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Diagnosing language impairment in bilinguals: Professional experience and perception

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Abstract

Diagnosing specific language impairment (SLI) in monolingual children is a complex task, with some controversy regarding criteria. Diagnosis of SLI in bilinguals is made more complex by the lack of standardized assessments and poor understanding of clinical markers in languages other than English. There is an added complexity when one of the languages being acquired is an endangered one, where the domains of use and input are restricted, and where input is affected by convergence with the majority language. This article explores the challenge facing speech and language therapists and psychologists in diagnosing SLI in bilingual children acquiring Irish and English. Six speech and language therapists and four psychologists took part in semi-structured interviews exploring the impact of the bilingual environment, the nature of bilingual language impairment, current practices and the needs of these children. Thematic analysis was carried out and here three of the main themes emerging in the areas of assessment, the bilingual environment and characteristics of language impairment in this population are discussed. For assessment, an overriding theme was the requirement of standardized testing to secure additional educational and therapy resources for these children. However, because there are no standardized tests available in Irish, both professions end up translating existing English-based language and psychological assessments, using the norms provided to achieve standard scores. Both professions expressed strong dissatisfaction with this practice but saw little choice, given the Department of Education's approach to allocation of supports. Language impairment in Irish was characterized by lexical difficulties, particularly with verbs and prepositions, tense errors, and significant borrowing and code-switching with English. Other themes that emerged were the growing influence of English as the children became older, which affected both attitudes to the minority Irish language as well as the content and structure of the language itself. The implications for service provision for bilingual populations in general are outlined.

Keywords
Assessment, bilingual language impairment, diagnosis, Irish, minority language acquisition

I Introduction

Diagnosing specific language impairment (SLI) in children remains one of the more controversial and complex areas in the field of language disorders, despite several decades of research and practice. Traditionally, the diagnosis has involved well-known 'inclusion' and 'exclusion' criteria. Inclusion criteria specify that the child has to perform more than two standard deviations below the mean on a standardized test of language, and that their nonverbal IQ must be within normal limits and at least one standard deviation above their language score (World Health Organization, 2001). Exclusion criteria involve ruling out other disorders that might explain the language impairment, such as hearing impairment, intellectual disability and/or social-emotional difficulties. More recently, the field has been moving away from these criteria to a more descriptive view of the impairment, ranging from difficulties with grammatical morphemes (Rice et al., 1998) to phonology and pragmatics (Botting and Conti-Ramsden, 2004).

In Ireland, children with SLI may be seen initially for a diagnosis in community health care centres, and referred to a speech language therapist (SLT) and psychologist for assessment. Once diagnosed as having an SLI, these children are entitled to access speech and language therapy and resource hours in school. Primary school children may be offered access to more intensive speech and language therapy through a regional Specific Speech and Language Disorder class, or language unit. The language class is under the jurisdiction of the Department of Education and Skills (DES), and the criteria specified in 2003 for admission to the class include an assessment by a psychologist showing a non-verbal IQ of 90 and 110 and a language score more than two standard deviations below the mean on a standardized test of speech and/or language. However, a survey of speech and language therapists in Ireland identified a strong dissatisfaction with these criteria (Lyons et al., 2008). One of the main concerns was that many children with SLI had additional needs, such as sensory integration and attention difficulties (disputing the idea of a 'pure' language impairment), and for this reason were neither meeting the criteria dictated by the DES nor entitled to access additional teaching and intensive therapy services. Furthermore, the therapists questioned the validity of using only standardized cognitive and language assessments, as the broader spectrum of difficulties were not always captured by standardized scores.

Despite such concerns regarding the adequacy of diagnosis in a monolingual population, the same strict criteria for diagnosing SLI also apply to bilingual children in Ireland who need to access intensive educational and therapy support, but with the added complication of an additional language. International research points to both under- and over-representation of bilingual children in special education and on speech and language therapy caseloads (Cummins, 2000). This is because second language learners often produce language patterns resembling those of monolingual children with SLI and because bilingual children with SLI produce errors that are also evident in typically-developing bilinguals (Paradis, 2010). This overlap has led to clinical and methodological confusion. In an attempt to resolve this confusion, Paradis (2010) carried out a comprehensive review of the literature dealing with bilingual language impairment. One factor under consideration was whether children with bilingual SLI have a 'double delay', as, by definition, they have less exposure to each of their languages. The findings on this were conflicting: on the one hand, both Paradis (2007) and Gutiérrez-Clellen et al. (2008) found that 5–7-year-old bilingual children with SLI

were as accurate at using grammatical morphemes in both languages as their monolingual peers with SLI. On the other hand, Orgassa and Werman (2008) found that bilingual children with SLI performed more poorly on Dutch grammatical morphemes than their monolingual counterparts and were thus additionally disadvantaged. The evidence on this issue may be affected by relative input levels in each language (see Gathercole and Thomas, 2009) as well as by differences in the status of the two languages concerned. Overall, Paradis (2010) concluded that the research on bilingual children with SLI is in its infancy, and recommended further research with children from a variety of linguistic communities.

