

# Assessment of Speech and Language Skills in Bilingual Children: An Holistic Approach

Helen Grech<sup>1</sup> and Barbara Dodd<sup>2</sup>

<sup>1</sup>*Institute of Health Care University of Malta, Malta*

<sup>2</sup>*Perinatal Research Centre University of Queensland, Australia*

A review of recent research and professional guidelines on the assessment of bilingual children with communication disorders identified some emerging themes. All the languages that a child is exposed to (including the home language/s) require assessment since proficiency across the different languages used reflects the child's ability to maintain social contacts and access education. Language mixing is a natural, typical and fundamental aspect of bilingual discourse that has no negative effect on bilingual language acquisition. Limited data on normal bilingual language acquisition makes differential diagnosis between language disorder and language difference very difficult. Consequently, bilingual children are at risk for being misdiagnosed as having an impairment. Assessment strategies are described that provide alternative approaches to the use of normative data for the identification of communication disorders. Research is needed to determine the effect of language pair and language learning context on bilingual language acquisition and to ensure valid identification of bilingual children with communication disorder.

**Key Words:** bilingualism, communication disorders, assessment, codeswitching

## Introduction

Baker (2001) estimated that between half to two thirds of the world's population is bilingual. Even in the United States, a recent census indicated that almost one fifth of the population spoke another language additional to, or other, than English (U.S. Bureau of the Census, 2000). Changing demographics, particularly in Europe, have led to an increase in the number of children from culturally and linguistically diverse populations that is reflected by the number of bilingual or multilingual school child-

ren. Bilingualism is increasingly becoming the predominant language-learning background of the majority of children world-wide. Consequently, speech and language therapists (SLTs) are challenged by the need to provide assessment and intervention for bilingual children<sup>1</sup> with communication disorders.

Grosjean (1992) claimed that it is unjust to consider a bilingual child as equivalent to 'two monolinguals'. He suggested that assessment of bilingual individuals' language proficiency should reveal their general communicative competence that may vary and mix depending on where, when and with whom they are communicating. Various factors, such as the lack of bilingual normative data, hinder clinicians from differentiating between children who have a communication disorder and those who are in the process of learning a second or third language. This article discusses the challenges that SLTs face in assessing children who are exposed to, or speak, more than one language. Strategies to overcome these challenges are recommended in line with recent contributions such as the recommendations of the *International Association of Logopedics and Phoniatrics* (IALP) (2006).

### **Contributing factors to language usage and competence**

SLTs need to understand and have detailed knowledge of the influences of language differences. For example, accents tend to reveal personal identity. A foreign accent can be marked by differences in phonology, timing, rhythm, stress and intonation patterns that causes the listener to shift focus from the meaning of the communication to the surface form of the language. This may lead to communication breakdown. Word misuse and grammatical errors may also mesh with a particular accent. These differences, however, do not indicate a speech or language disorder.

Cheng (1999) focused on lexical differences, providing examples of how the same mother tongue may purport different meanings, signalled by context of their usage, e.g., 'slippers' means 'shoes' in the midwestern US. Even bilingual SLTs are not necessarily also 'bicultural' or sensitive to different cultural issues, especially if they did not learn all their languages in the authentic cultural environment. In 1997, the American Speech, Language and Hearing Association (ASHA) produced a position paper stating that ASHA members cannot discriminate against anyone who speaks with an accent and/or dialect in service delivery, training, education or employment. Unless SLTs are aware of these 'bilingual characteristics' there is the danger of unfairly identifying an apparent deficiency in language competence (Stow and Dodd, 2005).

---

<sup>1</sup> In this article the terms "Multilingual and Bilingual" are used interchangeably and defined as in the Royal College of Speech and Language Therapists (RCSLT) Core Guidelines (2004), i.e., the knowledge and/or use of two or more language codes.

This issue also extends to the use of 'language mixing'. Genessee (1989) claimed that if children are exposed to language mixing then there is no reason to expect that bilingual children will not do it themselves. Romaine (1989) reported that many SLTs, and other related professionals, view normal language mixing as having negative repercussions on language development. This is not necessarily so. Romaine emphasised three dimensions that affect bilingual acquisition, namely, the language(s) parents speak with children; parents' native language(s); and, the extent to which parental language(s) reflect the dominant language of the community. Home languages of immigrant families are increasingly becoming a mixture of two languages; the same applies to community languages in which there exist more than one state recognised official language (e.g., Malta). The most widely used vernacular in bilingual communities is a mixed lect rather than monolingual varieties and this vernacular varies between sub-groups and across generations (Pert and Letts, 2006).

