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Analysis of current teaching and learning resources for children with additional educational needs in Irish-medium and Gaeltacht education.

SEALBHÚ
Lárionad Taighde DCU
um Fhoghlaim agus Teagasc
na Gaeilge

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Executive Summary

This research was undertaken to investigate the assessment and teaching resources required through Irish for Irish-medium and Gaeltacht primary and post-primary schools to cater for pupils with additional educational needs (AEN). The main objectives of the research were:

(i) to explore the resources currently available through Irish for Irish-medium/Gaeltacht schools to assist them in meeting the AEN of their pupils in the areas of, literacy, mathematics, ICT, language, and communication through Irish, and their personal, emotional, and social development,

(ii) to evaluate the areas in which further assessments and resources are required through the medium of Irish to assist Irish-medium and Gaeltacht schools in meeting the AEN of their pupils.

This report is important as international literature shows that teachers with access to appropriate assessments, resources, support, and guidance are more effective and that their students make better academic progress (Feng & Sass, 2010). The report analyses the current teaching, learning and assessment resources used in Irish-medium/Gaeltacht schools as they cater for pupils with AEN. It provides a review of international and national literature of recommended practices in literacy, mathematics, ICT, language and communication through a second/minority language, and personal, emotional, and social development. The data collected through the consultation process allowed us to compare the resources available/used through Irish in Irish-medium and Gaeltacht schools and the recommended best international/national practices. The consultation process consisted of three stages:

(i) Teachers from Irish-medium/Gaeltacht schools undertook an online questionnaire on behalf of their schools,

(ii) Irish-medium/Gaeltacht teachers conducted individual semi-structured interviews to provide a further context for the data collected through the questionnaire in stage one,

(iii) Schools and teachers were invited to complete a consultation form providing feedback based on the elements covered in a consultation paper.

This allowed schools and teachers to respond to the paper with their ideas, comments, and suggestions in the form of an anonymous online consultation accompanying the paper. The data from the consultation forms were used to clarify the details of the paper and to add any significant missing data.

Recent research found that teachers in Irish-medium primary schools outside the Gaeltacht faced challenges regarding the provision of special educational resources through Irish (Andrews, 2020). In addition to the areas mentioned above, the development of resources in Irish being undertaken by teachers in the Irish-medium/Gaeltacht schools were explored. The resources and assessment materials being translated from English to Irish by teachers were also explored. The lack of literacy assessments through Irish makes it difficult for schools and teachers to properly assess pupils, as the pupils are being educated through Irish and tests are often only available through English. It was reported that there has been a need to provide further assessments through Irish since 2005 (COGG, 2010; Mac Donnacha et al., 2005; NCCA, 2007; Ní Chinnéide, 2009; Nic Gabhann, 2010; Ó Duibhir et al., 2015). Therefore, it was important to understand the practices currently in place in schools in terms of assessment generally and their requirements for assessment through Irish. Reference was also made to the need to provide external services (e.g., speech and

language therapist and educational psychologists) through Irish as a requirement for pupils with AEN who are learning through Irish (COGG, 2010; Mac Donnacha et al., 2005; Ní Chinnéide, 2009). This research gave teachers and schools an opportunity to discuss the current practices in place regarding access to additional supports, the language in which these services are being provided, and their current needs in this area.

Additional educational needs (AEN) in Irish-medium and Gaeltacht schools

It is estimated that 9.4 % of primary pupils attending Irish-medium primary schools outside the Gaeltacht (Nic Aindriú, Ó Duibhir, & Travers, 2020) have an additional educational needs diagnosis. Dyslexia is reported to be the most frequently identified category of AEN in Irish-medium primary school outside the Gaeltacht (Barrett, Kinsella, & Prendeville, 2019; Nic Aindriú et al., 2020; Nic Gabhann, 2009). The other most frequently reported categories of AEN are autism spectrum disorder, emotional and behavioural difficulties, specific speech, and language disorder (Barrett, Kinsella, Prendeville, 2019; Nic Aindriú et al., 2020). It was estimated that 16.6 % of pupils enrolled in Irish-medium primary schools received additional teaching support from the special education teacher in the 2017-2018 school year (Nic Aindriú, Ó Duibhir, & Travers, 2021). The analysis showed that there is little difference in the number of pupils receiving support in Irish-medium and English-medium primary schools.

Research on the prevalence of additional educational needs in Gaeltacht schools is limited (Barrett, 2016; Mac Donnacha et al., 2005). The five most frequently reported categories are (1) specific learning disability, (2) mild general learning disabilities, (3) specific speech and language disorder, and (4) autism spectrum or development coordination disorder (Barrett, 2016: 14). In 2004, it was estimated that 6 % (n = 511) of primary Gaeltacht school pupils had a AEN diagnosis. In this study, 358 pupils (n = 8,516, 4 %) were receiving additional

teaching support from the school resource teacher (Mac Donnacha et al., 2005). The use of English assessments to identify pupils with AEN in these schools was an issue identified as some pupils may have limited English language proficiency in Gaeltacht areas.

There is little research available on the prevalence rates of AEN students in Irish-medium post-primary schools outside or within the Gaeltacht (Mac Donnacha et al., 2005). With regard to Gaeltacht post-primary schools, the diagnosis of AEN is estimated to be around 7 % of pupils (n = 324) in 2004 (Mac Donnacha et al., 2005). The study carried out more than 15 years ago stated that this sector had significant difficulties in accessing teaching and learning resources through Irish (Mac Donnacha et al., 2005). Unfortunately, there is no up-to-date statistical data on the prevalence and types of additional educational needs of pupils in post-primary schools Irish-medium/Gaeltacht.

Literature Review

Within the contexts of immersion education worldwide it is stated that schools and teachers face difficulties when accessing resources and teaching assessments through minority language (Andrews, 2020; Cammarata & Tedick, 2012; May, 2013; May & Hill, 2008; Walker & Walker Tedick, 2000). Section 2 of the main description below provides a comprehensive review of national and international research and literature in this area. It focuses on the following themes: access external bilingual or minority language service providers, assessment, interventions, and resources in the context of immersion education. The themes are divided into the following headings: literacy, language and communication, numeracy, and personal, social, and emotional development.

Overall, it is clear that suitable resources in English are available for pupils with AEN. It is also clear that the Department of Education and the National Educational Psychological Service (NEPS) recommends many assessments, interventions, and resources for teachers in primary and post-primary schools in Ireland. Unfortunately, most of these resources are not available through Irish. The benefits of these evidence-based assessments, interventions, and resources are evident in the literature reviewed. The next part of this executive summary discusses the research results of the consultation process, in relation to what assessments, interventions, and resources are required for teachers in Irish-medium and Gaeltacht primary and post-primary schools in the Republic of Ireland.

Research Results

The results in this summary focus on two areas; obtaining resources and assessments through Irish, and ICT resources available through Irish. The main description provides a more comprehensive account of the detailed results outlined in Chapter 4 below.

Obtaining resources and assessments through Irish

The majority of schools surveyed said that the lack of assessment and teaching resources through Irish to cater for the additional educational needs (AEN) of their pupils was very challenging. Most schools also reported that the external service providers, such as educational psychologists and speech therapists, had a good or very good understanding of the pupils' AEN in their school despite the fact that most services were being provided through English. With regard to the services of the educational psychologist, only 6 % of schools reported that this service was available through Irish only. Only 8 % of schools reported that speech the therapist services were available through Irish only. In relation to the visiting teachers' scheme, only 15 % of schools who had access to this service were through Irish. It is clear that there has been little improvement in the area in relation to the number of external service providers that provide a service to pupils through Irish in Irish-medium schools (Andrews, 2020). This is an international challenge in accessing these services bilingually or in minority language (de Valenzuela et al., 2016; O'Toole & Hickey, 2013).

With regard to the types of assessment used by teachers, the two categories of assessment most frequently used were standardised literacy assessments (77 %) and mathematical assessments (71 %) in both English and Irish. Many teachers reported that the lack of

assessment through Irish was the biggest challenge they faced, and teachers are often creating their own assessments. The lack of assessment has made it difficult for students to access the Reasonable Accommodation Scheme at Certificate Examinations (RACE) for state examinations.

As regards the assessments that are required through Irish, bilingual literacy (Irish-English) assessments (61 %) were the most frequently sought ones. Subsequently, 55 % of schools stated that they needed bilingual mathematics assessments, 54 % reported that they needed early numeracy assessments through Irish and 53 % reported the need to provide cognitive assessments through Irish.

It was found that teachers are creating their own resources through Irish to meet the needs of the pupils with AEN. It was found that 39 respondents reported having made their own resources on a weekly or daily basis. With regard to the resources used through Irish, one teacher referred to the excellent resources coming from Northern Ireland, for example from An tÁisaonad and the CCEA.

As part of the survey, schools were asked to rate a list of resources in order of urgency they need through Irish. Graded Irish language readers were listed on the most urgently needed resource. Irish language and communication resources were listed second, and interventions based on evidence and programmes for social and emotional development through Irish were listed in third place. Evidence-based mathematics interventions were listed in fourth place. The other resources needed are, mathematics resources and social stories.

ICT Resources through Irish

For the types of ICT required through Irish, text-to-speech (n = 36), audio books (n = 36), and applications (n = 36) were listed as the most needed resources to assess student phonics development in fourth place (n=33), followed by assessment applications for Irish literacy (n=32). The other ICT resources required through Irish are social stories (n = 31), touch-typing Irish language programmes (n=31), applications to develop student cognitive abilities/working memory (n=30), spelling programmes (n=29), mathematical assessments (n=29), and screen reader (n =23).

Recommendations for the Future

Recommendations are made in Chapter 5 below in the key report regarding future development in the area of assessment and resources for students with RSO learning through Irish. The main themes under which recommendations are made are external services, literacy, language and communication, numeracy, and social, emotional, and personal development. Each heading deals with the assessment, interventions, and resources/ICT. The recommendations relate to the best practice identified both nationally and internationally for catering for pupils with AEN in immersion education contexts and those learning through the second language. external Services through Irish

Conclusion

We are extremely grateful to all the teachers who gave their time generously and for the valuable views they have expressed. It is clear that additional teaching resources and assessments are required through Irish to help them support pupils with an AEN. The findings show that teachers are using the resources available through Irish, but more

developments are required in this area as there are not enough Irish language resources available. However, it is clear that the number of resources available through Irish has improved over the years. There is a need for more standardised and non-standardised resources in Irish literacy, mathematics, language and communication, and personal, social, and emotional development. It was clear that both primary and post-primary teachers relied heavily on assessments through English. The Department of Education and Skills, NEPS and the PDST are proposing many programmes, resources, and interventions which are not available through Irish. The teachers discussed how important it is that these are made available through Irish.

1. Introduction

This research was undertaken to investigate the assessment and teaching resources required through Irish for Irish-medium and Gaeltacht primary and post-primary schools to cater for pupils with additional educational needs (AEN). The objectives of this research were to:

- Assess the resources currently available through Irish for Irish-medium/Gaeltacht schools to assist them in meeting the AEN of their pupils in the areas, literacy, mathematics, ICT, language, and communication through Irish, and personal, emotional, and social development,
- Evaluate the areas in which further assessments and resources are required through the medium of Irish to assist schools in meeting the AEN of their students,
- Identify the challenges facing Irish-medium and Gaeltacht primary and post-primary teachers in accessing Irish language assessments and resources,
- Write a report discussing the resources available through Irish, the challenges facing schools in accessing resources through Irish, and making recommendations on the resources that teachers need through Irish.
- To provide stakeholders with an opportunity for Irish-medium education (e.g., principals, class teachers, special education teachers) to take part in a consultation process and to share their ideas and suggestions on a prepared discussion document by completing a consultation form.
- Write a report based on the feedback on the consultation paper according to the results/recommendations of the consultation process.

This research report is important because international literature tells us that teachers who have access to the appropriate assessments, resources, support, and guidance are more effective and their students make better academic progress (Feng & Sass, 2010). The paper analyses the current teaching, learning and assessment resources used in Irish-medium/Gaeltacht schools as they cater for pupils with AEN. It provides a review of the international and national literature around recommended practices in literacy, mathematics, ICT, language and communication through second/minority languages, and the development of personal, emotional, and social skills. The data collected through the consultation process allowed us to compare the resources available/used through Irish in Irish-medium schools and the best international/national practices proposed. There were three stages involved in this consultation process. In the first phase, teachers from schools completed an online questionnaire on behalf of their schools. In the second phase, teachers participated in semi-structured individual interviews to provide further context for the data collected through the questionnaire in the first stage. In the third stage schools and teachers were invited to complete a consultation form providing feedback based on the elements covered in a consultation paper. This allowed schools and teachers to respond to the paper with their ideas, comments, and suggestions in the form of an anonymous online consultation accompanying the paper. The results of the consultation forms were used to clarify the details of the paper and to add any significant missing data. Recommendations were developed as to what assessments and resources through Irish are required by schools to help them meet the AEN of their students.

1.1. Rationale for Research and Consultation Paper

The need for further research in this area has been highlighted for more than 10 years (Andrews, 2020; COGG, 2010; NCCA, 2007). Recent research found that teachers in Irish-medium primary schools outside the Gaeltacht faced challenges with regard to the provision of special educational resources through Irish (Andrews, 2020). The resources available through Irish are examined in detail in the following areas: literacy in Irish, mathematics, ICT, language and communication, and personal, social, and emotional development. These areas were selected because they were identified as the areas where more resources were needed in previous research (Andrews, 2020). It is also necessary to investigate what resources in Irish are being made by teachers themselves in the schools and how many hours a week they are spending creating these resources. The resources and assessment materials being translated from English to Irish by teachers in these areas are also explored. This is important because international research warns against the translation of assessment content by teachers and education professionals (Letts et al., 2020; Pert & Letts, 2006). This practice is not recommended because it does not give us a complete picture in terms of students' ability when tests are translated informally and the norms for the English test are used (O'Toole & Hickey, 2013). The lack of literacy assessments available through Irish makes it difficult for schools and teachers to properly assess pupils who use tests in English only, as the pupils are being educated through Irish. It was reported that there has been a need to provide further assessments through Irish since 2005 (COGG, 2010; Mac Donnacha et al., 2005; NCCA, 2007; Ní Chinnéide, 2009; Nic Gabhann, 2010; Ó Duibhir et al., 2015). Therefore, it is important to understand the practices currently in place in schools in terms of assessment generally and their needs in the area of assessment through Irish. The

need to provide external services (e.g., speech and language therapist and educational psychologists) through Irish for pupils with AEN who are learning through Irish was also identified in previous research (COGG, 2010; Mac Donnacha et al., 2005; Ní Chinnéide, 2009). This current research gave teachers and schools an opportunity to discuss the current practices in place regarding access to additional supports, the language in which these services are being provided and their current needs in this area.

1.2. General background

In the 2020-2021 school year, 45,471 primary pupils and 14,581 post-primary pupils were receiving education through Irish (see Table 1.1).

Table 1.1: The number of Irish-medium and Gaeltacht schools in the Republic of Ireland and the number of pupils attending these schools.