One of the key issues in bilingual research is the sociolinguistic context in which children acquire their languages. As noted, if one of their languages is a threatened minority language with lower social status, this can result in limited or attenuated input in that language, possibly from non-native speakers and/or in a reduced number of domains in which the language is used with the child. Such factors are particularly salient for the situation of Irish in Ireland. Stenson (1993) argued that Irish has been influenced most dramatically by English in the last 100 years, in the period when the monolingual Irish speaker became a rarity. She identified a range of features in Irish that are the result of high contact with English, and contrasts the current 'near-universal bilingualism' (Stenson, 1993: 108) among Irish speakers as a major contributor to this. Stenson discusses the effect of this universal bilingualism in her consideration of the more apparent English influence on Irish in recent years. Hickey (2009) pointed to its influence on normalizing relatively high levels of code-switching in the Irish of Gaeltacht (Irish-speaking) speakers, particularly high frequency code-switching of a limited number of forms such as English discourse markers, a phenomenon that has been noted in other endangered indigenous languages such as Shona (Myers- Scotten, 2006).

Irish is the first official language of Ireland, although spoken by the minority. While the Census of 2011 revealed that 1.77 million people claimed to be able to speak Irish in the country, only just over 77,000 reported doing so on a daily basis outside of the educational system. Looking at Irish- speaking communities, Census 2011 showed over 96,000 people live in the officially-defined Gaeltacht areas, with 68.5% of these claiming to speak Irish. Thus, a child being raised with Irish in the home, even in the Gaeltacht, may be exposed to Irish in only some of their daily interactions (e.g. neighbours, shop, playground, crèche, medical services) and even then, with speakers of the language who are either not native or for whom Irish is their non-dominant language. Following the Official Languages Act of 2003 (Department of Community, Rural and Gaeltacht Affairs, 2003) Irish speakers were provided with statutory language rights, which means that they are entitled to all public services, including speech and language therapy services, in Irish. However, much like the situation in Wales (Rees and Munro, 2005), issues such as language mixing and attitudinal dimensions are also pertinent to Irish. For example, there has been a growing awareness of issues such as code-switching and reduced grammatical accuracy and vocabulary among native speakers due to the ubiquitous influence of English even in Irish-speaking communities (Hickey, 2009). There is a relatively small base of research evidence regarding typical first language acquisition of Irish (Cameron and Hickey, 2011; Hickey, 1990, 1991, 1993; O'Toole and Fletcher, 2008), and extension of this knowledge base is critical for speech and language therapists in order to help them to assess, treat and set therapy goals.

Irish is now showing signs of accelerated contact-induced change in the direction of English (i.e. convergence, where languages with many bilingual speakers adopt syntactic

and morphological features from the more dominant language). This is due to the high levels of contact between the two languages now that the vast majority of Irish speakers are bilingual in English (Hickey, 2009; Stenson, 1993). Such convergence, as well as sociolinguistic factors such as restriction of the domains in which children hear Irish and normalization of high levels of code-switching of English words in Irish sentences, must be considered in relation to children currently acquiring Irish, as the impact of these factors can obscure the discrimination of an actual language difficulty from an input-related difficulty.

Unfortunately, there are limited resources available for professionals in Ireland to assess Irish- speaking children, all of whom are bilingual. This situation is not unique, and all across the world bilingual children need to access special education and therapy services. The aim of this study was to explore the experience, knowledge and views of professionals, both SLTs and psychologists, working with Irish–English bilingual children in the diagnosis of SLI.

II Method

Due to the relatively limited knowledge-base regarding Irish acquisition, and the even more limited research on SLI in Irish monolinguals or bilinguals, a qualitative analytic design was deemed the most suitable approach at this point in order to explore the professionals' knowledge, under- standing and experience of communication problems in Irish-speaking children and families referred to them. A number of key items were identified in the bilingual SLI literature for inclusion in a semi-structured interview protocol, which aimed to explore five main areas of referral, assessment, therapy, parental involvement and future needs of this client group in the experience of SLTs and psychologists. A full list of questions asked of the SLTs and psychologists is contained in Appendices 1 and 2 respectively. While some of the questions posed to the two groups were different in order to make them appropriate for their practice/experience of referral and assessment, most were the same, in order to maximize comparability between the two sets of interviews.

1 Participants

Ethical approval for this study was granted by University College Dublin Research Ethics Committee and, according to their own code of practice, the National Educational Psychological Service (NEPS) reviewed and approved the study before distribution of information about it to its members.

Information sheets and a letter of invitation were distributed to SLTs and psychologists identified as working in public service in Gaeltacht areas. Contact was made with the Special Interest Group of SLTs working with bilinguals, and with the NEPS, who agreed to forward to psychologists working with Irish speakers. A snowball sampling method was used in parallel, as that technique has been found effective for recruiting participants when a criterion characteristic is infrequent in the population. Thus, those contacted were invited to pass on the information sheet to any other colleagues in either the public sector or in private practice known to meet Irish-speaking children in their caseload. A total of nine SLTs and six psychologists were identified as the professionals working in the public sector in the Republic of Ireland who were most likely to encounter Irish speakers in their caseload, and all were invited to take part. Six practising SLTs and four psychologists agreed to take part, each of whom was either

based in a Gaeltacht area or was working with Irish-dominant children on a regular basis. The participants were all female, and inter- views were conducted over the phone due to geographical spread, with signed consent obtained by post, whilst verbal assent was also obtained at the time of the interview. Interviews lasted 30–40 minutes on average. All identifiers in the interviews were coded for confidentiality and marked for profession (SLT/psychologist), given the different experiences of the two professions. Participants were asked to fill out a background questionnaire about their qualifications prior to interview, but given the small sample and population from which it is drawn, there will be limited discussion of these factors in order to avoid giving disclosive information about participants and violating their anonymity. The participants' experience with bilinguals varied widely, ranging from 1–25 years, with a mean of 9 years. Two of the SLTs and two psychologists reported that their caseload was made up of 45%–65% bilingual Irish–English speakers, while one SLT reported that only 1%–2% of her caseload were bilingual Irish speakers, commenting that this was probably due to poor awareness of the bilingual services available in her Gaeltacht area. Two of the professionals were first-language Irish speakers, six were fluent second-language speakers and two described themselves as moderate second-language speakers of Irish.

