The Assessment of Aphasia in the Context of Cultural and Linguistic Diversity

By

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the degree of Doctor of Philosophy (Speech Pathology)

in School of Humanities and Social Science, Faculty of Education and Art

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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(Candidate)

Date..................................................
Dedication

The thesis is dedicated to my family members—

father, mother, husband, daughter, son and brothers
Acknowledgements

Undertaking this PhD thesis has been a great journey for me in my country, Australia. The completion of this thesis would not have been possible without the invaluable support, sacrifices, encouragement and inspiration of Allah and several individuals. Hence, I wish to offer my appreciation to all those who extended their support in many different ways.

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I would finally like to ask all PhD students: Have you cried while writing your acknowledgements statement? I did.
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<th>Description</th>
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<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>ASHA</td>
<td>American Speech-Language-Hearing Association</td>
</tr>
<tr>
<td>BAT</td>
<td>Bilingual Aphasia Test</td>
</tr>
<tr>
<td>BDAE</td>
<td>Boston Diagnostic Aphasia Examination</td>
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<tr>
<td>CCS</td>
<td>Communication Complexity Score</td>
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<tr>
<td>CHIS</td>
<td>Central Health Interpreting Service</td>
</tr>
<tr>
<td>CP</td>
<td>complementised phrase</td>
</tr>
<tr>
<td>ICE</td>
<td>interpreted communicative events</td>
</tr>
<tr>
<td>IPA</td>
<td>International Phonetic Alphabet</td>
</tr>
<tr>
<td>IS</td>
<td>interpreted setting</td>
</tr>
<tr>
<td>MIG</td>
<td>Multicultural Interest Groups</td>
</tr>
<tr>
<td>ML</td>
<td>monolingual setting</td>
</tr>
<tr>
<td>NAATI</td>
<td>National Accreditation Authority for Translators and Interpreters</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>PICA</td>
<td>Porch Index of Communicative Ability</td>
</tr>
<tr>
<td>PT</td>
<td>patient</td>
</tr>
<tr>
<td>SL</td>
<td>source language</td>
</tr>
<tr>
<td>SLP</td>
<td>speech pathologist</td>
</tr>
<tr>
<td>SPAA</td>
<td>Speech Pathology Australia Association</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>ST</td>
<td>source text</td>
</tr>
<tr>
<td>SVO</td>
<td>Subject Verb Object</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>TIS</td>
<td>Telephone Interpreter Service</td>
</tr>
<tr>
<td>TPH</td>
<td>Tree Pruning Hypothesis</td>
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<tr>
<td>TL</td>
<td>targeted language</td>
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<tr>
<td>TT</td>
<td>targeted text</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<td>US</td>
<td>United States</td>
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<tr>
<td>VIC</td>
<td>Victoria</td>
</tr>
<tr>
<td>VSO</td>
<td>Verb Subject Object</td>
</tr>
<tr>
<td>WAB</td>
<td>Western Aphasia Battery</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Thesis Abstract

The present research aimed to explore the challenges that monolingual speech pathologists and interpreters face during aphasia assessment sessions for bilingual speakers. A review of the previous research in the area of speech pathology assessment of bilingual speakers highlighted that the search for valid standardised assessment tools was problematic given both the complexities of obtaining adequate linguistic translation to cope with cultural and dialectal diversity among language groups, and the challenges faced by health care interpreters given the need to adapt materials to enhance interpreters’ partnerships with speech pathologists to ensure the validity of individualised assessment processes. The research aimed to develop an assessment guide that would facilitate these complex processes through providing these professionals with culturally and linguistically appropriate guidance.

In the first stage of the current research, the results of an online national survey (58 respondents) highlighted a lack in the availability of appropriate assessment materials for speech pathologists for use with bilingual speakers in Australia. It also revealed that speech pathologists’ lack of knowledge about other languages and cultural diversity is a main barrier towards improving the quality of the assessment sessions obtained for bilingual speakers. The findings highlighted that bilingual speech pathologists are often unavailable within the Australian context those who can work as consultants for monolingual English-speaking speech pathologists, to help in interpreting the assessment outcomes of bilingual speakers, including those with aphasia. Despite the reported difficulties faced by speech pathologists when assessing bilingual speakers with aphasia, as revealed from the survey findings, speech pathologists rated themselves as competent in doing the assessment and believed that the assessments they obtain for bilingual speakers are effective.
In the second stage of the research, the analysis of transcripts from focus group discussions identified the difficulties that arise in the partnership and collaborative teamwork between interpreters and speech pathologists when they are working together to assess bilingual speakers within the Australian context. In particular, misunderstandings were reported as common between speech pathologists and interpreters in relation to each other’s expectations of their roles within the sessions.

In the third stage, based on the findings revealed by the previous two stages of this research, an aphasia assessment guide was developed to providing interpreters and speech pathologists with an assistive guide to allow them to better identify and explain their role within aphasia assessment sessions for bilingual speakers. The guide developed for the present research narrowed the focus of the research to the pathology of aphasia and to the Arabic language, for the purpose of material development. The guide provides important knowledge needed by the English-speaking speech pathologists about the main Arabic language characteristics. The guide also provides health care interpreters with basic information about the meaning of the term ‘aphasia’ and about the expected language and speech behaviours and symptoms associated with the disorder. The guide provides some examples of more culturally and linguistically appropriate assessment materials that might be useful when obtaining language assessment for Arabic speakers with aphasia.

The current research findings suggest the importance of the development of assessment materials that can readily be understood by health care interpreters and used flexibly in partnership with monolingual speech pathologists. While the present research develops such assessment material for Arabic adult speakers, it is suggested that the research offers a potential model for the development of similar assessment processes and materials for use with a range of other languages and cultures.
Introduction

The assessment of aphasia for bilingual speakers is well recognised as a challenging procedure for speech pathologists in Australia and in other countries with multicultural communities (Kambanaros & Van Steenbrugge, 2004). Previously published research has identified some of the major difficulties that occur during interpreter-mediated assessment sessions for bilingual speakers with aphasia. Such difficulties and challenges are reported to emerge from the linguistic and cultural diversity, speech pathologists’ lack of knowledge about other cultures and languages, inappropriate assessment materials and interpreters’ unavailability (Battle, 2000; Isaac, 2002b; Roger, Code, & Sheard, 1996, 1998, 2000).

The present research aimed to explore the challenges that monolingual speech pathologists and interpreters face during aphasia assessment sessions for bilingual speakers, with a view to developing an assessment guide to facilitate the process by providing professionals with more culturally and linguistically appropriate guidance. The assessment guide developed by the researcher as part of this research was designed to assist with the assessment of Arabic speakers with aphasia (as Arabic is the researcher’s first language).

A range of research methods was used through the three-stage research process. The first stage was a quantitative study, which made use of an anonymous online survey, distributed nationally through the provision of a web-link via a number of professional electronic communication networks. This stage aimed to explore monolingual speech pathologists’ perspectives regarding the assessment of aphasia in bilingual speakers to identify the challenges they face in such sessions. It also aimed to reveal more about the availability of interpreters and about the relationship and partnerships between speech pathologists and interpreters in clinical sessions. The second stage of this research made use of a qualitative study that involved several
focus group discussions with groups of interpreters and of speech pathologists to learn more about
the challenges speech pathologists and interpreters face when working together to assess bilingual
speakers. This stage of the study also aimed to explore the nature of the partnership (if it exists)
between speech pathologists and interpreters when they are working together in the assessment of
bilingual speakers within the Australian context. In addition, the study aimed to uncover the role of
expectation on the part of each of these professionals in relation to the other, and to gather
participants’ suggestions and opinions on how best the speech pathologist–interpreter partnership
can be improved and enhanced. The final stage of this research emerged from the prior stages’
identification of the specific difficulties that make the assessment of bilingual speakers with aphasia
challenging for interpreters and speech pathologists. To meet the difficulties identified, a new
aphasia assessment guide was developed from this research to provide professionals with ideas and
suggestions that are more useful to facilitate the assessment process. In particular, the guide was
designed to provide speech pathologists and interpreters with a resource to help them to develop
more cooperative partnerships when obtaining aphasia assessment for bilingual speakers
(particularly, for Arabic speakers with aphasia). The guide provides culturally and linguistically
appropriate assessment items for use with Arabic speakers. As part of this development stage, a
review of the content of the guide was sought and obtained from a range of experts (Arabic speech
pathologists from Egypt and Jordan, Arabic interpreters that work in the health care sector in the
Australian context, and English-speaking speech pathologists that work with speakers with aphasia
in Australia). In response to expert feedback, the material was revised.

This research contributes to the body of knowledge on the assessment of aphasia in bilingual
speakers, and it fills a gap in current understandings of ways to meet challenges faced by speech
pathologists and interpreters in assessing bilingual speakers with aphasia in Australia and in other
countries with multicultural populations. The research argues that the complexities involved in the
assessment of aphasia in bilingual speakers cannot be addressed solely by the development of
standardised assessment. Instead, the findings suggest the importance of the development of assessment materials that can be readily understood by health care interpreters and used flexibly in partnership with monolingual speech pathologists. While the present research developed such assessment materials for Arabic adult speakers with aphasia, it is suggested that the research offers a model for the development of similar assessment processes and materials for use with a range of other languages and cultures.

The following eight chapters will discuss these research stages in more details and present the methods and findings of each study.

Chapter 1 provides an introduction to the relevant literature about aphasia and bilingualism. It focuses particularly on the emerging challenges in interpreter-mediated assessment sessions for bilingual speakers. Chapter 2 focuses on the Arabic language and provides relevant information about the structure of Arabic and the main differences between the Arabic and English languages. The purpose of this chapter is to help the reader to identify some of the problems that occur specifically when translating from Arabic to English and from English to Arabic. Chapter 3 focuses on translation and interpreting, particularly as provided by interpreters in the speech pathology sector. The important issues related to translation and interpreting in the health care sector are discussed in detail in this chapter. This chapter sheds light on the difficulties that emerge within the health care setting from the three different perspectives that comprise this setting: the bilingual speaker to be served, the health care provider and the interpreter that facilitates the communication between the interlocutors. Chapter 4 provides an overview of the research methodologies used to conduct each stage of this research, and details the triangulation obtained between the research data.

In Section 2, Chapter 5 provides the data analysis and findings of the survey conducted for this research through several focus group discussions. Chapter 6 then explains the main findings generated from the qualitative analysis of the data. Chapter 7 details the development process of the
aphasia assessment guide for Arabic speakers. This development process was initiated, modified and finalised through the different stages of this research. The resulting aphasia assessment guide aims to provide speech pathologists and interpreters with a useful tool for use when working with Arabic speakers with aphasia within the Australian context. Chapter 7 also provides details about the several revision stages carried out upon the assessment guide in response to the gathering of expert opinions and suggestions, sought by the researcher to improve the assessment guide. The specific changes made to the aphasia assessment guide are explained in this chapter.

Chapter 8, the discussion and conclusion chapter, provides a thorough discussion of the research’s main findings. An urgent call for further research is made to fill the remaining gap in research in regards to aphasia assessment in bilingual speakers.
1.1. Definitions of Aphasia and Bilingualism

1.1.1. Aphasia.

LaPointe (2005) describes aphasia as a communication disorder that affects the primary linguistic system in the aphasic person’s brain includes an impairment of lexical-semantic processing, syntax, phonology-graphology and pragmatic abilities. Aphasia commonly occurs after a stroke (cerebrovascular accident) in the left hemisphere of the human brain. Hallowell and Chapey (2008) discuss the importance of expanding such impairment-based definitions to include the activity and social participation, personal and environmental aspects in line with the International Classification of Functioning, Disability and Health (ICF) developed by the World Health Organization (WHO). From this wider perspective, quality of life emerges as a central feature for people affected by aphasia (Simmons-Mackie & Kagan, 2007).

