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Abstract

Profiling bilingual and minority language acquisition is becoming increasingly important for the work of speech and language therapists in Ireland. The Official Language Act dictates that all government and public services must be provided in Irish as well as English. Therefore SLTs must now be prepared to assess and treat clients in the Irish language. This paper describes how an assessment of early expressive vocabulary and grammatical development for children aged between 16 and 40 months was adapted to Irish from the MacArthur-Bates Communicative Development Inventories (Fenson, Dale, Reznick , Bates , Thal, Pethnick, Tomasello, Mervis and Stiles, 1994). Ongoing work in piloting and measuring the validity and reliability of the parent-report instrument is also outlined. This study has implications for developing assessment tools for working with Irish-speaking and bilingual children.

Key Words: Bilingual language assessment; Irish language development; MacArthur-Bates Communicative Developmental Inventories.

Introduction

Irish, although a minority language, remains the first official language of the Republic of Ireland and in January of 2007, became an official working language of the European Union. The Official Languages Act of (2003) provided statutory language rights so that all government and public services have to be available in the customer's language of choice i.e. Irish and/or English. As part of the Act, speech and language therapy now has to be available through the medium of Irish and this service is considered one of the more urgent areas of need as dictated by the Act (Reid, 2005). The 2006 census revealed that about 2% of the population or 89,260 people aged over 3 years live in the officially-defined Gaeltacht areas, with 71.4% claiming to be Irish-speaking. Although closer inspection of the figures indicates that many children speak Irish only within education, there are also indications that outside of the Gaeltacht, about 2% of the population are speaking Irish at home as the everyday language (Ó' Dochartaigh, 2006). This indicates that almost 4% of the population are acquiring Irish as their first language or at least bilingually. The increase in popularity of Gaelscoileanna across the country in recent years also means that more children are immersed in Irish language education and are speaking and learning through Irish on a daily basis.

If a child demonstrates any language or learning delay, parents can sometimes be misinformed to abandon the use of the minority language (in this case Irish) with the view to facilitating the development of skills in English (RCSLT, 2006). However, this contradicts the guidelines for best practice in speech and language therapy which state that assessment of communication skills should take place in all the languages to which that person is exposed and that intervention should be provided in the individual's mother tongue when it is their preferred or dominant language (IASLT, 2006 , RCSLT, 2006).

Moreover, ‘... bilingual individuals are vulnerable to misdiagnosis if linguistically and /or culturally inappropriate assessment tools are used [...] an incomplete picture of their skills emerges if only one language is assessed’ (RCSLT 2006; 270). Without appropriate assessment tools, Irish speaking and/or bilingual Irish-English speaking children with language delay are at risk of under-identification, and may not be accessing services. Brennan (2004) provided an excellent summary of the acquisition of the phonological system but also identified that further collection of developmental normative data was essential to provide information on other aspects of the acquisition of Irish. Given that there is a dearth of information on language development in Irish and the poor awareness of the nature, timing and rate of vocabulary and grammatical development in particular, there is urgent need for research in this area.

Assessment Tool - MacArthur-Bates Communicative Development Inventories

One of the most widely-researched assessment tools in recent times is the MacArthur-Bates Communicative Development Inventories, (CDIs; (Fenson, Dale, Reznick, Thal, Bates, Hartung, Pethick and Reilly, 1992)), a parent report instrument of language development originally developed in the USA. There are currently two versions of the instruments available: *Words and Gestures* (suitable for children aged 8-16 months) and *Words and Sentences*, designed for 16-30 month olds which measures vocabulary production and early grammatical development. There is also a recent instrument (CDI-III, (Dale, Reznick and Thal, 1998 , Fenson, Marchman, Thal, Dale, Reznick and Bates, 2007)for children aged 30-37 months. The instruments are held to provide a practical alternative to formal testing and spontaneous language sampling by relying on parental report of their child’s language development. The authors argue that

parental report is more representative of a child's language ability in the early stages, as parents have observed the child's behaviour and consequently the child's language in a wider range of situations than researchers or clinicians could ever hope to. Many studies have demonstrated the reliability and validity of the CDIs, with both the vocabulary checklist and grammatical measures correlating significantly and positively with spontaneous speech samples and standardised language assessments. The instruments have been extensively used to observe individual and stylistic variations in language acquisition, the developmental relationship between various components of the language system and have now been adapted into 38 different languages (Bates, Dale and Thal, 1995). By adapting the *Words and Sentences* instrument to Irish, this study aimed to develop a comprehensive inventory of children's developing vocabulary and grammatical competence in Irish.