2 Procedure

The interviews with the SLTs and psychologists were carried out by the researcher with expertise in that area (first and second authors respectively). Each interview was recorded digitally and later transcribed verbatim. Thematic analysis was used to examine the transcripts to identify potential themes and subthemes. Separate coding frames for the SLTs' and psychologists' interviews were developed by the first and second authors respectively in order to maximize sensitivity to themes in the two datasets. The coding process was informed by a number of texts and articles, including Gibbs (2009) and Braun and Clarke's (2006) influential article, which gives clear guidelines with regard to conducting thematic analysis in an appropriate, organized and comprehensive fashion. A number of codes and sub-codes were generated for each set of data, but as the analysis progressed many of these codes and sub-codes were later collapsed and merged together to help develop more mutually exclusive codes, as recommended by Braun and Clark (2006). Following this, the second researcher examined the transcripts and the coding frame and made a number of suggestions based on the titles, definitions and exclusiveness of the codes. The final coding frames developed were then used to code the data from each group of participants. Inter-rater reliability analysis was carried out for each dataset using the appropriate coding frame and one full transcript from each. The inter-rater agreement for the data was carried out by a third researcher experienced in qualitative research. The agreement using the SLT coding frame was 89%, and for the psychologists' data it was 85%, in both cases exceeding the criterion advocated as acceptable for inter-rater reliabilities in qualitative studies laid down by Guerin and Hennessy (2002).

III Results and discussion

Four main themes emerged from the interviews: the bilingual environment, assessment issues, the nature of language impairment in Irish bilinguals, and intervention. For the purposes of the current article, the first three themes which were related to diagnosing language impairment are discussed here, and examples from the data provided.

1 Bilingual environment

Figure 1 shows the main themes that emerged for the bilingual environment. The themes identified regarding the bilingual environment concerned input in the minority/second language (Irish), issues concerning the majority language (English) and attitudes to Irish. Looking first at the input issues with regard to Irish, the importance of the mother's own proficiency was highlighted, both by SLTs and psychologists, as often dictating which language was spoken in the home and deter- mining the children's language dominance:

INSERT Figure 1 about here

> SLT 2: When one parent, especially the mother, doesn't have the Irish, no matter how much she tries, I think they are always going to identify with her first language, because that is a stronger language, and you will find the kids tend to have a lot of English even though the dad speaks Irish.

> Psych (Psychologist) 4: I've seen a fair few children where one parent is not a native speaker, where the family has moved back to the Gaeltacht, and where the father is Irish speaking. I've a sense that more often than not English is dominant, the main language in the home … in those cases [where the mother is English speaking].

A second sub-theme reflected concern regarding non-native speaker input in Irish to children:

> SLT 3: The parents then who speak a bit of Irish with their children, we'll say the 70% English, 30% Irish
> … you'd notice that their Irish isn't the same as say people who have Irish as a first language, you'd even notice their grammar and … even their vocabulary …

Due to the decline in numbers of first language (L1) speakers, children are also exposed outside their home to Irish input from non-native speakers, even in Irish-speaking areas, with resultant errors in input to children:

> SLT 1: … but [errors are] more to do with lack of structured exposure in the environment, kind of the wobbly morphology that happens when a language is in transition and makes it harder for some children.

TM Hickey (2009) discusses how widespread learning of a minority language as a second language by speakers of a dominant language impacts on the minority language itself and on its L1 speakers. This can be seen in the increasing Anglicization of minority languages such as Irish and Welsh. Jones (1998) found Welsh L1 children in immersion schools adopting the errors of the second language (L2) learners rather than influencing them to use the correct forms, and similar phenomena have been noted in Ireland (Nic Pháidín, 2003). The fact that Irish L1 children are now in a minority in many classes even in Gaeltacht districts (Hickey, 2001; Ó Giollagáin et al., 2007) results in extensive exposure to input from L2 learners of Irish in most educational settings.

Furthermore, Muysken (2000) outlined how extensive L2 learning of a language causes wide- spread syntactic borrowing from the learners' L1 into the language

learned, and it can be argued that this phenomenon has affected the Irish language also. Such convergence and attenuation of language – sometimes referred to as 'thinning of language' – in younger generations in the Gaeltacht has been considered by Denvir (1989), Hickey (2009) and Ó hIfearnáin (2002). This was also reflected in the interviews:

> Psych 4: Over and over again I seem to be seeing a lot of English syntax almost becoming normalized in Irish.

> Psych 1: [Even] the children who have very, very good Irish – their Irish mightn't be as good as their parents [or] as good as one might expect it to be. And there is interference I suppose.

In parallel with this theme of English impacting on the quality of the Irish input to bilingual children was commentary on the overwhelming influence of English itself on the children's language output:

> SLT 2: Even when you go through vocabulary … and I would have the words 'bláth' [flower] there they are coming out with 'flower' and then, when it is a 'teach' [house] they'll say 'house' and … the mother is… kind of distraught really that they are coming out with all these English words.

