntax and grammar). Hickey and Stenson (2011) found for the Irish language, while the most frequent words show a high level of regularity, underlying rules are very complex. This was reflected by Participant 3: *"Spelling is really hard in Irish as you don't know if it's the actual spelling based on what it sounds like"* (P3-EM). *"I think that the spelling with all the 'fadas' was really difficult."* (P2-IM).

Participants also noted challenges in word recognition and vocabulary in Irish and subsequent reading comprehension, which reflects the typical comprehension, spelling, and phonological processing difficulties associated with dyslexia (Nijakowska, 2020; Snowling, 2014; Reina et al., 2024) *"I wouldn't be able to read big texts obviously because it's so many letters just mashed in together.... I could not comprehend what this word is even if I read the whole thing over and over again"* (P3-EM).

### *Subtheme 2: Emotional impacts*

Both EM and IM participants noted some adverse emotional impacts of their experience in L2 learning. One participant reflected on the feelings of unfairness associated with failing an Irish exam – *"It felt unfair when you would fail an exam even though you knew the material"* (P1-IM). Snowling (2014) notes that negative feelings for a student with dyslexia can create problems concerning self-belief and decreased motivation. This was reflected in participants' recollection of the negative impact their academic performance had on them *"I just thought that I was just not as smart as them."* (P3-EM). *"I suppose it impacted me in a negative way because it didn't seem as fun for me"* (P2-IM).

These emotional impacts were seen in the adverse impact of a late diagnosis of dyslexia on participants' self-belief. Nijakowska (2020) argues that dyslexia diagnoses allow people to understand their challenges with language, and late diagnosis can have a significant emotional and cognitive impact. Participant 4 noted *"as a child, it probably affected me in a more negative way as I didn't know what was wrong"* (P4-EM). Participant 1 expressed the feeling of being "behind" peers at school *"I didn't know I had dyslexia, so I just felt like I was behind everyone else"* (P1-IM). This reflects the lower self-perceptions regarding their abilities of themselves as learners (Gibby-Leversuch et al., 2021)

## **Theme 3: Learning strengths**

Being a learner with dyslexia brings several strengths (Kannangara, 2018) and participants identified the strengths of dyslexia. *"Being dyslexic helped me think of other ways around things."* (P1-IM). Participants noted how they developed strategies to support L2 learning, including orthographic mapping and the use of the chunking decoding strategy *"I used to break spelling and grammar into small easy chunks that made more sense for me"* (P4-EM). This process of 'thinking of ways around things' seems to be a pattern in people with dyslexia, and may reflect some of the compensatory strategies such as strengthened morphological awareness found in previous research (e.g., Laws et al., 2015). Participant 1 referred to the different ways of thinking that dyslexia brings *"you look at things differently and yeah, I think it's really good."* (P1-IM). This reflects some of the benefits of bilingualism, which may be linked to executive control development (Bialystok et al., 2014).

## **DISCUSSION**

These findings indicate very similar experiences of L2 Irish learning for learners with dyslexia in IM and EM schools. The challenges experienced were both cognitive and emotional. The cognitive challenges included writing, spelling, and reading comprehension, which was found across both IM and EM schools. This echoes previous research (Nic Aindriú, 2021a; Nic Aindriú, 2021b) and suggests that intervention programmes that support such skills should be applied similarly in both learning contexts and ideally the benefits would transfer across L1 and L2 learning (Nic Aindriú, 2021b). Schools and teachers should also pay sufficient attention to the emotional impact of dyslexia given the critical role of self-efficacy on learners' agency (Bandura, 1982; Code, 2020). The negative emotional impacts were likely moderated by the late diagnosis of all the participants. Participants reported the negative emotional impact of poor academic performance in L2 learning, including feeling behind their peers and the absence of an explanation for difficulties, such as a formal diagnosis. Given the importance of early identification in mitigating some of the adverse secondary consequences of dyslexia including poor self-belief (Battistutta et al., 2018; Sanfilippo et al., 2020), it is imperative that schools are proactive in terms of screening and referrals and teachers are well-educated in the area to identify suspicions, particularly in struggles with L2 learning, from a young age. Teacher education plays a key role

here as has been previously identified (Nic Aindriú, 2020) as well as the need for standardised assessments for dyslexia in the Irish language or students of immersion education (Barnes, 2017; Patton & Mathews, 2020).

A crucial finding was the resilience the participants reported in the face of the challenges posed by dyslexia in L2 learning. Indeed, the challenges noted above were frequently referenced in the context of resilience - participants indicated thriving at Irish in school despite the challenges of dyslexia – this is a core element of educational resilience (Waxman et al., 2003). Positive attitudes towards, and a strong level of identity with, the Irish language, as well as perseverance, were the sites of resilience in this study. This echoes previous research on the positive experience of children with SEN in IM education (Nic Aindriú, 2021a). These findings emphasise the importance of school culture in fostering such attitudes and identity in both IM and EM schools (Garza & Crawford, 2005). These resilience findings reflect the notion of grit – a non-cognitive trait that combines passion and perseverance for long-term goals (Duckworth et al., 2007). Grit entails working strenuously toward challenges, maintaining effort and interest despite failure and adversity, and is associated with educational, professional, and personal success (Fernández Martín et al., 2020).

There are strengths and limitations to the study. Participants were recruited through purposive and convenience sampling and a small sample was employed. Such a sample is prone to bias due to its characteristics that depends on the judgment of the researcher (McEwan, 2020). With only two participants in each of the groups, we do not aim to generalise this to all learners with dyslexia in IM and EM education. Nonetheless, it is important that the voices of learners with dyslexia are heard more prevalently in this space. This research adds to the relatively small but developing body of research on SEN in L2 learning and challenges the monolingual bias that tends to shape educational policy and practice towards monolingual students (Fortune, 2011). Research on educational resilience in L2 learning for students with SEN is relatively new and in need of further exploration, potentially through a longitudinal study tracking a larger group of students through their educational journey.

The findings from this small-scale study indicate that the experiences and challenges of the participating learners with dyslexia are similar across both educational contexts. The findings reflect the socio-cultural view of language learning where the social context, such as the school, individual variables, such as attitudes towards the language and perseverance, and cognitive variables, such as phonological awareness and working memory, all interact to affect how L2 learning is experienced (Saville-Troike and Barto, 2017).

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## SECOND OR ADDITIONAL LANGUAGE LEARNING IN IRISH-MEDIUM PRIMARY SCHOOLS: USING A UNIVERSAL DESIGN FOR LEARNING FRAMEWORK

Children in Irish-medium (or Irish immersion) primary schools have a variety of strengths, abilities, interests and needs and the Primary Language Curriculum aims to support all language learners in Irish primary schools. The potential of Universal Design for Learning (UDL) to promote successful second or additional language learning, and to support teachers in planning and preparing for the inclusive teaching of Irish in immersion settings, has not received much discussion to date. The current paper aims to address this gap. Each of the three principles of the UDL framework are explored in this paper, and their relevance in the context of second or additional language learning in immersion settings is examined.

**Keywords:** Immersion education, Universal Design for Learning, inclusive education, second language acquisition, additional language learning.

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### INTRODUCTION

Second language acquisition (SLA) may be defined as the "... study of change that takes place in the learner's L2 [second language] knowledge over time and of what brings about this change" (Ellis, 2015, p. 7). From a sociocultural perspective, such changes may appear different from learner to learner (Lantolf and Poehner, 2014) as each can have a unique Zone of Proximal Development (Vygotsky, 1978). In acknowledging that no two learners of Irish are the same (Ní Aogáin and Ó Duibhir, 2022), Universal Design for Learning (UDL) may offer a useful framework to guide and scaffold Irish-medium (IM) classroom practice while further assisting the practical enactment of *Curaclam Teanga na Bunscoile* [The Primary Language Curriculum] (PLC) (NCCA, 2019) through the provision of "... flexible pathways within the learning process" (Rao and Torres, 2017, p. 462). In the current paper, IM education refers to Gaeltacht schools and immersion schools outside Gaeltacht regions. Additionally, the learning of Irish is conceived as a second or additional language, acknowledging that some children speak or use languages other than Irish at home, and that all children from 2025 will have the opportunity to learn a Modern Foreign Language in primary schools. This paper endeavours to unpack the potential of a UDL framework to support the inclusive teaching and learning of Irish in IM primary classroom settings.

### DIVERSITY AND INCLUSION IN IMMERSION EDUCATION IN IRELAND

Immersion education is a form of bilingual education whereby additive bilingualism or plurilingualism is considered one of the main objectives (Ní Dhiorbháin et al., 2023; Swain and Lapkin, 2005). IM primary schools account for approximately 8% of the primary schools in the Republic of Ireland (Gaeoideachas, 2025), including Gaeltacht schools and schools located outside Gaeltacht regions. In Ireland, the majority of IM schools adopt an early total

immersion approach (Ó Duibhir, 2018) with the child being immersed in the Irish language for an average of two years and the formal instruction of English delayed until after the immersion period (Ní Aogáin et al., 2021). With the implementation of the *Policy on Gaeltacht Education* (DES, 2016), primary schools located in Gaeltacht regions are required to implement the immersion period for a minimum of two years as one of the thirteen language-based criteria required to be formally recognised as a *Scoil Ghaeltachta* [Gaeltacht School].<sup>1</sup>

<sup>1</sup> Second language acquisition is an established term denoting the acquisition of another language. It is acknowledged, however, that for some children this may be a third or additional language.