Adapting the CDI

(Dale, Fenson and Thal, 1993) recommend that the following factors are considered when adapting the inventories to other languages:

Adaptation not translation: The instrument should not be a direct translation of the original American version, and relevant linguistic and cultural factors needed to be considered. For the Irish version, this meant considering the rural areas in which many Irish-speaking children live, as well as the fact that they would be exposed to English, and so expressive vocabulary in both languages had to be measured.

Challenge of Grammar: The salient grammatical features of a target language must also be reflected in any adaptation to capture the universal and unique aspects of the

morphosyntax of a particular language. For example, Irish has a VSO word order and a rich inflectional system including initial mutations (séimhiú and urú) and complex plural formation which had to be taken into account.

Vocabulary checklist & sentence pairs core: Although there are many components to the CDI, the vocabulary checklist (see Figure 1) and sentences complexity sections (see Figure 4) have the greatest validity and should be included as a minimum. The pilot version of the Irish CDI included all of the sections in the original, including those on morpheme overgeneralisation.

Pilot: Early development of the checklists should be carried out on a small scale before proceeding to a larger-scale norming study. Although the entire project is a pilot of sorts, early piloting with four children revealed that many of the morphosyntactic items targeted had not yet been acquired by 30-month olds and so the study was extended to children aged 40 months. The entire pilot sample therefore was from twenty-one children throughout Munster whose language development is being profiled on a six-monthly basis from 16-40 months (see Table 1 for a description of the sample).

Table 1: Description of Children, Location and amount of Irish Spoken

ID	Location	Gender	Age at Time 1	% of Irish Spoken in the Home	Number of Samples
ICDI 1	Dingle Peninsula	Female	27	85	3
ICDI 2	Dingle Peninsula	Male	40	100	1
ICDI 3	Dingle Peninsula	Male	18	100	3
ICDI 4	Dingle Peninsula	Male	24	100	3
ICDI 5	West Cork	Male	22	100	4
ICDI 6	Dingle Peninsula	Male	38	100	1
ICDI 7	Ring	Female	20	80	3
ICDI 8	Ring	Male	34	80	2
ICDI 9	Dingle Peninsula	Male	40	95	1
ICDI 10	Dingle Peninsula	Male	16	100	3
ICDI 11	Ring	Female	36	100	1
ICDI 12	Ring	Female	28	80	2
ICDI 13	Ring	Female	33	100	2
ICDI 14	Dingle Peninsula	Female	17	100	3
ICDI 15	Clare	Female	19	60	3
ICDI 16	Dingle Peninsula	Female	16	100	3
ICDI 17	Dingle Peninsula	Female	18	100	3
ICDI 18	Dingle Peninsula	Male	18	85	2
ICDI 19	North Kerry	Female	34	100	1
ICDI 20	Ring	Female	17	75	2
ICDI 21	West Cork	Female	23	100	1

Open ended: Initially parents should be able to add words not included in the list and for the purposes of this study, parents were visited and assisted in completing the checklist by the researcher.

Low frequency: In order to capture the full range of age and language ability items with low and high frequency should be included. This meant including highly frequent words such as ‘animal sounds’ as well as complex low frequency words such as prepositional pronouns ‘acu’ *at-them*.

Validity: Validation measures of the newly adapted instrument using structured tests and language samples should be obtained. As there are no formal assessments of Irish, a nonverbal symbolic play test (Test of Pretend Play; Lewis and Boucher, 1997) and elicitation tasks for salient morphological features were developed and language samples from free play and book reading were also obtained.

Irish-Adaptation of the CDI

Previous studies of the acquisition of Irish, although limited, were taken into account when adapting the various components of the CDI. These include those by Mac Mathúna (1979); Nic Fhionnlaoich (1984); McKenna and Wall (1986); Hickey (1990 , , 1992 , , 1993); O’ Baoill (1992) and Brennan (2004). There were also a number of diary or parental observations studies although, mostly focused on the second-language acquisition of Irish (Owens, 1992) or on an older bilingual child (Ó Donnchadha, 1992). Word frequency lists for Irish were also considered as well as popular Irish children’s books, songs and nursery rhymes. The Child Language Data Exchange System (CHILDES; (MacWhinney, 2000) database has language samples of Irish-speaking children within the age range which were useful for the adaptation. The translations and adaptation were made initially by the lead researcher and then for content validity,

consultations were made with native Irish speakers and experts in child language acquisition.