Aphasia is estimated to affect about 1,079,615 individuals living in the United States (US), 221,583 individuals living in the United Kingdom (UK) and about 73,210 individuals living in Australia (AphasiaNZ, 2009). Like many countries around the world, Australia is a multicultural nation, with about 21 per cent of its population being bilingual speakers (that is, speakers who have mastered more than one language). While data are not available as to the proportion of bilingual speakers with aphasia, if 21 per cent of the estimated population with aphasia are bilingual, then it can be estimated that about 15,000 people with aphasia in Australia may be bilingual speakers. As the main etiology of aphasia is stroke, and as the risk of stroke increases with age, the increasing numbers of elderly people in Australia (as in other Western countries) suggests that, not only will there be increasing numbers of people with aphasia over the next 50 years, there will also be
increasing numbers of bilingual speakers with aphasia (Australian Bureau of Statistics, 2009). Hollander and colleagues (2003) identified that age-related acquired language disorders due to dementia and aphasia are expected to increase over the same period for both monolingual and bilingual speakers, mainly because causes of such disorders increase with age. There are an estimated 8,600 new cases of aphasia each year, with 60 per cent of these remaining aphasic after a year of initial incidence (Australian Aphasia Association, 1st October 2009). Based on the figures reported by Hollander and colleagues (2003), and in view of the estimate that 21 per cent of people living in Australia are bilingual, approximately 1,800 bilingual individuals could be expected to be affected by aphasia each year in Australia. These projections rely on the continued pattern of migrant, refugee and humanitarian entry, which has been operating up until now. While the larger proportion of entrants to Australia are younger, it needs to be noted that family reunion schemes have operated (although inconsistently) over more recent years, resulting in entry of older family members.

Speech pathologists in Western multilingual countries will increasingly be required to deal with bilingual aphasic speakers as a regular part of their professional practice. In Australia, the majority of speech pathologists are monolingual English speakers (Clark, 1998; Williams, 2011). Currently, they are frequently involved in the assessment and management of bilingual speakers with aphasia, including those with limited English language proficiency. The assessment and management of aphasia is a complex task in itself, and this complexity increases when the process involves bilingual aphasic speakers (Migliozzi-Kulik, 1988). As the above population projections suggest, increasing population numbers especially in the older age group mean that the need for speech pathology services providing for bilingual, and specifically, non-English-speaking, aphasia sufferers can be expected to increase. Extending from this, a rise can also be expected in the challenges and difficulties faced by interpreters and monolingual speech pathologists in obtaining aphasia assessments and treatments for such bilingual speakers.
1.1.2. Bilingualism.

As Siguan and Mackay (1987) state:

Bilingualism has been defined in many different ways, ranging from the total, simultaneous and alternating mastery of two languages to some degree of knowledge of a second language in addition to the spontaneous skills that any individual possesses in his first language (p. 13).

They also added that a speaker can be called bilingual when he/she is similarly proficient in another language beside his/her first language and has the ability to use both languages to equal effect across different situations (Siguan & Mackay, 1987). However, there has been controversy and a debate as to the definition of bilingualism (Ardila, 1998; Roberts, 1998). For instance, Paradis (2004) noted that bilingual speakers are not a homogeneous population, as their proficiency in each language varies according to several factors such as age and manner of second language acquisition, mastery level achieved in the second language, and the pattern of use of the second language. These factors have been suggested to interrelate. For example, the age when the second language was acquired can be affected by the manner or the approach of acquisition, while later acquisition may rely more heavily on metalinguistic and pragmatic knowledge (Paradis, 2004).

Roberts (1998) raised some concerns regarding the relationship between language acquisition, proficiency and patterns of use in bilingual speakers, due to the lack of research investigating this issue. The controversy regarding bilingualism also arises in regards to the use of the terms ‘bilingual’ and ‘multilingual’, with some researchers preferring to restrict the term bilingual to proficiency in only two languages, and to refer to speakers of more than two languages as multilingual (Roberts, 2008). In the context of the present thesis, the term bilingual is used throughout to describe issues and research in which the focus is on speakers of two languages, and bilingual speakers are the major focus of the research presented. In specific instances in which
issues and research are discussed that are particular to speakers of more than two languages, the term multilingual is used.

As will be explored later in this thesis, the differences between first and second language acquisition have been seen to have an important influence on the relative differences observed in the impact of brain damage on the presence, nature and severity of aphasia in each language of a bilingual speaker (Fabbro, 2001b). Bilingualism can be argued to be an issue to which clinicians need to pay close attention when preparing for work within the health care sector. This notion has been echoed by Paradis (1995a), who stated that ‘bilingualism is not just a rare occasional occurrence in the language/speech pathology clinic, but a phenomenon every clinic must be prepared to cope with’ (p. 219).

1.2. The Relationship Between Aphasia and Bilingualism

Research in the area of bilingual aphasia is relatively sparse, and even more limited in relation to aspects of clinical practice in bilingual aphasia aiming to improve services provided for bilingual aphasic speakers (Roberts, 1998). In this particular section of this chapter, the neurologically focused research is reviewed briefly to contextualise the more clinically focused research that will be discussed later in the following paragraphs.

Most of the research conducted in the field of bilingual aphasia has been descriptive, with a primary focus on the representation and organisation of the different languages in the bilingual speakers’ brain (Lorenzen & Murray, 2008; Roberts, 2008). Researchers have argued that there is greater participation of the right hemisphere in the language functions of bilingual speakers than in monolingual speakers (Paradis, 1985). Paradis (1985) identifies five main theories about the right hemisphere participation in language functions in the bilingual brain. Paradis mainly identified that the two languages in the bilingual brain are represented bilaterally, however more particularly in the right hemisphere.
(1) the second language is represented in the right hemisphere; (2) the second language is represented bilaterally; (3) the second language is less lateralized than the first: though both are subserved by the left hemisphere, there is a relatively greater participation of the right hemisphere for the second language; (4) both languages are less lateralized; (5) both languages are equally lateralized on the left and there is no difference between bilinguals and unilinguals in that respect (pp. 11–12).

According to Menn, O'Connor, Obler and Holland (1995), the right cerebral hemisphere is usually more involved in the use of the second language, which means that this hemisphere is of greater relevance in terms of language for bilingual speakers than for monolingual speakers. The work of Karanth and Rangamni (1988) supports the theory that bilingualism is associated with bilateral cerebral representation of language in the brain of bilingual speakers. However, in contrast, Petersen, Fox, Posner, Mintun and Raichle (1988) reported that the same neural processes subserve second language performance as subserve performance using the first language, based on observations of regional cerebral blood flow (rCBF) in bilingual speakers. In addition, their study showed that there was no evidence in favour of a specific right hemisphere contribution to bilingual processing of language. As the right cerebral hemisphere has been considered as a potential resource for compensatory language processing, the possibility has been raised as to whether bilingual speakers may be able to make better recovery due to the previous role of the right hemisphere in their processing of language (Beland & Zohra, 2001). However, it is also possible that the relative weakness of the right cerebral hemisphere in language processes will not allow enough right hemisphere compensation for language purposes after left side hemisphere lesion. One possibility may be that the potential for right hemisphere compensation may depend on the structure of the specific languages of the bilingual speaker. Age of acquisition has emerged as a major factor in neural organisation of the bilingual brain. For instance, Azarpazhooh, Jahangiri and Ghaleh (2010) concluded the following:
In bilinguals, languages might be lateralized in subcortical areas of the left hemisphere and that these subcortical structures might be more involved in speech production than comprehension. It was also suggested that the first language might have more subcortical representation than the second language and the subcortical organization of languages in bilingual brain can change according to the age of acquisition of second language (p. 531).

In addition to looking at the representation of the two languages in the bilingual brain, researchers have attempted to identify the neural correlates of language switching; that is, the areas in the brain that are active when bilingual speakers switch from one language to the other (Hernandez, Martinez, & Kohnert, 2000). Hernandez and colleagues have suggested that the dorsolateral prefrontal cortex was of particular importance in the bilingual brain for language switching (Hernandez et al., 2000), although such localisation of this language function remains controversial. Centeno and colleagues (2007) draw a distinction between language ‘switching’, which usually occurs at sentence boundaries, and language ‘mixing’, which is considered to occur within clause or sentence boundaries. However, this distinction between switching and mixing is controversial. For the purposes of the present thesis, the term ‘switching’ will include both within and across sentence phenomena. For researchers working from a sociolinguistic discourse perspective, such language switching is seen as a normal bilingualism phenomenon in which the control of the language switching becomes impaired after brain damage of the bilingual brain (Centeno et al., 2007).

More particularly, research into neural representation in the bilingual brain has drawn upon the observations and research into the pattern of recovery of the two languages following brain damage leading to aphasia. Research on the recovery of the language of bilingual speakers following stroke has examined the controversies as to which language recovers first after stroke, which language should be chosen for treatment first and whether the recovery of one language affects the recovery of the other. Paradis (1995a) reviewed the traditionally held notions regarding
differential recovery, discussing Ribot’s Rule, proposed in 1881, that bilingual aphasic speakers’ first acquired language will be less affected by stroke than the language acquired later and that the first acquired language will be recovered faster than the language acquired later. Paradis also discussed Pitres’ Rule, proposed in 1895, that bilingual speakers with aphasia will first recover their most familiar (most frequently used) language before their less familiar (less frequently used) language. However, as Paradis discussed, these two beliefs were disputed in the 20th century, when research indicated multiple patterns of impact (equal, differential and selective) and multiple patterns of recovery (differential, selective—including antagonistic and successive) influenced by the previously identified factors of age, manner of acquisition, the patients’ linguistic environment and their motivation to adjust to their environment (Paradis, 1995a).

The debates as to the patterns of recovery in the languages of the bilingual speaker following brain damage are mirrored in the discussions as to the preferred language to be targeted in treatment. Some researchers have suggested that the targeted language needs to be the first language, based on the notion that the first language is likely to have more substantial and distributed neural representation (Fabbro, 1999; Fredman, 1975; Paradis, 1977). Others suggest starting treatment with the language that has been least impaired by the brain damage, to achieve increased communicative function quickly for the patient. Others have argued that treatment should be directed to the most impaired language, arguing that the rehabilitation of one language will positively affect the recovery of the other untreated language, even though the two languages are structurally different (Fabbro, 2001a).

The issues around treatment decisions arise, at least in part, from the research that indicates that the neurological representation of language in the brain in bilingual speakers differs from that of monolingual speakers in being more widely represented in the non-dominant hemisphere (most usually, the right hemisphere), as previously discussed. However, Paradis (2004) also noted that the
recovery of different languages in bilinguals’ brain after stroke is not always the same in all individuals. For example, individual factors may influence recovery and response to treatment, such as the greater metalinguistic knowledge of the second language for some bilingual speakers (Paradis, 2004). Similarly, environmental factors will guide treatment decisions. As Fabbro (2001a) suggested, choosing a language for treatment needs to be referred to patients and their family members. More recently, the literature has focused on the necessity of using broad foundational knowledge and broad multidisciplinary bases in assessing and treating bilingual speakers with aphasia for the purpose of strengthen the understanding of aphasia symptoms in this population and therefore implement well-principled services for such speakers. This approach requires better understanding of bilingual speakers’ cultural and ethnical differences. In other words, assessing and treating bilingual speakers needs an understanding of the sociocultural factors within each ethnic group that affect the language use in order to consider the language choice for therapy and overall understanding of clinical program. Personalised intervention contexts for bilingual speakers with aphasia that integrate premorbid life experience, communication practices, cognitive-linguistic interactions, and cultural realities are suggested to be more beneficial for assessment and treatment purposes (Centeno & Ansaldo, 2011).