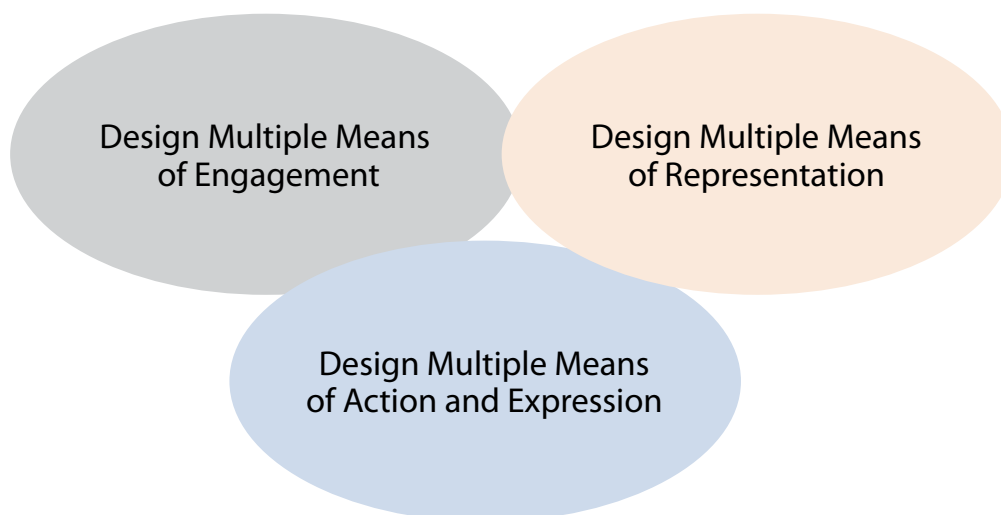
Children in IM education, like their peers, have a range of interests, strengths and needs (Nic Aindriú, 2019; Ní Chinnéide, 2009; Nic Gabhann, 2008) and a whole-school inclusive approach to learning is required to support all children (Ó Duibhir et al., 2024). Second language teaching and learning in primary school settings has further developed in recent years, particularly with the publication of the PLC providing an integrated language curriculum that aims to be inclusive of all identities, learning abilities, interests and linguistic backgrounds and strives to promote the engagement of all children in the language learning process (NCCA, 2019).

The sociolinguistic context of IM education has become more complex in recent years, with a decrease in the number of children from Irish-speaking homes attending IM schools outside of the Gaeltacht between 1970-2000 (Coady and Ó Laoire, 2002). In Gaeltacht schools, children often demonstrate higher proficiency in English than Irish in certain aspects of language development (Péterváry et al., 2014), adding to the intricacies of promoting Irish as a first language in the immersion school context (Ní Shéaghdha, 2010; Thomas and Dunne, 2022). The linguistic landscape of Ireland is shifting too and there are now over 200 languages spoken or used in the Republic of Ireland (CSO, 2017). Central Statistics Office (2023) results illustrate that speakers of Irish include 13% of Polish citizens (more than 10,800 people), 13% of Latvian citizens (over 2,100 people) and 15% of Australian citizens (more than 500 people). IM education settings in Ireland, therefore, need to have robust and creative pedagogies to support the needs of different language learners (Ní Dhiorbháin et al., 2023), to continue to develop literacy in the minority or minoritised language (Lauchlan et al., 2012; Rhys and Thomas, 2013) and to prepare children for the multilingual world they live in (Dunne, 2025). It may prove beneficial to consider second or additional language teaching and learning within a UDL framework to support the implementation of such pedagogies to foster language learning of all children in IM settings. A UDL approach may also support the enactment of recent recommendations by the Department of Education to embrace more inclusive practices in IM settings (Ó Duibhir et al., 2024). This aim, however, is contingent on the availability of effective Professional Development (Mac Domhnaill and Nic an Bhaird, 2022).

### APPLYING UDL TO THE TEACHING AND LEARNING OF IRISH IN IMMERSION SETTINGS

The UDL framework is underpinned by three overarching principles: Design Multiple Means of Engagement (the why of learning); Design Multiple Means of Representation (the what of learning) and Design Multiple Means of Action and Expression (the how of learning) (CAST.org, 2024) which are illustrated in Figure 1. UDL is considered a proactive approach for creating and providing flexible methods to teaching and learning that address learner diversity from the outset (Capp, 2020). Although UDL is gaining much attention in several areas of Irish education (Flood and Banks, 2021), and while some research highlights the clear links between the UDL framework and theories of SLA (Rao and Torres, 2017), the full potential of UDL for supporting inclusive teaching and learning of Irish in IM settings has not been explored sufficiently. By categorising second or additional language teaching and learning within the UDL framework and by including an exploration of UDL during pre-service education and during in-service professional development, IM teachers may be better supported to integrate flexibility in their practice. This may aid them in removing barriers to language learning, meeting the needs of a variety of language learners and optimising engagement by considering all learners' interests (Cook and Rao, 2018), as well as addressing some of the reported challenges in relation to the teaching of Irish (DE, 2022).<sup>2</sup>

Figure 1: The Three Principles of the UDL Framework (Adapted from: [www.cast.org](http://www.cast.org), 2024)



<sup>2</sup> These speakers indicated varying degrees of fluency in the language. See Press Statement Census 2022 Results Profile 8 - The Irish Language and Education - CSO - Central Statistics Office

## DESIGN MULTIPLE MEANS OF ENGAGEMENT

The first principle of the UDL framework considers the importance of providing a variety of ways in which learners can engage in the learning process. Some research, such as Rao and Torres (2017), highlights that the principle, Design Multiple Means of Engagement, aligns with Krashen's concept of the 'affective filter', reemphasising the importance of ensuring language learners' filter is low (i.e., the learner is not experiencing stress, anxiety or fear and is feeling safe and ready to learn) in order to support channels for language development (Tedick and Lyster, 2020). To stimulate learners' motivation and interest, and in turn, enhance and sustain their engagement in the learning process, Courey et al. (2013) promote the use of creative, hands-on and meaningful instruction. Igniting play and joy in the learning environment and infusing both concepts in teaching and learning is a crucial component of this principle (CAST.org, 2024). In terms of practical implementation, projects that encourage children to read for pleasure in Irish, either in school or at home, have been shown to increase linguistic motivation and offer opportunities to have contact with the language even where there is no language community nearby (Dunne and Hickey, 2017; Dunne and Ní Fhaoláin, 2020). Additionally, Winter (2016) contends that it is essential to consider learners' prior knowledge and developmental readiness from the outset of the planning process and further highlights the need for such prior knowledge to be continuously developed throughout the learning process in order to foster learners' intrinsic motivation. To acknowledge and assess prior learning, a teacher may encourage learners to engage in setting their own learning goals and reflect on them through the use of activities such as, '*Tá mé in ann ... Ba mhaith liom bheith in ann ...*' [I can do ... I would like to be able to do ...] or complete column A and B in a *Cairt ABC – Ar eolas agam ... Ba mhaith liom fáil amach ... Cad a d'fhoghlaim mé ...* [known as a KWL Chart in English]<sup>3</sup>.

It is important to highlight, however, that distinctive features of engagement, from a second or additional language learning perspective, include the need for the language learning environment to be relevant to the learner's life, to cultivate a sense of belonging to the language community, and to promote positive attitudes towards the language (Harris et al., 2006). Similarly, Principle One of the UDL framework reminds us that learners must be encouraged to bring their own authentic selves to the learning environment and be supported to make connections between the learning process and their everyday lives (CAST.org, 2024). Thus, in the case of first-language speakers of Irish, opportunities for language enrichment are crucial (Coady and Ó Laoire, 2002; Ní Fhlaithearta and Ó Brolcháin, 2023; Ó Duibhir et al., 2015) which aligns with the renewed emphasis on cultivating respect for and awareness of dialects in the UDL guidelines (CAST.org, 2024). Initiatives such as *Sárchainteoirí*, where excellent speakers of the language in the community visit classrooms to share their rich knowledge of the language and model fluency (Ní Shéaghda, 2010), are examples of how such opportunities can be cultivated and fostered in the IM context. The use of digital technology and the arts have also been shown to be very effective in promoting the creative use of Irish in Gaeltacht schools (Kiely et al., 2022). Intergenerational use of Irish at home through creative and playful activities such as baking (Engman et al., 2023), or children teaching Irish to parents and other family members (O'Toole, 2023) have also been shown to increase engagement with the Irish language outside of the school context, and to sustain effort and persistence in learners' language journeys. In further widening learners' Irish-language community, IM teachers may avail of classroom activities such as *Réaltaí Gaeilge* where children are supported in conducting research on celebrities who use Irish, or *Mo Phobal Gaelach* [My Irish-Language Community] whereby children are encouraged to engage with members of their family and friends to discover their connections with and use of the Irish language (See Appendix A for some sample questions).