A vernacular may be a child's dominant language. Educators, however, may consider individuals who engage in language mixing as having a 'lack of proficiency' in either language. Children often learn the monolingual varieties but use them only in specific contexts such as education or in formal communication. More styles and different versions of the code may be used in different contexts with different people providing a sociolinguistic marker. Backus (1999) therefore concluded that classifying children as having limited proficiency in a monolingual variety may not reflect their ability to speak their native language which has a mixed code.

de Hower (1996) claimed that language use within the child's social network needs to be taken into account when determining the degree and type of input. It is essential to know not only which languages are used with the child but also the amount of time carers using particular languages spend with a child and the style of language used (e.g. 'code mixing') in different domains. de Hower reviewed the evidence to date regarding the development of codeswitching behaviour. The major factors determining language choice in bilingual children were reported as knowledge of the linguistic abilities of the interlocutor and sensitivity for code choice. From a very early age, bilingual children make conceptually sensitive linguistic choices that draw on a developing knowledge of their separate language systems, switching languages according to interlocutor. The sociolinguistic situation contributes significantly to the language use of bilingual children, indicating that language mixing requires a high degree of language awareness and competence rather than reflecting a deficiency in linguistic knowledge. These factors create a challenge for clinicians. Diagnosis and description of bilingual language competence is difficult and complex.

### **Assessing bilingual children**

Bilinguals exhibit both similarities and differences in comparison to monolingual speakers of either language. For example, Yavas and Goldstein (2006) reported that the phonological skills of 4-6-year-old bilingual Spanish-English children and 'mono-

linguals' were similar. In contrast, Gildersleeve, Davis, and Stubbe (1996) reported significant differences in the phonological skills of 4-year-old bilingual and monolingual children. Similarly, Dodd, So and Li (1996) and Holm and Dodd (1999) found that children acquiring Cantonese and English successively used error patterns that were atypical of monolingual development in either language. Goldstein and Kohnert (2005) claimed that these contradictory results might indicate that the phonological skills of bilingual children approximate those of the native monolinguals as they grow older. Alternatively, the disparate findings may reflect differences specific to the language pair being acquired or the language learning context (e.g. simultaneous versus successive acquisition). Irrespective of the reasons underlying these conflicting results, they shed doubt on the validity of evaluating bilingual children's assessment results using monolingual norms.

Paradis (2005) compared the morphological skills of typically developing children acquiring English as a second language with those of monolingual English-speaking children with specific language impairment. The results revealed similar accuracy rates and error types for both groups of children, indicating that bilingual children could easily be misdiagnosed as having a language disorder. Language tests for bilingual children that are based on English assessments are flawed not only because bilingual children may acquire certain language structures differently from monolinguals but because the sequence and rate of acquisition of specific language components varies between different languages. It has been widely reported that in assessments of language, particularly vocabulary development, children from bilingual environments tend to score lower than monolingual English speaking peers (e.g., Thordardottir, Rothenberg, Rivard and Naves, 2006). Mahon and Crutchley (2006) assessed 69 monolingual and 96 typically-developing children with English as an additional language (EAL), aged 4-9 years, on the BPVS-II. The results indicated that EAL children tended to score less well. The gap, however, narrowed with increasing age leading to the conclusion that although children with English as an additional language are initially disadvantaged, they catch up with their monolingual peers. These results suggest that bilingual children's low vocabulary scores at a relatively early age should not necessarily be interpreted as an indicator of language disorder.

Peña and Quinn (1997) argued that lack of familiarity with the task, or vocabulary used in the test, might account for poor performance. Other explanation includes: frequency of lexemes varying across languages (e.g. verbs may be used more often than nouns in specific target populations); specific concepts being expressed by verb phrases in one language and noun phrases or relational words or prepositions in another; and, in some languages, (e.g., Spanish) the subject may not be overtly stated because it is redundant (Peña, Bedore & Rappazzo, 2003). Further, bilingual children may acquire some concepts in one language environment (e.g., feeding and grooming concepts would be emphasized in the home language) and others in another environment (e.g., colours, numbers in the school 'language'). Language exposure also plays a role in that interactional styles may vary across populations. This would be reflected by different frequencies of word types being emphasised; for example nouns may

not necessarily be the major focus in motherese. These factors suggest that standardised language proficiency assessments may fail to fully capture the competence of the bilingual individual's communication skills.