The study of the neurological organisation of language for bilingual speakers has led researchers to better understand the language organisation and processing in the brain for both bilingual and monolingual speakers. The study of bilingual speakers has also helped in obtaining better diagnosis and rehabilitation of neurogenic communication disorders for both monolingual and bilingual speakers (Paradis, 2000). In relation to neurolinguistic research and intervention for neuropathology of language, the systematic assessment of all languages known by the bilingual aphasic speaker clearly emerges as an essential requirement, given the potential differences in impact, recovery and response to treatment (Fabbro, 2001a; Lorenzen & Murray, 2008). These issues are addressed in the next section. However, it is outside the scope of the research presented in
this thesis to shed further light on the theories of language organisation and the lateralisation of linguistic functions between the right and left hemisphere. Nor is language switching in bilingual aphasic speakers and the particular area(s) in their brain involved with this process discussed in any detail. The main focus of this thesis is on the clinical aspects of speech pathologists’ work with bilingual aphasic speakers, and in particular on how speech pathologists and interpreters can work effectively with such bilingual speakers to obtain adequate assessment for their first language when it is neither spoken nor understood by the monolingual speech pathologist.

1.3. The Assessment of Aphasia in Bilingual Speakers

There has been ongoing research into the development of formal assessment tools for aphasia in a wide range of languages, for use in a wide range of countries (Centeno, 2009; Fabbro, 2001a; Roberts, 1998), and targeted research into the development of comparable test versions in different languages (Kambanaros & Grohmann, 2011; Lorenzen & Murray, 2008; Roberts, 1998, 2008; Roger et al., 2000). However, such types of assessment for bilingual speakers with aphasia require the administrator to share the same first language of the person being tested or to have a native-like level of proficiency, such as an experienced interpreter who is familiar with the assessment procedure. There has been comparatively less research on situations in which the test administrator is dependent upon another person who is fluent in the language of the test for administration and interpretation of the responses of the person being assessed. Further, according to Roberts (2008), there is a lack in the availability of reliable and valid aphasia assessment tests that can demonstrate sufficient sensitivity to detect patients’ progress over time and to discriminate between levels of impairment. There are also a lack of normative data available for specific groups in aphasia assessment for reference when interpreting either translated or non-translated (interpreter-mediated) aphasia assessment tests used with bilingual speakers with aphasia. Roberts
also notes the need to understand more about different cultures in designing and administering assessments, to minimise the intrusion of cultural biases.

The published literature in this area reveals that several aphasia assessment tests are currently being used to assess bilingual speakers in Western countries in which English is the main language used by speech pathologists. The most often reported aphasia assessment batteries in use due to the availability of their translated versions are: The Boston Diagnostic Aphasia Examination (BDAE) (Goodglass & Kaplan, 1983), The Western Aphasia Battery (WAB) (Kertesz, 1982), The Aachen Aphasia Test (Huber, Poeck, Weniger, & Willmes, 1984), American Speech-Language-Hearing Association Functional Assessment of Communication Skills (Frattali, Thompson, Holland, Wohl, & Ferketic, 1995), The Multicultural Aphasia Examination, and The Bilingual Aphasia Test (BAT) (Paradis & Libben, 1987) (Lorenzen & Murray, 2008; Roberts, 1998, 2008).

The validity of such translated assessment tests and the reliability of administering such standardised assessments through interpreters need to be established to assure the equivalence in both languages being tested to avoid misdiagnosis of the speaker’s language abilities (Amberber, 2011). Roberts (1998) argues that the available translated aphasia tests are inappropriate for use in assessing bilingual speakers with aphasia. Roberts emphasises that translated assessment tools originally developed for monolingual speakers are not equal in difficulty for bilingual speakers of different languages. Likewise, Paradis (2004) stressed the importance of obtaining equivalent and comparable language assessment in each language for bilingual speakers with aphasia instead of relying on translating standardised assessment tools. The main problems reported in relation to using a translated standardised assessment tool in the assessment of aphasia for bilingual speakers emerge from using culturally inappropriate test stimuli items and the inaccurate translation of different grammatical constructions (Battle, 2000; Isaac, 2002a; Roberts, 1998; Roger et al., 2000).
These difficulties in obtaining comparable assessment of aphasia across languages have formed the substantial research program led by Michel Paradis over many years. One of the most used aphasia assessment tests developed specifically for assessing bilingual speakers with aphasia is the BAT, developed by Paradis and Libben in 1987. This test was developed based on the authors’ belief that it was unethical to assess only one of the languages spoken by the bilingual aphasic speaker (Fabbro, 2001a; Paradis, 1995b). The BAT applies linguistic equivalence to all language areas of the two languages spoken by the patient through applying test items that are equal in difficulty in both languages (Lorenzen & Murray, 2008). The test consisted of three parts (A, B and C). Fabbro (2001b) stated the following in describing the three parts of BAT:

Part A for the evaluation of the patient’s multilingual history (50 items), part B for the systematic and comparable assessment of language disorders in each language known by the subject (472 items in each known language), and part C for the assessment of translation abilities and interference detection in each language pair (58 items each) (p. 202).

The assessment tests all linguistic levels including, phonology, morphology, syntax, semantics and lexicon. It does this by assessing each linguistic skill; comprehension, repetition, judgment, lexical access, propositioning, reading and writing. Using the BAT, a thorough quantification and classification of language disorders for each language known by the patient can be obtained to allow for a comparison of performances across those different languages.

The BAT has been reported to be the most frequently used tool by English monolingual speech pathologists (Roberts, 1998). The test has been translated and adapted for over 65 languages and for about 150 language pairs, including some Arabic versions of different Arabic dialects (see Section 2.3). The task items are not simply translated across languages, but are adapted to be cross-linguistically equivalent in complexity and validity. The BAT was not developed to assess bilingual speakers’ general functional communication abilities, but rather to measure the linguistic abilities of
bilingual speakers with aphasia (Paradis & Libben, 1987). This test is well suited to assessing the bilingual patients’ two languages and avoiding any misdiagnoses of patients’ language abilities in the language that the monolingual speech pathologist does not speak. The administration of the BAT needs to be provided by a native speaker of the language to be tested. Therefore, the BAT can be used within interpreter-mediated assessment for bilingual speakers with aphasia.

The BAT has been criticised for several reasons. According to Roberts (1998), the lack of published norms in most of the translated versions of BAT is problematic. In addition, to minimise any language switching anticipated in a patients’ speech production, ideally the bilingual speaker needs to be assessed in two separate sessions by two different individuals using only one language within each session, that is, patient’s first and second language need to be tested separately during two separate assessment sessions to identify any language switching that might occur while conducting the assessment (Paradis, 2004). While the provision of separate sessions using only one language is possible when conducted by a speech pathologist who speaks the language of the test, it is not possible when administering the BAT through an interpreter, and so the potential interference of language switching needs to be recognised. Additionally, since the BAT was not designed to provide a functional assessment, its administration does not allow for assessment of the patient’s daily life needs (Koumanidi, 2011).

Further, of relevance to the focus of the present research, it is important to note that the BAT requires the interpreter who administers the translated part of the BAT test to avoid giving cues for the patient during the administration. Findings from the study by Koumanidi (2011) identified that the interpreter may try to ‘help’ the bilingual aphasic speaker through changing the test stimuli, thereby potentially affecting the validity of the assessment. Moreover, although the speech pathologist may attend the session during this part of the assessment, he/she may not be aware of such changes if the language is unknown to him/her. Further, one of the major challenges in
administering the BAT is the need to allow sufficient time for responses. This can be difficult for an interpreter who is unfamiliar with aphasia (Koumanidi, 2011).

Lorenzen and Murray (2008) identify that an important driver in selecting aphasia assessment test for bilingual speakers is the ability of the instrument to describe the types and levels of language abilities of all languages spoken by the bilingual speaker. While the BAT offers one method of doing this, another possible means is discussed by Isaac (2002b). Isaac argues for the incorporation of a functional scoring strategy within assessment, as opposed to only using scoring measures of linguistic accuracy or errors. Such a functional scoring strategy is suggested to be useful in focusing on what patients are able to do, as opposed to what they are unable to do. An individualised, informal assessment approach has been recommended by other authors (Centeno & Ansaldo, 2011). The flexibility of such methods would allow speech pathologists to conduct the assessment in the patient’s preferred cultural and linguistic contexts, using culturally relevant materials such as books, songs, rhymes, family photos and other media used by the patient in his/her daily life (Isaac, 2002b).

1.4. Cultural Considerations, More specific to Arabic Speakers with Aphasia

Language barriers are not the only challenges faced by speech pathologist when working with bilingual speakers; cultural barriers are also crucial. Roberts (2008) has emphasised the impact of people’s cultural background on their attitudes, behaviours, habits, ideas, customs, social arrangements and ways of life. He argues that it is important for clinicians to learn about their patients’ cultural backgrounds, to prevent or solve any problems emerging from cultural and/or linguistic diversity. Roberts suggested some good resources for clinicians to use to learn more about other cultures, while also emphasising the importance of recognising individual variations when reading about culture. In other words, speech pathologists need to avoid ethnic and racial stereotyping when applying information obtained about a particular culture; they must recognise
that different authors may have different points of view about the beliefs of those cultures (Roberts, 2008).

In relation to Arabic patients’ culture, Davis and colleagues (2002) reported some specific cultural beliefs that they saw as common between Arabic speakers and that they considered helpful for clinicians working with Arabic patients in the health care setting. The issues that they identified, and which are listed below, may be seen as relating primarily to traditional Arabic cultural groups. These issues include: avoiding products such as bacon and sausage in meal preparation; avoiding mention of Christian holidays such as Easter and Christmas; avoiding anthropomorphism of animals; avoiding physical contact between men and women in public; avoiding touching or patting the head; avoiding passing items by the left hand or on the table rather than to the hand; recognising the preference for the use of the right hand in eating; recognising that women may prefer to have their husband or family members accompany them to appointments; recognising that home visits may be seen as an invasion of privacy; the role of lowered eye gaze in communicating respect (for example, of women to men and of children to adults); recognising the importance of modesty in dress (for example, covering the face); recognising the importance of Ramadan, the holy fasting month for Muslims; recognising the importance of observance of scheduled times for prayers; recognising the Sabbath (commencing at 1pm on Fridays); recognising the importance of the Quraan as the Muslims holy book; and recognising the belief in God’s plan for their fate as of central importance. As indicated above, the matters discussed by Davis and colleagues (2002) represent highly traditional Arabic Muslim beliefs and customs; the diversity of Arabic cultural groups and the increasing influence of Western culture on them mean that these issues need to be recognised as not necessarily pertaining to all Arabic Muslim people.
1.5. Interpreter-mediated Aphasia Assessment for Bilingual Speakers

As has been mentioned earlier, like many other countries in the world, Australia has become a multicultural nation, with approximately 21 per cent of its population being bilingual speakers. Monolingual speech pathologists in such multilingual countries need to deal with bilingual speakers with aphasia as a regular part of their professional practice. In Australia, the majority of speech pathologists are monolingual English speakers (Clark, 1998; Williams, 2011), yet they are frequently involved in the assessment and management of bilingual speakers with aphasia, many of which have limited English language proficiency. According to the American Speech-Language-Hearing Association (1985), the assessment and treatment provided for bilingual clients need to be administered by a bilingual speech/language pathologist who speaks the patient’s first language. However, even if the speech pathologist speaks one other language, it is highly unlikely that the speech pathologist will speak the first language of the patient, given the diversity of languages present in the community (Hand et al., 2000).

The Australian population is one of the most diverse in the world, with approximately 200 languages other than English currently being spoken by people in their homes, with an additional 200 indigenous languages spoken (Australian Bureau of Statistics, 2006a). According to the Australian Bureau of Statistics (ABS) (ABS,2006a), the most common languages other than English spoken by people at home are (from the most used to the least used):

- Italian, Greek, Cantonese, Arabic, Mandarin, Vietnamese, Spanish, Tagalog/Filipino,
- German, Hindi, Macedonian, Croatian, Australian Indigenes languages, Turkish, Polish,
- Serbian, Maltese and Netherlandic.

According to the ABS, there were between 189 and 231 different cultural and ethnic groups in Australia as at 2005, predicted to increase to 231 to 275 in 2011 (Australian Bureau of Statistics, 2011). Three million people living in Australia (16 per cent of the population) speak a language
other than English, and 38.5 per cent of this group, aged 65 years or older, identify themselves as not speaking English well or not speaking English at all (ABS, 2006c). In the context of this diversity, national and state government support has provided professional interpreter services for the community across the education, legal and health care areas, with services provided in most community languages, through face-to-face and telephone interpreting services, for no cost to the individual (that is, these programs are fully government-funded). Chapter 3 provides more information about these interpreting services.