Part1: Words Children Use

Section a) Vocabulary Checklist

Following a general translation and organisation of the words into obvious categories (22 in total, as the original CDI) cultural and language specific terms were considered, including words considered frequent in child-directed speech in Irish (such as those with the diminutive suffix –ín e.g. ‘caitín’ *kitten*). Dialectal differences also strongly influenced vocabulary, for example in west Kerry, the word for *car* (‘gluaisteán’ or ‘carr’) has been replaced by ‘mótar’ and ‘cairt’ in some areas. However as the dialect of the parent could not be predicted, all four words were listed together and the parent was asked to indicate which item would be more likely. Many extra vocabulary items were added at this stage in the adaptation, as the length of a word list significantly affects a parent’s assessment of the size of their child’s expressive vocabulary- the more words the parent is reminded of, the more words he or she remembers (Klee, Robertson, Howard and Gavin, 2000). This meant that there were 826 vocabulary items in the first draft of the Irish CDI (680 in the American CDI) which would help provide information about word frequency and eventually lead to elimination of certain items.

As already mentioned, Irish does not exist in a purely monolingual environment, thus the influence of English on vocabulary items was inevitable. There are many ‘loanwords’ which have been adapted from the English language and naturalised into the phonology, morphophonology and syntax of Irish and used in the everyday conversations of the Gaeltacht community in particular. To allow for the language contact situation,

parents were asked whether their child was using the Irish, English or bilingual terms for vocabulary items (see Figure 1). As the original checklist, parents were encouraged to select an item as being in their child's vocabulary if their child was attempting to say the word, regardless of whether they could pronounce it accurately. The vocabulary items were broadly broke up into the following three categories:

1. Nominals

The majority of the vocabulary items were nouns 'broadly defined' (Bates et al. 1995) and were generally in line with the English-version categories of 'sound effects and animal sounds', 'animals', 'vehicles', 'toys', 'food and drink', 'clothing', 'body parts', 'small household items', 'furniture and rooms', 'outside things', 'places to go' and 'people'. Cultural adaptations included the addition of animals, outside things and food items that would be more appropriate for Irish children. In addition, the category 'games and routines' was changed to 'games, routines and phrases' as in Irish many semantic ideas are expressed in idiomatic phrases and often learned in unproductive phrases or 'formulae' (Hickey, 1993) rather than single words. For example the verb *like* is expressed in a phrase '(is) maith liom' (lit- (COP) *good with-me*) or 'taithíonn liom' (lit- *please with-me*), and could not be listed as a single item (as 'maith' indicates *good* and 'taitin' translates as *please*).

2. Predicates

Other versions of the CDI including the English and Hebrew versions, list the 'action words' or lexical verbs in their infinitive forms. Because Irish has no infinitive, the 2nd person singular form of the imperative was listed as it is the closed to the uninflected base of a verb in Irish. As in other highly inflected language such as Hebrew, parents were instructed to mark a word as occurring in the child's vocabulary whether it

occurs in identical or inflected morphological forms. Consideration had to be given to the fact that many verbs in the English version do not correspond to verbs in Irish. For example, *have* is expressed as a phrase with the prepositional-pronoun ‘ag (+ person)’ and used with the verb ‘to be’ in the phrase ‘tá (mótar) agam’ (lit. *is car at me* “*I have a car*”). Therefore in the Irish adaptation, the semantic equivalent to *have* was listed under ‘prepositional pronouns’.

Turning to adjectives (called ‘describing words’) linguistic adaptation included the fact that adjectives which describe the state of a person in Irish are usually expressed in idiomatic phrases involving nouns and prepositional pronouns. These include the terms *hungry* and *thirsty* which were directly translate to ‘ocrach’ and ‘tartmhar’ but would mostly be expressed in the phrases ‘tá ocras/tart orm’ (lit- *be-pres hunger/thirst on me*). As with verbs, parents were asked to list these and other lexical adjectives whether the children used them in phrase or other forms. Other cultural adaptations were the addition of describing words for weather which feature strongly in early acquisition of Irish (Brennan, 2004).