	26 Counties outside the Gaeltacht	Gaeltacht	Total
Number of primary pupils	37,838	7, 633	45,471 (8.1 %)
Number of primary schools	150	109	259
Number of post-primary students	10, 824	3,739	14,581 (4 %)
Number of post-primary schools	47	22	69

1.3. Additional educational needs (AEN) in Irish-medium Primary Schools outside the Gaeltacht

It is estimated that 9.4 % of primary pupils attending Irish-medium primary schools outside the Gaeltacht (Nic Aindriú, Ó Duibhir, & Travers, 2020) have a AEN diagnosis. Compared to previous research carried out in Irish-medium schools, this rate is higher than the 7.9 % rate

cited by Nic Gabhann (2008). The figure identified by Nic Gabhann (2008) came from a larger sample (n = 12,829). However, when compared to a cohort of 7,494 in the study of Nic Aindriú et al. (2020) it can be argued that statistically, the prevalence of AEN in Irish-medium schools in the Republic of Ireland (ROI) has increased over the last decade. This may be due to progress in diagnostics and the extension of the AEN categories. Another reason could be that there was traditional practice of transferring pupils who had AEN from Irish-medium to English medium schools. However, more information has become available recently on the suitability of immersion and bilingual education for these pupils. This may also have had a positive impact on pupil retention rates. The figure for the prevalence of AEN in Irish-medium schools found in the study by Nic Aindriú et al. (2020) is much lower than the figure of 27.8 % (n = 2,381) for 9-year-olds in all school types (Cosgrove et al., 2014), and 25 % (Banks & McCoy, 2011) for all primary school children across the Republic of Ireland.

Dyslexia is reported to be the most widespread category of AEN in Irish-medium primary school outside the Gaeltacht (Barrett, Kinsella, & Prendeville, 2019; Nic Aindriú et al., 2020; Nic Gabhann, 2009). The other most frequently reported categories of AEN are dyslexia, autism spectrum disorder, emotional and behavioural difficulties, specific speech, and language disorder (Barrett, Kinsella, Prendeville, 2019; Nic Aindriú et al., 2020). It was estimated that 16.6 % of pupils enrolled in Irish-medium primary schools received additional teaching support from the special education teacher in the 2017-2018 school year (Nic Aindriú, Ó Duibhir, & Travers, 2021). This figure is higher than that of 13 % (n=1,719) previously estimated by Nic Gabhann (2008) for Irish-medium schools outside the Gaeltacht. However, this percentage of students (16.6 %), is similar to that of 17 % that was generated for students receiving additional teaching support under the general allocation model in

each primary school in the Republic of Ireland (Banks & McCoy, 2011) and Irish-medium primary schools in Northern Ireland (17 %, n = 431, Ní Chinnéide, 2009). Accordingly, this comparison suggests that there is little difference in the number of pupils receiving support in Irish-medium and English-medium primary schools.

1.4. AEN in Gaeltacht Primary Schools

Research on the prevalence of AEN in Gaeltacht schools is limited (Barrett, 2016; Mac Donnacha et al., 2005). Unfortunately, the latest study by Barrett (2016) does not include an overall prevalence rate AEN for students in Gaeltacht primary schools. However, it gives an overview of the most frequently reported categories of AEN in the schools (n = 15) that carried out the survey. The five most frequently reported categories are (1) specific learning difficulty, (2) mild general learning disabilities, (3) specific speech and language disorder, and (4) autism spectrum or development coordination disorder (Barrett, 2016: 14). In 2004, it was estimated that 6 % (n = 511) of primary Gaeltacht school pupils had a AEN diagnosis. In this study, 358 pupils (n = 8,516, 4 %) were receiving additional teaching support from the school resource teacher (Mac Donnacha et al., 2005). Within the study, parents and teachers in Gaeltacht primary schools discussed their dissatisfaction with the supports available to meet the AEN of pupils in these schools (Mac Donnacha et al., 2005, p. 8). The use of English assessments to identify pupils with AEN in these schools was an issue identified as some pupils may have limited English language proficiency in Gaeltacht areas. Therefore, their ability to access the content of the assessment rather than their actual academic abilities could have an impact on the assessment results. This was reported as a cause for pupils being given an inaccurate AEN diagnosis. Parents and principals also reported that they were advised by educational psychologists against speaking Irish to

pupils who had AEN and that they should only use one (English) language with these pupils. The schools also called for more resources to be made available through Irish for pupils with AEN and for teachers in Gaeltacht primary schools to have access to continuing professional development in this area.

1.5. AEN in Irish-medium and Gaeltacht post-primary schools

There is little research available on the prevalence rates of students with AEN in Irish-medium post-primary schools outside or within the Gaeltacht (Mac Donnacha et al., 2005). With regard to Gaeltacht post-primary schools, the diagnosis of AEN is estimated to be around 7 % of pupils (n = 324) in 2004 (Mac Donnacha et al., 2005). The study that was carried out more than 15 years ago stated that this sector had significant difficulties in accessing teaching and learning resources through Irish (Mac Donnacha et al., 2005). In relation to Irish language textbooks, it was discussed how it was difficult for schools to access books for the various subjects and that the ones available through Irish were often too difficult and unseen. Also, often they were very slow to publish Irish language textbooks compared to the English version. Recommendations were made that more Irish language resources would be available for example, textbooks, workbooks, computer programs, videos/DVDs, CDs, games, posters, additional reading resources, school-based schemes, and teaching notes (Mac Donnacha et al., 2005: 29). Unfortunately, there is no up-to-date statistical data on the prevalence and types of AEN of pupils in post-primary schools outside of the Gaeltacht.

1.6. Layout of the report

This report is divided into five parts. The first part provides information on the study and the rationale for undertaking this research The second part discusses relevant national and international research. The methodology used for the consultation process and the research in general are outlined in part three. Part four describes the results of the consultation process and provides some five recommendations for the future.

2. Literature Review

Within the contexts of immersion education worldwide it is stated that schools and teachers face difficulties in accessing resources and teaching assessments through minority language (Andrews, 2020; Tedick & Cammarata, 2012; May, 2013; May, Hill, & Tiakiwai, 2009). This part of the report reviews national and international research and literature on the following themes: access external bilingual or minority language service providers, assessment, interventions, and resources in the context of immersion education. These themes are divided into the subheadings, literacy, language and communication, numeracy, and personal, social, and emotional development for organisational purposes. Within these themes and areas, the best recommended practices worldwide in supporting pupils with special needs in immersion education contexts are outlined.

2.1. Access External Bilingual and Minority Services

It is reported nationally and internationally that children who speak minority languages and those who are bilingual should have access to bilingual external services (e.g., educational psychologists and speech and language therapists (Irish Association of Speech and Language Therapists) (IASLT), 2016). This means that a comprehensive overview of students' abilities in all its languages can be created (IASLT, 2016). Educational service providers often fail to carry out a bilingual assessment. The main reasons reported for this are lack of time and scheduling difficulties (de Valenzuela et al., 2016; O'Toole & Hickey, 2013). The Royal College of Speech and Language Therapists (RCSLT, 2006) acknowledges that bilingual assessment takes a lot of time but reiterates the importance of establishing the assessment of children's linguistic background. Ebert & Kohnert (2016) propose that speech and language therapists administer measures that can be pre-recorded in the child's minority

language and interpreted by a monolingual clinician, for example a sentence comprehension task.

An international study was conducted on the barriers faced by people trying to access external bilingual services across six locations within Canada, the United States of America, the United Kingdom, and the Netherlands (de Valenzuela et al., 2016). The main barriers were time constraints, scheduled conflicts, and limited availability of service providers (de Valenzuela et al., 2016). These external services often provide a monolingual service as they feel under pressure to implement interventions in the language of the majority of the community and education services (Jordan, 2008; O'Toole & Hickey, 2013). Qualitative research which assesses the competence and confidence of these service providers working with bilingual children with AEN indicates that most of these professionals have failed to obtain any preparation or training to assist them in their bilingual work (Hammer, Detwiler, Detwiler, Blood, & Deon Qualls, 2004; Ware, lye, & Kyffin, 2015). In the Republic of Ireland, O'Toole & Hickey (2013) recommend that, according to the international guidelines, all speech and language therapists and educational psychologists should be offered training on complementary assessment methods (such as dynamic assessment), and provide appropriate therapy interventions for bilinguals, to ensure accurate diagnosis.

Limited bilingual assessment resources are available internationally for external service providers (Kohnert, 2010; McLeod & Verdon, 2014). It has been reported that many professionals translate monolingual tests, whilst still using their norms, into another language without any certainty as to the reliability or validity of these translation tests. For example, in the context of the Republic of Ireland, O'Toole & Hickey (2013) found that most speech and language therapists and educational psychologists working with Irish-English

bilingual children were left with the no other option but translating standardised assessments themselves from English into Irish, while still using the English test norms to score children. This was a practice that they were unhappy with but reported that the Department of Education's demands for standardised scores and a lack of appropriate bilingual assessment methods have left them without any choice. Pert & Letts (2001) consider this practice to be ineffective and state that if tested translations are to be valid and reliable, it is necessary to consider the differences in normative populations, the levels of differences in language proficiency, and the sequences of language acquisition. National research says that students with AEN experience difficulties accessing external services through Irish (Andrews, 2020; Ní Chinnéide, 2009). These services also sometimes tend to encourage parents to use only one language with their children, usually English (Andrews, 2020; Ní Chinnéide, 2009).

2.2. Literacy

2.2.1. Literacy Assessment: Early Recognition of Literacy Difficulties

Best practice is to identify literacy difficulties among pupils early and to provide early interventions to meet pupils' AEN and improve their reading ability (National Reading Panel, 2000; Schneider, Wheel, & Ennemoser, 2000; Simmons et al, 2008; Velluntino, Scanlon, Zhang & Schatschneider, 2008; Wise & Chen, 2010). This is especially true for students in immersion education settings who are learning through a second language (T2) (Bournot-Trites, 2008; Geva, 2006; MacCoubrey, Wade-woolley, & Kirby, 2003; Wise & Chen, 2010). Often in the immersion education setting, students with literacy difficulties are only recognised when they are older and have begun English literacy. This often means that they

lose out on the very important early intervention period (Andrews, 2020; Barnes, 2017; Keep, 2003; MacCoubrey, Wade-Woolley, Klinger, & Kirby, 2004; Wise & Chen 2010; 2015).

In the contexts of French immersion education in Canada, students often move to English-medium education because they would have access to the appropriate educational support (Halsall, 1998; Wise & Chen, 2015). This may also apply to students who are learning through Irish (Andrews, 2020; Nic Aindriú, Ó Duibhir, & Travers, 2020). Unfortunately, there are no standardised assessments of early Irish literacy available. It is important to consider, however, that if students from backgrounds whose first language is English were available a test, their results of this Irish assessment may not be accurate either because they have had little contact with the Irish language and an emphasis is placed on the oral language development that occurs initially in these contexts (NCCA, 2019; Paradis, 2010). Therefore, a standardised bilingual assessment (Irish-English) is required to assess the early literacy development of these pupils. In the context of immersion education in Ireland, Murphy & Travers (2012) found that there were advantages of bilingual assessment (Irish-English) as it provides a more comprehensive overview of the full language abilities of young children.

In the context of Irish-medium education, it has been reported that pupils in Irish-medium schools with reading difficulties are being assessed and recognised with AEN through the language of the majority of the community, English (Andrews, 2020; Barnes, 2017; Ní Chinnéide, 2009). Wise & Chen (2015) research showed that phonological awareness can predict future reading ability for students learning through the majority language of the community. Other research in the context of immersion education shows that English phonological awareness assessments can predict the future achievement of French reading (Comeau, Cormier, Grandmaison, & Lacroix, 1999; Endler, 2008; Erdos, Genesee, Savage, &

Haigh, 2014; Erdos, Genesee, Savage, & Haigh, 2011; Jared, Cormier, Levy, & Wade-Woolley, 2011; Wise & Chen, 2010). While this method may be suitable for students learning through Irish as a second language, it would not be suitable for students learning through Irish as a first language in Irish-medium/Gaeltacht schools. Research shows that students learning through Irish follow a different track of literacy development compared to students learning through English (Barnes, 2017; Parsons & Lyddy, 2009). Students may experience delays in their non-word reading and word skills in English due to a period of immersion Irish. This is particularly the case for students from homes where Irish is a first language. It is therefore essential that standardised tests of non-word reading and word reading, as well as cognitive proficiency assessments, be created for students attending Irish-medium/Gaeltacht schools (Barnes, 2017).

2.2.2. Literacy Assessment for Post-Primary Schools in Ireland

In the Republic of Ireland, there are currently no standardised assessments through the medium of Irish available to post-primary schools. However, some tests are available in English; for example, the Drumcondra Post Primary Testing of English Reading Literacy (DPPT-READ), and the Drumcondra Reasoning Test (DRT). The DRT is a competency test which is only available through English developed to help students transitioning from primary to post-primary school. It assesses students' ability in verbal reasoning and numerical ability. Recently, the Educational Research Centre (ERC) has produced a new independent assessment of English literacy for post-primary schools called PPAD-E (ERC, 2020). We understand that work is currently underway on an Irish version of PPAD-E. This assessment was due to the fact that English literacy tests currently used in post-primary schools in the Republic of Ireland are normally developed and normed in the United

Kingdom or the United States. The ERC (2020) states that these tests can be inappropriate for post-primary schools in the Republic of Ireland, both in terms of culture and norms. Assessment, such as the PPAD-E has many advantages for schools, for example (ERC, 2020) they are:

- culturally responsive and adapted to the Irish context,
- designed for use by teachers,
- helpful in screening for learning difficulties (particularly with students starting in first year),
- useful in diagnostic assessment, monitoring, and evaluation of progress,
- helpful when identifying the need for further assessment (e.g., speech and language),
- helpful when applying for the processes for Reasonable Accommodations in Certificate Examinations/Disability Access Route to Education,[1]
- useful for establishing and reviewing literacy standards.

2.2.3. Reading Interventions in Immersion Education

The research shows a strong link between phonological awareness interventions including phoneme division, blending, and students gaining higher levels of reading achievement (August & Shanahan, 2006; Dressler & Kamil, 2006; Genesee & Geva, 2006; Genesee, Geva, Dressler, & Kamil, 2006; National Reading Panel; 2000). These positive qualities are also evident when students are learning through a second language. However, there has been little research in this area in immersion education contexts (MacCoubrey et al., 2004; Wise

[1] Race - https://www.examinations.ie/?l=en&mc=ca&sc=ra; https://accesscollege.ie/dare/

and Chen, 2010). It was found that students who conducted phonological awareness interventions in their second language (French) made better gains in terms of phonological awareness in both languages (English and French). This is due to the principle of language interdependence, where there is an academic cognitive language competence (CALP) which facilitates the transition of academic and literacy skills from one language to another (Archambault, Mercer, Cheng, & Saqui, 2019, p. 114). Evidence of this concept was reinforced by a meta-analysis of 47 studies on the transfer of trans-linguistic and decoding skills from the first language to the second language (Melby-Lervåg & Lervåg, 2012). Research also shows that reading speed and comprehension skills move from the first language to the second language (Geva & Clifton, 1994; Geva, Wade-Woolley, & Shany, 1997; Verhoeven, 1994. Interestingly, the motivation and trend of reading does not translate from the first to second language (Yamashita, 2004).

In Irish-medium/Gaeltacht schools, it is recommended that additional teaching support should be provided to pupils through the language of instruction of the school, Irish (Andrews, 2020; Bhaoill & Ó Duibhir, 2004; Chuaráin, 2009) and through using evidence-based interventions (NEPS, 2019). Unfortunately, there are no evidence-based interventions available for Irish language literacy. In research on 'Dyslexia Assessment and Reading Interventions for Students in Irish-Medium Education: Insights into Current Practice and Considerations for Improvement' found that pupils learning through Irish require effective reading intervention in Irish literacy; (1) how to recognise the letters and sounds of the alphabet, (2) decoding skills, (3) spelling skills, (4) oral vocabulary development, and (5) visual word recognition (Barnes, 2017). In addition, it is recommended that teachers of Irish-medium and Gaeltacht schools should have further professional development in the following areas: the phonics of Irish, the relationship between sounds and letters, phonemic

awareness, the development of phonetics skills, and increasing student motivation to read (Barnes, 2017).