Hickey (2009) examines the prevalence of code-switching in input to young Irish speakers, and discusses the impact of code-switching, borrowing, attenuation and convergence which have become highly relevant to recent discussions about Irish. It is well known that a significant increase in code-switching is one of the signs that a minority language is under pressure from the majority language (Crystal, 2000). It is difficult to pinpoint exactly what is causing this, but the multifactorial causes are likely to include the highly visible difference in status of the two languages; the explosion in media and internet access to English impacting particularly on children and teenagers; a rise in marriage rates between native speakers and English speakers (Ó Riagáin, 2007); and a further constriction in the pool of native speakers offering rich input to children. One psychologist speculated that another factor was the lack of support offered for literacy in Irish in homes and the fact that the television and media preferred by children and teenagers are likely to be in English:

> Psych 2: It possibly is that a very strong influence in the home – and a lot of native Irish speakers will say this – would be television, so that they are getting, you know, language input there.

The overwhelming influence of English in young children's experience of preschool education was also commented on by many of the participants. This results from mixing with English- speaking monolingual peers who attend these Irish-medium preschools, even in strongly Irish- speaking areas where parents have endeavoured to postpone exposure to English. This is a major concern for L1 Irish speakers as at age 3–4 years they have incomplete acquisition of their first language and continue to need language enrichment:

> SLT 5: I think they are all exposed to English as soon as they go to preschool anyway –

there just seems to be a burst of English then at that stage. A lot of parents say to me that they don't speak a word of English at home and as soon as the child goes to preschool they use English.

R Hickey (2007, 2001) examined the lack of L1 support and enrichment offered to minority language L1 speakers in Irish-medium preschools, due to the perception that L2 learners appear to have more urgent needs. Preschool staff are now being trained in L1 language enrichment, but there remains a resistance to organizing separate groups for L1 Irish speakers and L2 learners, so that children from different language backgrounds are mixed and tend to shift towards using English.

This tendency to shift towards English is related to the last theme regarding the bilingual environment, namely attitudes towards Irish. One participant noted the low status of Irish among young native speakers, particularly as they get older:

SLT 5: When you are at school in the Gaeltacht – when you are getting that bit older, it seems to be that if you don't speak English you are not cool.

This finding is largely in line with a recent study of the use of Irish in the Gaeltacht, which found that although young people in this area had a strong attachment to the language, their use of Irish with peers was very low (Department of Community, Rural and Gaeltacht Affairs, 2007). Shifting to the majority language to win peer approval is something that also occurs often in minority language situations in Wales (Baker and Jones, 1998) and Canada (Mougeon and Beniak, 1994). Linked to these less favourable attitudes to Irish itself were the observations by several SLTs that some professionals have negative attitudes to, or a poor understanding of, bilingualism overall:

SLT 3: Some [public health nurses or PHNs] might say the parent is concerned that the child is bilingual, and a lot of [PHNs] are afraid that it will affect their language … I've had a lot of referrals [from PHNs] that have just said 'child is bilingual', and that is the reason they give for referral.

In summary, all of the issues identified regarding the bilingual environment of Irish speakers point to limited and attenuated input to children in the language, from both native and non-native speakers, and this highlights the difficulty in distinguishing a true language impairment from a second language or diminished language input issue in minority language contexts.

2 Assessment

The next major theme was that of assessment, as depicted in Figure 2, where the major division was between the use of informal testing and standardized tests. Both the SLTs and the psychologists reported using informal testing with children to gain a sense of their language proficiency. Such informal testing was raised most frequently by the speech and language therapists as the only testing option, but they also commented that if they took a language sample they found it very difficult to interpret, due to the lack of norms for the language.

INSERT FIGURE 2 HERE

> SLT 5: Because we have no norms it's really hard to say … that things are wrong, [or] what should I be working on at this stage, or am I being unrealistic.

The lack of norms means that therapists often must rely on their knowledge of language development in English in order to interpret the results of informal tests they use.

> SLT 6: For example, we'd do our informal assessment with the young children, we would check to see if they have comprehension of 'under', 'on', 'in front' by a certain age, and I would have compared that to the English.

However, as Slobin (1997) has shown, linguistic structures do not emerge in a universal fashion or time schedule across languages, and prepositions have been found to emerge from relatively smaller vocabulary sizes in Irish (O'Toole and Fletcher, 2011). Clearly, language-specific information is needed to compare normative information.

Therapists also commented on the time-consuming nature of informal testing: 'You don't have enough time to sit down and analyse them [language samples]' (SLT 5). A survey of speech and language therapists in the USA revealed that they rarely used informal testing with bilinguals (Caesar and Kohler, 2007), preferring standardized tests. Assessing bilingual children is time-consuming, as an in-depth and thorough language background and case history needs to be taken and assessment of the child in all of the languages to which they are exposed is necessary (Royal College of Speech and Language Therapists (RCSLT), 2006). It may be for this reason, as well as large waiting lists and caseloads, that professionals are under too much pressure to allocate sufficient time required to assess bilinguals by taking language samples and using other informal measures, and so tend to prefer quick and easy-to-administer formal tests. However, such tests are not always available – as in the case of Irish – and a major issue for all of the speech and language therapists and psychologists interviewed was their feeling that they need to translate standardized tests, despite recognizing the problems with this approach.

> SLT 3: For the older children we usually have to use translated assessments in order to get standardized scores if resource hours are needed, so you do sometimes have to use translated assessments with the acknowledgement that it's not ideal.

When asked how they score and interpret the translated version, the SLT responded:

> I tend to just get the raw scores and age equivalents and compare them [to the English scores] and acknowledge that it's not reflective … of syntax and grammar in Irish which is completely different from syntax in English.