3. Closed Class

Categories under this section included pronouns, question words, prepositions, quantifiers and articles, auxiliary and modal verbs (called ‘helping verbs’) and connecting words. Significant adaptations had to be made for the category pronouns as there are many more ways of expressing these in Irish depending on the context or direction of the pronoun reference. These include object and subject pronouns which in Irish have emphatic counterparts (e.g. ‘mé’ *me* and ‘mise’ *me-emphatic*). There are also the aforementioned prepositional pronouns which occur when the pronoun is an object of a preposition and is a feature of all Celtic languages (Doyle, 2001). These were limited to

the 1st, 2nd and 3rd person singular and 1st person plural as it was noted that these would be the only forms used productively by 3 year olds (Hickey, 1992). The list of prepositional pronouns included, ‘ag’(lit- *at*) + person (e.g. ‘agam’ *I have*); ‘do’ (lit- *to*) + person (e.g. ‘dom’ *to me*) and ‘le’ (lit- *with*) + person (e.g. liom- *with me/mine*) among others. For ‘prepositions and locations’, almost twice the number of items were listed in the Irish version from the original CDI. Irish has a very rich prepositional system although as in other languages, the choice is lexically determined. For example, ‘ar’ could mean *on, in, for* or *at* when used in a prepositional phrase and depends on the preceding verb or adjective. Therefore direct translation was not possible and led to many more items being included in this section which corresponded to a single item on the English form (e.g. there were 6 items corresponding to the English preposition *at*- ‘ag, ar, chun, faoi, le, & um’).

Auxiliary and modal verbs are listed in the CDI under ‘helping verbs’ and in Irish include verbs and verbs phrases such as ‘caithfidh’ (which covered functions *got-to/have-to/need-to* from the original CDI); ‘(is) féidir/ ábalta’ *can*; ‘(ag) iarraidh’ *trying*, and ‘teastaigh’ *want(to)*. Irish has two forms of the auxiliary verb *to be*- the copula ‘is’ and the substantive verb ‘tá’ which are both inflected for tense and mood. As the original CDI, all of the forms of the auxiliary verbs and their inflected and negative counterparts were included in the checklist.

Figure 1: Sample of vocabulary listed under ‘places to go’

11. ÁITEANNA LE DUL PLACES TO GO								
	Gaeilge	Béarla		Gaeilge	Béarla		Gaeilge	Béarla
abhaile	<input type="radio"/>	<input type="radio"/>	cóisir	<input type="radio"/>	<input type="radio"/>	picnic	<input type="radio"/>	<input type="radio"/>
Aifreann	<input type="radio"/>	<input type="radio"/>	faoin tuath	<input type="radio"/>	<input type="radio"/>	pictiúrlann	<input type="radio"/>	<input type="radio"/>
amuigh	<input type="radio"/>	<input type="radio"/>	feirm	<input type="radio"/>	<input type="radio"/>	scoil	<input type="radio"/>	<input type="radio"/>
cathair/baile mór	<input type="radio"/>	<input type="radio"/>	obair	<input type="radio"/>	<input type="radio"/>	teach/tigh	<input type="radio"/>	<input type="radio"/>
clós	<input type="radio"/>	<input type="radio"/>	ospidéal	<input type="radio"/>	<input type="radio"/>	trá/tráigh	<input type="radio"/>	<input type="radio"/>
clós súgartha/ faiche imeartha	<input type="radio"/>	<input type="radio"/>	páirc	<input type="radio"/>	<input type="radio"/>	zú	<input type="radio"/>	<input type="radio"/>
coillte	<input type="radio"/>	<input type="radio"/>	naíonra/ crèche	<input type="radio"/>	<input type="radio"/>			

Section b) How Children Use Words

The latter part of the section on ‘words children use’ asks parents to indicate how often (*never, sometimes or often*) their child uses language of any form to refer to past and future events; to absent objects/people; to possession/ownership and whether they can comprehend simple instructions. As these are universal features of child language acquisition (Bates et al. 1995) these questions remained largely unchanged in the adaptation.

Part 2: Sentences and Grammar

This second part of the CDI addresses the development of morphology and syntactic structures. Again, the targets for this section came from the few studies on the acquisition of Irish and included some features of language acquisition which are thought to be universal such as overgeneralisations. Significant language-specific adaptations had

to be made again, although an effort was made to adhere to the original format of the CDI for comparison with other adaptations.