2.2.4. Oral Language Programmes for Literacy Development

To access literacy activities, a high level of oral language development is particularly important for students learning through the T2 (Baker et al., 2014; Brooks, 2016; Kamil et al., 2008; Snowling & Hulme, 2011). Students with a AEN are encouraged to increase their vocabulary in order to help them develop their reading comprehension skills and to help them access the cognitive academic language proficiency in the classroom (Foorman et al., 2016). With regard to vocabulary development, a number of strategies were proposed to help students learn through a second language, for example the Vocabulary Enrichment Programme, National behavioural Support Service (NBSS), 2014. However, there are no programmes such as this available through Irish. It is also important for schools to develop students' speaking and listening skills (Higgins et al., 2017). Oral language development in Irish is very important for students of Irish-medium/Gaeltacht schools who do not have Irish as their first language (Barnes, 2017).

2.2.5. Information and Communication Technology (ICT) for pupils with Literacy Difficulties

The use of ICT to help struggling readers is very effective (Bjekiü et al, 2012, Bjekiü et al. 2014). Research shows that the use of ICT by people with literacy difficulties can stimulate and increase their academic achievement (Singleton, 2009). It gives students who are struggling with reading a fair opportunity to access print. For example, research has shown that reading, writing, spelling, vocabulary learning, and pronunciation can be easier for

readers struggling when using ICT (Huriyah, 2018). It is also recommended that the use of ICT can improve students' self-esteem and self-confidence (Huriyah, 2018). Using ICT in the classroom can help readers struggling to access the curriculum content in a variety of ways (Dawson, Antonenko, Lane, & Zhu, 2018, p. 227). This section provides an overview of the most beneficial types of ICT for pupils with reading difficulties. Table 2.1 provides a brief overview of the most frequently recommended types of ICT for children with reading difficulties discussed in greater detail below.

Table 2.1. How adaptive technology can be useful to support students with reading difficulties (as amended by: Dawson, Antonenko, Lane, & Zhu, 2018, p. 23).

Challenge for pupils with reading difficulties	How adapted technology could support the student	Reading and writing aspects to support the challenge
Reading	Options for accessing information	Text-to-language: It enables the student to listen to the subject while watching the screen
		Screenshot: It enables the student to listen to the words within images, graphs, and screen capture.
Writing and spelling	Options for communicating ideas and information	Speech to Text: It enables the student to express their ideas without being stuck in the handwriting mechanics that may be very difficult for students with reading difficulties.
	Options to support spelling	Predictive text: It enables students to select a list of words that could be used in writing activities.

2.2.6. Speech to Text

A speech to text application can be used with struggling readers to help them with their writing. There are various advantages for students who use this process, for example, improved access to classroom work, developing writing skills rather than spelling (e.g. ideas, sequence etc.), greater autonomy, reduced anxiety, and improved core reading and writing skills (Bruce, Edmonson & Coleman, 2003; Chiu, Liou, Yeh, 2007; Gardner, 2008; Higgins & Raskind, 2000, 2004; MacArthur, 2009). There are a number of options available on how to use (e.g., Microsoft Word), App, or software program. These applications have been shown to be beneficial because; (I) they reduce the stress on pupils due to writing by acting as a personal support tool, (ii) that students can write more comfortable and accurate, (iii) students can say and see how to spell it on the screen, (iv) it is easier for students to put their ideas into words, and (v) helps to promote independent learning (Bruce, Edmonson & Coleman, 2003; Chiu, Liou, Yeh, 2007; Gardner, 2008; Higgins & Raskind, 2000, 2004; MacArthur, 2009).

2.2.7. Text to Speech/Screen Reading Software

If a student encounters difficulties with decoding and reading fluency but a high level of aural ability, it is a good idea to use text-to-speech software (Parr, 2013; Wood, Moxley, Tighe, & Wagner, 2017). This software is beneficial for struggling readers as it makes the content on screen more accessible to them, increases their ability to work independently (e.g., reading), and increases their self-confidence. It has also been found that it improves the written and spelling performance of students (Cullen, Richards, & Lawless-Frank, 2008; Higgins & Raskind, 2004). Software is available in English and other languages, including native languages (Pen Friend). However, there is no software available that operates

through Irish. Research also suggests that readers can improve pupils' reading comprehension and speed when the text is presented in shorter lines with more spacing and when the main points of the text are highlighted on screen (Dawson, Antonenko, Lane, & Zhu, 2020, p. 227; Rello, Saggion, & Baeza-Yates, 2014; Schneps, Thomson, Chen, Sonnert, & Pomplun, 2013; Schneps, Thomson, Sonnert, et al., 2016). Schneps et al. (2016) report that this software can be very effective for students with dyslexia. Berninger et al., (2015) found that a writing guide on iPads offers benefits for students with dyslexia when undertaking text to speech. This application may improve their handwriting, spelling, and construction of sentence's by using students' ability to listen, speak, read, and write (Berninger et al., 2015).

2.2.8. Word Processing Software

Research shows that this software can improve the spelling and vocabulary of students with dyslexia (Evmenova, Graff, Jerome, & Behrmann, 2010). The effectiveness of this assistive technology can be limited by the ability of the student to correctly identify the first few letters of a word but the latest versions of this software that take into account and the creation of wordlists have been improved (Dawson, Antonenko, Lane, & Zhu, 2018: 228).

2.2.9. Interactive Audio Books

Interactive books are a very good resource to support the development of reading skills. These books are beneficial to students as they allow students with literacy difficulties to read text in a supportive environment at a pace suitable for them (Huriyah, 2018, p. 76). This practice is also beneficial for students learning through a second or minority language, as they get more contact with the language of the text and the support when reading. These

books may also provide additional activities that would allow students to further develop their language and literacy skills, for example, phonological awareness and comprehension skills. There are many interactive non-fiction and fiction books in English that students can read. These books contain a built-in audio recording or can be used in Microsoft Word using the text-to-language application.

2.2.10. Touch Typing

Limited research has been carried out on the benefits of tactile typing for students with learning difficulties. Touch typing enables pupils to focus on writing down their ideas rather than focusing on the form of letters or spelling (Koorland, Edwards, and Doak, 1996; Tenney and Osguthorpe 1990). It allows them to easily correct their spelling mistakes and increases contact with the second language, their knowledge of the written word and it also has a positive impact on their reading and visual identity skills. The most effective way to learn touch typing is through a multisensory approach. Many students in Irish-medium/Gaeltacht schools use touch typing courses through English as there is no course available through Irish. For this multi-sensory approach, letters and words are read loud, displayed on the screen, and then typed by the pupil. This promotes muscle memory in the learning process, which is great for kinetic learners.

2.2.11. Literacy Applications

There are many applications available through English which help to screen for dyslexia or enhance learning skills such as writing, reading (e.g., taking notes, composing text etc.), spelling, memory, etc. (Politi- Georgousi & Drigas, 2020: 5). The types of applications available are further outlined in Table 2.2.

Table 2.2. Types of literacy applications that are beneficial for pupils with reading difficulties (as amended by: Israelson, 2015)	
E-books Applications	**Books available electronically in application form.**
Rhythm or Pronunciation games	The applications provide an opportunity to practice rhythm or phonetic words with a gaming feature.
Alphabetical Applications	These applications allow the letters of the alphabet to be named or written, for example, A-Z Music Videos.
Customer Service	These applications allow students to write letters and words.
Visual word applications	These applications vary and often have a gaming and auditory feature.
Word classes applications	These applications provide an opportunity for the student to practice on the final front and tide.
Multiple Choice Questions Applications	Most applications are short articles that feed “reading comprehension” with multiple choice questions after them
Multimodal Configuration Applications	These applications are designed to allow students to engage in digital writing such as multimodal texts containing words, images, sounds, videos and/or animation. A picture book can be used to compose and share multimodal stories.
Screening/assessment and Mediation	These applications enable the teacher to evaluate students and monitor their progress. They provide students with the opportunity to undertake literacy interventions in a phased and interactive way.

2.3. Language and Communication

2.3.1. Language Development Checklists and non-standardised Assessments

The NCSE (2021) has put together a wide range of language assessment tools on its website. Tools in English include developing communication skills checklist, listening skills checklist, phased language processing activities, abstract dictionary checklist, phonemic awareness assessment, and language screening. There is also a functional language and communication resource in English, for example, a checklist for planning and monitoring teachers, and a checklist for students. All of these are great resources for the development of English and communication. A list of applications in English is also available. Unfortunately, these recommended resources are not available through Irish for those teaching in Irish-medium/Gaeltacht schools. With regard to formal standardised speech and language assessments available through English, it is recommended that students are assessed in a number of different areas, for example, phonological processing, linguistic abilities, illustrative language, social communication, and social skills. These assessments are currently not available through Irish.

2.3.2. Parental Reporting Tools

The research shows that detailed interviews with parents, and teachers about the student's minority language development are beneficial in evaluating the child's first language development, and their current skills in their first language (Boerma & Blom, 2017; De Lamo, & Jin, 2011; Grimm & Schulz, 2014; Paradis, Emmerzael, & Duncan, 2010; Paradis, Schneider, & Duncan, 2013; Retrepo, 1998. Findings suggest that it is vital to assess the quality and volume of language input in both languages for bilingual children to accurately

assess language development (Boerma & Blom, 2017; Paradis, 2011; Tuller, 2015). Paradis et al. (2013) found that a questionnaire for parents on first language development for English learners from different backgrounds (n = 152) helped identify language difficulties when these learners were not yet developing second language speaking skills. Similarly, Boerma & Blom (2017) found that parents' reports on bilingual language development provide context for analysing the results of non-word repetition tests and storytelling sampling. When these methods were compiled, they provided a strong indicator of language impairment in bilingual pupils. In the context of education through Irish, Mac Arthur-Bates Communications Development Inventories (MacArthur-Bates Communicative Development Inventories) were developed in Irish for young children (17-36 months) (O'Toole & Hickey, 2017). This is a parental reporting tool which includes important information about children's development in early language, including vocabulary understanding, output, gestures, and grammar (O'Toole & Hickey, 2017).

2.3.3. Language Interventions for Bilingual Students with Language Difficulties

Research carried out in this area focused primarily on sequential bilingual children, with second language interventions undertaken in the majority language of the community. No known studies were carried out on language interventions in the minority language only. Ebert et al. (2014) study on the impact of three treatment programmes on bilingual Spanish-English children (n = 59) with specific language difficulties. For the group that conducted the monolingual intervention (English only), there were statistically significant improvements in seven areas of language development. There was a significant improvement in English vocabulary, with an overall average improvement in English and non-linguistic cognitive skills (see Ebert et al., 2014, for more details). The bilingual group improved statistically

significantly in nine activities however their processing speed performance decreased. The positive benefits of bilingual language interventions were reinforced through a systematic quantitative review of bilingual and majority language interventions for young bilingual learners (Duran, Hartzheim, Lund, Simonsmeier, & Kohlmeier, 2016). This review included 26 quantitative research studies published in peer-reviewed journals from 1991-2014 (see Duran et al., 2016 for further details). The results show that interventions carried out bilingually or in the child's home language (minority first language) have further improved the skills of pupils' first language and did not have a negative impact on the development of the participants' second language. However, most of the effects on language development in these studies were small to medium.

2.3.4. Parent Home Language Interventions

The research states that English interventions implemented by parents at home can have a positive impact on children's bilingual language and literacy development (Adesope, Lavin, Thompson, & Ungerleider, 2011; Lonigan & Shanahan, 2010; Roberts & Kaise, 2011; Seneschal & Young, 2008). Through a systematic meta-analysis of 18 studies, Roberts & Kaiser (2011) found positive effects on an illustrative language, and an increase in communication rate in bilingual pre-school as a result of educating and empowering parents to implement programmes at home, for children with and without language impairments. Unfortunately, very little research is available on language interventions carried out at home in languages other than English (Ijalba, 2016). Most of the research carried out in this area is based on the effectiveness of home-language interventions with Spanish-English bilinguals. Further research is needed in this area using languages other than Spanish. For pre-school children who speak Hmong-Spanish without language impairment, it was found that

vocabulary learned in the first language facilitated the acquisition of vocabulary in the second language (Roberts, 2008). For bilingual Spanish-English children with language impairments (n = 24), the implementation of home language and literacy (Spanish) activities, based on interactive picture books, provided literacy advantages. Parents of the intervention group (n=12, average age = 43 months) gave parents six education sessions before starting language-based activities on the books. The education sessions focused on language development milestones, the importance of early literacy development, and the expansion of first language communication skills at home. Children in the intervention group have achieved positive vocabulary gains in the first and second language.

2.3.5. Language, Communication and Mathematics

Language plays an important role in developing mathematical and higher order thinking skills in all learners (NCCA, 2014a; Whitin & Whitin, 2003). It was pointed out that there are many aspects in the language of mathematics, such as vocabulary and mathematical methods of thinking (NCCA, 2014a). There are a number of cognitive skills that students when undertaking mathematics may experience difficulties with, such as memory, visual spatial skills, executive function, and language skills (Mazzocco, 2009). Pupils with a low level of language proficiency may find it difficult to acquire the language of mathematics and thus this may negatively affect their mathematical abilities (NCCA, 2014a: 17). For example, research results show that the mathematical abilities of pupils with language impairments can vary from those without impairments. One study found that many students had difficulties with language impairment and learning number sequences (Dolan, 2009; Dolan, Cowan, Newton, & Lloyd, 2007; Fazio, 1994, 1999). It has been reported that the required vocabulary can be taught through a variety of formats, for example formal

teaching in the classroom, semi-formal activities, or informal activities (NCCA, 2014a). Mathematics can be challenging for second language learners as they do not have a deep understanding of the vocabulary, syntax, and grammar of the T2. This can prevent them successfully engage in various learning activities, for example, explaining processes, describing, constructing conclusions, and presenting arguments, in oral and written contexts (Moschkovich, 1999; NCCA, 2014a, b).

Therefore, it is important that teachers support their students' participation in mathematical discussions (NCCA, 2014a, 2014b; Moschkovich, 1999). Teachers should give students the opportunity to participate in mathematical discussions at their proficiency levels (Moschkovich, 1999). This can be done by using a number of expressions of the same concept, using gestures and objects to clarify meaning, accepting, and building on pupils' answers, repeating pupils' statements using more technical terms (mathematical), and focusing on mathematical content and argument (NCCA, 2014a). Efforts have been made over the years to specify exactly what mathematical language must be known for students learning through English (NCCA, 2014a, 2014b). A useful booklet has been created for mathematical vocabulary in the UK which lists the specific vocabulary that should be taught to students at all class levels (NCCA, 2014a, 2014b). This resource is very useful as it outlines the terminology prospects for each class group. It is important to recognise, however, that this vocabulary should be taught in a context using realia and mathematical resources (NCCA, 2014a). A resource like this would be very useful for students learning through Irish. The development of mathematical language should be undertaken in the classroom using mathematical discussion as a learning tool (Hufferd-Ackles, Fucus, & Sherin, 2004; Sfard, 2007).

2.3.6. Resources

According to the PDST (n.d) there are five components of the effective oral language development; (i) developing listening and speaking skills, (ii) teaching varieties of texts, (iii) creating a language learning environment, (iv) teaching and expanding vocabulary and conceptual knowledge, and (v) promoting listening. To implement these things teachers, require support, guidance, and resources, especially if they engage with students developing skills in the second language or learning through the second language. Teachers are given guidance on how to do this in the PDST manual (n.d) on the *Five Components of Effective Oral Language Instruction*. However, there is no specific guidance available to those teaching through Irish as a first or second language. NEPS (2015a, b) provides guidelines and strategies for teachers on how to provide in-class support for pupils with language difficulties, but again these instructions are in English and there is no emphasis on the pupil learning through Irish as second language. The NCSE (2021) proposed a range of resources for language and communication development, for example the development of language skills, ideas for play at home, a home activity package, games, an attention and listening booklet, and vocabulary development. Most of these resources are available in English only. There are many resources that teachers can use to develop the pupils' language and communication, for example, speech boxes, games, listening activities, sound production activity sheets, memory games, listening, chat cards, and silly sentences. These resources are available free of charge to English-medium teachers but unfortunately there is little availability through Irish.