Due to the monolingual nature of the speech pathology profession in Australia, only a limited number of speech pathologists are registered as bilingual speech pathologists, and these are widely dispersed across the different regions of Australia, representing about 51 different language backgrounds (Speech Pathology Australia Association, 2012; Williams, 2011).

Owing to the nation’s high cultural and linguistic diversity, the government supported interpreter service, and the small number of bilingual speech pathologists, interpreter-mediated assessment sessions are commonplace for Australian speech pathologists. Research conducted in speech pathology clinics at Australian major hospitals in 1992 concluded that between 16 and 22 per cent of speech pathologists’ caseload of aphasic speakers were bilingual (Whitworth & Sjardin, 1993). According to Roger, Code and Sheard (1998), about 95 per cent of speech pathologists in speech clinics in Australia depend either on professional interpreters or on patients’ family members when conducting language assessment for bilingual speakers in their first language.

Due to the availability of a government-funded program of interpreters, there is considerable controversy for Australian speech pathologists who may wish to make use of family members as interpreters when, for example, this is the preference of the patient. Institutional policies frequently prohibit such use, due to the potential for conflict of interest and invasion of privacy for the patient (Garrett, Forero, Dickson, & Klinken Whelan, 2008a). However, according to Wiener, Obler and
Sarno (1995), the benefit of involving family members in the process of assessing and treating bilingual speakers goes beyond the purposes of translation; it also helps in the provision of information regarding patients’ linguistic abilities relative to premorbid states. Such involvement of relatives may be seen to fall within the same domain as the information gathering routinely obtained from family members of monolingual English-speaking patients (Garrett, Dickson, Young, Klinken Whelan, & Forero, 2008; Isaac, 2002a; Roger, 2003), and so be unproblematic. However, concerns over accuracy and ethics would remain if relatives were to be extensively used in the administration of assessment tools. Roger, Code and Sheard (1996) suggested the need for more research focused on the involvement of interpreters, family members or other bilingual aides in the assessment process. However, until now, little work has been pursued in this area, perhaps due to concerns about any apparent conflict with prevailing institutional policy as regards this issue.

There are many benefits of interpreter-mediated assessment discussed in the professional literature, although the assessment process is recognised as providing another layer of complexity to the process. The interpreter’s presence becomes crucial when speech pathologists and the aphasic speaker do not share the same language (Baker, 1995b). Beyond the interpretation of instructions and responses and the identification of errors, interpreters work through situations to facilitate the communicative interaction between the monolingual speech pathologist and the bilingual speaker. They also add to the speech pathologist’s understanding of the patient’s cultural background, religion and beliefs, and the different linguistic structures and grammar of the patient’s first/other language (Isaac, 2002b).

The role of interpreters when taking a case history and a history of the patient’s language acquisition and use, and in identifying the functional communicative needs of the patient are essential and unchallenged. Paradis (2004) stressed the importance of obtaining a comprehensive language history for the two languages spoken by the bilingual patient for the purpose of identifying
the severity of impairment within each language and across modalities. Lorenzen and Murray (2008) discussed the importance of conducting the language history as a special feature of bilingual assessment, focusing on age of second language acquisition and manner and pattern of use. Their review of the published literature indicated that self-rating scales or language-use questionnaires were used most commonly in such situations. However, more recently, the use of the Language Experience and Proficiency Questionnaire (LEAP-Q) developed by Marian in 2007 has been more prominent (Marian, Blumenfeld, & Kaushanskaya, 2007).

The accuracy of the linguistic interpretation of patient responses is essential to the diagnosis of linguistic processing for aphasia. According to Paradis (2001), it is important to ensure the correctness of bilingual speakers’ responses during aphasia assessment to avoid any misdiagnosis of patients’ language disorder symptoms. Roger’s research, which involved the back-translation of recordings of interpreted-mediated formal assessments, raised significant questions as to the extent to which speech pathologists can depend on the information gained at the time of assessment administration (Roger, 2003). Roger also called for further research to be conducted in this area, as well as research into alternative approaches, to develop a useful tool for functional assessment and useful guidelines for conducting aphasia assessment in bilingual speakers (Roger et al., 1998).

Previous research by Isaac identified the significant ethical concerns of professional interpreters when their metalinguistic judgments are called upon by speech pathologists (Isaac, 2002a). Her interpreter participants identified substantial reluctance to judge patients’ performance, in the belief that to make judgments about a patient is incompatible with their professional code of ethics (Australian Institute of Interpreters and Translators (AUSIT), 1996). Further, interpreters’ perceived their role in speech pathology sessions to be primarily as an interviewer guided by the speech pathologist, as well as the mediator and informant of any cultural differences and culturally sensitive issues emerging during the session (Isaac, 2002a).
The present thesis addresses these issues raised through this discussion through the identification of the need for more flexible and functional tools that rely less on the linguistic accuracy of interpretation of patient responses, and which sit comfortably within the role expectations of professional interpreters.

1.6. The Need to Develop More Appropriate Assessment Tools

Aphasia assessment for a bilingual speaker has been clearly identified as a challenging situation for monolingual speech pathologists in multicultural Western countries (Battle, 2000; Hurburun, 2008; Isaac, 2002a, 2002b; Isaac & Hand, 1997; Kambanaros & Van Steenbrugge, 2004; Roberts, 1998, 2008; Roger, 2003; Roger, et al., 1998, 2000; Wiener, et al., 1995)

In the Australian context, more than 10 years ago, Roger, Code and Shear’s (2000) survey regarding practice in this area was distributed to speech pathologists who were frequently involved in the assessment of bilingual speakers with aphasia in metropolitan Sydney hospitals. It is notable that, at that time, the 40 speech pathologists who responded reported major barriers to assessment occurring frequently when assessing bilingual speakers. Issues include the lack of appropriate assessment materials to be used with bilingual speakers with aphasia; speech pathologists’ lack of knowledge regarding other languages and cultures; and the unavailability of interpreters. Roger’s (2003) empirical study of the accuracy of interpreter-mediated assessment sessions for bilingual speakers concluded that speech pathologists could not be sure about the adequacy of the assessments they obtained for bilingual speakers. In addition, the lack in training for speech pathologists and interpreters was also raised as major limitation that affects interpreter-mediated speech pathology session for bilingual speakers in the Australian context (Isaac, 2002a). Isaac’s empirical study (2002a) comparing the perceptions of interpreters and speech pathologists in response to a training workshop, identified limitations in the scope of the information shared between speech pathologists and interpreters.
In summary, the research by Roger (2003) and Isaac (2002a) focused on difficulties and challenges faced by speech pathologists and interpreters when working together due to the poor partnership and lack of knowledge of such professionals. Based on their findings, each of these researchers noted the urgent need to provide speech pathologists with more appropriate resources for aphasia assessment with bilingual speakers. However, their research did not extend to the exploration of what sorts of resources might be helpful. The present research sought to fill this gap in this developing field of research. This research aimed to investigate whether the difficulties and challenges reported in previous research were still current and to find appropriate solutions that would facilitate the process of assessment. This aim was achieved by conducting research using a range of descriptive methods. The first stage in this research commenced by conducting a questionnaire survey asking speech pathologists about the challenges they face when assessing bilingual speakers and to gather their suggestions in regard to possible solutions for these difficulties. In the second stage, the research analysed focus group discussions with interpreters and speech pathologists to know more about their partnerships and the challenges they faced when working together in the assessment of bilingual speakers in order to further inform the development of resources. Finally, the last stage of this research built on these two previous studies to develop and test the face validity of an assessment guide designed to be used by speech pathologists and interpreters in their work together to assess Arabic speakers with aphasia in the Australian context.

1.7. Conclusion

In this chapter, a review of the relevant literature highlighted that the assessment of aphasia in bilingual speakers is a challenging situation (Kambanaros & Van Steenbrugge, 2004). This review indicated that the bulk of the existing research in bilingual aphasia has tended to focus on the organisation of the two different languages in the bilingual brain and on the recovery pattern of each language after stroke rather on practical and clinical issues of the assessment situation and on
how to facilitate the process (Roberts, 1998). The review of the previous literature also indicated that there has been a focus on translated versions of aphasia assessment tests, but that such translated versions are not necessarily appropriate to be used with speakers from linguistic and cultural background other than those for whom the original assessment was developed (Battle, 2000; Isaac, 2002a; Roberts, 1998; Roger, et al., 2000). Some researchers have stressed the importance of obtaining equivalent and comparable language assessment in each language for bilingual speakers with aphasia instead of relying on translating standardised assessment (Roberts, 1998). In order to provide valid assessment for bilingual speakers, the literature reviewed in this chapter argued that the use of interpreting services by monolingual speech pathologists is needed in order to obtain such assessment sessions for bilingual speakers. However, the interpreter-mediated aphasia assessment session is also considered as a challenging situation (Baker, 1995a; Isaac, 2002a).

Therefore, the present research was developed with the aim of extending the scope of previous research through the development of more flexible and functional tools, which sit comfortably within the role expectations of professional interpreters. For this purpose, this research developed an assessment guide for Arabic speakers with aphasia for the purpose of facilitating the assessment process. The current research chose to limit the focus of the final assessment tool to be suitable for Arabic aphasia speakers because of the researcher’s first language knowledge of Arabic. Arabic was also seen as an important ‘test case’, given the substantial linguistic differences between English and Arabic, and thus the substantial challenges for interpreter-mediated assessment. Given the focus on Arabic, the following chapter (chapter 2) will first briefly introduce the characteristics and structures of the Arabic language for the purpose of identifying the key differences between Arabic and English, as these would typically not be known by most monolingual English-speaking speech pathologists. Chapter 2 will also draw some important comparison between Arabic and English languages in order to ease the readers’ understanding of
difficulties when translating and interpreting between Arabic and English languages, that will be further discussed through chapter 3 in this thesis.
Chapter 2: Arabic Language

2.1. Introduction to the Arabic Language

The Arabic language is a Semitic language which is characterised by a limited vocalic system and a rich consonantal system (Bateson, 1967; Watson, 2007). While English is classified as a Low West Germanic language of the Indo-European family of languages (Fennell, 2001). Arabic and the English languages differ in many respects. They differ in phonology in which Arabic has gutturals and emphatic consonants which are absent in English. They also differ in their grammatical system in which Arabic has genders and cases, while English does not. Syntactically, in Arabic adjectives always follow nouns; while in English the former precede the latter. Orthographically, Arabic uses a purely consonantal alphabet and the direction of writing is from right to left. However, the two languages are related in the way that their scripts derive from the phoenician alphabet. More details will be discussed throughout this chapter.

As indicated above, the Arabic language belongs to the Semitic language family which itself is part of the wider Afroasiatic phylum including Egyptian, Coptic, Cushitic, Berber, and Chadic. Other languages that belong to the Semitic language family are the East Semitic languages of Akkadian and Eblaite, and the west Semitic languages of Aramaic, Ugaritic, the Canaanite languages including Hebrew, Ancient and modern South Arabian, and the Semitic languages of Ethiopia (Watson, 2007). Semitic languages besides Arabic that are still in use are: Ethiopic, the modern language of Ethiopia (South Arabic language); Mehri, Soqotri, Harsusi, Bahari, Hobyot, and Jabbali (Modern South Arabian Languages use in Yemen and Oman); and Hebrew (Watson, 2007). Semitic languages have been spoken for millennia in regions in which the Arabic language is still in use in the present day. The Arabic language is a widely spoken language, with about 80 million speakers in 1967 (Watson, 2007), increasing to about 221 million speakers across 57
countries today (Lewis, 2009). There are numerous modern Arabic spoken dialects that differ depending on the region in which each particular dialect is used. There are two main classifications of Arabic dialects—the Eastern dialect and the Maghrebi dialect, each of which includes several other sub-dialects (Lewis, 2009; Watson, 2007). These two main Arabic dialects differ substantially in their linguistic features such that speakers from the eastern and western extremes of the Arabic-speaking world are mutually unintelligible. The Eastern Arabic dialect is spoken by people who live in east of a line running from Salum in the north to roughly the Sudan-Chad border in the south, while the Maghrebi Arabic dialect is spoken by people who live to the west of the line.