Section a) Bound Morphemes

The first section addresses how frequently (*not yet; sometime or often*) children produce bound morphemes, and there were six questions in the Irish version (four in the original CDI) due to the highly inflected nature of the language. As in the original, one question addressed the production of regular plural morphemes. In Irish the plural can be difficult to predict but (Hickey, 1990) noted that ‘-í’ and ‘-anna’ plural endings were the earliest to be used by preschool children, and so were chosen as examples of plural marking. The next question addressed the use of synthetic verb+ person marking where the verb and subject are united in a single word (thus the child would use ‘téim’ as opposed to the un-inflected ‘téann mé’ for *I go*) and is a common feature of Munster Irish (Doyle, 2001). Another question asked whether the child was yet using the ‘ag’ particle of progressive structures (‘ag obair’, lit- *at work, ‘working’*) as it has been observed to be omitted in early child language studies of Irish (Hickey, 1990). Also similar to the CDI was the third question addressed the use of regular past tense marking, which in Irish involves lenition (séimhiú) of the verb: thus ‘dún’ /dun/ *close* becomes ‘dhún’ /ɣun/ *closed*. The use of lenition in possessive structures was the fifth question as it has been found to be one of the earliest marking of initial mutations and as possessive structures (particularly of noun + noun format) are frequent in the 2-word stage (McKenna & Wall, 1986). Examples of lenition included ‘mo chóta’ /mʷ ɣoʰa/ *my coat*; and ‘cóta Mhamaí’ /koʰa wami/or /koʰa vami/ depending on dialect) *Mommy’s coat*.

The final question addressed the production of future tense suffixes, the most common of which are ‘-faidh’ and ‘-eoidh’ (Ó’ Siadhail, 1995).

Section b) Irregular Morphemes

In the next section, parents are asked to indicate whether the child has begun to use irregular plural and past tense marking. Although even ‘regular’ plurals are hard to predict in Irish there are some nouns that are particularly unique and irregular when inflected. These include ‘bean’, *woman* → ‘mná’ *women*; ‘leaba’, *bed*, → ‘leapacha’, *beds* and ‘teach’, *house*, → ‘tithe. Irregularly inflected verbs are more straightforward and include ‘déan’ *do*; ‘faigh’ *get*; ‘tar’ *come*; ‘téigh’ *go* and ‘tabhair’ *give*. In the English CDI only the past tense of irregular verbs was listed, but as Irish has both irregular past and future tense marking, irregular future tenses were also included. The irregular verb forms are outlined in figure 2:

Figure 2: Sample of items listed under irregular noun and verb morphology

B. CRUTH FOCAL WORD PARTS					
Seo a leanas focail eile a fhoghlaimíonn páistí. Cuir marc le do thoil ar aon focail anseo a úsáideann do pháiste.					
AINMFHOCAIL (8)					
ba	<input type="radio"/>	leapacha	<input type="radio"/>	lachain	<input type="radio"/>
éisc	<input type="radio"/>	mná	<input type="radio"/>	leoraithe	<input type="radio"/>
laethanta	<input type="radio"/>	tithe	<input type="radio"/>		<input type="radio"/>
BRIATHRA (20)					
béarfaidh	<input type="radio"/>	gheobhaidh	<input type="radio"/>	thug	<input type="radio"/>
chonaic	<input type="radio"/>	íosfaidh	<input type="radio"/>	tiocfaidh	<input type="radio"/>
déarfaidh	<input type="radio"/>	rug	<input type="radio"/>	(an/ní) bhfaighidh	<input type="radio"/>
dúirt	<input type="radio"/>	tabharfaidh	<input type="radio"/>	(an/ní) dheachaigh	<input type="radio"/>
fuair	<input type="radio"/>	tháinig	<input type="radio"/>		