2.4. Mathematics

2.4.1. Early Recognition of Mathematical Difficulties

Teachers are encouraged to use a range of assessment resources to assess pupils' mathematical abilities (NEPS, 2020). Recommended methods include checklists, questionnaires, and parent-teacher meetings (NEPS, 2020: 16). Informal assessment in mathematics is very important. Teachers are encouraged to use a full range of non-formal assessment in their classroom, including, learning portfolios, observation, peer-assessment, self-assessment, conversation, drawing, student interviews, classroom-based assessments, and reflective diaries (NCCA, 2014a, 2014b).

For standardised assessment, it is recommended to use a range of assessment tools, for example, screening tests and diagnostic assessments. Screening tests in mathematics are used to identify pupils with difficulties in mathematics who would benefit from mathematical interventions (NEPS, 2020). These standardised assessments are usually carried out in groups (NEPS, 2020). There are currently no mathematical diagnostic tests available through Irish. The delivery method of these screening tests may vary, some of them being delivered as paper and pencil tests, rating scales, checklists, or observation of skills or abilities (NEPS, 2020, p. 18). In relation to the early assessment and identification of pupils with mathematical difficulties in primary schools in the Republic of Ireland, the Educational Research Centre (ERC, 2020) designed an early-screening and diagnostic mathematics test through English, Drumcondra Early Numeracy Test (DTEN). These assessments are suitable for use with students at the end of senior infants or at the beginning of first class. These assessments have been normed using a primary school cohort in Ireland and have been developed incorporating aspects of international best practice in

mathematics assessment. This screening consists of three components: (1) preliminary number, (2) number, and (3) addition and subtraction. Unfortunately, this important mathematical screening and diagnostic assessment is not available through Irish and therefore, does not accurately assess the ability of students learning through Irish. Therefore, it is very important that screening and diagnostic assessment, such as this, is developed through Irish and standardised on primary Irish-medium/Gaeltacht pupils so that those students who are learning through Irish can be accurately assessed (Murphy & Travers, 2012).

2.4.2. Standardised Mathematical Assessments for older age groups

A study carried out in Australia on students learning through French in immersion education found that pupils were at a small disadvantage when they were tested in their second language compared to a test in their first language. This may be due to their lack of French vocabulary and/or higher cognitive demands of reading in French. It is therefore recommended that students being assessed in their second language should be given more time to take the test so that they have the opportunity to obtain equivalent results compared to those being tested in their first language. It has been reported that it is often difficult for students in immersion education contexts being assessed in their second language in mathematics, to understand the issue and to be aware of the mathematical operation to be implemented (De Courcy & Bourston, 2000). However, the results showed that there was a cross linguistic transfer of skills in terms of mathematical knowledge when students' results were compared in their first and second languages.

In the context of Irish-medium education, it was pointed out that students may have difficulties with the use of Irish in standardised maths tests and therefore the pupils may

have scored as well as they could have (Gilleece et al., 2011). Ní Riordáin & O'Donoghue (2009) studied the relationship between mathematical ability to solve written problems and the pupil's level of proficiency in Irish. Students in this study were from Irish-medium schools (n=21) and the Gaeltacht (n=16) who were transferring to either English or third level post-primary education. A control group of monolingual English students of the same age group (n=49) also participated. The results of this study suggest that pupils whose first language was Irish were at a disadvantage in terms of written mathematical problems when they were assessed in English as they were translating from primary to post-primary school. This is an important factor to be taken into account for students who have Irish as their first language. Currently, only one standardised mathematics assessment is available for post-primary schools and is in English, Drumcondra Post-Primary Mathematics Test (DPPT-Maths). This test was developed in response to the need for such testing identified by the Department of Education in the 'National Strategy to Improve Literacy and Numeracy 2011-2020' (Department of Education and Science, 2011). This test is based on the Maths Project syllabus for Junior Cycle and draws on international best practice in assessment to provide testing that is appropriate to the Irish context. It provides guidance on strengths, and the types of difficulties that students experience in mathematics.

2.4.3. Mathematics Interventions

There has been little research on the effectiveness of mathematics interventions in the immersion education system. However, many studies have been conducted on the effectiveness of mathematical interventions for second language learners of English with learning difficulties/disabilities (Driver & Powell, 2017; Kong & Swanson, 2019; Orosco, 2013, 2014a, 2014b; Sharp & Dennis, 2017; Swanson, Kong, & Petcu, 2019). These

interventions focused on various aspects, for example, word problems (Kong & Swanson, 2019), strategic model drawing strategy (model drawing strategies) (Sharp & Dennis, 2017), and culturally and linguistically responsible schema intervention (Driver & Powell, 2017). These interventions may have advantages if they were developed in immersion education contexts using the teaching language of the school.

In the Republic of Ireland, the Department of Education and Skills in partnership with NEPS (2020) created a 'Good Practice Guide for Teachers 2020' for mathematics. It provides guidance to schools on mathematics assessment and interventions. Formal (screening and diagnostic) tests and informal assessment in mathematics (observation, self-assessment, etc.) are recommended. As already mentioned, unfortunately no mathematical screening or diagnostic assessments are available for any age group through the medium of Irish for those receiving education through Irish. Schools are advised to undertake evidence-based mathematics interventions with pupils who have difficulties with mathematics, they recommend, *Maths Recovery, Maths in the Class/Maths Blast, Number Words, Numicon, Catch-Up Numeracy*, *Ready Steady Go Maths, Junior Undiscovered Math prodigies, Number Talks*, *Paired Mathematics and Mathematics for Fun*. Unfortunately, most of these proposed interventions are not available through the medium of Irish, except *Maths in the Class and Ready Steady Go Maths*. These were created for those attending English-medium schools without much consideration for those learning through Irish.

2.4.4. ICT & Mathematics

Li and Ma (2010) found in experimental research that students' academic achievement increased as a result of using computer technologies for mathematics. They also found that students with AEN have increasingly used technology to find mathematical concepts

compared to students without AEN. Using applications in the classroom has many advantages, for example, they provide alternatives to face-to-face teaching, thus giving the child the opportunity to build a strong mathematical knowledge base (Kucirkova, 2014; Pitchford, Kamchedzera, Outhwaite, Faulder, Gulliford & Pitchford, 2018). It is now common practice to use educational applications (apps) to assist students in their learning (Holloway, Green, & Livingstone, 2013; Hubber et al., 2016). These applications are mainly used on touch screen devices such as tablet or iPad/iPhone. Applications have been identified as beneficial to the development of mathematical competence/skills among students (Berkowitz et al., 2015; Schacter & Jo, 2016, 2017). Most of the research was carried out on the impact of mathematical applications on students' learning of applications developed in the students' first language (Outhwaite, Faulder, Gulliford, & Pitchford, 2019; Pitchford, 2015; Pitchford, Chigeda, & Hubber, 2019). Little research has been carried out on the effectiveness of mathematical applications developed/used for students learning through a second language.

In research on Portuguese-English bilingual students aged 5-6 and the effects of undertaking learning activities on Portuguese or English mathematics application (Outhwaite, Gulliford, & Pitchford, 2020), they found that mathematical advantages existed for students who carried out the intervention in their first language (Portuguese, Brazil) or second language (English). However, it was reported that the students who used the application in their first language had greater benefits. It was reported that the pupils who carried out the activities in their first language have been successful in undertaking more mathematical activities than those who performed them in their second language. As these students had not been in contact with the second language recently, this result may suggest that they need more consistent contact with the second language and more developed language skills to engage

with the application at a higher level. For students who were learning English as second language, it was found that mathematical applications can have the same positive impact on the development of mathematical skills for these students as he did for the monolingual English language students (Outhwaite, Gulliford, & Pitchford, 2017). There are many advantages of using mathematical applications for students learning through the second language, for example:

- providing students with a relatively high level of contextual support to make sense of their learning activities (Outhwaite, Gulliford, & Pitchford, 2020: 2327).
- face-to-face mathematical guide through a screen teacher who could support the child's academic language cognitive competence development (Outhwaite, Gulliford, & Pitchford, 2020, p. 2327).
- using activities with virtual objects, verbs labels, and a multi-sensory approach (Car, 2012; Lindahl & Folkesson, 2012; Outhwaite, Gulliford, & Pitchford, 2020, p. 2327).
- appropriate levels of cognitive demand in a learning activity (Outhwaite, Gulliford, & Pitchford, 2020, p. 2327).
- an opportunity for students to work within their near developed zone (Inal & Cagiltay, 2007; Magliaro, Lockee, & Burton, 2005; Vygotsky, 1978.
- ongoing assessment opportunities (Outhwaite, Gulliford, & Pitchford, 2020).
- an exciting, engaging and rewarding learning experience for students (Couse & Chen, 2010)
- an individual learning platform that promotes scaffolded learning (Slavin & Lake, 2008).

In the context of education in the Republic of Ireland, the PDST (2020) published a draft four-page document on mathematical applications available for use in Irish Primary Schools from Junior Infants to Sixth Class (available here). However, there is no list of Irish mathematical applications that could be used in Irish in Irish-medium/Gaeltacht schools. The lack of ICT and Mathematics resources available through Irish places additional pressure and work on teachers of Irish-medium/Gaeltacht schools to translate or create their own resources to try to use ICT in their mathematics lessons.

2.4.5. Mathematical Games

Inclusive mathematics lessons and quality of learning can be improved through the use of mathematical games (Lämsä, Hämäläinen, Aro, Koskimaa & Äyrämö, 2018). Koskimaa & Fenyvesi (2015) says that games can improve students' participation in numeracy and literacy activities and strengthen students' skills through repetition. Educational games are more often used to help students with learning difficulties (Kwon & Lee, 2016) and games can create an exciting and repetitive environment for these students in which they will be able to acquire skills they might find difficult (Lämsä et al., 2018). Games can support academically struggling students by providing instant corrections and feedback on their work, which is significant in education interventions (Rasanen, Salminen, Wilson, Aunio, & Dehaene, 2009). Educational games can have a positive impact on students' learning experiences (Lämsä et al., 2018). Hersh (2014) also claimed that games can be beneficial to promote learning and motivation for learning students with AEN. However, in order to secure learning, it is important to identify the learning outcomes for the student when designing an educational game (Lämsä et al., 2018). In addition, Hersh & Leporini (2013) stated that game designers should consider the learning objectives and make games

accessible to learners with disabilities when creating educational games. Udar.ie has games for numeracy such as 'Snap le h Numbers'. But there are not enough mathematics games through Irish for secondary or primary school pupils.

2.5. Personal, Social and Emotional Development

2.5.1. Assessment and Interventions

It was found that higher levels of understanding of feelings, reduced feelings of stress, and increased feelings of well-being has benefits for pupils. It can also improve pupils' ability to cope with difficulties, improve psycho-social performance, increase school relationships, reduce bullying, and increase the student's learning capacity (Hromek & Roffer, 2009). Personal, social, and emotional development can be defined as (Hromek & Roffey, 2009, p. 628):

- being able to identify and label personal feelings, strengths, and values,
- being familiar with how to effectively and safely regulate and express feelings,
- having a good social orientation for others, who are not bound by bias,
- be able to read and take into account others' emotions,
- being responsible for yourself and others and making ethical decisions,
- being able to set targets in the short and long term,
- problem solving skills,
- focusing on the positives,
- respecting others,
- treating others with care and compassion,
- good communication skills,

- being familiar with how to promote the establishment, development, and maintenance of healthy relationships,
- creating links between individuals and groups,
- being able to negotiate fairly,
- having good conflict management skills,
- being prepared to accept mistakes and seek help when needed, and
- demonstrating personal and professional integrity by consistently using relative values and standards to manage or improve behaviour.

The National Behaviour Support Service (NBSS) provides schools with information on recommended programmes and resources to promote social and emotional understanding among primary and post-primary pupils (NBSS, 2013). The assessments and interventions listed enable teachers to identify the status of understanding of pupils' feelings and to provide follow-up actions or interventions where necessary. The main areas covered by these programmes are emotional literacy/emotional intelligence, managing emotions, developing social skills, and successful behaviour management skills. The assessments, interventions and resources listed are available through English and most have been developed in countries other than Ireland. With regard to wellbeing resources, the NCSE (n.d.) recommends the use of the *Friends for Life* programme in schools. This programme, which is only available through English, helps students develop effective strategies to deal with anxiety, stress and change and teaches the skills necessary to reduce anxiety and promote resilience. In the field of behaviour management (NBSS, n.d.) programmes and resources (e.g., worksheets) for teachers in primary and post-primary schools are also recommended. These programmes are highly recognised internationally and provide

excellent opportunities for students with behavioural difficulties through the medium of English. Unfortunately, they are not currently available through Irish. It is understood that the Fia na Follaine programme is now available through Irish for the senior classes, and this is a great asset for students in terms of positive mental health development.

2.5.2. Games

Games bring many benefits to students in terms of personal, social, and emotional development as they can inspire them and promote fun in the classroom (Hromek & Roffey, 2009). This experience-based approach has advantages for students in terms of personal, social, and emotional development because (Hromek & Roffey, 2009: 631);

- is active, cooperative, and involves critical thinking, analysis, problem solving, evaluation,
- the learner interacts and collaborates with adults and peers,
- learning is linked to cognitive, consequential, and contested domains,
- it increases creativity,
- assessment of information as implemented in a creative and pupil centered way— projects, presentations, multimedia
- involves simulations, games, role-playing, case studies, contact groups, and multimedia.

There are lots of games and resources available to teachers in these areas, for example, games to develop social skills, and games based on emotions. However, most of these are only available in English.

2.5.3. Social stories

Social stories were originally created to help children with autism spectrum disorder develop their social skills, but they are now often used with children with a range of learning difficulties. These stories can be used as an intervention for young children with behavioural problems (Benish & Bramlett, 2011; Lorimer, Simpson, Myles, & Ganz, 2002; McGill, Baker & Busse, 2015; Rhodes, 2014). Social Stories are a way to support the exchange of information between children, parents, and professionals in a safe and meaningful way. It is recommended that social stories include certain information, expectations and reports about an event or activity, for example, it is possible to focus on a difficult social situation (Wahman, Pustejovsky, Ostrosky & Santos, 2019). Ultimately, social stories provide information about what people are doing, thinking, or feeling, a sequence of events, they identify significant social ques and their meaning, and often provide a script about what to do or to say (Attwood, 2000: 90). Social stories based on daily routines can help create a structure and purpose for children with ASD. Another topic is social interactions embodied in social stories. Self-care skills are also often presented in social stories (Autism Parenting Journal, 2020). These stories can help children to familiarise themselves with social events such as how to take turns, acquire new skills, such as hand washing or address the needs of certain students such as shouting (Gray and Granard, 1993). They can be helpful because they can provide a series of information about an activity, interest, or emotion in an organised and planned way (Gray, 2022). Social stories can be adapted, depending on the individual and specific needs of the child. They can benefit children by introducing materials in a clear and concise way (Gray, 2022).