Psychologists reported similar practices of adapting test delivery in order to try to get a truer picture of a child's language competence:

> Psych 4: This is so far removed from standardized, but I would tell them that I'm going to ask the question in Irish or English … and that they're free to answer … in either language … Then – with a lot of reservations – I would score it as correct [in either language].

Overall, the professionals were not satisfied that the translations capture the children's difficulties with Irish:

> SLT 6: I translated the CELF Preschool … the Word Structure … it was completely not relevant to the Irish language.
> Psych 2: … grading of difficulty, when you translate, is all up in a heap. So for some tests that are really important, like vocabulary, translating into Irish is not enough.

Paradis (2010) outlines how many researchers have cautioned against using standardized tests normed with monolinguals for assessment of bilinguals because of the risk of over-identifying language disorders. It is well established that translation of tests is fraught with difficulties due to the differences in the normative populations, levels of linguistic difficulty, and order of acquisition (Pert and Letts, 2001). Clearly, both the SLTs and the psychologists were dissatisfied with having to translate tests, but felt that the demands of the Department of Education to produce standard scores for the diagnosis of SLI presented them with no other choice.

> SLT 4: … unfortunately we are required to get scores for resource teaching hours. We don't have any choice at the moment … it's outlined in the special educational circular that they have to be two standard deviations below the mean.

The final theme regarding assessment concerned parental choice in the assessment. It was note- worthy that this showed two opposing sub-themes, with some of the professionals reporting experience of parents who demanded that their child be tested only in Irish, while others encountered parents who wanted testing only in English:

> SLT 5: I have a few parents … they've refused an English assessment. They don't want an English assessment because they say Irish is the language of the home.

This attitude may be attributable to those parents who are deeply committed to the language and have made life choices to raise their children as Irish speakers. It contrasts with other parents who are less committed to using Irish exclusively, instead using a mixed input strategy in the home, per- haps because they see English as pivotal to their child's future. Such parents were reported by another participant to have requested assessment in only one language, but this time in English only.

> SLT 3: If the child is bilingual, usually the parents say 'just do the assessment in English'. Even I've had adults, who would have had fluent Irish, and they don't want the assessment through Irish, they don't want any speech therapy through Irish at all.

Such an approach by parents clearly indicates which language they value most, but it also shows a lack of understanding of the nature of bilingual acquisition. For professionals, it is clearly a challenge to convey to some parents that, regardless of the parents' views about the relative importance of the child's languages, assessing bilinguals in only one of their languages goes against best practice guidelines (RCSLT, 2006), and it is recommended that professionals use these guidelines to justify bilingual assessment to parents. However, this issue raises the need to inform parents more with regard to bilingual acquisition, and to raise their awareness of the values their attitudes to the two languages and their own differential language use convey to their children.

3 Nature of language impairment in Irish bilinguals

The last theme discussed here concerns the nature of language impairment in Irish as described by the participants. Figure 3 shows that the main themes that emerged here concerned lexical deficits, distinguishing SLI from typical bilingual lag, and code-switching from the majority language into the minority language. Lexical difficulties were the problems mentioned most frequently

INSERT FIGURE 3 HERE

> SLT 1: Prepositions can be a problem, even right up to 6 or 7 [years of age] …

> SLT 2: They have poor verbs … I've often heard myself saying, *cad tá sé sin ag déanamh* ('what is he doing') and they're *ag déanamh* ('doing') back to me; they just don't seem to be able to figure what is the word that they are supposed to be using there.

Deficits in verb learning have long featured in SLI (Conti-Ramsden and Jones, 1997), while deficits in tense-marking, another well-known feature of SLI across languages (Leonard, 2000), were also noted:

> SLT 3: [describing a child with SLI] she is quite a bright child … but her language is so poor … She's 3.06 and she's really only using 2-word combinations mostly, and it's mostly Subject–Verb … she has no real use of tenses, present tense only, there's no past tense.

However, the participants also commented on the difficulty in distinguishing SLI from the deficits seen in the non-dominant language of bilingual children, noting that the children with SLI make similar errors to younger, typically developing children:

> SLT 5: it's very hard [to spot difficulties] but, when they keep doing it [making errors] when they are older. You know a lot of my older kids stop doing that [but] … the SLI kids keep doing it.

Similarly, Rice et al. (1998) argue that children with SLI show deficits with tense-marking that centre mainly on timing, late onset and asynchrony in development.

An additional complication noted by the participants in diagnosing the Irish-speaking children was impoverished and/or unstable (i.e. non-native-speaker) language input:

> Psych 2: Like anything else, in the more severe cases of SLI it's very obviously an SLI, but there's probably a subgroup of those children where … there may be a more linguistically impoverished home environment and those children actually may fare out quite well when they go to *naíonra* [Irish-medium preschool] where they're in a language-rich environment.