### 2.2. Phonology and orthography of the Arabic language.

The Arabic language consists of 26 consonants and three vowels (Alhawary, 2011). The three basic vowels in the Arabic language are /a/, /i/ and /u/, each of which presents in short and long forms (Bateson, 1967; Watson, 2007). The Arabic language has a rich consonantal system, especially in its guttural consonants, for example, the laryngeal /ʔ/ (written in Arabic as ْ), the pharyngeal /h/ (written in Arabic as ح), /ʕ/ (written in Arabic as ع) and the velar fricative /χ/ (written in Arabic as خ) (Bateson, 1967; Watson, 2007). Consonants in the Arabic language can be voiced, voiceless or ‘emphatic’ in some Arabic-specific phonemes. Alhawary (2011) has described the emphatic process, and one of his examples (description of the /ض/ Arabic emphatic sound) is presented below to assist the reader by way of an example:

\[\text{ض} D \text{ [voiced alveolar stop emphatic] produced with the tip of the tongue and the alveolar ridge at the base of the upper incisors (with pressure applied from both sides of the tongue against the inner sides of the upper molars, so that the sound produced is not just the empathic/heavy/deep version of the voiced alveolar stop [d]; the closest English sound is ‘d’ in Donna (p. 9).}\]
Emphatic Arabic sounds can also be either pharyngealised or glottalised within different Arabic dialects (Watson, 2007).

According to Alhawary (2011), the Arabic language differs from English, in that syllabic stress is less critical for distinguishing meaning. He stated:

The very first fact to keep in mind with respect to stress (or emphasis on a syllable within a word) in Arabic is that it is predictable and not phonemic. In other words, absence or presence and even misplacement of stress do not lead to a change in word meaning. This is unlike English where, for example, the placement of stress at the beginning of a word such as reject makes the word a noun, whereas placement of stress on the second syllable (i.e., before [j]), as in re´ject, renders the word a verb (p. 15).

Written Arabic is read and written with joined letters from right to left. Not all Arabic letters can be connected to the letters before or after them when writing and these letters are called non-connectors (Alhawary, 2011). There are 15 letter shapes used singly and in combination to represent all 26 consonants, as well as three long vowels. The Arabic alphabet consists of 29 letters (see Appendix A for the Arabic alphabet). Arabic consonant sounds are written differently based on their position within the word (initial, middle or lateral). For example, the /K/ sound appears as ك at the beginning of the word, ك in the middle of the word, and ك at the end of the word. The written Arabic language does not contrast upper and lower case or cursive fonts. The Arabic written language uses four different vowel diacritics to indicate short vowel, gemination (consonant prolongation), case and silence. These diacritics are placed either on the top of the letter or below the letter and are usually used at the primary level of teaching Arabic writing, until students can rely on the context for word recognition (Beland & Zohra, 2001).
2.3. Syntax

The default word order in the Arabic language is Verb Subject Object (VSO), although Subject Verb Object (SVO) word order can also occur. The main distinguishing features are the verb root and the pattern morphology. Arabic verbs usually consist of two, three or (rarely) four consonants from which words are built. One Arabic verb can form many different words that come from the basic verb root. A basic structure is an arrangement of the positions of consonants and vowels linked with the verb root to form these verbal structures (Bohas, Guillaume, & Kouloughli, 1990). For instance, the root k-t-b (dealing with ‘writing’ generally) yields, in Arabic:

kataba كتب ‘he wrote’ (masculine)
katabat كتابت ‘she wrote’ (feminine)
kutiba كتب ‘it was written’ (masculine)
kutibat كتابت ‘it was written’ (feminine)
kitāb- كتاب ‘book’ (the hyphen shows end of stem before various case endings)
kutub- كتب ‘books’ (plural)
kutayyib- كتاب ‘booklet’ (diminutive)
kitābat- كتابة ‘writing’
kātib- كاتب ‘writer’ (masculine)
kātibat- كاتبة ‘writer’ (feminine)
kātibūn(a) كتابون ‘writers’ (masculine)
kātibāt- كتابات ‘writers’ (feminine)
kuttāb - كتاب ‘writers’ (‘broken’ plural, an irregular form, see below)

katabat - كتابة ‘writers’ (broken plural)

maktab - مكتب ‘desk’ or ‘office’

maktabat - مكتبة ‘library’ or ‘bookshop’

maktūb - مكتوب ‘written’ (participle) or ‘postal letter’ (noun)

Arabic verbs undergo systematic changes in the vowel of the verb stem from the perfect to the imperfect tenses. For example, the perfect tense of (qaTa’a ‘he cut’) changes to (yaqTa’u ‘he cuts’) in the present tense, and to (YuqTa’au ‘to be cut’) in the passive. The verb (Daraba ‘he hit’) changes to (yaDribu ‘he hits’) in the present tense and to (Yudrabu ‘to be hit’) in the passive. The verb (kataba ‘he wrote’) changes to (yaktubu ‘he writes’) in the present tense and to (Yuktabuo ‘to be written’) in the passive (Cavalli-Sforza, Soudi, & Mitamura, 2000).

The Arabic verb also can be changed to form the plural, dual, feminine and masculine from the verb root. There are a total of 13 person-number-gender combinations such as infixes, prefixes, and suffixes that can be connected to verbs and nouns (Bateson, 1967; Cavalli-Sforza et al., 2000; Watson, 2007). Arabic nouns also have plural, dual, feminine and masculine forms. Adjectives are morphologically like nouns. Usually adjectives might agree with the attributed noun in gender, number, case and definiteness (Cavalli-Sforza, et al., 2000). The Arabic pronominal appears in different forms: independent subject pronouns, and bound possessive and object pronouns, which are suffixed to nouns and verbs, respectively (Cavalli-Sforza et al., 2000).

One of the most problematic parts of the language for the non-native Arabic language speaker is referred to as the ‘broken’ plural (Maxos, 2000). Maxos (2000) has explained the Arabic plural system as follows:
As for the regular plural, which is the easy part, paradoxically, it occupies remarkable space in Arabic grammar references and that makes the two suffixes ‘\(\text{ون}\)’ and ‘\(\text{ين}\)’ known by everyone as masculine plural but still, arabs keep making mistakes including the highly educated people about which suffix to choose, because that depends on the plural syntactic position if it is nominative, accusative or genitive. In this respect, knowing the syntax-sentence structure is most important. Feminine plural is [a] very similar case but its problem is invisible, because the difference between nominative, accusative and genitive is only in the final short vowel, and short vowels are not written in normal texts. Spoken Arabic solved the problem of masculine plural by using one suffix ‘\(\text{ين}\)’ for all cases: nominative, accusative and genitive (p. 1).

In Arabic phrases, a word that functions as the qualifier typically follows the qualified term. Thus, an adjective follows the noun in qualifies, as in the standard Arabic noun phrase as cited by (Cavalli-Sforza et al., 2000):

- al-baytul-Kabīru
  
  the-house the-large
  
  ‘the large house’

- Kataba Kitāban
  
  Wrote-he book-indef.
  
  ‘he wrote a book’

- ʔasbaћa Kātiban
  
  Became-he writer-indef.
‘he became a writer’

As can be seen in the brief overview above, the complexities of the Arabic language differ from those in the English language in multiple ways. These complexities make translation and interpreting challenging. Chapter 3 will discuss in detail translation and interpreting, and the differences and challenges between these processes. It will also discuss the crucial issues associated with applying translation and interpreting in health care settings, particularly for speech pathologists working with interpreters in sessions with bilingual speakers.

2.4. Aphasia in Arabic Speakers

There is limited availability of information about the nature of aphasia in the Arabic language, and much of this research is drawn from studies involving a small number of Arabic speakers with aphasia (Koumanidi, 2011) which will be discussed further in the following paragraphs. In addition, existing studies have tended to focus on agrammatism in speakers with Broca’s aphasia. The following section of this chapter will provide some details in regard to the available studies that have explored aphasia in Arabic speakers.

Agrammatism is a phenomenon that exists in the language production of aphasic speakers across most languages. Typically, verbs produced by grammatical aphasic individuals are frequently marked by syntactically and semantically inappropriate inflectional affixes (Faroqi-Shah & Thompson, 2007). In English language speakers with agrammatism, not all verb inflections are equally impaired. Faroqi-Shah and Thompson (2007) described agrammatism in English aphasic speakers by giving the following example:

Last night, I walking home.

From a linguistic point of view, the deficits in agrammatism have been accounted for in terms of phonology, morphology and syntax (Diouny, 2010). Broca’s aphasia is most commonly considered
as affecting the person’s syntactic system and the ability to correctly use the functional syntactic elements in speech production. Friedmann (2006) described the deficits in speech production of Broca’s aphasics based on Chomsky’s linguistic theory and on knowledge about brain-language relations. According to this syntactic theory, sentences can be represented as phrase markers or syntactic tree in which these syntactic trees consisted of functional words that represented in varies nodes (Chomsky, 1993). Friedmann (2001) used such a syntactic tree in describing that the syntactic deficits in speakers with agrammatism are selective, which may be explained with reference to what has become known as the Tree Pruning Hypothesis (TPH). Friedmann (2006) argued that in Broca’s agrammatic aphasia, the general idea is that the selective pattern of impairment is caused by the inaccessibility of high nodes of the syntactic tree to agrammatic speakers and so the syntactic structures that relate to high nodes of the tree are more impaired than the lower structures in the syntactic tree in agrammatism. Friedmann (2001) has further explained this by stating the following:

According to the TPH, agrammatics frequently fail to project their syntactic tree all the way up to the tree top. This leads to the dissociations founds between structures depending on high parts of the tree, which are impaired, and lower structures, which are preserved (p. 21).

As the focus of this thesis is on aphasia in bilingual speakers, more particularly on Arabic speakers with aphasia, the following paragraphs will first introduce some studies conducted on bilingual speakers, and then will discuss on those studies conducted on Arabic speakers with aphasia in order to identify characteristics of the aphasia deficits in Arabic speakers.

Friedmann (2006) concluded that individuals with agrammatism those who speak Arabic and/or Hebrew will retain their ability to produce well-formed yes/no questions, but speakers of Dutch, English and German with exactly the same impairment cannot. In addition, Albustanji
(2009) argued that the study of grammatical deficits in Jordanian Arabic speakers with aphasia might reflect similar linguistic deficits by other speakers of other Arabic dialects. This point of view was based on the fact that almost all Arabic dialects share the same grammatical features, thus, they all would share basic morphological and syntactic properties, such as the definite article /-l/, the obligatory agreement of the noun and modifying adjectives in definiteness, the number agreement system that allows feminine singular verb and adjective agreement with plural nouns, the construct of /idafa/ which also called the genitive construct and relative clause structure.

Few studies have been conducted on agrammatism in Arabic speakers with aphasia, and only one study was found to focus on agrammatism in an Arabic-Hebrew bilingual speaker. This particular study was conducted by Ibrahim (2008) and focused on the hypothesis of double-dissociation within bilingualism. This hypothesis claims that the first and second language can be impaired independently of each other. The study investigated a speaker who was considered to have been a balanced bilingual speaker who had mastered the Arabic and Hebrew languages before his stroke. Arabic and Hebrew are both Semitic languages and are similar in origin, but they differ in other linguistic structures such as the phonological and the articulation system (Ibrahim, 2008). In Ibrahim’s study, the patient showed greater impairment in his Arabic language, while his Hebrew language was less impaired after the stroke.