## DESIGN MULTIPLE MEANS OF REPRESENTATION

Design Multiple Means of Representation acknowledges that learners perceive and comprehend information in different ways. The creation of learning materials that make the content accessible to the greatest number of learners (Courey et al., 2013) is fundamental to this principle. Some similarities exist between Principle Two of the UDL framework and Krashen's (1985) theory regarding comprehensible input (Rao and Torres, 2017), which maintains that learners need to receive much rich input, which is comprehensible to them and their abilities, in order to support successful SLA and development.

Building knowledge through maximising the transfer and generalisation of knowledge, within and between concepts, is paramount to the successful design and implementation of Principle Two (CAST.org., 2024). Such an understanding appears to echo that of the Common Underlying Proficiency (CUP) hypothesis (Cummins, 2021) whereby it is believed that language learners draw on a common proficiency and understanding of language, and that some skills can transfer to support the learning and acquisition of an additional language. Opportunities to support possible transfer of knowledge within and between learners' languages should be explicitly highlighted and explored in the language learning environment to support additive bilingualism / plurilingualism. While some

<sup>3</sup> For a description of this activity and others mentioned in the paper, see *An Ghaeilge do gach duine. An dearadh uilloch don fhoghlaim*.

research cautions that not all concepts and skills transfer from language to language (Barnes, 2021; Barrett et al., 2020), other research in Ó Duibhir and Cummins (2012) propose four main areas which offer successful cross-linguistic transfer. These areas include, (i) the transfer of conceptual knowledge, (ii) the transfer of specific linguistic elements, (iii) the transfer of phonological awareness and (iv) the transfer of metacognitive and metalinguistic strategies. From a practical implementation standpoint, certain teaching and learning practices can support the transfer of conceptual knowledge, such as reinforcing the same reading comprehension strategies (Ó Cathalláin, 2011) and conventions of print in English and Irish lessons. The use of posters and visual aids in the learning environment can also further support learners in transferring conceptual knowledge and / or specific linguistic elements between languages. The use of similar graphic organisers in different language lessons may support the transfer of information from one language to another in relation to concepts such as reading and writing genres. Furthermore, availing of the same child-led assessment methods, goal-setting and reflection frameworks (e.g. *Two Stars and a Wish / Dhá Réalta agus Mian Amháin; The Feedback Sandwich / An Ceapaire Comhairle; I can do ... I would like to be able to do ... / Tá mé in ann ... Ba mhaith liom bheith in ann ...*) across languages may encourage the transfer of metacognitive and metalinguistic strategies. Multilingual activities, such as examining the names of flora and fauna in different languages, can also allow children to examine the clues about the flower for example, the size and shape of the flower, the time of year it grows, and any associated mythology contained in its name in different languages. Multilingual activities, where children discuss similarities and differences between Irish and other Welsh vocabulary, also create an awareness of connections between Celtic languages (Dunne, 2024). The handbook *Trasteangú sa Seomra Ranga* (Thomas et al., 2022) offers further guidance on using translanguaging as a pedagogical tool in language teaching.

It is important to highlight, however, the challenges observed in IM education, as documented in the latest Chief Inspector's Report (DE, 2022), particularly in relation to the introduction of subject-specific vocabulary across the curriculum. Scaffolding is an essential component of the successful implementation of Principle Two of the UDL framework to enable the learner to become 'resourceful and knowledgeable' (CAST.org, 2023) and may support the acquisition of subject-specific vocabulary in IM settings. In considering varying practical scaffolding techniques within the SLA context, a print-rich environment may prove beneficial in supporting the acquisition of subject-specific vocabulary among learners, as well as fostering their own independent language learning journey. When displaying new vocabulary in a classroom environment, it is important the language is illustrated clearly for all learners and also, in a meaningful context, authentic to the learners' lives. In embracing a UDL approach, it is crucial that new vocabulary is introduced with multiple representations, such as a visual representation (and a real-life object where possible) and oral / aural representations to support learners' comprehension (CAST.org, 2024). Furthermore, providing learners with multiple examples of the new vocabulary in varying contexts throughout the school day may support deeper understanding and provide broader access to the concept (Capp, 2020). Creative digital technologies, such as Abair.ie (Trinity College Dublin), could be availed of for learners to receive feedback on their language use and pronunciation of new vocabulary in the immersion classroom or at home (see Ní Chiaráin, 2024 for an overview of creative technologies that are being developed in Trinity College Dublin). Furthermore, learners can listen to stories / reading excerpts prior to reading themselves to support comprehension. This can be done through the use of Read Aloud functions in Microsoft Word, on websites like SoundCloud which contains audio recordings of texts from Irish-language publishers, or websites where audio and written versions of stories are available, such as Léigh Anois, Léigh Leat or Scéal an Lae produced by TG4 Foghlaim.

## DESIGN MULTIPLE MEANS OF EXPRESSION

Learners differ in the manner in which they navigate their learning environment, approach their unique learning process, and express their own individual learning (CAST.org, 2024). Therefore, to ensure optimal learning and development of all, it is essential to design for and respect such varying types of action and expression which is represented in Principle Three, Design Multiple Means of Action and Expression. This principle considers the benefits of providing learners with alternative communicative approaches to engage with and to illustrate learning (Capp, 2020). Unlike the other two principles, Principle Three is focused on the learners providing evidence of their own learning. In any class, it is essential to present learners with a variety of communicative approaches to support them navigating their unique learning environment and expressing their knowledge, in a manner appropriate to their abilities (CAST.org, 2023). It is widely recognised within the SLA realm that producing linguistic output, in a manner fitting to the learner's needs and abilities, is crucial in developing a proficient language user which thus may mirror Swain's Output Hypothesis (2005).

While considering how to create Multiple Means of Action and Expression in the context of SLA, it is important that appropriate assessment methods are provided to offer flexible and varying routes for learners to illustrate their learning in a holistic manner, fitting to their needs. The Continuum of Assessments Methods (NCCA, 2007) offers a variety of modes to assure the learner's full potential is adequately assessed. While there have been developments in the range of formal assessments available for IM settings (Barnes et al., 2022; English, 2024), there remains a dearth

of assessments that take into consideration the continuum of bilingualism / plurilingualism and for which normed data is available for different profiles of speakers (Dunne, 2025). It is imperative that learners, themselves, understand their strengths and abilities and are supported in creating their own learning goals and monitoring their own success (Winter, 2016). Thus, learner-led methods such as meaningful goal setting, self-assessment and peer-assessment methods, similar to those mentioned under Principle Two, should be encouraged in Irish lessons in IM settings (Dunne, 2025).

In order to successfully pave all possible avenues to effective language learning, the provision of a suite of options as to how to express and communicate learners' new learning is important and further ensuring the availability of appropriate resources remains crucial (CAST.org, 2024). During Irish language lessons, learners may be given a choice-board of multi-media options (CAST.org, 2024) as to how to present their work, which in turn, could further optimise learners' engagement (CAST.org, 2024). For example, rather than a learner writing a review of a book, they could be given the option to present their book review in a comic strip format, or audio-record their review using digital supports such as Microsoft PowerPoint or Recorder on an iPad. Additionally, classes may create learning checklists, such as, '*Is gá dom a dhéanamh ... D'fhéadfainn a dhéanamh ...*' [ I must do... I could do ...], which provides the learners with choice in what they complete, in an inclusive manner.

## CONCLUSION

In summary, the general principles of UDL appear to build on understandings of best practice in SLA, are also aligned to the inclusive principles of the Primary School Curriculum and thus, should form part of pre-service education and in-service professional development for IM teachers. Examining how Irish can be taught, through the lens of the three principles of UDL, may offer practical ways to design and deliver creative and inclusive Irish-language lessons in the IM context. In order to apply UDL principles in an effective manner in IM classrooms, it is important that teachers feel competent and confident in implementing UDL in their own practices (Capp, 2020). Rather than the provision of "one-shot" (DeMonte, 2013, p. 4) professional development events, sustained professional development, which is tailored to the specific needs of the school, is required to successfully implement whole-school UDL practices. In doing so, the use of identified characteristics of effective professional development proposed by Darling-Hammond et al. (2017) could be adapted to meet the needs of immersion teachers and thus, may be utilised to create effective professional development for UDL implementation. In brief, the authors maintain that UDL has the potential to support learners in their educational journey and to make a positive impact on the teaching and learning of Irish in IM settings but caution, however, that effective professional development and practical resources are needed to support the full realisation of the implementation of the UDL framework in IM schools.

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## APPENDIX A

### Sample Questions for *Mo Phobal Gaelach*

Is féidir leis an múinteoir agus leis an rang cúpla ceist shamplach a scríobh chun ceisteanna an agallaimh a mhúnlú don pháiste. Mar shampla:

- An bhfuil Gaeilge agat? An bhfuil aon teanga eile agat?
- Cá bhfuair tú do chuid Gaeilge?
- An úsáideann tú do chuid Gaeilge go laethúil / seachtainiúil?
- An bhfuil aithne agat ar aon duine eile a bhfuil Gaeilge acu?
- An bhfuil aithne agat ar aon duine cáiliúil a bhfuil Gaeilge acu?