With regard to bilingual education, Tabors (2008) states that teachers must be aware of the steps involved in acquiring a second language in order to distinguish between difficult behaviours resulting from learning difficulties and those associated with learning a second language. Brilliante and Nemeth (2017) says that offering a social story in the child's home language leads to a better understanding and that the teacher has a better opportunity to deliver the objectives of the story. This is also an important resource for parents or carers who speak the language of the child's home and can help with the process of bilingual education (Brilliante and Nemeth (2017). It was found that using the home language with a child can reduce behavioural issues (Castro, Espinosa, & Paéz, 2011; Goldenberg, 2008). Instead of being seen as negative, the home language should be used to help the child learn and help the child in the multilingual classroom (Cheatham, Armstrong, & Santos, 2009; García et al., 2011; Puig, 2010). It is suggested that a bilingual child would benefit from social stories in their home language and in the language of the school. According to Brilliante and Nemeth (2017), when bilingual teachers are able to support students' communication and learning in their native language and in their second language, it supports the bilingual development of all pupils, including those with disabilities. Educators and external professionals should develop language plans based on the specific needs of each pupil and the resources available in the school (Brilliante & Nemeth, 2017). In addition, McWilliams (2010) claims that language supports such as word walls, labels, photographs, graphics etc. in every aspect of the school day will allow the child to have more opportunities to use the language in locations outside the school environment. Kohnert & Derr (2012) states that consistent use of both languages will benefit learners by reinforcing positive behaviours. Pictures serve as a visual aid that can accompany sentences (McGill, Baker & Busse, 2015). This is in line with the views of Dettmer, et al. (2000) who discusses

the benefits of visual supports for children with autism. Children with autism tend to have difficulties with auditory processing and visual supports are easier for them to understand (Gillberg & Coleman, 2000). Therefore, social stories can be a visual support that enables teachers to use phrases in the home language and English (Brilliante and Nemeth, 2017).

2.5.4. Social Stories and ICT

Herbert (2010) stresses the importance of ICT and in particular mobile technologies for modifying special educational practices. ICT has the potential to foster effective learning environments for individuals with AEN (Sani-Bozkurt, Vuran, & Akbulut, 2017). Mobile devices are a possible area for creating interactive social stories due to their affordability as well as their graphics/illustrations (Sani-Bozkurt, et al., 2017). Social stories can be created using music (Brownell, 2002), video models (Sansosti & Powell-Smith, 2008) or computer-aided technologies (Hagiwara & Myles, 1999). Sani-Bozkurt et al. (2017) state that, interactive social stories can be more attractive and easier to remember because the learner actively participates in the process and is able to discover using their preferred learning styles. Mukti and Hwa (2004) agree that interactive applications can make content more attractive. In addition, Mayer (2005) suggests that when words and images are combined on screen, learning can be more effective. With regard to visual stimuli such as illustrations and pictures, research shows that children with ASD respond better to this type of motivation compared to hearing stimulants (Rao & Gagie, 2006; Shukla-Mehta, Miller, & Callahan, 2010).

2.5.5. Poster and Visual Resources

There are many posters and visual resources available to teachers to support students with social, behavioural, and emotional problems, but most of them are available in English only. These resources, for example, visual time programming, photographs, picture cards, and labels have been used to develop students' communication skills (Arthur-Kelly et al., 2009; Spriggs et al, 2017; Watson & DiCarlo, 2016). The resources are said to have a positive input due to their structure (Rutherford, Lahood-Kullberg, Baxter, Johnston, & Cebula, 2020). The use of these resources can reduce frustration and stress that children feel. They can also help students to better interact with others and increase their autonomy (Rutherford et al., 2020). Its success however depends on the level of staff training and knowledge on how to use these effectively (Wellington & Stackhouse, 2011).

2.5.6. Applications and ICT

The effectiveness of ICT use has been studied to help teach students with ASD and emotional skills (Boucenna et al., 2014; Mitchel, Parsons, Leonard, 2007). These studies found that the use of ICT with autistic students can positively influence their development (imitation and joint attention) (Boucenna et al., 2014), social skills (Mitchel et al., 2007) and recognising emotions on others' faces (Charitak, 2015). There are many suitable online applications and websites where games and videos can be accessed to promote the development of these skills. However, these ICT resources are currently only available in English.

2.6. Conclusion

It is clear that suitable resources are available in English for students with AEN. It is also clear that the Department of Education and NEPS recommends many assessments, interventions, and resources for teachers in primary and post-primary schools in Ireland. It is regrettable that most of these resources are not available through Irish. The above literature review shows the benefits of these assessments, interventions, and resources. The next part of this report discusses the research results of the consultation process to find out what assessments, interventions, and resources are required for teachers in Irish-medium and Gaeltacht primary and post-primary schools in the Republic of Ireland.

3. Consultation Process

A mixed methods approach was used to investigate the assessment, teaching and learning resources required through the medium of Irish to cater for the additional educational needs of pupils in Irish-medium and Gaeltacht primary and post-primary schools. This methodology was chosen because it enabled us to answer questions that cannot be investigated effectively using only quantitative or qualitative methods (Creswell & Plano-Clark, 2011). In the first stage of the consultation process, schools completed an online questionnaire. In the second stage, teachers from these schools conducted a semi-structured individual interview. This format was chosen because it gives a richer in-depth picture of the quantitative data collected through the survey.

3.1. Stage One

The online survey allowed us to collect statistical information and data relating to participants' views and practices (Cohen et al., 2013, Robson & McCartan, 2016). Numerical, descriptive, and explanatory data were collected on; (i) the assessments and resources available through Irish and used in Irish-medium and Gaeltacht schools to meet the additional educational needs of their pupils, and (ii) the assessments and additional resources required through Irish in these schools. The data collected were analysed using the Statistical Package for Social Sciences (SPSS). This allowed us to examine quantitative data in terms of descriptive statistics and frequencies. Data were analysed in terms of percentage, average, mode, maximum, minimum value, and range. Qualitative responses to open questions were analysed using a thematic analysis (Braun & Clarke, 2006).

3.1.1. The construction of the questionnaire

The questionnaire consisted of 19 questions comprising of multiple choice and open questions. Items were adapted from previous research and the literature revised in Chapter 2 (as shown in Table 3.1). The questionnaire was piloted and based on the feedback received a number of terminology amendments were made.

Table 3.1: Questionnaire design

Background Information (Questions 1-6)	Questions on the background of the schools and the person who completed the questionnaire on behalf of the school (e.g., teaching role).
Challenges related to accessing teaching and assessment resources through Irish (Question 7)	Questions on the lack of teaching and assessment resources for Irish-medium and Gaeltacht schools (Andrew, 2020; Ní Chinnéide, 2009).
Education professionals (Question 8 & 9)	A question about the education professionals who have worked with students in schools over the past three academic years and the language they used when carrying out their work (Andrews, 2020; Ní Chinnéide, 2009).
Creating resources through the medium of Irish (Question 10 & 11)	Questions about how often teachers create their own resources through the medium of Irish and what resources they create.
Assessment (Question 12-15)	Questions on; whether schools translate assessments from English into Irish for use in the school (Pert & Letts, 2001; O'Toole & Hickey, 2013), what assessments they translate, the assessment language used for

	different types of assessment (Irish or English), which assessments are required through Irish? (Andrews, 2020; Ní Chinnéide, 2009)
Resources (Question 16-18)	Questions based on the classification of resources required urgently through the medium of Irish as well as an open-ended question on this subject (COGG, 2010; NCCA, 2007; Ní Chinnéide, 2009).
Participation in an interview (Question 19)	Participants were asked if they were interested in participating in a semi-structured interview in the second stage of the consultation process.

3.1.2. Recruitment of Participants for Phase One

Gaeloideachas sent an email to all Irish-medium and Gaeltacht primary schools and post-primary schools in the Republic of Ireland inviting them to take part in this research. The email contained a link to the questionnaire as well as a plain language statement and an informed consent form.

3.1.3. Stage One Participant Profile

The survey was completed by 56 teachers. Table 3.2 shows the breakdown by type of school; (1) Gaeltacht primary schools (n = 13), (2) Irish-medium primary schools outside of the Gaeltacht (n = 31), (3) Gaeltacht post-primary schools (n = 5), and (4) Irish-medium post-primary schools outside of the Gaeltacht (n = 7).

Table 3.2. Number of schools in each category who completed the online survey.

	Total Number of Schools	Representative Example
Irish-medium primary schools outside of the Gaeltacht	150	31 (20.6 %)
Irish-medium post-primary schools outside the Gaeltacht	47	7 (14.89 %)
Primary Gaeltacht Schools	109	13 (12 %)
Gaeltacht Post Primary Schools	22	5 (22.72 %)
Total	328	56

A mix of small and very large schools took part in the consultation process by completing the online questionnaire. For example, there were 20 pupils enrolled in the smallest school and 720 pupils enrolled in the largest school. Most of the schools completing the survey (27/56) were based in Leinster as seen in Table 3.3, 15 schools were based in Munster, seven in Ulster and Connacht.

Table 3.3. Geographical location of the schools that took part in the research.

	Province of Leinster	Province of Munster	Province of Ulster	Province of Connaught
Irish-medium primary schools outside of the Gaeltacht	21	7	1	2
Irish-medium post-primary schools outside the Gaeltacht	5	2	0	0
Primary Gaeltacht Schools	1	3	5	4
Gaeltacht Post Primary Schools	0	3	1	1

Responses were collected from schools with and without DEIS status. There were six schools in DEIS Band 1, three were in DEIS Band 2, and five were rural DEIS schools as seen in Table 3.4 below. The remaining 42 schools were not located in a designated disadvantaged area.

Table 3.4: Number of DEIS schools by type of school surveyed.

	DEIS Band 1	**DEIS Band 2**	**Rural DEIS**
Irish-medium primary school outside of the Gaeltacht	3	1	0
Irish-medium post-primary schools outside the Gaeltacht	1	1	0
Primary Gaeltacht Schools	2	0	4
Gaeltacht Post Primary Schools	0	1	1

3.1.4. Schools with Special Classes

Of the schools that took part in the study (n = 56), there were special classes in nine of the schools, four primary schools and five post-primary schools.

3.1.5. Roles of Teachers who completed the Questionnaire.

The majority of those who completed the questionnaire on behalf of their school (primary schools n=23/post-primary n=6) were special education teachers in primary schools. Administrative principals (n=11) were the group with the second largest response to questionnaires. Of those who completed the questionnaire on behalf of their school, 11 were mainstream classroom teachers. The other responses were collected from, teaching principals (n = 6), post-primary subject teachers (n = 3), and special class teachers (n = 1). The breakdown of posts per school type is provided in Table 3.5 below.

Table 3.5: Roles of those who completed the online questionnaire on behalf of their schools.

	Irish-medium primary school outside of the Gaeltacht	An Irish-medium post-primary school outside the Gaeltacht	Gaeltacht Primary School	Gaeltacht Post Primary
Special Teacher Education	16	3	7	3
Mainstream Class Teacher	5	3	1	1
Special Class Teacher	0	0	0	1
Teaching Principal	1	0	4	1
Administrative	9	1	0	0

Principal				

3.2. Stage 2: Semi-structured interviews

Interviews were conducted for a maximum of 30 minutes with teachers and principals. Interviews were recorded and transcribed with the permission of participants. This enabled researchers to gain a deeper understanding of the data collected from the initial stage:

a) the additional educational needs of pupils learning through Irish,
b) the assessments and teaching resources available and used through Irish in Irish-medium primary and post-primary schools,
c) the assessments and resources used through the medium of English in Irish-medium and Gaeltacht primary and post-primary schools, and
d) the assessment and teaching resources required through Irish for pupils with AEN.

The literature reviewed in Chapter 2 and previous research influenced the content of the interviews (Andrews, 2020; Ní Chinnéide, 2009). The qualitative data collected through the interview process were analysed using the framework of the thematic analysis Braun and Clarke (2006). This process enabled the researcher to identify patterns and themes within the qualitative data and to address the research issues (Braun & Clarke, 2006; Clarke & Braun, 2013b).

3.2.1. Recruitment and Profile of Participants

Interviews were conducted with a total of 32 teachers from Irish-medium and Gaeltacht primary and post-primary schools (see Table 3.6). The main participants were special

education teachers but teachers with other roles were also involved. Every effort was made to invite teachers from schools around the country to take part in the interviews. A particular effort was made to ensure that the voice and views of each Gaeltacht area were taken into account.

Table 3.6: 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
Irish-medium primary schools outside the Gaeltacht (N=13)	2	2	2	N/A	7	0
Irish-medium 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	1	0	0	0	3	2

Primary Schools (N=6)						

3.3. Responding to the Consultation Paper

Teachers and schools had an opportunity to respond to the consultation paper by filling in a link to a consultation feedback form. We sought views on any aspect of the paper. The consultation paper was also available on the Gaeloideachas website (www.gaeloideachas.ie).

3.4. Ethical Considerations

The Research Ethics Committee of Dublin City University gave permission for all stages of the research and the guidelines were followed strictly.

4. Research Results

This section presents the results of the research that includes the consultation process. The results of both surveys and interviews are triangulated in this section to provide an in-depth analysis of the assessments and resources for pupils with AEN that are required through Irish. The results of the initial consultation process are presented under the following headings; the challenges of obtaining resources and assessments through Irish, bilingual external service providers, the challenges associated with assessments through Irish, the assessments currently used in Irish-medium schools, the assessments required through Irish, assessments translated from English to Irish, the amount of time teachers spend designing their own resources, and ICT resources through Irish.

4.1. The Challenges of obtaining resources and assessments through Irish

Most schools (n = 56) surveyed found it very challenging that there was a lack of assessment and teaching resources available through Irish to cater for the AEN of their pupils (n = 33). A further 22 schools found this problem was a bit challenging and one school said this problem wasn't challenging at all. When this information was analysed by context, it was found that the lack of resources was very challenging for most of the Irish-medium primary schools outside the Gaeltacht (n = 30). Only one school in this cohort found that the lack resources was not a challenge at all. In each of the other cohorts (Gaeltacht primary schools, Irish-medium post-primary schools outside of the Gaeltacht, and Gaeltacht post-primary schools), there was agreement that this aspect was very challenging for them. In previous research, Irish-medium schools and other types of international immersion education have been reported this lack of resources through a minority language as challenging (Andrews, 2020; COGG, 2010; Cammarata & Tedick, 2012; May 2013; NCCA, 2007).

4.2. Availability of external service providers who are bilingual.

In the survey, most schools (n=38) reported that external service providers, such as educational psychologists and speech therapists, had a good understanding of the pupils' AEN in their school. In addition, eight schools reported that these services had a very good understanding of the pupils' AEN. However, 10 schools reported that they did not understand the pupils' AEN at all. When the language used by these service providers was investigated, it was clear that most services were provided through English. With regard to the services of the educational psychologist, only 6 % of schools (n=56) reported that this service was available through Irish only. Only 8 % of schools reported that speech the therapist services were available through Irish only. In relation to the visiting teachers' scheme, only 15 % of schools who had access to this service reported that it was through Irish. When comparing these findings with research in the previous area, it is clear that there has been little improvement in the area in relation to the number of external service providers working with students through Irish in Irish-medium schools (Andrews, 2020). This is an international challenge for minority language speakers (de Valenzuela et al., 2016; O'Toole & Hickey, 2013).

By exploring this topic in the semi-structured interviews with primary and post-primary teachers, it is clear that there are many similarities between the groups. There were references in each cohort to the challenges posed by external service providers who do not speak Irish.

4.2.1. Primary Gaeltacht Schools

Three teachers from this group (n =7) said that speech therapists provided their services and resources through English. One of the teachers stated that this practice was contrary to the language policy of the school. Another teacher said that their speech therapist had limited Irish, and that this teacher would like to see more speech therapists with Irish. It is problematic for Irish-medium schools if the external services provide their services through English as pupils in these schools are struggling with Irish and are not receiving support with Irish and in certain cases Irish is the first language of the pupils.

> If you get a programme from the speech therapist — it's very difficult when you get things like that, and they are all in English and a child in the school is struggling with the Irish language. (Interview 7)

4.2.2. Irish-medium primary schools outside of the Gaeltacht

Two teachers from Irish-medium primary schools outside the Gaeltacht said that speech therapists only provided their services in English. Another teacher was unhappy with the language supports available in their area.