On the other hand, Friedmann (2001) explored the syntactic abilities in 14 Hebrew and Palestinian Arabic speakers with agrammatic aphasia. The study aimed to identify the reality of selective impairment of patients’ syntactic abilities. The study explored different functional categories in agrammatic participants’ production: verb inflection, subordination, questions and verb movement. In relation to verb inflection, results from this study showed that participants with agrammatic aphasia, all of whom were speakers of Hebrew or Arabic languages, were severely impaired in their ability to use correct tense within sentences, while their ability to use correct agreement verbs was relatively intact. Friedmann identified that this finding was consistent with
findings from other studies that have looked at inflection of verbs in other languages such as Spanish, English and French. Friedmann’s findings support the contention that in agrammatic aphasia, not all functional categories are impaired.

Friedmann’s (2001) findings also supported Pollock’s (1989) hypothesis; as cited in Friedmann (2001); about the syntactic tree that represents tense and agreement under different functional heads, and in which there is selective impairment of these two inflections because the tense phrase is situated higher than the agreement phrase in the syntactic tree. This means that the higher nodes in the tree, where the tense is placed, are harder for agrammatic aphasic speakers to access. Therefore, patients with agrammatic aphasia will retain their ability to use correct agreement inflections, while their ability to use correct verb inflections will be impaired. Friedman’s findings in relation to the structure of other syntactic deficits in Hebrew and Arabic were similarly consistent with the unified account offered by the TPH.

Friedmann (2002) reported a study, among others, of Wh- questions and Yes/No questions that extended the exploration of these syntactic forms. The 2002 study reported on 14 Hebrew agrammatic speakers, two Palestinian Arabic agrammatic speakers and one English agrammatic speaker. The results (based on sentence elicitation and repetition tasks as well as on spontaneous language samples) supported the previous 2001 findings in relation to these syntactic structures, in that for agrammatic speakers of Hebrew and Arabic, Yes/No questions were more difficult than Wh- questions, a finding which is the reverse to the pattern typically identified in studies of English speakers with agrammatism. Friedmann argued that in English, Yes/No questions require higher nodes in the syntactic tree than Wh- questions, and so cause more difficulty for agrammatic speakers, while the structure of Hebrew and Arabic requires higher nodes for Wh- questions than for Yes/No questions. In relation to the present thesis, this research has important implications in identifying that, because the structure of the Hebrew and Arabic languages differs from English,
different patterns of more and less difficulty for agrammatic speakers can be expected for speakers of those languages.

Safi-Stagni (1992) conducted a study that aimed to explore aphasic deficits in Arabic speakers for the purpose of obtaining cross-linguistic comparisons. This study examined aphasic errors in one Saudi Arabian speaker of the Hijazi dialect (which is very distinctive in its phonology and morphology compared with other Arabic dialects). Safi-Stagni argued that the Arabic language is a highly inflected language in which the grammatical morphemes carry a heavier functional load than in analytical languages that depend on word order, such as the English language. Therefore, according to Safi-Stagni, Arabic speakers with agrammatism would preserve many grammatical elements in their language production compared with agrammatic speakers of other languages.

Mimouni and Jarema (1997) studied the language of three Arabic Algerian speakers diagnosed with Broca’s aphasia to describe agrammatism in Arabic aphasia. Speech samples were collected from the speakers in a repetition task, reading aloud and recitation from the Quraan. The analysis of all speech samples identified omission and substitution of verb affixes, and omission of articles, pronouns and verbs. Mimouni and Jarema (1997) described the difference between agrammatic errors in the system of suffixes and prefixes in the Arabic and English languages. They identified that in English language, the prototypical process of word formation is linear affixation, by giving this example: ‘i.e. words are made up of sequences of one or more segments or morphemes that are concatenated together in a linear order as shown in the word trans-form-ation’ (p. 126). While in Semitic languages including the Arabic language, the word-formation process expressed mostly through a change internal to the word itself. More particularly; in Arabic language; simple words are commonly formed on the basis of a lexical root of three or four consonants, between which are inserted sets of vowels as well as in this infixation process, suffixation and prefixation are also typical operations in Arabic word formation such as in the word
Diouny (2007) aimed to explore the tense and agreement markers produced by Moroccan Arabic speakers with Broca’s aphasia. Four Moroccan Arabic speakers with Broca’s aphasia were matched for age, sex and education demographic differences with other participants from the control group. Participants were involved in four tasks for the purpose of investigating tense and agreement features of their speech production. These tasks were picture description, repetition, sentence completion and grammaticality judgment tasks. Findings showed that Moroccan Arabic speakers with aphasia were performing worse for tense than for agreements compared with the participants’ performance from the control group. While referring to studies obtained on agrammatism of English aphasic speakers, results showed that English speakers with agrammatism produced 42% correct agreement and about 15% correct tense. Diouny’s results supported the findings of an earlier study by Friedmann (2000) with two Palestinian Arabic speakers. Most of the tense errors observed in the study by Diouny (2007) were omissions and substitutions of verbal affixes. Diouny also observed that the participants with aphasia were omitting verbs with complex syntactic processing, and so their utterances were characterised by non-fluency and reduced syntactic complexity, or in other words, telegraphic style.

Albustanji (2009) explored agrammatism in Jordanian Arabic speakers; a familiar Arabic dialect; with a focus on question production and comprehension of grammatical morphemes corresponding to tense, agreement and negation. This was the first study to explore agrammatism in Jordanian Arabic speakers or to compare agrammatism in the Arabic language with its manifestations in other languages. Further, in this study, the number of participants was greater than that found in previously published studies. Participants included 15 Jordanian Arabic speakers with non-fluent aphasia and a control group of 15 Jordanian arabic speakers without aphasia. Findings
showed that for Wh- and Yes/No questions, participants with aphasia performed significantly worse than the control group participants on both question elicitation and repetition tasks. This study showed that question production in the repetition task was easier than question production in the elicitation task for participants with aphasia. Albustanji’s findings agreed with the previously presented study by Friedmann (2002). However, Friedmann had not examined question repetition in the two Palestinian Arabic subjects in that study. The two studies also shared the same findings in regard to the aphasic participants’ difficulties in the production of Wh-questions, which were significantly more impaired than the production of Yes/No questions. Albustanji discussed that the poor performance of participants with aphasia in Wh- and Yes/No may have related to the fact that question and answer forms in Arabic differ greatly to those found in other languages. He identified that in Arabic speech production, the Wh- questions requires the movement of the Wh-morpheme to the beginning of the sentence that will present the complementised phrase, however in the production of yes/no questions, speakers do not require such movement of any morphemes because yes/no questions in Arabic can be formed simply by changing the intonation without the auxiliary-verb inversion (Albustanji, 2009). Looking further at the production of tense by Arabic aphasic speakers in Albustanji’s study, participants with aphasia showed more errors in the past tense verbs than in present and future tense verb. He described this finding by explanation reasons stand behinds this fact. In Arabic language, the production of the perfect past tense and the future tenses requires moving the verb to the tense node for tense inflection while this movement is not required in the imperfect present tense because it is the default status (Albustanji, 2009).

Albustanji’s (2009) findings in regard to errors in past tense verbs supported results from previous studies by Friedmann (2000) and Grodzinsky (2000). Diouny (2010) noted:

In languages with a poor inflectional system like English, agrammatic subjects tend to omit inflectional affixes (the plural suffix /-s/ and the past morpheme marker /-ed/) and function
words such as prepositions, and complementisers. However, in languages such as Spanish, Arabic and Hebrew, all of which have a rich morphological system, agrammatic subjects omit and/or substitute inflectional markers. Omission is allowed as long as it does not lead to the creation of a non-word in the language (p. 5).

In relation to reading and writing, it has been suggested that Arabic individuals with a left hemisphere lesion may maintain reading abilities because of the complexity of the visuospatial activity needed when reading the deep orthography in the Arabic language (Coslett & Saffran, 1989; Seymour & Elder, 1986). The work of El Alaoui-Faris and colleagues (1994) suggested that Arabic orthography may affect the recovery process of reading ability based on right hemisphere lateralisation. In other words, the bilingual individual with an acquired left hemisphere lesion, especially who has a language characterised by the type of orthography used for the Arabic language, may use bi-hemispheric participation of the left and the right hemispheres across the recovery stage of reading abilities.

Although the majority of research exploring aphasia in Arabic speakers has focused at the syntactic level, one study by Alasseri (2008) examined the discourse abilities of nine Arabic speakers with aphasia. This work represents a unique contribution to research in relation to the functional communication aspects involved for Arabic speakers in a contrast with a healthy group of 10 adults. The study explored whether or not discourse elicited using video clips stimuli with emotional content; positive or negative; was superior in quantity, quality, relevance and manner than that elicited using non-emotional or neutral content. Results indicated that adults with aphasia were pragmatically less appropriate than normal controls on the majority of discourse measures used by the study. Results also revealed that emotional content positively influenced performance.
for the majority of pragmatic variables, including in terms of the amount of production and communicative efficiency, the accuracy of production and its coherence.

2.3 Conclusion

As can be seen from the previously presented studies conducted for the purpose of exploring aphasia in Arabic speakers, there has been limited research in this area. The lack of available descriptive studies about aphasia in Arabic speakers not only limits the practice of English-speaking speech pathologists in Western countries, but also limits Arabic-speaking speech pathologists who work with Arabic aphasic speakers in Arabic countries. However, while Arabic-speaking speech pathologists can draw on their own linguistic knowledge to inform their assessments, this is not possible for English-speaking speech pathologists. Without information about what might be expected for an Arabic speaker with aphasia, the monolingual English-speaking speech pathologist is heavily reliant on the interpreter’s metalinguistic knowledge of Arabic (see Chapter 6 for further exploration of this issue), and on the suitability and availability of resources for the efficacy of the assessment.

As previously explored in chapter 1 and chapter 2 of this thesis, the available translated versions of some aphasia assessment tests have been identified by previous researchers as inappropriate assessment tools for use with populations other than those for whom they were developed (Roberts, 1998; Roger & Code, 2011). Therefore, such translated versions would not be considered as appropriate assessment to be used for Arabic speakers with aphasia. Although there are several Arabic versions of BAT that representing the most familiar Arabic dialects such as the Jordanian Arabic, Maghrebian Arabic, Arabic Armenian, Arabic English, Arabic French, Arabic Somali and Arabic Swahili BATs (Paradis, 2011), the limitations of the BAT raise questions as to the need to develop further resources to assist assessment.
This chapter outlined the key available studies that have attempted to describe aphasia in Arabic speakers. For the purposes of the present research, the key findings from the available research on aphasia in Arabic speakers has been summarised and presented in a simplified format as part of the guide developed to assist interpreters and speech pathologists (see Chapter 7) when assessing Arabic speakers with aphasia in the Australian context.
When speech pathologists do not share the language spoken by clients with aphasia, they need to rely on others with skills and training in translation and interpreting. The differences between the two tasks of translation and interpreting do not simply arise from translation dealing with the written word and interpreting dealing with the spoken word. Although translators generally translate only into their mother language, interpreters interpret both into and from the languages with which they work (Fradd & Wilen, 1990). This chapter first discusses the complexities of translation in general, and then as it applies to the Arabic language in particular. As the focus of the research presented later in this thesis primarily involves issues in relation to interpreting, this chapter also outlines a framework for understanding these issues in more detail.

3.1. Translation

The translation process is performed similarly to communication in everyday life, in that when people listen to each other or when they read linguistically imparted information, they need comprehension and interpretation processes. As described by Dickins, Hervey and Higgins (2002) ‘a stage of translation involves a perfectly ordinary, everyday activity that simply requires a standard command of the language used’ (p. 7).

Bell (1991) cited Meethan and Hudson’s (1969) definition of translation as:

The process or result of conveying information from one language or language variety into another … the main aim is to reproduce as accurately as possible all grammatical and lexical features of the ‘source language’ original by finding equivalents in the ‘target language’. At the same time, all factual information contained in the original text … must be retained in the translation (p. 13).
According to Eco (2001), the verb ‘translate’ is presented in different dictionaries as ‘the action of transforming data or instructions from one form or from one given alphabet into another form or alphabet, without loss of information’ (p. 74).