Thus, the participants noted that for these young L1 Irish speakers, it is difficult to distinguish a language exposure/input issue from a true SLI. This difficulty in distinguishing true SLI from bilingual lag pertains to bilingual children in general, and

highlights the necessity of a thorough measure of language background to establish the nature and level of exposure to each language. Paradis (2010) maintains that this information is vital to appropriately interpreting standardized test results or even results of informal measures of language. Similarly, Cheng (2006) suggests that in evaluating the language competence of bilingual children, a thorough case history is important in order to identify their internal strengths and weaknesses, as well as external opportunities available and threats should a correct diagnosis not be made. She also suggests that SLTs need to have extensive multicultural awareness to work with this client group. Following a thorough case history, as noted already, international best practice guidelines on the diagnosis of SLI in bilinguals state that bilingual children should be assessed in all of the languages that they are exposed to and in a variety of tasks. Other tasks that can be used to confirm a diagnosis of language impairment in bilinguals include a trial period of intervention through a process known as 'dynamic assessment' (Peña et al., 2001). This means that children's language skills are initially tested, allowing the child to respond in either of their languages so that conceptual scoring can be used (along the lines of the assessment described by one of the professionals in this sample). After that, children identified with a difficulty have a period of intervention that might focus on teaching them vocabulary items in both or either language before they are re-tested. Peña et al. (2001) maintain that children who fail to show the effects of intervention have true language impairment. This method could also be used to differentiate those with a true language impairment from those who are typically developing Irish–English-speaking children who show a bilingual lag in one of their languages that may be due to inadequate input, as was illustrated in the following statement:

> SLT 1: With some of [the children] you would say 'fine they have a language impairment', but a lot of [their difficulties] are due to inter-language, and I have to say to the parents, you know this isn't developing and maybe you have to increase your kind of use of XYZ structures at home and see what happens. Quite frequently that resolves the issue.

These comments demonstrate the view of the participants that many Irish-speaking children showing signs of delay can benefit from greater exposure to enriched, accurate and stable linguistic input such as that provided in immersion preschools, pointing to the need to work with parents and preschool providers to facilitate provision of such input, and also to raise awareness on a wider level of the need for greater attention to input issues in the case of a minority language.

The final theme regarding nature of language impairment in Irish was the issue of code-switching. While Pert (2007) notes that code-switching in bilinguals can be interpreted as a sign of linguistic sophistication, the perspective changes in endangered languages, where high levels of code- switching signal threat (Crystal, 2000). Here, the therapists appeared cognisant of that threat in noting that the level of code-switching in the bilingual children with SLI was higher than expected.

> SLT 4: I have come across, children who would use a lot more loan words than you would expect them to, so sticking *-áil* [Irish progressive marker] onto the end of English verbs, that kind of thing.

The issue of code-switching in bilingual children with SLI needs to be assessed in the

context of code-switching among their peers and in the wider community. An investigation into code- switching in typically-developing Irish-speaking preschool children by Hickey (2009) noted that those from Irish-only homes were most likely to code-switch English nouns in their Irish utterances and less frequently to code-switch English verbs and adjectives. It might be the case that an over-use of English verbs – in conjunction with lack of development of verb morphology in Irish – could function as an indicator of language impairment in Irish, although it would be necessary to differentiate this from the now normalized levels of code-switching of verbs in input in the Gaeltacht, where many adults also code-switch fairly frequently, as was noted by one of the participants:

> SLT 6: In the Gaeltacht there is some code mixing, and say for example, one of the classics is *ag wonderáil* ['I was wondering']; it's kind of like we adopt the English word and put a bit of an *-áil* at the end of it!

4 Summary and implications

To summarize, the main issues that arose for the diagnosis of language impairment in bilinguals included the importance of considering parental language input and competence in both languages (particularly a mother's or primary caregiver's competence), and the need to consider the changing nature of a minority language in high contact with a local majority language when trying to distinguish input-related issues from true language impairment. In making such distinctions, participants were particularly concerned with the lack of normative information available to interpret language samples and external pressures for standardized assessments, which forces them to resort to informal translation of tests. These issues deserve to be discussed officially between representative organizations of service providers and state bodies so that adequate provision can be made to offer reliable and valid assessment strategies and intervention to children from homes where Irish is spoken.

Some other lines of future enquiry that emerged in this study with regard to potential language impairment markers among bilingual children with SLI included: poor lexical verb knowledge, deficits in grammatical morphology, and differences in quantity and quality of code-switching from other bilingual children. The implications of these factors for diagnosing Irish–English bilingual children with language impairment merit further exploration. Paradis (2010) argues that the misidentification of SLI is possibly more of a concern than the misidentification of other neurodevelopmental disorders, because unlike other developmental disorders, it is diagnosed on the basis of deficits in linguistic domains. For bilingual children with SLI, a number of issues need to be addressed urgently. Probably the highest priority should be given to the development of accurate profiles that differentiate their language difficulties from those of typical second language learners. However, this is made more complicated in sociolinguistic contexts where we cannot be sure whether a child's language difficulties are due to a poor linguistic environment with unstable and inadequate input and minority language attenuation. Ultimately, these clinicians urgently need to be provided with valid and reliable measures, both formal and informal, to assess the child's language with due regard to their linguistic environment and exposure patterns. The case for provision of such measures and the need to take input factors into account, as well as a stricter requirement to assess children in all of the languages to which they are exposed, needs to be targeted immediately by the clinicians' representative bodies. Ways of gaining parental support for this approach are also needed. In addition it would be advantageous to offer information and training in the use of complementary methods, such as dynamic assessment, to help with diagnosis in line with best practice guidelines recommended by professional bodies such as the RCSLT (2006) and the International Association of Logopedics and Phoniatrics (IALP, 2011).