Section c) Overregularisation

The next section addresses over-regularisation on nouns and verbs (see Figure 3 below). Hickey (1992) noted overgeneralization of the morpheme –anna to irregular plural of *fish* ‘éisc’ in ‘*iascanna’ and Nic Fhionnlaóich (1984) reports the use of ‘*lachannaí’ for ‘lachain’ *ducks*, from overgeneralising the –aí plural suffix. It was therefore hypothesized that the children may apply the earliest-acquired and arguably more perceptually salient plural endings, ‘-anna’ and ‘-aí’ to irregular plural marking in particular and to plural forms where there is less salient plural marking (for example where ‘milseán’ /mʲʃɔnʲ/ *sweet*, becomes ‘milseáin’ /mʲʃɔnʲ/ with vowel-insertion plural marking). Use of the English plural morpheme –s on Irish words was also listed as a possible error because of the language contact. Finally there were examples of overgeneralising initial mutations to the root form of a noun so that *table*, ‘bord’ /bo:ɾ/ is produced as ‘mbord’ /mo:ɾ/ from the phrase ‘ar an mbord’ *on the table* and has been noted to occur in early acquisition (Hickey, 1990; Brennan, 2004).

There was little in the way of examples of over-regularisation on verb marking in the literature, apart from Owens (1992) who reported errors in the use of future marking on the imperative verb in early 2nd language acquisition of Irish. Thus the irregular verb ‘ith’ *eat* became ‘*ithfidh’ *will-eat* (for ‘íosfaidh’). The pilot form investigated whether children would make developmental errors in past, present and future tenses. For example, errors on past tense included overgeneralization of lenition to present tense verbs (known as verbal nouns) so that ‘dhein mé’ *I did* becomes ‘*dhéanamh mé’; or

using the unmarked imperative form (*dein mé) or failing to use the dependent form of irregular verbs when asking questions or using negatives (‘ar chonaic/níor chonaic’ *did (you) see/ (I) didn’t see* becomes ‘ar/ní feic’ from the verb ‘feic’ *see*). Other examples are contained in Figure 3

Figure 3: Sample of items listed under overgeneralisation

C. CODANNA FOCAIL/PÁIRT 2					
Úsáideann páistí óga deireadh na bhfocal go mícheart go minic. Mar shampla, déarfadh páiste “Faigh mé an carr amárach”. Is samplaí <u>dul chun chinn sa teanga</u> iad na botúin seo. Sna liostaí seo a leanas, cuir marc, le do thoil ar na dearmadaí ar fad den tsaghais seo a chuala tú ó do pháiste le déanaí.					
AINMFHOCAIL					
bóanna	<input type="radio"/>	dorasáí	<input type="radio"/>	mbord	<input type="radio"/>
bádanna	<input type="radio"/>	solasaí	<input type="radio"/>	gcathaoir	<input type="radio"/>
iascanna	<input type="radio"/>	liathróids	<input type="radio"/>	mhadra	<input type="radio"/>
leoraíeanna	<input type="radio"/>	stocas	<input type="radio"/>	bhéal	<input type="radio"/>
leabanna	<input type="radio"/>	cairéads	<input type="radio"/>	(eile?)	
BRIATHRA					
<i>‘Botúin’ ag caint ar an am atá caite</i>		<i>Botúin’ ag caint faoi láthair</i>		<i>Botúin’ ag caint faoin todhchaí</i>	
déan/ déin (mé)	<input type="radio"/>	(ag) déin	<input type="radio"/>	faigh	<input type="radio"/>
dhéanamh (mé)	<input type="radio"/>	(ag) faigh	<input type="radio"/>	feic (mé)	<input type="radio"/>
faigh (mé)	<input type="radio"/>	(ag) feic	<input type="radio"/>	feiceoidh	<input type="radio"/>
feic (mé)	<input type="radio"/>	(ag) glan	<input type="radio"/>	ithigh	<input type="radio"/>
téigh (mé)	<input type="radio"/>	(ag) ith	<input type="radio"/>	tarfaidh	<input type="radio"/>
ar feic?/níor feic	<input type="radio"/>	(eile?)		(eile?)	
ar téigh? níor téigh	<input type="radio"/>				

Parents are then asked whether the children has begun to combine words (‘not yet’, ‘sometimes’ or ‘often’) and to write the three longest utterances they have heard from their child recently which remained the same as the original CDI.