It is important to differentiate disordered communication from difficulties related to learning English as an additional language. Guidelines proposed by the RCSLT (1998) and IALP (2006) state that bilingual children should be assessed in both languages. As yet, however, limited research exists regarding the development of English as a second language or how typically developing bilingual children perform on English assessments. It would be wrong to assume that bilingual and monolingual children perform identically (Stow and Dodd, 2003). Translation of assessments or 'making allowances' for bilingual children on tests devised for monolinguals are not sufficient. Test translations may not tap the relevant language structures other languages.

Peña et al (2003) investigated the semantic abilities of three bilingual language groups with varying Spanish/English proficiency. The results indicated differences in patterns of performance for English and Spanish. This study highlights the importance of assessment in both languages, as performance in one language may not necessarily reflect performance in the second or third language. Peña et al's (2003) study also provided support for the need to assess bilingual children on a variety of tasks to obtain a broader profile of the children's language skills and minimise disadvantage due to task unfamiliarity.

Some clinicians argue that 'holistic assessment' is difficult to implement due to their limited proficiency in a child's languages. For example, Papoutsis Kritikos (2003) carried out a survey of practitioners registered with the ASHA from 5 different US states. More than 70% of the respondents reported that they were not competent or had limited competence (even with the help of interpreters) in assessing clients who speak a language in which they are not proficient. Roseberry-McKibbin and Eicholtz (1994) reported similar findings. Approximately 40% of participants in the study carried out by Papoutsis Kritikos reported that they would not be less likely to provide intervention for children with bilingual exposure in comparison to their monolingual peers. This is of particular significance especially since 55% of respondents were bilingual, 23% had learned a second language at school and 32% had cultural experience with a second language. Lindsay, Soloff, Law, Band, Peacey, Gascoigne and Radford (2002) reported survey results on SLT services to education that indicated that only 6.8 % of respondents seemed to be assessing children in their home language through interpreters or other bilingual professional.

In contrast, the ASHA (1995) guidelines suggested that equal opportunities for therapy should be given to monolingual and bilingual children. Roseberry-McKibbin (2002), recommended that children with language impairment should ideally receive bilingual language therapy instruction in order to maintain and promote their L1 skills while also helping them to learn L2. The author also emphasised the need to encourage parents to speak to their child in the language in which they are most comfortable to facilitate their child's language acquisition. SLTs who do not distinguish between

language difference and disorder in multilingual children, may be violating professional mandates (Roseberry-McKibbin, 1995). Cheng (1996) also argued that adequate assessment of multilingual children requires SLTs to have extensive multicultural awareness. Research suggests however, that the development of the skills needed for competent assessment and treatment of bilingual children is dependent on clinicians being educated to deal with multilingual/multicultural issues.

The need to assess both or all the child's languages in order to reach a valid and reliable diagnosis cannot be overstated. Strategies to measure skills in all the languages used by children include the use of process-based assessments (e.g., fast mapping [FM] or dynamic assessment [DA]) rather than static standardized tests. Hwa-Froelich and Matsuo (2005), however, reported a study of Vietnamese-English bilinguals that indicated that the types of FM and DA tasks they employed were not significantly correlated. Consequently, Goldstein and Kohnert (2005) strongly recommended using stimuli that measure what is permissible in both languages. It is recommended that both conceptual vocabulary (i.e., the total number of concepts known across the two languages) and total vocabulary (i.e., the total number of labels used for those concepts) are calculated when assessing bilingual children. This recommendation supports Bedore, Perla, Garcia, and Cortez's (2005) finding that vocabulary is distributed across languages so that some is shared and some is specific to each language. Other procedures that have been recommended include testing beyond ceiling and below the basal level of formal tests, testing both languages (conceptual scoring) and using interactive approaches.

Some researchers such as de Montfort Supple (1996) and Salameh, Håkansson, and Nettelbladt (2004) have emphasised the need to apply a developmental perspective before diagnosing a bilingual child as having a language impairment since variability amongst bilingual children seems to be the rule rather than the exception. It is suggested that clinicians opt for complementary approaches, e.g., comparing individual bilingual children to group average for identification of difficulties, as well as assessing individual functioning when describing skills. While this approach addresses the dearth of bilingual norms and assessments for specific multilingual populations, language profiling and observations may not be considered objective assessment measures.