> It would be great in the context of Gaelscoil if such resources were available in Irish. Much of the material comes from the United States or England — most of it is not in an Irish context at all. (Interview 1)

One teacher also explained that many professionals encouraged the pupils in their school, who had diagnosis or learning difficulties such as dyslexia, to move to another school or not to learn Irish at school. The teacher was disappointed to receive these proposals and explained how difficult it was to give someone an exemption studying Irish in an Irish-medium school. Such recommendations have a negative impact on pupils and parents and raise concerns.

> It was recommended not to use Irish at school. Parents have said that this therapist is saying to move school. That's my experience. (Interview 11)

4.2.3. Post-Primary Gaeltacht Schools

No one reported in this cohort that external service providers were provided through Irish. One teacher described the difficulty of pupils who receive exemptions from Irish who are attending Gaeltacht schools and who have Irish as their first language. This was very difficult for them to understand because the teacher believes that every pupil should have an opportunity, regardless of their ability, to learn through Irish, especially if Irish is their first language.

> We are a Gaeltacht school, so you have to do Irish. The person is included in this Gaeltacht scheme, every child is doing Irish. If you are speaking Irish at home, you should study Irish at school. (Interview 4)

4.2.4. Post-primary schools outside the Gaeltacht

One teacher in this cohort said they had a speech therapist with Irish.

> We were lucky enough to have a language therapist with Irish (Agalla 6)

Another teacher from this group said that the educational psychologist recommended pupils with learning difficulties not to undertake study through Irish. This created a conflict for the teacher.

> For the past 10 years psychologists have been saying — this should be in English ……But that is a conflict for me because these students have done most of their education through Irish. (Interview 6)

4.3. Assessments Currently Used in Irish-medium/Gaeltacht Schools

In the survey, schools were asked about the types of assessment they used. The two most frequently used categories of assessment were standardised literacy assessments (77 %) and mathematical assessments (71 %) in both English and Irish. With regard to standardised literacy assessments, 41 % used these assessments through English. 52 % of participants used standardised mathematical assessments through Irish. These assessments were often used in Irish-medium primary and Gaeltacht primary schools. Only 39 % used bilingual literacy assessments (Irish and English) and this was the lowest percentage. It is interesting that 5 % of participants (n =2) were using dyslexia filters and non-verbal intelligence tests

through Irish although these assessments are not officially available through Irish. In addition, two participants mentioned that they used cognitive assessments through Irish although these tests have not been created and normed through Irish — which would suggest that some schools are translating English-language assessments and using English norms. This practice is not internationally advisable as assessment data may be inaccurate (Pert & Letts, 2006; O'Toole & Hickey, 2013). During the interviews, further investigation was carried out on the types of assessment used in schools. The details are presented in the next sections, using the different categories of schools.

4.4. Primary Gaeltacht Schools

Each teacher (n=7) in this cohort used the Drumcondra assessments as there are few other assessments available through Irish for these schools.

> In terms of assessment, now of understanding, spelling in Irish, literacy skills, other than the Drumcondra's— there's nothing. (Interview 4)

One teacher in this cohort thought that the Drumcondra assessments through Irish were not quite challenging for students in a Gaeltacht school. This teacher said that the level of Irish in these tests was not high enough for the pupils in their school.

> I don't think they are suitable for our school. These are the standard of Gaelscoileanna (Irish-medium schools). (Interview 2)

Four teachers said they used the *Sigma T* through Irish. One teacher used 'My thoughts about the school' checklist from NEPS (NEPS, 2007). Other teachers explained that they used other non-standardised resources to assess pupils' early Irish literacy development due to the lack of standardised Irish-medium early literacy assessments. For example, one teacher reported that they used the Drumcondra Early Literacy Test in place of *MIST*[2], full immersion education is in place in their school and there are no standardised early literacy assessments available in Irish. Another teacher used *Toe by Toe* and *Literacy Liftoff*. Two teachers used *Mar a Déarfá* as an assessment and two other teachers used Drumcondra oral language profiles. These assessments are problematic as teachers cannot compare the scores that students receive on English standardised literacy assessments and the Irish literacy proficiency of their students.

4.5. Irish-medium primary schools outside of the Gaeltacht

As with the other cohorts, one teacher stated that there were few literacy assessments available through Irish other than the Drumcondra assessments.

> In fact, we have no assessment through Irish other than the Irish Drumcondras. (Interview 1)

Another teacher added to this point, when they said that due to the lack of assessments available through Irish, they could not carry out sufficient assessments of their student's Irish literacy abilities.

[2] Middle Infant Screening Test — English early reading test (available here).

> In terms of official assessment there is nothing to assess what we are looking for. (Interview 11)

Ten teachers used Drumcondra assessments: Nine teachers used Drumcondra Irish literacy test and five used the Drumcondra Mathematics test through Irish. One teacher used the Drumcondra Language Profiles. Other teachers then said they used tests they have translated from English to Irish to evaluate their students; four reported that they translated the early numeracy assessment, and two other teachers were using early reading assessments translated into Irish. Two other teachers reported that there are no standardised screeners like *the* BIAP[3]through Irish and therefore they did this test through Irish. Two teachers also said that they used a translated version of the *MIST* test to evaluate the development of the pupils' early Irish literacy.

> The BIAP at Junior Infants level but they are in English, no standardised screener similar to that is available through Irish at this stage. (Interview 4)

Seven teachers mentioned that they used the *Sigma T* through Irish and two teachers used *Micra T* through Irish. One teacher believed that these assessments were easier to access for students compared to the Drumcondra tests.

[3] Belfield Infant Assessment Profile — a screening tool designed to help teachers identify the particular strengths and needs of children in infant classes in primary school (available here).

> We stay with the Sigma and Micra as we think they are easier for the children. They are now online. (Interview 13)

The informal assessment methods referred to by teachers in this cohort were as follows; *Gafa le Mata* as maths assessment (n = 2), *Cleite* (n = 1), *Focal feasta* (n = 1), oral language assessment designed by the teacher (n = 1), and checklists designed by the teacher (n = 4).

4.6. Gaeltacht Post Primary Schools

In relation to assessments through Irish, five out of six teachers stated that there are no standardised assessments available through Irish. In addition, all teachers experienced a problem and challenge with the lack of assessments available.

> We do not use any because there are none. (Interview 3)

One teacher discussed that teachers undertake class-based examinations through Irish, but she said there are no official or standardised assessments available. Therefore, it is more difficult for teachers to compare students' outcomes or to identify problem areas. One teacher has created their own written assessment to assess literacy levels in both Irish and English. This teacher has also translated the *Jackson Phonics Assessment* into Irish as a similar test is not available in Irish. Two teachers said their school was involved in a pilot Irish language literacy assessment for second year students run by the ERC. These teachers felt that such an assessment was urgently required for Gaeltacht post-primary schools. However, unfortunately, they have not yet access to a published version of this assessment.

The special class teacher used the sixth class Drumcondra assessment to assess their students' understanding and spelling of Irish as there are no appropriate assessments available for the age group they teach. One school reported that they created an oral Irish exam as an entrance exam to assess the pupils' spoken level of Irish when moving from primary school to post-primary school and to identify and cater for individual student needs.

4.7. Irish-medium Post Primary Schools outside the Gaeltacht

Three teachers said they made little use of assessment through Irish, and two said that there are very few assessments available through Irish. As a result, one teacher said that their school is dependent on information, diagnoses, or assessments from primary schools.

> We don't use anything…. there's nothing at our disposal. (Interview 4)

Class-based assessments were mentioned twice. A special education coordinator in this cohort said that they use NEPS checklists and that teachers used a survey in their school to ascertain the students' attitude to school.

4.8. Assessment Challenges through Irish

As seen above, many schools face difficulties and challenges when conducting assessments of pupils through Irish. This topic was further investigated in the interviews.

4.8.1. Primary Gaeltacht Schools

Four teachers from the Gaeltacht primary school group (n=7) reported that the lack of assessments available through Irish was the biggest challenge they faced.

> It is very difficult because the assessments are not available. That's the biggest problem. (Interview 1)

One teacher reported that they had no choice but to create their own assessments. This is a time-consuming exercise, and the assessments are not standardised. Therefore, the teacher could not compare the results of the class with other classes or schools.

> The main challenges are that we are creating them (assessments). It's extra time — it's a pain — especially when you see the choice English schools have. There is no choice in Irish. (Interview 7)

Two teachers described the language difficulties that their students experienced in acquiring spoken Irish and the reading of Irish. One teacher said they can no longer use the early literacy test *MIST*, or early literacy interventions, as there is now a two-year immersion education programme in their school. This was a major challenge for them as there are no similar early literacy assessments or interventions available through Irish in relation to the identification and intervention of early literacy difficulties that are recommended as international best practice (Wise & Chen, 2010).

> The teacher now has nothing to assess the alphabet or vocabulary in April. This gap exists. (Interview 4)

4.8.2. Irish-medium primary schools outside the Gaeltacht

Six teachers (n=13) explained that the lack of assessments through Irish was very challenging for them. Four teachers spoke about the lack of literacy screeners through Irish and three others referred to the lack of standardised literacy assessments through Irish.

> The biggest challenge is that they are not available. For example, for dyslexia, I do not think that any tests are available in Irish, and we need to rely on the tests available in English. (Interview 6)

Three teachers spoke about the language difficulties faced by their students and that these language difficulties have a negative impact on students' ability to access assessments through Irish. One teacher referred to the difficulties experienced by their students with the various dialects in Irish. In addition, the teacher said that Irish dialects must be considered if assessments were developed in Irish.

> The language is the difficulty…. perhaps it would not be in the Munster dialect — they would not use the same words. (Interview 10)

4.8.3. Gaeltacht Post Primary Schools

In relation to the challenges of assessing children through Irish, five teachers (n=6) in this cohort outlined how this was a challenge for them. One of the teachers said it looks bad that

the school has no standardised assessments through Irish, especially as this is a Gaeltacht school.

> It looks terrible, it is bad publicity. (Interview 3)

In addition, this teacher spoke about how parents are dissatisfied with the lack of assessment available through Irish at second level. They are frustrated that, although they live in the Gaeltacht, their children have Irish as their first language and received their education through Irish in Gaeltacht primary schools, there are no assessments available through their first language. The teacher explained how parents feel that their children are being unfairly assessed compared to students attending English-medium schools.

> Parents are giving out that their children have attended a Gaeltacht school, in the Gaeltacht and that they have Irish as their first language at home and their first examination from the school is in English. (Interview 3)

Another teacher said that not all primary schools are using the same standardised assessments as the Drumcondra or the *Sigma/Micra T* and that not all schools are using these assessments through Irish. This can create issues for post-primary schools as not all pupils were assessed in the same way: there are no official results, reports or diagnoses of pupils entering post-primary schools. This teacher says that there should be a transfer examination between primary and secondary schools, and that it should be available in Irish so that all pupils can be assessed fairly.

> There should be a standardised examination from the beginning for all people moving from primary to post-primary school and to have it carried out through Irish. (Interview 4)

Three teachers within this cohort discussed how they access the Reasonable Accommodation Scheme at Certificate Examinations (RACE) in their school, but they indicated that appropriate assessment through Irish must be available to assess their pupils accurately.

> The pupils are not getting fairly assessed when compared to the pupils in English-medium schools as it does not show us how good or bad, they are in spelling in Irish as we are currently unable to take that assessment through Irish. (Interview 5)

While all teachers agreed on the need to provide assessments in Irish, three of the teachers explained the importance of having standardised assessments in their own dialect. In addition, one teacher described how different words have different meanings depending on the dialect and not all students will be aware of the different meanings.

Three teachers mentioned that allowances should be granted to the various dialects of Irish and students will need time to familiarise themselves with the language used in the assessments through direct teaching or learning from sample papers. If this is not implemented it will have an impact on the weakest students.

> The language of the paper must be taught to the pupils. It creates difficulties especially for the weakest pupils. (Interview 6)

4.8.4. Irish-medium post-primary schools outside the Gaeltacht

All teachers in this cohort discussed the challenge of assessment through Irish. One of the teachers outlined the problems they had regarding assessment in their school and said that the majority of pupils in their school are from English-speaking primary schools and therefore do not have fluency in Irish. As a result, this teacher reported that they had to teach their first-year subjects bilingually to help them settle in and provide enough support to increase their proficiency in Irish, this was one of the biggest challenges for them.

> In our school, we are a Gaelcholáiste (post-primary outside of the Gaeltacht). However, most of our students come from English-medium primary schools. There would be very few of our students coming from Irish-medium primary schools. It is likely that fluency and literacy in Irish is lacking in many of our students. We need to do a lot of work with them to bring the standard of Irish up to the standard of a first-year student when they arrive. …. In the first year, we have to do everything bilingually to help them settle in. Even those checklists we use would, we have to give them a lot of support to tackle them through Irish. I think this is the biggest barrier. (Interview 29)

Conversely, one teacher did not think that there were any challenges when assessing students through Irish, and they said that they used former examination papers and mathematical books specifically for assessment through Irish. However, this teacher indicated that it is more challenging for them to teach through Irish and one of the problems was the lack of teaching resources. This teacher said that the weakest students had difficulty reading the textbooks through Irish and that the language used in the books was of a very high standard, and that it was not very accessible.

> I think it's not a big problem with regard to assessment. There are no resources available to me through Irish to help me teach the subject.... the pupils with difficulties reading, can't read them, they can't read any of it. (Interview 5)

4.9. Assessments required through Irish.

Within the survey, schools were asked what types of assessments they wanted through Irish. The most frequently reported were bilingual literacy (Irish-English) assessments (61 %). The development of tests such as this has been shown to be beneficial in the previous research undertaken in the context (Murphy & Travers, 2012). Subsequently, 55 % of schools stated that they needed bilingual mathematics assessments, 54 % reported that they needed early numeracy assessments through Irish and 53 % reported the need to provide cognitive assessments through Irish.

4.9.1. Primary Gaeltacht Schools

In relation to early literacy, five teachers outlined the importance of having an assessment similar to *MIST* available for Irish literacy as a result of the immersion education policy in their school under the Policy on Gaeltacht Education. In addition, four teachers stated that the BIAP should be available through Irish. One teacher said that there was a need for dyslexia screening assessment through Irish. Two teachers said the *NARA* would be [4]beneficial if it were in Irish. Other assessments referred to as required through Irish were the Neale (*n* = 1) and the *Rain Sentence Reading Test* (n = 1) being in Irish.

> Something for dyslexia, we would be able to say, 'there is a very high chance that this child has dyslexia.' And something like the *NARA*. (Interview 1)

4.9.2. Irish-medium primary schools outside of the Gaeltacht

Within this cohort four teachers said there was an urgent need for dyslexia screening for Irish language and literacy. One teacher noted that *Toe by Toe and Quest* are beneficial and that similar resources should be made available in Irish. Three teachers in this cohort mentioned the importance of early literacy testing such as the *MIST* being available through Irish. Other tests mentioned to be required through Irish included Schonell spelling test (*n* =1) and the Yark (n = 1).

[4] Neale Analysis of Reading Ability — measures the accuracy, understanding and reading rate of students from 6 to 12 years of age (available here).

> Assessments such as the dyslexia screening test and so on should be available in Irish. (Interview 7)

One teacher commented on the fact that there are no cognitive assessments available through Irish. Another teacher suggested that these assessments should be available online and that the report should be processed automatically. It was also recommended that standardised/criteria-based checklists should be available for the language and literacy assessment of pupils' learning through Irish.

> It would be great if there were standard checklists to show what language the child should have at their age. (Interview 3)

If these assessments were to be created through the medium of Irish, a teacher gave an example of the importance of creating an assessment that is accessible in terms of the language level for students.