IV Conclusions

The data presented here show clearly that professionals working in the context of endangered minority languages need urgent official recognition of their testing needs. The undesirability of cur- rent translation methods needs to be recognized by both professional bodies and the Department of Education who impose strict criteria for accessing special education and therapy services. All professionals should be provided with, and trained in, appropriate assessment and therapy interventions for bilinguals, in order to avoid the 'choice' element or monolingual view applied to this situation. Bedore and Peña (2008) recommend that developing assessments for bilingual children should begin with identifying markers of language impairment for the target language, such as have been suggested here, and analysis of the ways in which the two languages interact with each other. As dis- cussed here, widely reported markers of SLI in both monolinguals and bilinguals include a slower rate of vocabulary growth, word finding difficulties and poor verb knowledge, as well as shorter utterances and difficulties with inflections or forms with a low phonetic salience. Further investigation of such possible markers need to be identified in Irish speakers and might first be achieved through a series of detailed single case studies. This could help with identifying common features of language impairment in all bilingual children, particularly minority language speakers with SLI. Bilingual children in Ireland with SLI need to have urgent consideration given to supporting professionals' diagnosis of their language difficulty and distinguishing it from both typical bilingual lag in acquisition of one or both languages, and from the impact of impoverished input found in situations of language change and attenuation. While the issue of bilingual SLI is, at one level, an area of study now garnering research attention, it is, more fundamentally, an issue of human rights which, in the Irish context, requires urgent attention in order to meet the needs of this group of children.

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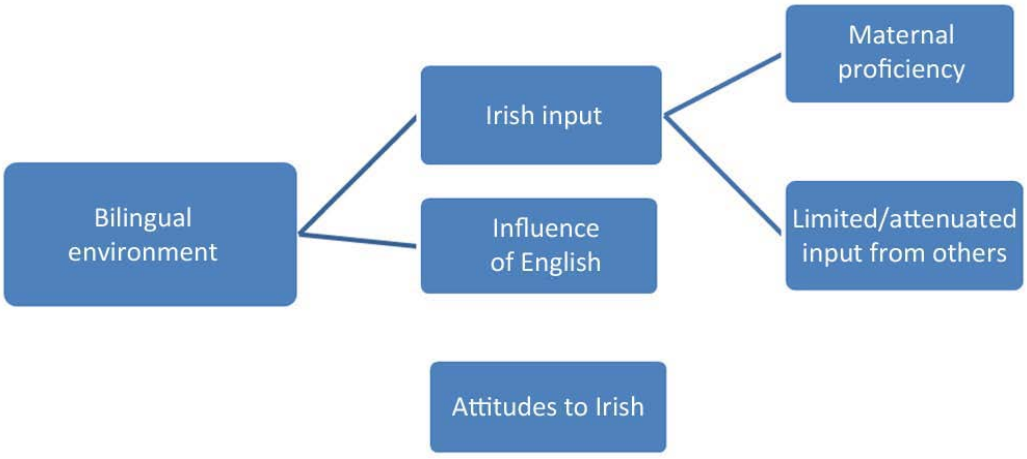


Figure 1. Bilingual environment themes and subthemes.

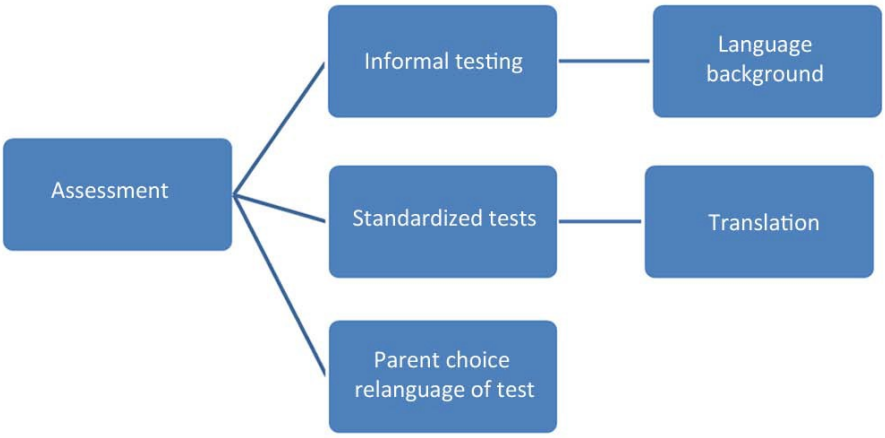


Figure 2. Assessment themes and subthemes.

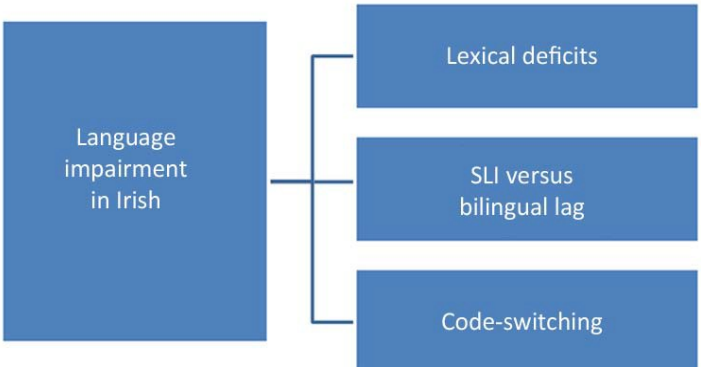


Figure 3. Nature of language impairment in Irish and related subthemes.

Appendix 1

Interview questions for speech and language therapists

Diagnosing language impairment in bilinguals: Professional experience and perception

Date of interview noted and check that consent form was signed and submitted in advance, and verbal consent sought on tape. Participant thanked for agreeing to take part. Reiteration of information sheet material that the interview will seek to elicit information about their experience in getting referrals of children with possible SLI who speak Irish in the home and assessing them, their recommendations re therapy and management, interacting with parents regarding assessment and management, and other observations regarding language use and future needs in this population on the basis of their experience.