Hatim and Munday (2004) identified different types of translation: that is, intralingual, interlingual and intersemiotic translation. Intralingual translation refers to the translation process within the same language, which can involve re-wording or paraphrasing. Interlingual translation is the translation from one language to another. Intersemiotic translation refers to the process of translating verbal signs using non-verbal signs, such as music or images. Hatim and Munday (2004) noted that these three types arose from Jakobson’s work in 1959. Jakobson argued for the importance of the entire message when translating into another language. Jakobson’s concept considered the idea of translation equivalence between languages and this concept has occupied the field of translation since it emerged.

The same concept was supported later by Eugene Nida, who integrated the psychosociolinguistic into the translation field through creating a more dynamic equivalence model of translation. This model is three-staged and is based on the analysis, transfer and re-structuring processes of translation. Nida’s approach remains extremely influential to the present day (Hatim & Munday, 2004). It goes beyond the traditional perspective in translation that focuses mainly on the meaning. Rather, here, the focus is on the textual, contextual and cultural factors related to the translation process. According to Pym, Shlesinger and Jetmarova (2006), Nida’s approach in translation brought wider contextual considerations into the study of translation. However, such approaches focus more on the text itself and ignore the human nature of translators and their social identity as mediators rather than just translators (Pym et al., 2006). In contrast, interpreters define themselves as the bridge and the channel that create the link and the connection needed by the communication parties that do not speak a common language (Roy, 1992).
Dickins and colleagues (2002) identified two extremes within the intralingual translation in interpreting the message transformed between the speaker and the listener of the same language. As the interpretation of the speaker’s messages might be based on the listener’s experiences, attitude, expectations and prediction, this is to risk omission, substitution and elaboration of the message. The first extreme within intralingual translation is gist translation, in which the listener is interpreting the speaker’s message using his/her own words, omitting some elements of the source message based on his/her prediction (Dickins et al., 2002). In other words, in gist translation, omission of some elements of the original message may occur consciously or unconsciously in its reformulation. This reformulation might result from the translator misrepresenting the source message, from the reader misreading the targeted message, or from both.

The other extreme that occurs within intralingual translation is exegetic translation. Exegetic translation occurs when the listener distorts the source message by elaborating on it by adding details and personal judgments based on the translator’s experience (Dickins et al., 2002). However, in everyday communication exchanges and in translation, to add nothing to, or omit nothing from, the message content becomes impossible. The comprehending and rephrasing of the translated message equally use both gist and exegetic processes, as three elements of any communication situation seem to affect the interpretation of the communicated messages. These are: the linguistic context; the speaker’s selection of words; and the non-linguistic circumstances associated with the situation and the experiences of the participants, based on their familiarity or unfamiliarity with the situation (Dickins et al., 2002). Dickins and colleagues further identified that interlingual translation (sometimes referred to as ‘translation proper’) includes such gist and exegetic extremes when translating from one language to another.

The issues around the extent to which interlingual translation can be exactly aligned with the source material are often discussed with reference to the terms ‘literal’ and ‘free’ translation. Hatim
and Munday (2004) describe literal translation as referring to word-for-word translation, while free translation means conveying the meaning of the text in general without being restrained with the word-for-word concept. In other words, literal translation preserves the form of the text, while in free translation the translator can preserve the content by altering the form. Dickins and colleagues (2002) have elaborated on this basic distinction by considering four approaches to translation: ‘interlinear’, ‘literal’, ‘free’ and ‘communicative’. The following discussion will present these types and styles in general, while examples of each style will be provided and explained further in the following section of this chapter when discussing translation between Arabic and English.

In **interlinear** translation, grammatical units from the source text are used in place of the targeted language grammar. Interlinear translation only needs to be obtained when the purpose of the translation is to focus on the structure of the source text. This style of translation is mostly used in descriptive linguistic or language teaching, but it not a very practical way of obtaining meaningful translated text. On the other hand, **literal translation** focuses on the denotative meaning of words, usually presented as they are in dictionaries (out of context). However, the grammar of the targeted language is used. **Free translation** includes only a global correspondence between the textual units of the source text and those of the targeted text. In free translation, the grammar and the vocabulary of the source text may be completely different to the targeted text, while the essential meaning of the source material is preserved. **Communicative translation** is defined by Dickins and colleagues (2002) as follows:

A communicative translation is produced, when, in a given situation, the ST [source text] uses an SL [source language] expression standard for that situation, and the TT [targeted text] uses a TL [targeted language] expression standard for an equivalent target culture situation (p. 17).
Communicative translation can be seen as capturing the notion of the dynamic equivalence as developed by Nida (2001), as discussed earlier. Nida (1964) describes the principle of equivalent effect as follows: ‘the relationship between receptor and message should be substantially the same as that which existed between the original receptors and the message’ (p. 159). However, Dickins and colleagues (2002) warn against the danger of using the dynamic equivalence concept excessively, which can risk the loss of the meaning of the source material.

Translators need to realise all of these concepts discussed in regard to the translation styles and processes apart from their skills in another language, while additionally, they must possess good writing, editing and analytical skills. The task of translation involves more than just replacing a word with its equivalent into the other language; translators need to manipulate ideas and sentences to flow with the same coherence in the translated text as in the original written text. They also need to consider any cultural references that may need to be further explained, and expressions that cannot be translated literally, such as slang and other idiomatic expressions. They also need to know who the intended audience for the translation is, to shape the translation so that it can be understood (Nida, 2001). Further, translators need to consider that some passages may have multiple meanings, and thus have several translation possibilities. These complexities mean that translators need to make multiple revisions before a final text can be submitted (Nida, 2001). In other words, translators need to perform not only interlingual translation, but also intralingual translation through rewriting ambiguous text to make it more understandable (Nida, 2001).

The field of translation has been described by Wilss (1994) from the perspective of sociocultural theory as requiring an emphasis on linguistic behaviour as involving both cultural-specific and universal components. As Wilss discusses, no two languages are culturally compatible, which signals the importance of functional equivalence considerations in the field of translation.
other words, translators need to apply adaptive and compensatory strategies when translating from one language to another and from one culture to another.

On the other hand, interpreters are those bilingual individuals who form the locus of language contact, alternately at the same time in the same place to facilitate communication between monolingual speakers. In addition, interpreters are those professionals who work in different settings to mediate the communication between many different types of interlocutors, through using their two languages to convey the spoken discourse of individuals who speak one of their languages to individuals who speak their other language (Valdés & Angelelli, 2003). According to Valdés and Angelelli (2003), interpreting and translation professionals work to render a message produced in one language into another language. While the term interpreting refers to the process of conveying spoken or oral messages communicated by speakers, translation is the process that involves rendering written texts. In general, there are different types of interpreting based on the settings where the interpreting process applied; conference, court, and community interpreting. The interpreting process can also follow different modes in conveying spoken messages such as simultaneous or consecutive interpreting (Angelelli, 2000; Gile, 2009; Valdés & Angelelli, 2003). The similarities and differences between these two professions are discussed below.

3.2. Translators and Interpreters, Similarities and Differences

Translation and interpreting are not two different actions performed by different persons. According to Bell (1991), translating and interpreting are two terms that refer to the same individual; the bilingual person that is acting as the mediating agent between monolingual communication participants from two different language communities. Nida (2001) identified both processes as the same act, producing in the targeted language the closest natural equivalent of the source text either through a spoken or a written performance. Nida (2001) noted that interpreters need the skill of making decisions rapidly, the ability to keep up with the rapid flow of spoken
language, and instant recall from a wide background knowledge, and finally the willingness to produce something that may not be perfect. Similarly, Gile (2009) argued that translation and interpreting are similar in the function performed in which both are performing essentially the same function of re-expressing in one language what has been expressed in another for communication or other purposes.

However, while most scholars in the area focus on the linguistic processes required of translators and interpreters, Bahadir (2011) discusses how the context in which community interpreters work shapes their function to have a broader sociocultural impact. Bahadir describes the community interpreter as the professional who works as the voice of the accused or oppressed, the defendant, the incarcerated, the minority speakers, the migrant, the asylum seeker and the refugee, among many others. The complex social issues arising from the contexts in which interpreters work can be seen to have important issues in relation to their role in health care, and this will be considered in this thesis.

The immediacy of the context of interpreting raises particular issues when interpreters are required to provide on-the-spot translations of written material into verbal form; that is, ‘sight’ translation. Sight translation sometimes needs to be performed by interpreters alongside simultaneous and consecutive interpreting when being asked to express orally what is written in a text document. Russell (2005) defines simultaneous and consecutive interpreting as:

“Simultaneous interpretation is defined as the process of interpreting into the target language at the same time as the source language is being delivered. Consecutive interpretation is defined as the process of interpreting after the speaker or signer has completed one or more ideas in the source language and pauses while the interpreter transmits that information” (p.136).

Agrifoglio (2004) identified that differences between sight translation and simultaneous and consecutive interpreting arise mainly due to the fact that in simultaneous and consecutive
interpreting, the source segment of language disappears once the oral message has been conveyed, while in sight translating the source text remains visually accessible for the translator. Agrifoglio considers that sight translation is a crossbreed type of translation that stands between translation and interpreting. It is considered a more complex and demanding technique for interpreters compared with consecutive and simultaneous interpreting, at least in part because the nature of the text itself differs. Generally, texts are richer in written rather than oral form (for example, there is often a wider range of vocabulary use, such as synonyms).

The issues involved in sight translation are important for this thesis, as interpreters who work in the health care sector for professionals and bilingual speakers often face this type of translation. More specifically, speech pathologists need to obtain written language assessments and may require written text within standardised assessment tools to be translated by the interpreter into the patient’s first language. To provide sight translation in such situations places interpreters under more complex demands than when only performing simultaneous and/or consecutive oral interpreting tasks. As Agrifoglio (2004) notes, ‘Since the beginning of interpreting research, sight translation has mostly been considered as a pedagogical exercise and interpreters are rarely trained in this task per se’ (p. 43). The complexities involved raise questions regarding the need for training and additional support for interpreters to manage these demands. This will be addressed further in this thesis.

The training required for translation and interpreting is wider than that needed for handling sight translation. Owing to the complexity involved in translation, Alves, Gonçalves and Rothe-Neves (2001) emphasised the importance of translators’ training based on their belief that translation will need more theoretical learning and practical training beside their innate skills. Their competence in translation need to be understood as a role-specific competence rather than just as a
repertoire. In other words, translators’ competence needs to be perceived as the appropriate use of specific abilities according to surrounding demands (Alves et al., 2001).

Similarly, many other scholars argue that for interpreters, specific training is required to ensure competence such as extra-linguistic knowledge which has been identified as one of the most important requirements for interpreters, as it plays a major role in the comprehension and reformulation phases of the translation process (Angelelli, 2000, 2004, 2008; Gile, 2009; Langdon & Quintanar-Sarellana, 2003). Gile (2009) also stressed the importance of specific lexical information for interpreters given the significant consequences of miscommunication that can occur when the interpreter or the translator cannot find the appropriate terminology to convey the source message appropriately and correctly.

While both translators and interpreters need to maintain their knowledge base, the time factor again makes an important difference between translators and interpreters’ knowledge database. Translators may seek additional knowledge at their own pace, while interpreters will need to gain such knowledge previously before attending the interpreting assignment (Gile, 2009). In addition, Gile added, ‘freelance interpreters require wider but more superficial, more volatile and less structured knowledge than translators’ (p. 148). Gile argues the importance of advanced preparation strategies for interpreters, as does the present thesis.

3.2 Translation of Arabic language texts

Dickins and colleagues (2002) agreed with Wilss (1994) in relation to the idea that intralingual translation and interlingual translation (‘translation proper’) are interrelated processes when translating between Arabic and English. Since the Arabic language involves a high degree of semantic repetition, Dickins and colleagues (2002) reported that in Arabic-English translation, gist translation is common. Dickens and colleagues identified that exegetic translation is mostly in use with different English interpretations of the Quraaan. The main approaches to interlingual translation
have been discussed by Dickins and colleagues (2002), and these are described below, with Arabic-English examples.