> If it is based on one that is already available through English — if it is to be translated — this would influence the teachers as the language is not adapted to meet that of the age group. (Interview 11)

4.9.3. Gaeltacht Post Primary Schools

With regard to assessments required for post-primary schools, one teacher stated that checklists must be available for the assessment of pupils learning through Irish as well as an Irish version of the Vocabulary Enrichment Programme as recommended by the NBSS (2014) and the CAT4 assessment[5]. Two teachers described the need for a suitable standardised assessment through Irish in reading, spelling, and mathematics for the first- and second-year students. One teacher reported that they would like the assessment they used in the Drumcondra pilot assessment scheme they had previously participated in to be made available. However, they reported that this assessment has not yet been made available to schools. Two teachers reported the need for appropriate assessments for the *RACE* scheme, such as the *WRAT* [6] through Irish. One of the teachers in this cohort said they would like all of the assessments recommended by the Department of Education and Skills and NEPS (NEPS, 2020) to be available through Irish and believe that it is a human right to assess pupils in language through which they are learning.

> I think it should be a human right that the student is being tested in their own language, the language of the education system. (Interview 6)

[5] CAT4 — reasoning ability test (available here)

[6] Wide Range Achievement Test — an assessment of academic skills that measures reading, maths, spelling and comprehension skills (available here).

4.9.4. Irish-medium Post Primary Schools outside the Gaeltacht

A special education coordinator in this cohort emphasised the need for standardised assessment in Irish literacy, especially for first year students. Another special education coordinator in the cohort explained the importance of having appropriate assessments available to evaluate students for the *RACE* scheme. This teacher described how only certain appropriate assessments are available in English. She said that while the students could pass the English spelling assessment, their ability to spelling in Irish could be much lower and would not be a success if the assessment was in Irish. This is an issue as pupils will be taking the tests through Irish.

> Race that's the most urgent thing. (Interview 3)

One teacher stressed the need for more tests to be available through Irish as this will allow them to compare Irish and English literacy levels. A special education coordinator in this cohort also reported that they would like to see the assessments *CAT4, WRAT, DASH, PPAD-E* available in Irish.

> WRAT and CAT, NGRT, Diagnostic Reading Analysis are taking place, but we don't have its equivalent in Irish to compare results. (Interview 6)

4.10. Assessments Transferred from English to Irish

In the survey, most respondents (n = 41) reported that they did not transfer tests. A small number of respondents reported translating norm reference tests (n = 6), standardised tests (n = 4), and criteria-referenced tests (n = 6).

4.10.1. Primary Schools

When this was further investigated in the second stage interviews, it was found that four teachers in the primary Gaeltacht cohort (n=6) translated assessments such as the *BIAP*, mathematics assessments, and the *MIST*. The other two teachers said they had not translated assessments. Within the cohort of teachers interviewed in Irish-medium primary schools outside the Gaeltacht (n = 13), four teachers reported that they translated assessments such *as* the BIAP and Drumcondra Early Literacy Test. The other seven teachers did not translate assessments due to the unreliability of the assessment results when the test was translated, and the English norms were used.

> I don't think that is advisable, for those that are standardised to be translated into Irish because then it is no longer standardised. This does not make sense. (Interview 4)

4.10.2. Post Primary Schools

Four teachers within a post-primary Gaeltacht cohort said that they do not translate standardised English assessments. One teacher translated the *Jacksons Phonics assessment* and produced her own assessment in Irish based on this. In addition, this teacher stated that

she does not have time to translate further assessments, and in particular not all of the checklists recommended. Only one of the teachers in the cohort of teachers interviewed from post-primary schools through Irish outside of Gaeltacht assessments, translated assessments for example, the *WRAT4*.

> In terms of speech, I have a command of linguistics and specifically phonology — I myself can undertake and develop resources and assessments for speech and language. (Interview 2)

4.11. Resources used in Irish-language and Gaeltacht media schools.

4.11.1. Time spent by Teachers in Creating Resources

Respondents to the questionnaire were asked how often they created their own resources through Irish to cater for the additional educational needs of the pupils they teach. Of this cohort, 17 respondents reported that they had made their own resources on a daily basis. A further 22 respondents reported having made their own resources on a weekly basis. The other respondents created resources every two weeks (n = 6), monthly (n = 6), and termly (n = 2). Three respondents who were administrative principals said they had never created their own resources.

4.11.2. Primary Schools

During the interviews, four teachers from the primary Gaeltacht cohort spoke about the time they spent creating resources based on the national curriculum. One of these teachers

spoke about how this takes time and challenges for them on top of their teaching duties. Another teacher gave an example of how they spent their time.

> You would need to be typing and cover the English page. To cover the English with the Irish language, many of these kinds of things are going on. Another problem is that all teachers' manuals are in English. (Interview 4)

Within the cohort of teachers interviewed from Irish-medium primary schools outside Gaeltacht areas. Two teachers discussed the time they spent creating resources. However, one teacher who has had teaching experience over 20 years discussed the improvements made in this area.

> I see as a special education teacher the big gaps. They have been filled since I started teaching in '97 as a class teacher. I remember when I started out, I was designing everything. This is no longer necessary. (Interview 2)

4.11.3. Post Primary Schools

In response to a question about resources available through Irish, three teachers from Gaeltacht post-primary schools said that very little was available and that you need to create your own most of the time. One of the teachers reported that they spend around 5 hours in the evening searching for resources and ideas, translating resources, and creating their own resources.

> There are no resources through Irish if you do not design it yourself. (Interview 1)

One teacher said that improvements have been made in the last few years and that they used anything they came across through Irish, especially the resources listed on the COGG, Ceacht.ie and Gaeloideachas website, or textbooks through Irish. All subject teachers from Irish-medium post-primary schools outside of the Gaeltacht said they spend a lot of time creating resources. A mathematics teacher explained that most of the resources they use are in English and that they had to translate them into Irish. They also said that the teachers created all the resources in their school. A special education coordinator said that all the resources they use were transferred from English. A history teacher has reported that they do not have enough time to create resources and that they feel that there are more meaningful ways they could spend their time.

> Your time could be spent doing things more worthwhile. (Interview 1)

4.12. Resources used through Irish.

4.12.1. Primary Gaeltacht Schools

One teacher referred to the excellent resources coming from Northern Ireland, such as those from An tÁisaonad and the CCEA. However, there are sometimes challenges for students when using these resources as the dialect of Irish spoken is different from the day-to-day language they use. Two teachers used Séideán Sí, Féasta Focal, and Giglets.

> We use Mar a Déarfá…. we get the pronunciation from Muintearas. But again, we have to be careful because there are words that we will not use. Words that we use often have different pronunciations. (Interview 2)

The development of wellbeing through the medium of Irish was very significant for teachers in these schools as the *Friends programme recommended by* NEPS is not available through Irish.

> We use …*FRIENDS* but I have to translate them as I teach. (Interview 2)

4.12.2. Irish-medium primary schools outside of the Gaeltacht

In this cohort six teachers spoke about how they used Séideán Sí as an Irish literacy resource. Five teachers used Cleite and four used Mar a Déarfá. One teacher used Brendan Culligan's spelling method through Irish. With regard to the use of classroom novels, one teacher acknowledged that there were significant improvements to reading books for young children, but they believed that there should be a wider range of books for independent reading.

> There are lots of reading books available to young children of Gaelscoileanna (Irish-medium) and they are beautiful but I'm thinking that more books that are suitable for children in the case of independent reading would be beneficial (Interview 7)

4.12.3. Gaeltacht Post Primary Schools

One of the special class teachers used a lot of resources from Twinkl. This teacher said that there are lots of pictures in the resources and the print is the same throughout, and that the children in their special class enjoy the continuity. One teacher noted that there were many health and well-being resources in the new Junior Certificate Cycle and that some of them had been translated into Irish.

> I think the new Junior Certificate has helped in terms of wellbeing and to make these resources available through Irish. And more is available. We do not feel such a big deficit in terms of such things. (Interview 6)

4.12.4. Irish-medium Post Primary Schools outside the Gaeltacht

Regarding language and communication, the music teacher said that the language in the new Junior Certificate Cycle book is challenging. She said that this is the only book available in Irish for music for Junior Cycle. The mathematics teacher reported that Irish used in the examinations papers was easier than in the textbooks.

4.13. Essential Resources through Irish

Within the survey, schools were asked to rate a list of resources in order of the urgency that they need through Irish. Graded Irish language readers were listed as the most urgently needed resource (n=46). Irish language and communication resources were listed second (n=42). Evidence-based interventions and programmes for social and emotional development through Irish were listed in third place (n=41). Maths interventions based on

evidence-based practices were listed in fourth place (n=40). The other resources needed are; mathematical resources (n=37) and social stories (n=33). In an open question, respondents could add other options or more details regarding the resources required through Irish. Some respondents stressed the need for more social, emotional and well-being resources through Irish: five mentioned the need to have more social stories in Irish. Ten respondents listed graded reading books and reading books as an urgent need. The need for Irish language assessments (n=6), games (n=5), applications/more ICT resources (n=4), language and communication resources (n=2), posters (n=1), and entrance exams for post-primary schools (reported n = 1).

4.14. Primary Gaeltacht Schools

Three teachers from the Gaeltacht primary group (n=7) raised the point of lack of resources in the area of mathematics. They discussed how much less resources are available through Irish in mathematics, especially in terms of online resources. One teacher discussed the benefit of using video to teach mathematical concepts. Teachers in this cohort said they also needed resources through Irish for spelling, literacy, and writing. They discussed the types of resources; graduated spelling programme (n = 1), e-books (n = 1), readers (n = 1), applications such as *Nessy* (n = 1), handwriting books (n = 1) and graded readers (n = 1). In relation to Aistear one of the teachers said they would like a manual of activities to guide them in this area.

Another teacher discussed how an app or Irish language resources on self-care would be beneficial to assist students in terms of social and emotional development. They also

referred to the need for more mathematics games through Irish. Mathematical resources were mentioned, as recommended by NEPS (2020) such as the *Numicon* manual required through Irish.

> That would be great — something like that, Numicon, (Interview 30)

4.14.1. Irish-medium primary schools outside of the Gaeltacht

Eight teachers from the Irish-medium primary group outside the Gaeltacht (n = 13) raised the point of the lack of resources in the area of mathematics as there were much less ICT mathematics available through Irish.

> There is much less in mathematics in Irish. (Interview 13)

Three teachers said that social stories are very helpful and more should be available through Irish. Two more teachers said they need Irish-language dyslexia screeners and Irish literacy applications. The need for increased ICT resources through Irish was further emphasised by the remote teaching period caused by the Covid-19 pandemic.

> The pandemic has clarified the shortcomings of applications, online. (Interview 4)

Teachers in this group mentioned that many resources were required for Irish language literacy, for example; the *Arrow* intervention (n=1), phonics scheme (n=1), evidence-based

interventions (n=1), dyslexia interventions/resources (n=2), precision teaching programme (n=1), a scheme such as *Toe by Toe (* n=1), and a series of graded books (n=1).

In terms of language development and communication Irish one teacher said there is a need for resources in this area.

4.14.2. Gaeltacht Post Primary Schools

With regard to the content of the resources required through Irish, two teachers said that videos based on self-care, how to deal with feelings, mental health and well-being, how to make and keep friends, how to place an order in a shop, how to be safe are needed. One of these teachers felt that this will help to demonstrate to the children that the language is still alive and used. Two teachers said they would like to have a database of all available resources in Irish so that teachers can share and search resources. One teacher also discussed the value of a support network for Irish-medium teachers, such as the unofficial Facebook groups created. Another teacher emphasised the importance of the PECS communication system and how it must be available in Irish. This teacher also said that resources such as a visual timetable should be available through Irish for students with autism. Another teacher confirmed this point, they said that they need more posters in Irish around the school/classroom and that these should be available in the three different dialects. In addition, one teacher wanted to have a graduated reading scheme available in three different dialects in Ireland. The importance of creating numeracy applications in mathematics areas such as counting, and money was also discussed.

Self-care — video resources with labels in Irish to teach them self-care — how to wash themselves, put their clothes in the washing machine, how to keep

> themselves safe around electricity, jobs in the house. (Interview 2)

4.14.3. Irish-medium post-primary schools outside the Gaeltacht

All teachers reported that there is a shortage of Irish medium resources in each of their roles. In response to asking for the resources needed immediately through Irish, one of the special education coordinators said they were all needed.

> They are all urgent — they are all needed. We are not meeting students' needs through Irish. (Interview 3)

It was also reported within this cohort that more posters in Irish would be helpful, with keywords for various subjects and verbs. In addition, the need to develop evidence-based practices was discussed. A special education coordinator in this group discussed the need for an immersive reader in Irish. In addition, they said that social stories would be very useful, but many of the current social stories are aimed at primary school children and are in English which is a challenge for them. This teacher stated that high interest books/low reading level through Irish would be helpful. Another teacher also said that resources through Irish would help with reading and understanding. The music teacher interviewed in this group is highly dependent on teacher forums, Facebook groups and the Post-Primary Music Teachers' Association (PPTMA) to access resources for their students. This teacher also explained that music resources are available for Junior Cycle but that most of them are in English. They discussed how neither a workbook nor a composing book was available in

Irish. Another teacher said NEPS had enough resources for children but there was nothing for teenagers with learning difficulties and that very few of the resources that were translated into Irish.

4.15. ICT Resources through Irish

Schools were asked as part of the survey what types of ICT were required through Irish. Text into speech (n=36), audio books (n=36), and applications (n=36) were listed as the most needed resources. Word processing technology in Irish was subsequently listed (n=34). Applications to assess student phonological development were listed in fourth place (n=33), followed by assessment of Irish language literacy applications (n=32). The other ICT resources required through Irish are social stories (n=31), touch-typing programmes (n=31), applications to develop student cognitive abilities/working memory (n=30), spelling programmes (n=29), mathematical assessments (n=29), and a screen reader (n = 23). There were five 'other' responses, with two respondents highlighting the importance of a spell-checking system, typing applications (n=1), videos for fitness/yoga (n=1). Within the second stage of the consultation process, seven teachers from the full cohort (n=32) said there was a lack of ICT resources through Irish. Three teachers reported that more videos through Irish should be available.

In the interviews, teachers in the different types of schools discussed the types of ICT they currently use and the types of ICT that are required through Irish. This is discussed in more detail below.

4.15.1. Primary Gaeltacht Schools

One teacher used many apps but said they were all in English. Another teacher spoke about how Séideán Sí was very helpful for students with learning difficulties as it was a different style of learning for them.

> When you are dealing with children with AEN, it gives them a nice break. They are very pressured and the games in Séideán Sí are very good. (Interview 1)

4.15.2. Irish-medium primary schools outside of the Gaeltacht

Three teachers spoke about CCEA's resources, and how they were very useful for them. Two teachers used resources from the COGG website. One teacher described how their students enjoyed using technology and the immediate feedback was an exciting factor for their 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)

4.15.3. Primary Gaeltacht Schools

Four teachers from this cohort 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. Two teachers talked about the importance of having a series of graded reading books.

> 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)

4.15.4. Gaeltacht Post Primary Schools

In relation to ICT, one teacher said they use a computer in the classroom, but they try to avoid ICT as there are no applications or websites through Irish. Another teacher also tries to avoid any English-based website or online resources. Instead, this teacher used online worksheets with no writing and a lot of pictures. One teacher emphasised the importance of text to speech and its benefits and some of her students made significant improvements in this area. This teacher is currently using Speechnotes.com and would like to have it available in Irish and for use in state examinations. Another teacher reported that they were using ICT at all times but usually does not use any applications through Irish. Online dictionaries such as Teanglann.ie, Abair.ie, and Tearma.ie (n = 1). This teacher also stated that the NCSE has listed many applications on its website in relation to literacy, behaviour management, and high frequency words but that they are all in English. BBC also has applications, but they are in English again. In relation to mathematics, this teacher used Khan Academy, but this is only in English.