I gceantair Ghaeltacht agus líonraí Gaeilge, is féidir ceisteanna breise a chur ar dhaoine, mar shampla:

- Cén leabhar Gaeilge is fearr leat?
- Cén ceoltóir Gaeilge is fearr leat?
- An bhfuil aon nath cainte i do chanúint a thaitníonn go mór leat?



# CAN TASK-BASED LANGUAGE LEARNING PROMOTE THE USE OF UNIVERSAL DESIGN FOR LEARNING IN THE CONTEXT OF INCLUSIVE IRISH LANGUAGE TEACHING?

This article discusses Irish as a school subject across all post-primary schools in the Republic of Ireland. It discusses the significant increase in the number of exemptions from studying Irish, since the application of new criteria. It provides an insight into task-based language learning (TBLL) and discusses some of the opportunities that TBLL can provide to implement universal design for learning (UDL) goals. UDL is an inclusive approach that seeks to accommodate all students together in mainstream education. There are recommendations in the conclusion on how Department of Education policies could be implemented more effectively.

**Keywords:** Universal Design for Learning (UDL), Differentiation, Exemptions, Task-Based Language Learning (TBLL), Content and Language Integrated Learning (CLIL)

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## INTRODUCTION

Irish is a compulsory subject at both primary and post-primary level in Ireland (Department of Education and Science, 2024). This article discusses Irish in a context where over a quarter of pupils in Irish post-primary schools have identified special educational needs (SEN) (McCoy et al., 2019). Due to this, it is worth exploring options to teach the language using methods that cater to different learners' needs. In relation to the study of Irish in post-primary schools, task-based learning is mentioned as one of the "significant elements of teaching and learning in this specification" (The Department of Education, 2023, p.15) in the Junior Cycle. The literature describes how Task-Based Language Learning (TBLL) can be used to reduce second students' language anxiety. (Aubrey et al., 2022)

## CONTEXT

There are 416,631 students enrolled in 721 post-primary schools in Ireland with 68 of them in the Irish-medium education (T1) sector (Gaeloideachas, 2024). T1 schools are those that operate through the medium of Irish. A total of 3,832 students at post-primary level attend 29 schools in the Gaeltacht (areas where Irish is the community language) and a further 11,951 students attend 47 post-primary schools located outside the Gaeltacht (Gaeloideachas, 2024). The Department of Education (2022) clearly explains in a circular that there is no exemption from studying Irish available in the T1 schools in any case. Nic Aindriú and Ó Duibhir (2023) point out that teachers are facing particular challenges in terms of inclusive education in the T1 sector, as there is a lack of professional development and resources provided to teachers. Outside the T1 sector, there are 404,680 students attending English-medium post-primary schools (T2).

### Irish language and exemptions

All students, except those who meet the criteria for a language-learning exemption, are required to study Irish at school. A new system for the granting of exemptions was put in place at the beginning of the academic year in 2019 (Department of Education and Science, 2019). Students who have spent three years in the education system outside Ireland and some learners with an SEN are eligible for an exemption (Citizens' Information, 2024). A research report on the study of Irish (Flynn, et al., 2019) suggested that the exemption process should be re-imagined to be applied in a more inclusive manner. However, the number of exemptions has substantially increased over a number of years with the change in criteria in 2019, and it has continued to increase with the introduction of an update of the criteria in 2022 (Department of Education, 2022; Ó Duibhir, 2023).

McTaggart (2024) indicates that there were 49,570 at post-primary level who were not studying the language. This means that 12.2 % of the population attending T2 schools at post-primary level have exemptions from Irish. It is accepted that the amount of exemptions provided in a number of schools in the T2 sector are out of step, leading the Department of Education to carry out an audit about this matter (McTaggart, 2024).

### **Inclusive education and Universal Design for Learning**

Ireland's latest inclusion guidelines are contained in the Framework for Inclusive Education. The document is based on five key principles (National Council for Special Education (NCSE), 2011). The Framework was greatly influenced by a ground-breaking literature review by Winter and O'Raw (2010). In this literature review, five principles that should be included in an inclusive education framework were proposed:

1. This approach applies to the whole school community.
2. The approach is reflective of the diversity among different students and schools.
3. There is a need for active engagement in all schools to achieve inclusive education
4. Inclusive education should be an integral part of whole-school planning.
5. The Framework is based on evidence from research and teacher practice.

Molina Roldán et al.(2021) asserts that all learners benefit from a classroom dedicated to inclusive education. The National Council for Curriculum and Assessment (NCCA, 2007) provides guidelines for teachers at post-primary level to promote inclusive education. These foster teachers' awareness of the Framework. A separate document is available for the core subjects of English and Maths, as well as many other subjects, but there is no document available relating to the Irish language although it is a compulsory subject (NCCA, 2007).

The *Center for Applied Special Technology* (CAST, 2024) explains that the Zone of Proximal Development (Vygotsky, 1978) is a design cornerstone of universal design for learning (UDL) . UDL was originally established by CAST in the mid-1980s (Flood & Banks, 2021). The UDL framework is based on seven principles which were agreed by academic staff at the end of the last century (Connell et al., 1997). UDL's aim is to organise lessons so that a wide range of learners can benefit from the lesson. A summary of the principles are provided below (Burgstahler and Cauce, 2020).

- i. Balance: the lesson should cater for learners across a range of abilities.
- ii. Flexibility: the lesson should be variable to accommodate different students.
- iii. Simple and intuitive: any equipment employed as part of the task should be easy to use.
- iv. Perceptible information: information should be observable to people even if they have a physical impairment.
- v. Tolerance for error: the emphasis should be put on effort and the deficit method should be avoided.
- vi. Low physical effort: people should not be fatigued at the end of the lesson.
- vii. Size and space: the size and space of the room should be suitable for a wide variety of people.

Along with UDL, differentiation can be used to support inclusive education (Tomlinson, 2014). Differentiation is a reactive system in which the teacher provides specific work for the various students in the class. This work is based on their abilities, language resources and additional needs (Tomlinson, 2014). In contrast to differentiation, UDL is proactive and inclusivity is an integral part of planning (Galkienė & Monkevičienė, 2021)

### **Introduction to Task-Based Language Learning (TBLL)**

Content and language integrated learning (CLIL) has been discussed extensively among teachers in Ireland and is studied by many students as part of their initial teacher education (Ó Duibhir, 2016). TBLL and CLIL are related and overlap significantly (Kamal et al., 2024). Under both methods, it is understood that it is not possible to separate the language and its meaning from each other (Lopes, 2020).

The literature strongly describes TBLL as an effective approach to developing the skills of speech interaction (Masuram & Sripada, 2020; Nget et al., 2020; Rahmah, 2017; Universitas Terbuka & Panduwangi, 2021). Oral communication provides many opportunities to engage the learner with SEN (Fitzgerald et al., 2021). In the CLIL lesson, the target language is linked to a second school subject; for example, learning new vocabulary in Irish within a history topic. (Banegas et al., 2025; Mac Gearailt et al., 2023b)

TBLL is a learning method with a focus on output and interaction (East, 2021). Within TBLL, students are engaged in activities based on an information gap. They should be engaged in work that is connected to the real world (Jackson, 2022). For example, they can be carrying out tasks related to reading timetables, LEGO or Minecraft. Other real life examples include creating a poster, producing a newsletter, video, or pamphlet, or designing a map. This incorporates UDL principles because it allows students to present their learning in different ways using different mediums.

Input is not limited to the written word within TBLL; in addition, interactive communication is central, with a particular focus on the negotiation (Van den Branden, 2006a; East, 2021). This largely reconciles with the UDL principle of recommending the use of different methods of interpreting the information (CAST, 2024).

Before designing the TBLL task, the language needs of learners should be assessed (Grote & Oliver, 2022; Ship, 2005). Duran and Ramaut (2010) state that TBLL can be used to teach lessons at level A1 on the Common European Framework of Reference for Languages (CEFR). This is the level suitable for complete beginners (Council of Europe, 2020).

### **How can TBLL promote inclusion?**

The ways of using TBLL to support the acquisition of Irish as a second language for students with SEN are discussed here. With regard to TBLL, Bygate (2020) stresses that relevant research should not be driven by a theoretical framework but should focus much more on the needs of teachers and students in the classroom.

Chan (2022) provides a specific description of the elements needed to adapt TBLL as a teaching method that is inclusive for learners with SEN. Chan (2022) explains that there are five factors to be considered in detail when trying to design lessons that are aligned to TBLL and which are inclusive at the same time. This topic is strongly aligned with the Inclusive Education Framework (National Council for Special Education, 2011). The five factors are described below (Chan, 2022).

- i. An educational ecology should be established in the classroom allowing space for all students, that is to say, the tasks should be designed within a UDL framework.
- ii. The input should not be limited to language input (This very much aligns with the multi-modal input recommended in the Junior Cycle Specification (T2) (Department of Education, 2023).
- iii. The output should not be limited to spoken language, but rather gestures, facial expressions and body language should also be used.
- iv. Equipment or props should be used together with cognitive tools (such as diagrams or mind maps) so that more people are able to make sense of the input and so forth from the task.
- v. Consultancy: evidence-based approaches which were developed with the SEN learner at the centre should be used.