Cheng (2006) suggested the use of SWOT and RIOT approaches for evaluating bilingual children's language competence and planning clinical strategies. The SWOT analysis involves taking information from the case history and clinical analysis and identifying internal (strengths and weaknesses) and external (opportunities and threats) factors. The RIOT procedure emphasises reviewing all pertinent background information about children's language/s exposure and usage; interviewing all stakeholders that may influence children's acquisition of communication skills; observing children in the different domains with a variety of people; and testing children's proficiency of all the languages used. Cheng argued that only such an holistic analysis can capture a clear profile of the child's communication skills.

## Conclusion

There are three main emerging issues concerning the assessment of bilingual children. Assessment of the proficiency of all the languages that the child is exposed to (including the home language/s) is vital as this reflects on the child's ability to maintain social contacts and to cope in the educational environment. Language mixing seems to be a natural, typical and fundamental aspect of bilingual discourse. Research (e.g., Zentella, 1997, Pert & Letts, 2006) indicates that code switching does not have a negative effect on bilingual language acquisition. Clinicians should take this into consideration when assessing bilingual children's communication skills. Limited data on normal bilingual language acquisition makes differential diagnosis between language disorder and language difference very difficult. Bilingual children are at risk for being misdiagnosed as having a communication impairment, but also for having an undiagnosed speech or language disorder (Stow and Dodd, 2005). There is an urgent need, then, to develop an international research base of bilingual speech and language acquisition and disorder. This would ensure the efficiency and efficacy of the clinical management of bilingual populations.

## References

- American Speech-Language and Hearing Association. (1995). Communication development and disorders in multicultural populations: Readings and related materials. *Rockville MD: Author.*
- Backus, A. (1999). Mixed native languages: A challenge to the monolithic view of language. *Topics in Language Disorders*, (4), 11-22.
- Baker, C. (2001). *Foundations of Bilingual Education and Bilingualism* (3rd ed.). Clevedon: Multilingual Matters.
- Bedore, L. M., Pena, E. D., Garcia, M., & Cortez, C. (2005). Conceptual versus monolingual scoring: When does it make a difference? *Language, Speech, and Hearing Services in Schools*, 36, 188-200.
- Cheng, L. L. (2006). Lessons from the Da Vinci Code: Working with Bilingual/Multicultural Children and Families. *The ASHA Leader*, 26 September 14-15.
- Cheng, L. L. (1999). Moving beyond accent: social and cultural realities of living with many tongues. *Topics in Language Disorders*, (4), 1-10.
- Cheng, L. L. (1996). Beyond bilingualism: A quest for communicative competence. *Topics in Language Disorders*, 16, 9-21.
- de Hower, A. (1996). "Bilingual Language Acquisition", in Fletcher, P. & MacWhinney, B. *The Handbook of Child Language*. US: Blackwell Pub. (Ch. 8, 219-251)
- de Montfort Supple, M. (1996). Prologue: Beyond bilingualism. *Topics in Language Disorders*, 16, 1-8.
- Dodd, B.J., So, L. K. H. & Li, W. (1996). Symptoms of disorder without impairment: The written and spoken errors of bilinguals. In B. Dodd, R. Campbell, & L. Worrall (Eds.) *Evaluating Theories of Language* (pp. 119-139). London: Whurr.