4.15.5. Irish-medium Post Primary Schools outside the Gaeltacht

With regard to ICT, the Irish language/history teacher and the music teacher would like more interactive websites in Irish. The music teacher noted that Coláiste Lurgan had many songs in Irish on their YouTube channel, and she often used them in her music classes, but otherwise there is a shortage of songs in Irish. This teacher said that the majority of the

websites they use are in English due to the lack of websites available through Irish. This can create problems in terms of terminology. This teacher uses Teanglann.ie, the Irish-English dictionary online, and praised the oral pronunciation section of the website. With regard to teaching history, the teacher said they would like online quizzes, comic strips and posters in Irish. With regard to the resources needed to teach Irish, the teacher reported that their students enjoyed learning various aspects of grammar through Kahoot. They also explained that an app to help students learn grammar would be beneficial and stated that the students would be able to work at their own pace and independently. This teacher used YouTube to teach students about Irish language poems. The mathematics teacher explained that there was a need for a revision book for mathematics in Irish, which would be suitable for students with learning difficulties. One teacher said their students really enjoyed *using* Duolingo and their students also used Abair.ie. Another teacher reported that all students had iPads in their school but that they did not use any applications through Irish. This teacher also used *Kahoot* to teach Irish grammar and said their students enjoyed using this. One teacher used Folens. They said that there are few resources available in Irish compared to other subjects such as English.

4.16. Conclusion

It is clear from the above research findings that teachers in Irish-medium and Gaeltacht primary and post-primary schools are using the resources available to them through Irish. In addition, it is clear that the number of resources available through Irish has improved over the years. However, more standardised, and non-standardised assessments are required through Irish in a range of subjects, for example, Irish literacy, mathematics, language and communication, and personal, social, and emotional development. Assessments are

required for pupils in these primary and post-primary schools as it is clear that they rely heavily on English-medium assessments in these areas and in terms of cognitive assessment. It is evident in Section 2 that many programmes, resources, and interventions that are being proposed by the Department of Education and Skills, NEPS and the PDST that are not available through Irish. The teachers who took part in this research discuss the importance of these being made available through Irish for those receiving their education through Irish. The next section discusses recommendations for the future in relation to the assessments and resources required through Irish in terms of national and international research (see Section 2) and the views of teachers who took part in this research.

5. Recommendations for the Future

Recommendations for future development in the area of assessment and resources through Irish are made for pupils with AEN who are learning through Irish in this section of the report. The main themes for which recommendations are made in this section are external services, literacy, language and communication, numeracy, and social and emotional development. Each heading deals with the assessment, interventions, and resources required. The recommendations relate to the best practice nationally and internationally recommended for catering for pupils with AEN in immersion education contexts and those learning through the second language. The recommendations for the future are preceded by a brief summary of the main findings of the research.

5.1. Summary of Research Results

It is clear that access to assessments and teaching resources through Irish for most Irish-medium/Gaeltacht schools is very challenging or challenging (Andrew, 2020; NCCA, 2007). Most schools (n = 38) who participated in the first part of this research said that the external service providers (e.g., educational psychologists and speech and language therapists) understood the need of their students who were learning through Irish very well. This is interesting, as only a small majority of these schools reported in the survey that they had access to these services through Irish. Most of these services provided assessments and interventions for pupils in these schools through the medium of English, which goes against the language policy of Irish-medium/Gaeltacht schools. In relation to assessment, it was found that most Irish-medium/Gaeltacht primary schools are using standardised assessments through Irish to assess mathematics and literacy in Irish. The data suggested that some teachers in Irish-medium/Gaeltacht schools are translating assessments, for

example, dyslexia screeners and cognitive assessments from English to Irish when using the English-language test norms. This practice is unreliable and provides inaccurate assessment results (Pert & Letts, 2006; O'Toole & Hickey, 2013). However, these assessments are not available through Irish and therefore these teachers may feel that they do not have a second choice as their students are learning through Irish. In each of the categories of schools covered by the consultation process, it was reported that there was a lack of standardised assessments available through Irish. Teachers demanded that standardised assessments be developed through the medium of Irish in the following areas: dyslexia screeners, cognitive ability tests, early literacy, early numeracy, post-primary literacy and numeracy, and transfer tests for pupils moving from primary to post-primary. Some of the post-primary Gaeltacht teachers discussed the need to provide Irish language assessments in different dialects of Irish as it can confuse students when the different terminology is used from the various dialects. They may not know the vocabulary of the different dialects, and this can affect their ability to access the test.

While some teachers said there was an improvement in the range of resources available through Irish, it was clear from this research that there is still much work to be done so that Irish-medium/Gaeltacht education pupils have access to evidence-based resources and interventions in the language of their school's teaching. It is clear from the literature reviewed that there are many resources and interventions available through English recommended by the Department of Education and NEPS which are not available through Irish. This means that Irish-medium/Gaeltacht pupils may not be accessing the interventions and resources they need. It is clear from the results of the survey and interview that more resources are required in the areas of Irish language literacy and communication, numeracy, and personal, social, and emotional development. Teachers also referred to the need for

more ICT resources in these areas, for example, in relation to speech-to-text software and various applications. In the next part of this chapter, recommendations are made for further development of Irish language assessments and resources in the areas of literacy, language and communication, numeracy, and personal, social, and emotional development. These recommendations should be carried out to ensure that all Irish-medium/Gaeltacht pupils have the same opportunity to access a high standard of education.

5.2. External Services through Irish

- It is recommended that external bilingual (Irish and English) services be provided to students attending Irish-medium/Gaeltacht schools in relation to assessment and interventions (e.g., educational psychologists and speech and language therapists) (IASLT, 2016).
- Those providing external services should undergo bilingual training to help them carry out their work in both Irish and English in accordance with students' needs (Hammer, Detwiler, Detwiler, Blood, & Deon Qualls, 2004; O'Toole & Hickey, 2013; Ware, lye, & Kyffin, 2015)
- Assessment tests through Irish must be developed for educational psychologists and speech and language therapists to help them properly assess pupils with AEN in Irish-medium and Gaeltacht schools.

5.3. Literacy

5.3.1. Assessment

- Standardised assessments of early Irish literacy are required for students learning through Irish. This is very important to help schools identify pupils with difficulties early during the early immersion period.
- It is recommended that standardised bilingual assessments (Irish-English) be made available for early literacy in order to accurately assess pupils whose first language is English and who are attending Irish-medium/Gaeltacht schools.
- Standardised non-word and word reading tests as well as cognitive development assessments should be provided for pupils attending Irish-medium/Gaeltacht schools, especially those with Irish as a home language (Barnes, 2017).
- A test in Irish is required to assess students' non-verbal reasoning and numeracy ability and to help students moving from primary to post-primary school (ERC, 2020).
- It is recommended that a standard literacy examination through Irish be developed and made available to post-primary schools (ERC, 2020).

5.3.2. Literacy Interventions

- In immersion schools, it is recommended that special educational support should be provided to pupils through the daily teaching language of the school, i.e., Irish (Andrews, 2020; Bhaoill & Ó Duibhir, 2004; Oh, 2009).
- Evidence-based intervention programmes should be developed through Irish based on; (1) phonological awareness, (2) decoding skills, (3) spelling skills, (4) oral vocabulary development, and (5) visual words (Barnes, 2017; NEPS, 2019).

- It is recommended that further professional development be developed for teachers who provide Irish literacy interventions for Irish-medium/Gaeltacht pupils (Barnes, 2017).

5.3.3. Resources

- The teachers who took part in the research said that there is a need for more graded Irish language readers for primary and post-primary pupils.
- ICT software through Irish must be developed to assist students with 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), word processing software (Evmenova, Graff, Jerome, & Behrmann, 2010), and interactive books (Huriyah, 2018).
- A touch-typing course for Irish should be designed to assist students with reading difficulties or motor skills (Koorland, Edwards, and Doak, 1996; Tenney and Osguthorpe 1990)
- It is recommended that a wide range of literacy applications be designed for primary and post-primary pupils in Irish.

5.4. Language and Communication

5.4.1. Assessment

- The following assessment tools should be available through Irish for pupils who are being raised through Irish or schooled through Irish; communication development skills checklist, listening skills checklist, vocabulary checklist, phonemic awareness assessment, and language screening (NCSE, 2021).
- There is a need to provide more ICT applications through Irish to help students develop their social and emotional skills.
- Parental reports of language development should be used to accurately assess the language input of bilingual pupils (O'Toole & Hickey, 2017). According to the research these tools are strong indicators of identifying language impairments in bilingual children (Boerma & Blom, 2017).

5.4.2. Language and Communication Interventions

- It is recommended that a class communication support checklist comprising the following elements be developed; language learning environment, opportunities for language learning, and language learning interventions (Lindsay, Dockrell, Law, & Roulstone, 2012).
- It is recommended that bilingual (Irish-English) interventions, or in the child's home language (minority language, Irish) be developed and made available to those with speech and language problems.
- Parental home language interventions.

- An oral mathematics language programme should be developed through Irish for primary and post-primary pupils (Hufferd-Ackles, Fucus, & Sherin, 2004; O'Halloran, 2005; Sfard, 2007).

5.4.3. Language and Communication Resources

- Guidelines are required for teachers and schools on how to develop the pupils' language and communication skills in line with the instructions available in English (PDST, n.d; NEPS, 2015).
- Schools and parents need a range of resources through Irish, for example, developing language skills, ideas for fun at home, games, audiobooks, and vocabulary development (NCSE, 2021). Other resources that teachers can use to develop student language and communication are speech boxes, games, listening memory games, prompt chat cards, silly Sentences, and activities with pronouns. These resources are available free of charge to teachers in English but unfortunately there is little availability through Irish.

5.5. Mathematics

5.5.1. Assessment

- It is necessary to provide a range of assessment methods appropriate for those who are being raised through Irish and those who are learning through Irish as recommended by NEPS (2020), for example, checklists and questionnaires.
- It is recommended that standardised assessment, for example, screening tests and diagnostic assessments be developed through Irish for pupils.

- The Drumcondra Early Numeracy Test (ERC, 2020) should be developed through Irish. It is not enough to translate the English language test into Irish and to use the norms of the English language test (O'Toole & Hickey, 2013; PERT & Letts, 2006).
- Screening and mathematical assessments should be designed and made available through Irish to primary and post-primary schools so that they can properly assess pupils learning through Irish.
- It is strongly recommended that standardised bilingual screening and diagnostic assessments be developed for mathematics so that teachers can accurately assess the ability of students learning through Irish as a second language (Barnes, 2017; Murphy & Travers, 2012)
- It is recommended that more research be carried out on the amount of time that students being tested in mathematics in a second language should be given to ensure that they have an opportunity to achieve equivalent results compared to those being tested in their first language (De Courcy, Bourton, 2000).
- Develop and provide standardised mathematical assessment through Irish for post-primary schools in line with the Drumcondra Post-Primary Mathematics Test (DPPT-Maths) (ERC, 2020).

5.5.2. Numeracy Interventions

- Research should be undertaken on the effectiveness of mathematical interventions in the Irish-medium education context, for example, retelling word problem solving (Kong & Swanson, 2019), dynamic mathematics strategies (Orosco, 2013, 2014a, 2014b), model drawing strategy (Sharp & Dennis, 2017), and responsive schema interventions (Driver & Powell, 2017).

- It is recommended that a booklet of Irish language mathematical vocabulary be created that lists the specific vocabulary that should be taught to students at each level (NCCA, 2014a, b).
- The list of evidence-based interventions that is available in the 'Good Practice Guide for Teachers 2020' (NEPS, 2020) should be made available through Irish. Primary and post-primary schools are encouraged to use these interventions with pupils with mathematical difficulties. Unfortunately, most of these proposed interventions are not available through the medium of Irish, except Maths in the Class and Ready Steady Go Maths. They were created for those attending English-medium schools with little reference to those learning through second or minority language.

5.5.3. Resources

- Mathematics and ICT applications should be made available through Irish to primary and post-primary pupils learning through Irish (Outhwaite et al., 2018; Outhwaite, Gulliford, & Pitchford, 2020).
- Virtual mathematics games are needed to promote the learning and motivation of AEN students (Lämsä, Hämäläinen, Aro, Koskimaa & Äyrämö, 2018).

5.6. Personal, Social, and Emotional Development

5.6.1. Assessment and interventions

- It is recommended that programmes and assessments based on evidence for personal, social, and emotional development be made available through Irish to the pupils as well as those recommended by NBSS (2013) and NCSE (2022).
- Development of evidence-based programmes and assessments through Irish to assist pupils of Irish-medium/Gaeltacht schools with behavioural difficulties is necessary (NBSS, 2013).

5.6.2. Resources

- More board games and resources through Irish are needed to assist with the personal, social, and emotional development pupils (Hromek & Roffey, 2009).
- Further social stories books suitable for Irish language pupils should be developed and available as an app/online (Benish & Bramlett, 2011; McGill, Baker, & Busse, 2015).
- There is a range of free English language facilities available online, for example, a visual timetable etc. Irish-medium/Gaeltacht school teachers need resources like this (Rutherford et al., 2020).
- More ICT applications and resources are needed through Irish to assist with the personal, social, and emotional development of pupils (Boucenna et al., 2014; Mitchel, Parsons, Leonard, 2007).

6. Responses to the consultation process

A short consultation paper with the results of this research was made available to Irish-medium primary and post-primary schools by email and social media. Schools and teachers were given the opportunity to respond to the results of the study through a short survey. All answers to the paper were anonymous. A total of 10 respondents replied to the paper. Four of these respondents were post-primary teachers in gaelcholáistí outside the Gaeltacht. There were three teachers working in Gaeltacht primary schools, two in Irish-medium primary schools outside of the Gaeltacht, and one more in a Gaeltacht post-primary school. The majority of people who responded to the paper were special education teachers. Those who responded to the paper had a range of teaching experience, ranging from those with 0-5 years' experience to teachers with over 25 years' experience.

Respondents were asked whether they with the results of the consultation paper published in the areas of Irish literacy, mathematics, ICT, language and communication development, and the personal social and emotional development of pupils. The majority of respondents were satisfied with the recommendations made. Respondents were also asked to identify the 5 most urgent teaching resources. Evidence-based mathematics interventions were listed first (n=5), a programme for personal, social, and emotional development through Irish, mathematics resources, and a graded spelling programme were listed next (n=4), and then evidence-based Irish reading interventions (n=3).

The participants then selected the five most urgent ICT teaching resources mentioned in the consultation paper which needed to be developed through Irish. The main resources mentioned were mathematical assessment, literacy applications, word processing technology through Irish, phonological development (assessment) applications, and Irish

language literacy applications (assessment). The five most urgent ICT teaching resources mentioned in the consultation paper that need to be developed through the medium of Irish. The participants then selected the five most urgent assessments mentioned in the consultation paper which needed to be developed through the medium of Irish. The most urgent assessment resources through the medium of Irish were early Irish literacy, early numeracy, dyslexia screeners, phonological assessments, and language development and communication checklists.

7. Conclusion

It is clear from the valuable views of the teachers who took part in the research that many teaching and assessment resources are required through Irish to assist teachers in Irish-medium/Gaeltacht schools to support pupils with AEN. We are extremely grateful to all the teachers who gave their time generously and for the valuable views they have expressed. It is clear that additional teaching resources and assessments are required through Irish to help them support pupils with AEN. Teachers are using the resources available through Irish but there are not enough. However, it is clear that the number of resources available through Irish has improved over the years. There is a need for more standardised and non-standardised resources in Irish literacy, mathematics, language and communication, personal, social, and emotional development. It was clear that both primary and post-primary teachers relied heavily on assessments through English. The Department of Education and Skills, NEPS and the PDST are proposing many programmes, resources, and interventions which are not available through Irish. The teachers showed how important these were to be available through Irish.

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