The following are some sample strategies which could be used within inclusive teaching: finger spelling (for example for those with a hearing impairment) (Walsh-Aziz et al., 2023), visual accommodations and breaking down the steps of the task so that only small parts are to be completed in one session. (Ellis et al., 2019).

Multisensory learning is an educational approach with a particular focus on audio-visual resources as well as on kinesthetic learning where students are active while they are learning (Eroğlu et al., 2022). Literature also states that TBLL can help foster multi-sensory learning (Schrooten, 2006) and this creates a space for students with dyslexia to access and improve their ability to speak Irish.

As part of his vital work Krashen (1986) uses a metaphor of affective filter to describe the influence of emotions on the development of the target language in particular on the spoken language. Krashen (1986) asserts that anxiety is reduced if students are working without full focus on the grammatical rules. A longitudinal study from Zehan et al. (2021) found this to be the case when TBLL is used. The results of this study are based on data derived from a self-report of 34 students.

Relevant literature suggests that computer-assisted language learning (CALL) can be used as a basis for TBLL (González-Lloret, 2017). The author claims that TBLL is “ideal for informing and fully realising the potential of technological innovations for language learning.” Systematic analysis of 1799 publications (González-Lloret, 2017, p. 234) confirms that adaptive technology is one of the main themes recently discussed in research related to TBLL (Jia & Bava Harji, 2023). The link between adaptive technology and TBLL illustrates various ways of using this teaching method to support the UDL.

### **Practical ways to connect TBLL and UDL**

Strengthening digital access to tasks greatly expands the capacity of TBLL to facilitate inclusive education (Vasinda & Pilgrim, 2022). One of the most powerful adaptive technologies that make reading material available to more people are audiobooks. (Almgren Bäck et al., 2024) There are some available for both young learners and teenagers online.

For example, a teacher working with images as part of the task in a TBLL lesson could add an alternative text (*alt text*) to each of them (Huntsman, 2022). This is a resource that describes the appearance or function of an image on a webpage, it is beneficial to the learner with a visual impairment, helping them to make sense of the task.

If a video or short film is used as part of a task, a transcript of the dialogue should be provided for students with hearing impairment. The transcripts can be used to add a subtitle to the video (Venturini et al., 2022). If the assignment is based on the jigsawing (supplying each student within the group with part of the necessary information) an audio file could be provided to students that have difficulty with reading (Almumen, 2020). Synthetic voices can be used to facilitate the translation from text to speech; Trinity College Dublin has developed an Irish language synthesizer ([www.abair.ie](http://www.abair.ie)).

## CONCLUSION

Teachers designing TBLL lessons must understand the learners' language needs (Long, 2005). The work in the classroom should be based on educational tasks that are linked to knowledge related to the language needs of the students (Grote & Oliver, 2022). In order to achieve this, in the case of Irish, research must be carried out where students at post-primary level are closely listened to, resulting in a better understanding of their Irish language learning needs. Furthermore, research should be done to use technology to support the TBLL on an inclusive basis when learning Irish as a second language.

## SUGGESTIONS FOR THE FUTURE

To implement the Specification (L2) for Junior Cycle, a range of resources that are aligned with TBLL as a teaching method will need to be developed (NCCA, 2023). Therefore, a repository should be established on a collaborative basis among teachers across the country. To do this correctly, it is necessary to research the needs of post-primary students in relation to Irish language-learning so that a valuable suite of tasks is developed, in keeping with the interests and objectives of the students.

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# AN INCLUSIVE APPROACH IN THE TEACHING OF IRISH READING IN SENIOR PRIMARY CLASSES IN AN IMMERSION SCHOOL

In immersion settings in Ireland, most pupils are immersed in a language that is generally not their home language. In the senior classes, Irish and English reading is practised. But we have very little information on how children in immersion education read in Irish, in both languages, or on the skills and strategies they use when reading. There is a lack of guidance and research on the most effective way to promote dual literacy, or to meet the different needs of children across two languages. In order to promote inclusive practice, this knowledge is urgently needed. This study uses formative assessments, research articles and new reading material to encourage teachers to reflect on current practice. Focused reading groups are explored as a possibility to meet diverse needs and support teachers to build on their inclusive strategies with 9–11-year-olds.

**Keywords:** immersion, literacy, reading, inclusivity, assessment

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## INTRODUCTION

The benefits of reading are widely recognised. Reading in a second language (L2) can enhance oral language and contribute to the full acquisition of the language (Day & Bamford, 2002; Hinkel, 2006; Stenson & Hickey, 2018). In Irish immersion schools, for the most part, Irish reading begins in the early years and English is introduced in the second or third school year (Ó Duibhir et al., 2017). In the early years, therefore, more time is spent on reading Irish than on reading English (Ó Duibhir, 2018). However, research shows that children in immersion education read more frequently in English for pleasure than they read in Irish and that they prefer to read in English (Harris et al., 2006; Parsons & Lyddy, 2016). There is also evidence that they are better readers of English than they are readers of Irish, including native Irish speakers (Lyddy et al., 2005; Pétarváry et al., 2014). Principals and teachers report a lack of willingness of children to read in Irish as well as a lack of competence in cases.

There is evidence that reading needs can be met more inclusively with focused, directed reading (LaSerna, 2022; Martinez & Plevyak, 2020; Wilson et al., 2012). However, teachers require particular expertise as well as advanced class management skills to confidently organise differentiated teaching and groups in class (Wilson et al., 2012).

This research focused on teacher practice. Assessment results, research articles and new reading resources were used to encourage a group of teachers to examine their current practices and explore possibilities for change and an inclusive approach to the teaching of reading. A focus on the senior classes can provide information on a range of skills and strategies that readers have, or have not, acquired while reading two languages. The research question addressed was: Can an inclusive approach to reading with targeted groups meet the needs of 9-11 year olds in immersion education settings in Ireland?

To explore this question, the major factors that affect literacy achievement and learning effectiveness for bilingual learners are discussed; variation in language proficiency, differentiation in practice, appropriate assessment, appropriate resources and the training and knowledge that teachers need to implement strategies and make changes in practice.

### Diversity in competence

Bilinguals often have different competences in their languages (Montrul, 2008). The differences are due to a number of factors, such as one's cognitive abilities, contact with the language, the degree of socialisation, prior experience with language, the age of the learner (Montrul, 2008) as well as specific learning needs that influence linguistic development. It has been revealed in L2 reading that differences in knowledge of vocabulary and reading fluency

influenced differences in reading comprehension (Lee & Chen, 2018). It has also been revealed that students with below-average reading achievement had less proficiency in the language compared to students with above-average scores (Genesee & Lindholm-Leary, 2021). Children have a mix of language competences, and in immersion schools, complexity is increased when needs must be met in both languages.

### **Differentiation in practice**

In an inclusive approach, the goal of the Universal Design for Learning (CAST, 2018; Westwood, 2001) is to make the curriculum accessible to all children. Proactive differentiation is recommended when the same model does not work for everyone. Children can benefit from lessons more focused on their needs (Barnes, 2017; Nic Aindriú, 2024) and purposeful group practice in L2 reading can be more focused and personalised (LaSerna, 2022; Martinez & Plevyak, 2020; Wilson et al., 2012). Lack of time with each student is reported as a disadvantage with reading groups (Shanahan, 2013). However, children can be targeted in groups that are organised with specific goals in mind. Children are in the zone of proximal development (Vygotsky, 1987) which allows them to develop at the appropriate level and close the gap in proficiency in L2 reading (La Serna, 2022). In groups, children have the opportunity to engage in active and collaborative activities that make learning social (Wilson et al., 2012).

### **Assessment**

In the case of dual literacy, assessing each language separately without identifying the link between the two languages does not recognise the development of dual literacy (Escamilla & Hopewell, 2010; Hornberger, 2004; Nic Aindriú, 2021). Researchers have expressed concerns that children are being identified as bad readers due to a lack of understanding of dual literacy (Hopewell & Escamilla, 2014). It is necessary to identify all skills, strategies and multi-competencies of dual literacy. Reading in the first language (L1), language proficiency of the second language (L2) and the decoding of the L2 contribute to the understanding of the L2, therefore assessment tests of merely one language do not reflect all competencies of multilingualism (Hopewell & Escamilla, 2014). Of course, there is no single assessment that provides all the information. Breaking the reading process into components is recommended as an approach to focus on the range of cognitive processes associated with reading across languages (Grabe, 2009; Koda, 2005; Stanovich, 2000). Teachers can informally create their own tests and assessment strategies using records, checklists, notes, dialogues, questioning and observation, focusing on phonological awareness, word recognition/phonics, fluency, vocabulary and comprehension (National Reading Panel, 2000). A reader can reveal the strategies they use to address challenges or can highlight the strategies that are lacking. With information from assessments, the teacher can be reflective and critical in finding the most effective teaching method (Martinez & Plevyak, 2020).