Section d) Grammatical Complexity

The final section of the CDI is called ‘complexity’. Here parents are asked to choose between sentence pairs that represent increasing progress in their child’s mastery of grammar. As Irish has a richer system of morphological inflections and a markedly different word order to English, instead of forced choice sentence pairs, the Irish version presents a group of three and sometime four ways that a child could say a sentence with increasing complexity. For example, if a child was trying to tell someone that they had just fallen, parents were asked would the child simply use the imperative form of the verb ‘tit’ *fall*, whether they could use it with a pronoun ‘tit mé’ *I fall*; whether they would use synthetic person marking on the verb ‘*titeas’ *I fall* or finally, whether they would use the verb in the past tense by leniting it (with person marking) ‘thiteas’ *I fell*. This multi-question format was similar to other version of the CDI such as the Mandarin Chinese (Tardif, Gelman and Xu, 1999) and Hebrew (Maital, Dromi, Sagi and Bornstein, 2000) versions. The pilot form of the Irish CDI had 42 groups of sentence-types for parents to choose from, and for the sake of comparability with the CDI, they were grouped into items which mainly focused on either bound morphemes (including examples already mentioned); functor words (such as prepositions, articles, pronouns and conjunctions); and the development of early syntactic structures (such as the expansion of word-order in declarative and interrogative sentences and the acquisition of post-modifying complements). This section was largely constructed using the Irish Language Assessment, Remediation and Screening Procedure – ILARSP (Hickey, 1992) as a guideline for developing complexity. Examples of sentences assessing grammatical complexity are outlined in Figure 4 below:

Figure 4: Sentence Complexity (sentences focusing on morpheme usage)

E. CASTAIGHT COMPLEXITY					
I ngach ceann des na grúpaí seo a leanas cuir marc led' thoil ar an bhfocal (nó grúpa focal) IS COSÚLA leis an bhfocal (nó grúpa focal) a úsáideann do pháiste ag an am seo. de. Má tá do pháiste ag baint úsáide as abairtí níos faide nó níos deacra ná cinn atá tugtha, roghnaigh an ceann deireanach					
1. Tit! Tit mé! Thit mé! Thiteas!	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	6. Madra bord Madra bhord Madra mbord Madra ar an mbord	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	11. Imríonn mise peil Imrí mise peil Imrím peil	<input type="radio"/> <input type="radio"/> <input type="radio"/>
5. Bábóg beag Babógín Bábóg bheag Bábóg bheag agamsa	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	10. Mise féach eitleán Féach mé eitleán! Fhaca mé eitleán! Chonaic mé eitleán!	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	15. Mamaí glan Mamaí glanadh Mamaí ag glanadh Tá mamaí ag glanadh	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
16. Na cóta Na cótaí Cá'il na cótaí? Cá'il ár gcótaí?	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	25. Tá sé póigín mise Tá sé tabhair póigín mise Tá sé ag tabhair póigín dom Tá sé ag tabhairt póigín domsa	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	34. Tabhair dom é Tabhair domsa é Tabhair domsa an liathróid!	<input type="radio"/> <input type="radio"/> <input type="radio"/>
20. Geansaí ró mór Tá geansaí ró mór Tá an geansaí ró mór Tá an geansaí ró mhór	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	29. Mise cailín (buachaill) Tá mise cailín (buachaill) Is cailín (buachaill) mise Is cailín (buachaill) maith mise	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	38. Sin caoire Sin caoire sa gort Sin caoire istigh sa gort Sin caoire istigh sa ghort	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
21. Níl bris Ní hea bris mise Níor bris mé Níor bhris mé	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	30. Seacláid mise Tá seacláid uaimse! Tá seacláid agus cóc uaimse	<input type="radio"/> <input type="radio"/> <input type="radio"/>	39. Maith leat tóg? Maith leat tógáil teach? Ar maith leat a thógáil teach? Ar mhaith leat teach a thógáil?	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Future Directions

Following this initial adaptation, the study then targeted families in the Munster area who spoke Irish the majority of time in the home(i.e. 60% or more). Piloting of the checklist is continuing and when complete, the data will then be thoroughly examined and validity and reliability measures obtained. Given further adaptation for those speaking different dialects, the outcomes of this study will help to develop a screening procedure for Irish-speaking children. As with the original CDI, the inventory could then be posted to a wider variety of parents to collect data from a broad range of children. This would then provide a cost effective and far-wider sample of the Irish speaking population than interviewing could ever achieve. It is hoped that the tool will be able to be used by many health professionals and will provide a useful decision making tool for referral sources and also help speech and language therapists in diagnosing, setting goals and measuring progress in therapy for Irish-speaking children.

(* = incorrect word/sentence formation).

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