- Genessee, F. (1989). Early bilingual development: one language or two? *Journal of Child Language*, 16, 169-179.
- Gildersleeve, C., Davis, B., & Stubbe, E. (1996, November). When monolingual rules don't apply: Speech development in a bilingual environment. Paper presented at the Annual Convention of the American Speech-Language-Hearing Association, Seattle, WA.
- Goldstein, B., and Kohnert K. (2005). Speech, language, and hearing in developing bilingual children: Current findings and future directions. *Language, Speech & Hearing Services in Schools*, 36, (3), 264-267.
- Grosjean, F. (1992). Individual bilingualism. In R. E. Asher & J. M. Simpson (Eds.), *Encyclopedia of Language and Linguistics (Volume 3)*. Oxford: Pergamon.
- Holm, A. & Dodd, B. (1999). A longitudinal study of the phonological development of two Cantonese-English bilingual children. *Applied Psycholinguistics*, 20, 349-376.
- Hwa-Froelich, D. A. & Matsuo, H. (2005). Vietnamese children and language-based processing tasks. *Language, Speech, and Hearing Services in Schools*, 36, 230-243.
- International Association of Logopedics and Phoniatrics (2006). *Recommendations for Working with Bilingual Children*. Retrieved October 1, 2006, from <http://www.ialp.info>
- Lindsay, G. Soloff, N., Law, J. Band, S. Peacey, N., Gascoigne, M. and Radford, J. (2002). Speech and Language therapy services to education in England and Wales. *International Journal of Language and Communication Disorders*, 37, 273-88.
- Mahon, M. and Crutchley, A. (2006). Performance of typically-developing school-age children with English as an additional language on the British Picture Vocabulary Scales 11. *Child Language Teaching and Therapy*, 22, (3), 333-352.
- Papoutsis Kritikos, E. (2003). Speech-language Pathologists' beliefs about language assessment of bilingual/bicultural individuals. *American Journal of Speech-Language Pathology*, 12, 73-91.
- Paradis, J. (2005). Grammatical morphology in children learning English as a second language: Implications of similarities with specific language impairment. *Language, Speech, and Hearing Services in Schools*, 36, 172-187.
- Peña E. and Quinn, R. (1997). Task familiarity: Effects on the test performance of Puerto Rican and African American children. *Language, Speech and Hearing Services in Schools* 28, 323-332.
- Peña E., Bedore, L.M. & Rappazzo, C. (2003). Comparison of Spanish, English and Bilingual Children's Performance Across Semantic Tasks. *Language, Speech and Hearing Services in Schools* 34, (1), 5-17.
- Pert, S. and Letts, C. (2006). Codeswitching in Mirpuri speaking Pakistani heritage preschool children: Bilingual language acquisition. *International Journal of Bilingualism*, 10 (3), 349-374.
- Romaine, S. (1989). *Bilingualism*. Oxford: Basil Blackwell.
- Roseberry-McKibbin, C., (2002), Principles and strategies in intervention. In A.E. Brice (Ed.). *The Hispanic Child: Speech, Language, Culture and Education*. Boston: Allyn & Bacon.
- Roseberry-McKibbin, C.A. (1995). *Multicultural students with special needs: Practical strategies for assessment and intervention*. Oceanside, CA: Academic Communication Associates.
- Roseberry-McKibbin, C.A. & Eicholtz, G.E. (1994). Serving children with limited English proficiency in the schools: A national survey, *Language Speech and Hearing Services in Schools*, 25, 156-164.



- Royal College of Speech and Language Therapists. (2004). *Clinical Guidelines*. Bicester: Speechmark. <http://www.rcslt.org/>
- Royal College of Speech and Language Therapists Specific Interest Group in Bilingualism. (1998). Good practice for speech and language therapists working with clients from linguistic minorities. The RCSLT.
- Salameh, E., Håkansson, G., & Nettelbladt, U. (2004). Developmental perspectives on bilingual Swedish-Arabic children with and without language impairment: a longitudinal study. *The International Journal of Language and Communication Disorders*, 39, (1), 65-91.
- Stow, C., and Dodd, B. (2005). A survey of bilingual children referred for investigation of communication disorders: a comparison with monolingual children referred in one area in England. *Journal of Multilingual Communication Disorders*, 3, (1), 1-23.
- Stow, C. and Dodd, B. (2003). Providing an equitable service to bilingual children in the UK: a review. *International Journal of Language and Communication Disorders*, 38 (4) 351-377.
- Thordardottir, E. Rothenberg, A., Rivard M-E. and Naves, R. (2006). Bilingual assessment: Can overall proficiency be estimated from separate measurement of two languages? *Journal of Multilingual Communication Disorders*, 4, (19): 1-21.
- U.S. Bureau of the Census. (2000). *Language Use and English-Speaking Ability: 2000*. Retrieved November 13, 2006, <http://www.census.gov>
- Yavaş, M. & Goldstein, B. A. (2006). Aspects of bilingual phonology: The case of Spanish-English. In Z. Hua & B. Dodd (Eds). *Phonological Development and Disorders in Children: A Multilingual Perspective*. Clevedon: Multilingual Matters.
- Zentella, A. C. (1997). *Growing up Bilingual*. Malden, MA: Blackwell.