### **Resources**

Attractive and stimulating resources are recognised as a source of positive attitudes in reading (Dunne & Hickey, 2017; Guthrie, 2013). A range of genres and types of books enhance the motivation of reading. There is evidence that exposure to books encourages greater participation in reading than the socio-economic status of a child (Cummins, 2011). A variety of books and a variety of language standards are needed to accommodate the approaches and contexts of reading in schools (Glasswell & Ford, 2010). Texts that are aimed at teacher-guided reading contain rich and challenging language. Other books can be in the reader's zone of proximal development that encourages the use of skills and strategies (Grabe & Stoller, 2011). Reluctant readers can be supported with books that are written at a low level of ability but that focus on a high level of interest. Texts for independent reading or for reading clubs should be at an accessible language level that can be read for pleasure. Shanahan (2020) recognises the importance of texts being challenging for readers to strengthen reading skills. On the other hand, readers are less likely to understand a text if it contains too many new words (Snell et al., 2015; Wasik & Iannone-Campbell, 2012). It is therefore necessary for teachers to find challenging texts that are not at an overly challenging level that the children will be discouraged. This is a challenge for immersion and L2 teachers and guidance on book selection is necessary.

### **Teacher training and knowledge**

Teacher expertise is a critical element in effective reading instruction (Gambrell et al., 2014). In the context of this study, to promote an inclusive approach in reading lessons, teachers need specific knowledge. Pedagogical knowledge is required to support teaching approaches, class organisation, whole class and group teaching as well as teaching routines (Griffith et al., 2015). In addition, there is a need for specific knowledge in the particular context of immersion education (Cammarata & Tedick, 2012; Nig Uidhir & Ó Ceallaigh, 2024) in terms of reading components across languages, assessment and appropriate resources suitable for specific languages. Appropriate assessment would provide an insight into the language proficiency of children, and with this information, an understanding of the ways in which differentiation can be applied in practice to support a range of learners.

## Change of practice

Changing long-standing practice is challenging. A teacher may know there is a problem but not know how to solve it (Duguay et al., 2016) or believe that a particular practice is in place, but observation of the practice itself indicates that this is not the case (Bingham & Hall-Kenyon, 2013). Research on dissonance focuses on changing beliefs and attitudes as a starting point towards change (Guerra & Wubbena, 2017). Reducing dissonance can raise self-awareness and support teachers to make their own changes in practice (Gorski, 2009). To focus on teacher practice, the inclusion of the voice of children in the form of assessment or classroom observation is recommended to examine teachers' current practice and place this in the context of theory (Treacy & Leavy, 2021).

## METHODOLOGY

This study focused on the practice of Gaelscoil teachers in Irish reading lessons for children aged 9-11, with the aim of reflecting on their inclusive practice by focusing on assessment, research articles and new reading resources. Teachers were given research articles on the components of reading (Dole, 2002; Lervåg & Aukrust, 2010; Pressley, 2001; Rasinski, 2014; Wasik & Iannone-Campbell, 2012) and on reading approaches (Grabe, 2010; Subscription & Pinnell, 2012). An Irish version of the assessment tests on the components of reading was developed and implemented in consultation with the teachers. Running records, a fluency test based on the Fluency Rubric (Rasinski, 2004), a decoding assessment based on the *Cód na Gaeilge* (Irish Language Code) programme (de Brún, 2012) and a phonics assessment (Walpole et al., 2011), word recognition (Liostaí Bhreacadh, 2007) and comprehension interviews based on the Major Point Interview for Readers (Keane & Zimmerman, 1997) were conducted. A new selection of reading resources were presented to the teachers who chose books suitable for the readers in their classes at a variety of reading abilities.

Teachers completed questionnaires at the beginning of the study to describe current practice. They were interviewed at the beginning and end of the study. A reading lesson was observed in each class and there were ongoing discussion sessions throughout the study.

## Participants

Six teachers from two Irish immersion schools participated in the study. Ethical approval was gained from Dublin City University and approval from the boards of management of both schools and approval from all participants. A small sample of teachers was selected with the aim of gathering detailed information on practice. Urban schools were selected with large class sizes, a mix of socio-economic backgrounds and with children for whom Irish was not the language of home. The teachers had classes aged 9-11 with around 30 children in each class (n=172). It is recognised that this study is a small sample, but it provides an insight into the practice of reading and the teachers' views on their practice.

## Data collection and analysis

Data were collected from the questionnaires, the children's assessment results, transcripts of the interviews, observations and discussion sessions. Quantitative data were analysed by recording frequencies. Thematic analysis (Clark & Braun, 2017) was applied to the qualitative data and common themes were revealed and are discussed below.

## RESULTS

These findings discuss the responses and statements made by six teachers who took part in the study. The analysis of the questionnaires (n=6) and the children's assessment results (n=172) were used to inform the teachers' discussions. A thematic analysis was conducted on 12 interviews, 6 discussion sessions and 12 lesson observations. Major themes emerged from the analysis of the data; lack of training in the specific aspects of immersion education, lack of teacher knowledge, teacher attitudes and confidence, lack of assessments and lack of resources as well as lack of knowledge of resources.

## Practice at the beginning of the study

All teachers reported that they had received monolingual training in reading in initial and in-service teacher education and had not received any training in inclusive approaches to reading. They had not read any research on these topics. This lack of knowledge on specific aspects of immersion education has been demonstrated in other studies in Ireland (Nig Uidhir & Ó Ceallaigh, 2023; Ó Duibhir et al., 2017).

All participating teachers stated that the children did not have the appropriate standard of reading in Irish. A wide

range of difficulties were described for children with regard to decoding skills, vocabulary development, fluency problems and some had a lack of comprehension of texts. However, teachers explained that their approach to assessing reading did not provide them with the appropriate information, that they did not know exactly where the weaknesses were and how to address them. The teachers in both schools indicated that they had more reading resources in English than in Irish. To cater for the wide range of readers in classes, a wide range of books is necessary. A shortage of high interest, low ability texts in Irish as appropriate resources in these contexts was discussed.

### **Description of lessons**

A typical reading lesson was described. In one school lessons were mostly whole class reading lessons, the same book for each child, mostly fictional novels. The emphasis was on a teacher or students reading aloud in turn and everyone else following the text. The reading was stopped occasionally to explain words or for the children look up the definition in the dictionary. After the reading, the children were given activities, either independently or in groups. There was no differentiation, and although the children were working in groups, everyone had the same text and the same group work. In the other school, group reading took place for the most part, and each group had a different book according to the children's abilities. Each group had independently pre-planned activities based on the book while the teacher moved from group to group, listening to children read aloud in turn. The emphasis was on reading aloud in these lessons, each student reading in turn and reading as a display (Ash et al., 2008). This practice leaves less time for reading instruction and less time for each student (Ash et al., 2008; Shanahan, 2013). Each student read in turn in a Round Robin style. While there was an inclusive approach in terms of groups, there was no time for teaching reading and meeting the needs of each individual.

### **Change**

The research, assessment results and new resources provided teachers with an opportunity to reflect on their own practice in the context of a new perspective. All teachers indicated in the final interviews that they had learned a great deal from the research articles, that they recognised their own heightened awareness and a change in their own effectiveness. The assessments provided them with detailed information that they did not have before and gave them clear targets for planning for the children's needs. The teachers indicated their own lack of knowledge of reading resources available in Irish. They were given a range of options, fiction and non-fiction texts as well as Readers' Theatre. The Readers' Theatre encouraged the use of group reading in classes that did not practice group reading, as well as reading aloud in the context of fluency practice and rereading, which improves prosody and comprehension (Chard et al., 2002; Rasinski, 2014). The teachers were afforded confidence in selecting appropriate books and trying new approaches. They believed they were employing an inclusive and enjoyable approach while focusing on the children's specific needs in Irish reading.

## **DISCUSSION**

The teachers expressed their lack of knowledge about the development of reading components across two languages, informal assessment in an immersion setting, reading approaches and appropriate resources for a range of learners in an inclusive approach. In reading research articles and analysing assessment results the teachers explored their own practices. Small groups are recommended to meet the needs of children in the L2 (La Serna, 2022) but this is not sufficient without the appropriate information from assessment and research for planning (Wilson et al., 2012). Through informal assessment it is possible to focus on the aspects that are weak or lacking in readers in focused groups (La Serna, 2022; Martinez & Plevyak, 2020; Wilson et al., 2012) and to be reflective and critical in order to find the most effective teaching method in an inclusive pedagogy (Martinez & Plevyak, 2020). The teachers were given the opportunity to focus on the needs of the children at their own immersion language proficiency level (LaSerna, 2022; Martinez & Plevyak, 2020; Wilson et al., 2012).

The importance of resources and books appropriate to the child's level of learning and the need to properly investigate the books being read was highlighted. Irish language reading resources have been greatly expanded recently, but there are gaps in resources for specific reading situations. There is a shortage for a range of contexts and reading approaches to meet all needs. High interest, low ability texts were highlighted as a gap in the context of struggling or reluctant readers.