Clarification here: "In the rest of the interview I am going to use the term 'bilingual' to refer to children for whom Irish is the/a major language of the home."

Interview questions

1. *Referral*

Typically, in your experience who refers bilingual children to you?
What age do they tend to be when referred to you?
What do you find is the main reason for referral?
What is the usual language background of the children (i.e. mother or father L1 Irish/one-parent–one-language situation)?
Is there a family language situation that you think is more likely to give rise to problems?
Is there any pattern you have observed in terms of the early childcare these children receive (within home/care with relative/crèche)?

2. *Assessment*

In which language(s) do you carry out assessment (of these children)?
What order do you tend to assess them in: English or Irish first?
How do you measure the language background/input to the child?
What are the usual English language assessments used?
Do you use any Irish-language assessments/profiles/norms? If so, which ones?
Do you use any informal measures?
Do you tend to assess pre-literacy skills?
What happens if a psychological assessment is indicated?
Who assesses the child?
And how are the children assessed?
How is a diagnosis of SLI made?
Do you think there is a difficulty in accounting for SLI vs limited exposure issues?
What language-specific patterns of impairment do you see most often?
How are they different to monolingual children with SLI?
How are they similar to monolingual children with SLI?
Would you say that a particular area tends to be most affected, such as phonology/vocabulary/grammar/pragmatic language? (+ expand)
In vocabulary, is it nouns/verbs/closed-class items (pronouns, prepositions) that are more problematic?
Is there a comprehension/expression division in the children's language competence?
What do you think of a child's use of loan words and/or code-switching?

3. *Therapy/Management*

Tell me about the model of service delivery offered to these children.
How long do they typically receive intervention for? Is there follow-up in later years?
How does it affect the educational placement of the children (e.g. Gaelscoil/English-speaking

school)?
What about language class provision?
What about literacy?
What do you think of children with SLI being exempt from Irish?

4. Parents

Do the parents tend to opt for a change in the home-language strategy if a diagnosis of SLI/ language delay is made? If so what …
What is the general advice that you offer to parents of bilingual children with SLI?
Do you have any observations about the parents' own language use?

5. Future needs

What do you consider are the most important issues to address with this population?
What assessments do you think are needed?

Appendix 2

Interview questions for psychologists

Diagnosing language impairment in bilinguals: Professional experience and perception. Date of interview noted and check that consent form was signed and submitted in advance, and verbal consent sought on tape. Participant thanked for agreeing to take part. Reiteration of information sheet material that the interview will seek to elicit information about their experience in getting referrals of children with possible SLI who speak Irish in the home and assessing them, their recommendations re therapy and management, interacting with parents regarding assessment and management, and other observations regarding language use and future needs in this population on the basis of their experience.
Clarification here: "In the rest of the interview I am going to use the term 'bilingual' to refer to children for whom Irish is the/a major language of the home."

Interview questions

1. Referral

Typically, in your experience who refers bilingual children to you?
What age do they tend to be when referred to you?
What do you find is the main reason for referral to you?
What is the usual language background of the children (i.e. both mother and father L1 Irish-speaker or one only/one-parent–one-language situation)?
Is there a family language situation that you think is more likely to give rise to problems?
Is there any pattern you have observed in terms of the early childcare these children receive (within home/care with relative/crèche)?

2. Assessment

In which language(s) do you carry out assessment (of these children)?
Do you find that parents have views with regard to the language(s) of assessment?
How do you measure the language background/input to the child?
What order do you tend to assess them in: English first always?
What are the usual English-language assessments used? Note mention of:

- Belfield Infant Assessment Profile (BIAP);
- LARR Test of Emergent Literacy;
- Middle Infant Screening Test (MIST);
- Early Language Skills Checklist;
- Non Word Intelligence Test (NRIT);

- SIGMA-T; MICRA-T; Drumcondra reading and Math tests;
- Neale Analysis of Reading;
- Woodcock–Johnson;
- Other.

Are there Irish norms (based on English-speakers in Ireland) available for [tests mentioned]?
Do you use any Irish-language assessments/profiles/norms? If so, which ones?
Do you use any informal measures in assessing the children's language or general competence?
Do you tend to assess pre-literacy/literacy skills (if not included in answer above)?
How is a diagnosis of SLI made?
Do you think there is a difficulty in accounting for SLI vs limited exposure issues?
What language-specific patterns of language impairment do you see most often in these bilingual children?
How are they different to monolingual English-speaking children with SLI?
How are they similar to monolingual English-speaking children with SLI?
Would you say that a particular area tends to be most affected, such as phonology/vocabulary/grammar/pragmatic language? (+ expand)
Is there a comprehension/expression division in the children's language competence?
Do you assess/note a child's use of loan words and/or code-switching?

3. Therapy/Management

When the child in this population has an SLI diagnosis what provisions/recommendations are usually made? For how long?
What about language class provision?

Is there follow-up by a psychologist in later years?
How does it affect the educational placement of the children (e.g. Gaelscoil/English-speaking school)?
What about literacy?
What do you think of children with SLI being exempt from Irish?

4. Parents

Do you find that the parents using Irish in the home opt to change the home-language strategy if a diagnosis of SLI/language delay is made? If so, what changes do they make?
What is the general advice that you offer to parents of bilingual children with SLI?
Do you have any observations about the parents' own language use?

5. Future needs

What do you consider are the most important issues to address with this population?
What assessments do you think are most needed?
Would you be interested in attending a workshop on this topic? If so, what topics would you like addressed at this workshop?
Would you be interested in taking part in a focus group/further research on this topic?

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