Teacher knowledge and reflection on practice are essential to planning (Duguayet et al., 2016). It is also necessary to have the appropriate resources for planning and responding to children's needs in an inclusive manner (Grabe & Stoller, 2011). This study showed that teachers can be motivated and encouraged to make positive changes in their own practices (Gorski, 2009; Treacy & Leavy, 2021).

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# TEACHER PROFESSIONAL LEARNING FOR INCLUSIVE EDUCATION IN GAELTACHT SCHOOLS: A REVIEW OF THE LITERATURE

Professional learning (PL) is key if teachers are to feel prepared and supported to implement inclusive education (IE) for students with special educational needs (SEN). There is a dearth of research related to professional learning for inclusion in Gaeltacht education. The intersection of immersion education and SEN presents additional challenges for Irish-medium education (IME) schools in meeting the needs of their students with SEN, and teachers in these settings require context specific PL in the area of SEN. However, to date, PL has not always addressed the complex socio-linguistic context in which Gaeltacht schools are located. This paper reviews key literature pertaining to Gaeltacht education, as well as PL and SEN across a range of contexts.

**Keywords:** Gaeltacht, immersion education, teacher professional learning, inclusive education, special educational needs

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## INTRODUCTION

Despite global policy commitment to inclusive education (IE), inadequate professional learning (PL) to support the translation of policy into practice remains a key challenge (Chow et al., 2023; O’Gorman and Drudy, 2010; Roberts and Simpson, 2016; Travers et al., 2010; Young et al., 2017). International research on the PL needs of immersion teachers in the area of SEN is limited (Carr, 2007; Casey et al., 2013; Lapkin et al., 2006; Mady, 2018; Mollica et al., 2005; Rodriguez and Carrasquillo, 2005). Increasingly, research in the Irish-medium education (IME) context highlights that teachers require PL in the areas of SEN (Andrews, 2020; Barrett, 2016; National Council for Curriculum and Assessment (NCCA), 2007; Ní Chinnéide, 2009; Nic Aindriú et al., 2022). However, there is a dearth of research focusing specifically on Gaeltacht education (Ní Thuairisg, 2018; Ó Grádaigh, 2015), particularly in the area of SEN (Mac Donncha et al., 2005; Mac Intyre Coyle and Nic Aindriú, 2023). Furthermore, PL has not always addressed the complex socio-linguistic context in which the professional practice of Gaeltacht teachers is located (Ní Thuairisg, 2018). It is important to address PL for IE in the under-examined Gaeltacht context, since the understanding and enactment of inclusion varies significantly across contexts and cultures (Artiles and Kozleski 2007; Norwich, 2008; Warnes et al., 2022). This article aims to review key literature pertaining to PL and SEN in immersion contexts in order to answer the following question, how might PL further support IE in Gaeltacht schools? In doing so, it aims to address research gaps related to PL for IE in immersion settings.

## METHODOLOGY

A thematic approach (Clarke and Braun, 2017) was deemed the most fitting to undertake this review, due to the multi-strand nature of this research. Literature was yielded from comprehensive searches of Educational Resources Information Centre (ERIC), PsycINFO, Scopus and Google Scholar. Additionally, grey literature and national websites (e.g., [www.cogg.ie](http://www.cogg.ie); [www.gaeloideachas.ie](http://www.gaeloideachas.ie); [www.ncse.ie](http://www.ncse.ie)) were analysed in order to identify relevant data/publications. This review draws upon literature from the Republic of Ireland (RoI) and Northern Ireland (NI), in both English and Irish, that is pertinent to both primary and post-primary schools, as well as international research. Systematic reviews/meta-analyses were sought out but studies with smaller sample sizes were also included, due to the relatively small number of relevant studies in the Irish context. Key search terms utilised included: Gaeltacht, immersion education, teacher professional learning, inclusive education, special educational needs. Although the focus of this paper is PL to support IE in Gaeltacht schools, it includes research on IME schools outside of the Gaeltacht (Gaelscoileanna), who face similar challenges in the provision of IE through a minority language.

## GAELTACHT CONTEXT

### Gaeltacht area and Gaeltacht education

'Gaeltacht' refers to regions in Ireland in which the Irish language is, or was until recently, the primary spoken language of the majority of the community (Údarás na Gaeltachta, 2017). The linguistic district of the contemporary Gaeltacht is "multi-faceted and complex" (Ó Duibhir et al., 2015, p. 9). The position of the Irish language as a minority language in the Gaeltacht is precarious (Mac Donnacha et al., 2005; Ó Giollagáin et al., 2007; Ó Giollagáin and Charlton, 2015; Péterváry et al., 2014), with a general downward trend in the number of people in the Gaeltacht speaking Irish on a daily basis (Central Statistics Office (CSO), 2017, 2023). This is also evident at school level, (Harris et al., 2006; Mac Donnacha et al., 2005; Ó Giollagáin et al., 2007; Péterváry et al., 2014). As a consequence, a model of Gaeltacht education has arisen which must simultaneously tend to the socio-linguistic needs of both "native speakers" and learners of Irish alike (Ó Ceallaigh and Ní Dhonnabháin, 2015, p. 188).

### Gaeltacht educational policy

These unique challenges and the complex socio-linguistic contexts of Gaeltacht schools are acknowledged in the *Policy on Gaeltacht Education* (Department of Education and Skills (DES), 2016). The overarching goal of this policy is to ensure access to high quality and relevant IME in Gaeltacht schools and to promote the use of Irish as the primary language within Gaeltacht communities. The *Scéim Aitheantais Scoileanna Gaeltachta* (Gaeltacht Schools Recognition Scheme) aims to strengthen immersion education in Gaeltacht schools. Immersion education is a form of bilingual education in which students are immersed in a second language (L2) other than their first language (L1), in order to develop fluency and literacy in both languages (Cummins, 2009). The policy acknowledges the need for Gaeltacht teachers to have ongoing PL in order to provide high quality teaching and learning to linguistically diverse groups of students, and that PL for Gaeltacht teachers should be aligned to the PL for teachers in the general school population. Specific reference to SEN exists in one of the seven support pillars of this policy. Objectives include improved access to resources and support services through Irish, as well as raising awareness among professionals about the literature highlighting the benefits of bilingualism and the particular bilingual needs of students with SEN in Gaeltacht settings.

There have been key policy developments nationally related to IE for all, such as *Education for Persons with Special Educational Needs Act* (EPSEN) (Government of Ireland (GoI), 2004). However, Barnes (2024) argues that IME schools operate within a "fragmented policy context" (p.4), which sidesteps the needs of Irish speakers in favour of the majority culture. She highlights that EPSEN does not explicitly mention IME in the Act, nor is the National Council for Special Education (NCSE), developed under EPSEN, obligated to adapt resources, support, or training materials for use in IME schools.

### SEN in Gaeltacht schools

There is limited and dated data pertaining to SEN in Gaeltacht schools. In 2005, Mac Donnacha et al. estimated that 6 % (N=511) of students in the 125 Gaeltacht primary schools and 7 % (N=324) in 27 Gaeltacht post-primary schools had a diagnosis of SEN. The most up to date overview of the most prevalent types of SEN in Gaeltacht schools have included both IME school types in their study of the SEN provision and prevalence (Barrett, 2016; Barrett et al., 2020). At that time, the most prevalent types of diagnosed SEN in these schools are as follows: (1) Specific Learning Difficulty (SLD), (2) Mild General Learning Difficulty (MGLD), (3) Specific Language Impairment (SLI), (4) Autism Spectrum (AS) and (5) Developmental Coordination Delay (DCD). However, this study does not provide an isolated, overall prevalence rate of students with SEN in Gaeltacht schools. In a more recent study (Nic Aindriú, in press), it is estimated that 16.7 % of students in IME and Gaeltacht post-primary schools have a diagnosis of SEN. SLD is the most prevalent category of SEN in these schools. Other most frequently reported categories are AS, DCD, Attention Deficit Hyperactivity Disorder (ADHD) and MGLD. The prevalence rate of SEN in Gaeltacht schools at 18.22 % is marginally higher than the rate of 16.35 % in IME schools outside of Gaeltacht areas. A total of 15.13 % of students in both school types access additional teaching support, which includes students with and without formal diagnoses of SEN (Nic Aindriú, in press).

There are numerous challenges related to IE for students with SEN in IME settings. These include the limited availability of assessment and resources for students with SEN in IME settings (Barnes and Ó Duibhir, 2023; Mac Donnacha et al., 2005; MacIntyre Coyle and Nic Aindriú, 2023; Nic Aindriú et al., 2021), a lack of evidence-based interventions in the medium of Irish (Nic Aindriú and Ó Duibhir, 2023), as well as limited educational psychological provision (Murtagh and Seoighe, 2022) and professional support services to support the needs of bilingual children with SEN (Nic Aindriú et al., 2021).

### Teacher professional learning

The terms PL and professional development (PD) are often used interchangeably. Timperley *et al.* (2007) distinguish between PD and PL by associating the former with educational activities and processes and PL as the form of expertise

and internal knowledge creation which is the outcome of such activities. Increasingly, PL is the recommended term used to account for the teacher learning that may emanate from the range of PD experiences in which teachers engage (King et al., 2022). This marks a shift in PD conceived as something that is “done” to teachers (Timperley et al., 2007, p. 233), to the idea that teachers are active participants responsible for their individual learning and agents of change within their context (Labone and Long, 2016).

PL is central to teacher professionalism (Kennedy, 2014). Effective PL is a mechanism for improving teacher practice and student outcomes (Darling-Hammond et al., 2017). However, PL is a complex system (Boylan et al., 2018; Merchie et al., 2018; Strom and Viesco, 2021), which is inextricable from the “complex teaching and learning environments in which teachers live” (Opfer and Pedder, 2011, p. 377). It is the features, as opposed to the form (e.g., workshop or seminar) have been shown to be of greater importance in determining the impact of PL on students and teachers (Gilleece et al., 2023). Core features of effective PL, as identified by Desimone (2009), and widely accepted as orthodoxy (King et al., 2022) consist of: content focus; active learning; collective participation; coherence; and duration. Additional features include a focus on participants’ needs, the role of external providers and specialists and the importance of leadership for PL (Cordingley et al., 2015).

### Teacher PL in the Republic of Ireland

In recent years, teacher PL in RoI has been supported and impacted by key policy developments, such as *Cosán*, the national framework for teacher learning devised by the Teaching Council (2016), as well as an increased policy focus on both the evaluation of PL (Gilleece et al., 2023) and PL principles and practices (King et al., 2022). In the RoI, PL opportunities are provided by the Department of Education (DoE), through teacher support services such as the recently amalgamated Oide, Education Centres, agencies of the DoE, third level institutions and other organisations. An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta (COGG), Gaeloideachas, Údarás na Gaeltachta, Education and Training Board (ETB) Ireland are among the organisations that offer PL to IME schools.

*Cosán* reflects the idea of PL as ongoing and lifelong, and an embedded and natural component of teacher PL and school improvement (Banks and Smyth, 2011). It acknowledges that PL may be informal, personal, professional, school-based, or external. *Cosán* identifies PL as both a right and a responsibility, but this is not mandatory engagement following completion of Initial Teacher Education (ITE) and induction. PL as a responsibility understands teachers as professionals who are self-motivated to steer their own PL journeys. While inclusion is a priority learning area within *Cosán*, Kenny et al. (2020) note that the framework does not overtly recommend any specific standards or competencies in IE, meaning that teachers working with students who present with SEN are not required to engage in any specific PL to support the IE of these students.

### The professional learning needs of immersion teachers

Teachers in immersion classrooms are charged with additional and complex pedagogical demands (Lapkin et al., 2006; Lyster and Tedick, 2014; McPake et al., 2017). In addition to the required knowledge and pedagogy related to an individual’s specific subject, immersion teachers also need to develop the linguistic knowledge and skills necessary for them to effectively teach their subject in immersion classrooms (Tedick and Fortune, 2013). In the case of minoritized language medium instruction, it can be difficult to find teachers who are fluent and literate in the minority language, and confident in using it as the medium of instruction (McPake et al., 2015). Teacher preparation and PL programmes have often been inadequate in addressing the specific needs of the immersion teacher audience, with the consequence that immersion teachers often lack the skills to locate language opportunities within subject content and instruction (Cammarata and Tedick, 2012). Common across the research is the need for higher quality PL specific to immersion teaching, as well as the need for more developed knowledge of immersion pedagogies (Lyster and Tedick, 2014; Mac Gearailt et al., 2021; Ní Dhiorbháin and Ó Duibhir, 2017; O’Boyle et al., 2023). In the Irish context, a demand amongst immersion teachers for PL specific to IME exists (Ó Duibhir, 2018; Ó Giollaigáin et al., 2007). Immersion teachers express that their training does not adequately prepare them for IME (Ó Ceallaigh and Ní Shéaghda, 2017) and ITE does not sufficiently tend to the IME sector (Mac Donnacha et al., 2005; Ó Ceallaigh, 2013; Ó Grádaigh, 2015).

Recently, O’Boyle et al. (2023) have provided an overview of the challenges for teachers and educational practitioners in IME in NI. This research comprised a systematic literature review of 152 articles across a broad range of pedagogical, linguistic and geographical contexts, as well as multi-perspective interviews with key stakeholders. Challenges encountered relate, firstly, to the teaching and learning resources gap, such as testing materials, subject specific textbooks, exam preparation materials and language testing materials, as well as the human resources gap related to the “double role” (p.28) immersion teachers occupy as teachers of a subject as well as a language. Secondly, assessment in this sector is seen to be underdeveloped, requiring teachers to spend additional time designing their own assessments or to use potentially invalid ones. The lack of specialized training in bilingual test construction may not only compromise assessment quality but also impact their professional identity.

There is a documented need for additional PL opportunities for IME teachers in the area of SEN (Andrews, 2020; Barrett et al., 2020; COGG, 2010; Mac Donncha et al., 2005; Ní Chinnéide, 2009; Ní Fhoighil and Travers, 2013). Nic Aindriú et al.'s (2022) study on the PL needs of IME teachers in SEN (N=133) reveals that these teachers would like to learn more about literacy, assessment, interventions and inclusive pedagogies, and that they have a preference towards short courses and/or in-school PL, a factor which has also been reported at post-primary level (Nic Aindriú, in press). The challenges these teachers face in terms of meeting the needs of students with SEN include a lack of time, lack of courses available based on the immersion context and lack of in-school PL options. The subsequent design of an online PL course in SEN for teachers in IME schools aims to address these challenges, targeting the areas identified above, as well as bilingual and second language acquisition (Nic Aindriú et al., 2023).

### Planning and evaluating effective professional learning

Contextual factors, such as system, school and classroom and individual, are barriers or enablers which influence PL uptake, participation, learning from PL and/or implementation and embedding of PL learning (Gilleece et al., 2023). Planning of PL should be cognisant of baseline data, such as reasons for engaging with PL, expectations of PL and an evidence base of the knowledge, skills and attitudes prior to the PL (King, 2014; King, 2016). Of relevance to the Gaeltacht also is a meta model of PL designed by King et al. (2023), which is informed by existing frameworks, as well as the broader PL literature. This model highlights the importance of context and is flexible enough to enable PL designers to choose from a range of tools and approaches, as well as allowing researchers to select methods and instruments that most align with their objectives. It is suggested here that the planning and evaluation frameworks provided by the aforementioned may allow for consideration of the specific needs of immersion teachers (O'Boyle et al., 2023), and IME (Andrews, 2020) and Gaeltacht teachers (Ní Thuairisg, 2018). This is critical in the Gaeltacht context, as Ní Thuairisg has found Gaeltacht post-primary teachers' (N=20) participation and engagement in PL to be low due to dissatisfaction with PL provision that does not address their socio-linguistic environment.

In consideration of how PL might support IE in Gaeltacht schools, a professional learning community (PLC), as a transformative model of PL, (Kennedy, 2014) offers potential in the Gaeltacht context. Broadly speaking, a PLC can be viewed as "professionals coming together in a group – a community – to learn" (Hord and Sommers, 2008, p.7). PLCs are associated with improved teaching and student learning and are driven by the needs of participating teachers, while simultaneously honouring their knowledge and experience (Vescio, Ross and Adams, 2008). According to Ní Thuairisg (2018), a PLC of post-primary teachers in Gaeltacht schools may act as a PL vehicle that tends to the specific challenges of practice in this context, while also encouraging the development of a professional identity that is underpinned by a common cultural and linguistic identity. In the Irish context, a PLC for inclusive practice has been shown to positively impact individual teacher attitudes and efficacy towards IE, both at an individual and collaborative level (Brennan, 2017). Furthermore, there is evidence these changes were sustained change in the longer term (Brennan and King, 2022).

### CONCLUSION

This review of the literature pertaining to Gaeltacht education, as well as PL and SEN in immersion contexts, finds that teachers in immersion settings require PL in the area of SEN. Furthermore, context is a key consideration in the planning and evaluating of such PL. This may have implications for future practice and policy in Gaeltacht schools. Gaeltacht schools face specific challenges in meeting the needs of their students with SEN. It is positive that PL and provision for students with SEN is addressed in the *Policy for Gaeltacht Education 2017-2022* (DES, 2016). However, there is scant guidance as to how other key policy developments, such as EPSEN (Gol, 2004), and policy related to teacher PL, might translate to the unique socio-linguistic Gaeltacht context. In order to avoid becoming an "educational backwater" (McPake et al., 2017, p.100) in the context of educational reform, it is critical that Gaeltacht schools are provided with PL opportunities for IE that address their specific needs and context. It is also key that such PL is viewed by Gaeltacht teachers as a responsibility as well as a right, as it is recognised that teachers may exercise autonomy in respect of the PL opportunities that will most benefit them and their students (Teaching Council, 2016). In playing an active part and engaging in this debate, Gaeltacht teachers can ensure their concerns are heard and that awareness is raised about their specific issues and developments (McPake et al., 2017). A PLC of Gaeltacht teachers may offer promise to support their PL needs in the area of SEN, in a manner that supports teacher autonomy and is contextually sensitive.

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