Dickins and colleagues criticised interlinear translation, in which targeted text does not necessarily respect the grammar of the source text, with the grammatical units instead corresponding as closely as possible to every grammatical unit of the original. An example of interlinear translation of an Arabic proverb to English as used by Dickins and colleagues (2002) is as follows:

الي فات مات

The/What passed died

In this example, Dickins and colleagues preserved the grammar of the source text (Arabic) in the English translation, and the incomprehensibility of the English sentence is obvious, illustrating that interlinear translation is impractical between Arabic and English.

Dickins and colleagues did not provide a literal translation for the above example, but in English it would be:

What has passed, has died.

In this literal translation, the grammar of the source text has been ignored in favour of representing the lexical items in an acceptable English sentence structure.

The same proverb example in a free translation is provided by Dickins and colleagues as:

Let bygones be bygones

In this free translation, it is obvious that the grammar is completely different and the metaphor of dying is lost, as the lexical items are also changed, although the gist has been preserved.
The same proverb example in a communicative translation would be to use the Spanish expression well known to English speakers, ‘Que sera, sera’, ‘What will be, will be’. In this type of translation, although the wording is entirely different and from another language, it is likely to be used by English speakers in the same situations when that the original Arabic proverb would be used.

Apart from translation inconsistencies arising from different approaches to translation, inconsistencies can arise from factors such as the lack of standardisation in varieties of Arabic across different Arab countries, or even in the same country (Saraireh, 1994). Saraireh (1994) also notes that inconsistencies can arise from the translator’s inattention or unfamiliarity with a technical field, or the mistaken idea that ‘stylistic variation’ should be achieved through the use of different terms for the same referent. Saraireh (1994) identifies that translation inconsistencies can occur in Arabic-English translation when the translator chooses a specific expression in the target language for a new or borrowed concept, which is later used interchangeably with one or more synonyms. This might occur when Arabic synonyms are used to render concepts for which a specific term has already been introduced into the target language, while another type of inconsistency might occur when native Arabic terms are used for Arabicised borrowed terms (see Table 1 for examples). As language contact has increased and so has international exchange of knowledge, science and technology, loan translation has become a common phenomenon in many languages.
Table 1

*Examples of Arabicised borrowed words from English.*

<table>
<thead>
<tr>
<th>English</th>
<th>Native Arabic</th>
<th>Arabicised Borrowing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>Haatif</td>
<td>Tilifoon</td>
</tr>
<tr>
<td>Radio</td>
<td>Midhyaa?</td>
<td>Radyuu</td>
</tr>
<tr>
<td>Camera</td>
<td>?aalat tašwiir</td>
<td>Kamiraa</td>
</tr>
<tr>
<td>Microscope</td>
<td>Mijhar</td>
<td>Mikruskuub</td>
</tr>
<tr>
<td>Capsule</td>
<td>Birshaama</td>
<td>Kabsuula</td>
</tr>
<tr>
<td>Toxins</td>
<td>Sumuum</td>
<td>Tuukiinaat</td>
</tr>
<tr>
<td>Zinc</td>
<td>Xaaršiin</td>
<td>Zink</td>
</tr>
</tbody>
</table>

Another type of inconsistency might occur when different derivations from the same Arabic term are used for the same English concept, for example:

- **Chemical**
  - Kimaawiyy
  - Kimiyy

- **Chelation**
  - Raabiţa kulaabiyya (bond claw)

- **Amber, ambergris**
  - عقرب

- **Kohk (cosmetics)**
  - كحل

- **Sash (ribbon)**
  - شاش

- **Zero**
  - صفر

Loan words can enter any language from several different languages. Thus, while Arabic borrows many words from the English language, it also draws borrowings from other languages, either directly or via their adoption in English. For example, there are numerous loans from Spanish and Hindi in Anglo-Indian (Behnstedt, 1997). Of course, borrowings occur in both directions, and so many English words (and words in other languages) come from Arabic (see Table 2).
Table 2

Examples of English borrowed words from the Arabic language.

<table>
<thead>
<tr>
<th>Arabic words</th>
<th>Phonemic transcript</th>
<th>English words</th>
</tr>
</thead>
<tbody>
<tr>
<td>سكر</td>
<td>/sukkar/</td>
<td>sugar</td>
</tr>
<tr>
<td>ليمون</td>
<td>/laymoon/</td>
<td>lemon</td>
</tr>
<tr>
<td>الكحول</td>
<td>/alcohol/</td>
<td>alcohol</td>
</tr>
<tr>
<td>قهوة</td>
<td>/qahwa/</td>
<td>coffee</td>
</tr>
<tr>
<td>قطن</td>
<td>/qutun/</td>
<td>cotton</td>
</tr>
<tr>
<td>سفر</td>
<td>/safar/</td>
<td>safari</td>
</tr>
<tr>
<td>صفر</td>
<td>/sifr/ or/cipher/</td>
<td>zero</td>
</tr>
</tbody>
</table>

Beaugrande and colleagues (1994) explain how loan English words and translation affect written Arabic in Jordanian newspapers. They give examples of texts using SVO as a sentence word order instead of the VSO Arabic sentence word order; using compound adjectives such as ‘?afru-?asyawi’, ‘Afro-Asian’ in a similar way to in English; and using the English journalistic punctuation system.

Izwaini (2006) discusses the main problems that occur in automated, computer-facilitated translation between Arabic and English languages (that is, deletion, vocalisation, multiple meanings, gender and coordinators and conjunctions). These problems serve to illustrate some typical issues in Arabic-English translation, and they are thus discussed in detail below.

**Deletion** becomes a problem when obtaining word-to-word translation, for example:

مجلة تراث تصدر عددًا خاصًا حول حديقة الصقر

(Magazine Turath publishes number special on hunting the-hawks)

‘Heritage magazine published a special on hunting hawks’ (p. 120) (Izwaini, 2006).
In this example, we can notice the word عدد (issue, number) is dropped.

**Vocalisation** is another problem that can occur when using word-to-word translation between Arabic and English. According to Izwaini (2006), and as described earlier in Chapter 2 in regard to the Arabic written language and the use of diacritics, the lack of diacritics in the written Arabic language may lead to mistranslation, mainly because without the diacritic, a single word could be translated four different ways (Beland & Zohra, 2001). Izwaini (2006) called this process **Vocalisation** and provided the following examples:

‘For example, الحر can mean the-heat or the-free, مهمة can be task or the feminine form of important, فقد can mean to lose or a conjunction plus a particle, يعد can mean to promise or to prepare, and يعد can mean to establish or to complicate’ (p. 120).

Izwaini (2006) also notes that some Arabic letters are written differently in different Arabic countries. For example, in Egypt, some letters are written without the use of diacritics, while in other Arabic countries the same letters are written with diacritics. As identified above, the diacritics could cause a change in the translation and in the meaning.

Other problems can arise because each letter of the Arabic alphabet can be represented by several distinct allographs based on whether the letter position in the word is initial, medial, final or in isolation (Beland & Zohra, 2001). An example can be seen in the letter ش, which is written as or ش, or ش in these respective positions. Also, problems can arise given the **multiple meanings** for some words. For example, إعلان can be translated as announcement, advertisement, declaration and sign (Izwaini, 2006, p.123).

In the Arabic language, gender is represented by two terms only and the neutral **gender** is absent. Izwaini (2006) stated the following:
This can result in translating some masculine pronouns in the singular, and feminine pronouns in the singular and plural that refer to inanimate into he/him/his and she/her, resulting in confusion and incoherence of the translation (p. 126).

The tense and aspects systems in Arabic and English do not correspond fully to each other, and so when translating Arabic past tense in cases of reporting, the verb should be translated into the present perfect because the past tense can sound as if it is a narrative. Izwaini (2006) provides the following example:

الأ ب نات جاءت

(have-come the-girls)

The girls came.

Usually Arabic texts use the bound morpheme و, which refers to ‘and’ at the beginning of sentences and sometimes within paragraphs. Therefore when translating from Arabic to English, not all of the coordinators and conjunctions need to be translated. In addition, when translating from Arabic to English, coordinators and conjunctions might cause some difficulties or misinterpretations when translating from Arabic to English. Izwaini (2006) described that coordinators and conjunctions can cause problems depending on the context, for example، فقـد which is an Arabic conjunction that is usually attached to a particle to mean roughly, ‘hence’, or alternatively, it can appear as a verb, meaning ‘to lose’.

This chapter so far has provided an explanation of the key issues in translation and interpreting processes in general, and in relation to Arabic-English translation and interpretation in particular. This information lays the groundwork for the next section, which will focus on translating and interpreting within the health care context in Australia, including as it relates to
speech pathology. The complexities involved in translation and interpreting present health care interpreters with numerous challenges, especially in speech pathology sessions.

3.3. Translation and Interpreting in the Health Care Australian Context

As previously discussed in this thesis, Australia is one of the most culturally and linguistically diverse societies in the world, with approximately 21 per cent of the population speaking English as second language (Australian Bureau of Statistics, 2006b). About half a million individuals living in Australia identify as having limited English language proficiency (Australian Bureau of Statistics, 2006b). In the 1970s, the Australian government developed its ‘Multiculturalism’ policy, which has continued to receive bipartisan political support ever since. Knight (2008) defines ‘Multiculturalism’ as:

A term that was introduced into the political bureaucratic language decades ago, and has since become synonymous with diversity and tolerance in Australia. It was introduced in 1973 by the Labor government under Gough Whitlam and later resumed as a policy under the Fraser government, where refugees were welcomed from Lebanon and South-East Asia. Also in 1973, the government officially ended the White Australia policy by dropping all references to race in its immigration policy; immigrants were now to be chosen on merit and eligibility for various categories rather than on the basis of race, colour or religion (p. 106).

According to the legislation associated with this policy, obtaining social justice is crucial for all people who live in Australia through providing adequate services for all people including those with limited English language proficiency. As part of this shift in thinking, it became recognised that the provision of professional translation and interpreting services for those people was an important strategy to avoid situations in which insufficient and incorrect interpreting occur, such as when friends or family members participate as interpreters in medical settings (Garrett, Forero, et al., 2008a). Thus, government policy has shaped the context in which speech pathologists and
bilingual speakers in Australia have access to translation and interpreter services. This chapter elaborates on the issues that arise from this broader context.

3.4. Health Care Interpreting Service; Implications for Patients with Limited English Language Proficiency

Kliewer and Jones (1997) report that a greater proportion of individuals from low socioeconomic and poor health status backgrounds make use of medical services than do those from more affluent backgrounds. In addition, more of those individuals in the former group identify as having limited English language proficiency than do those in the latter, more affluent group. This suggests a relationship between lack of language proficiency and poor health, and indeed some authors have identified difficulties with communication between patients and health care service providers due to language mismatch as negatively affecting patients’ access to assessment, diagnosis, treatment, satisfaction and quality of life (Garrett, Forero, et al., 2008a; Karliner, Jacobs, Chen, & Mutha, 2007). The recent published literature continues to stress the importance of using professional interpreters or bilingual health care providers for the purpose of improving the quality of medical care provided for people with limited English language proficiency (Flores, 2005).

In response to such calls, and to avoid the proposed negative effects associated with the increasing number of communities and migrants with limited English language proficiency, the Australian government has increased efforts toward improving and providing professional interpreting services for limited proficiency English speakers in all sectors, including the health care sector. To deploy interpreters across a range of sectors in Australian, the Central Health Interpreting Service (CHIS) and the Telephone Interpreter Service were established (Clark, 1998). The Telephone Interpreter Service provides interpreting services 24 hours a day, seven days a week in about 170 languages and dialects for any person or organisation in Australia requiring interpreting services. Such interpreting services are provided either through an immediate telephone interpreting
service or through a pre-booked on-site interpreting service (Department of Immigration and Citizenship, 2009). The main aim of the Telephone Interpreter Service is to achieve fairness and equity for all people living in Australia through allowing them the same opportunities for free access to different services available for English-speaking Australians, irrespective of their ethnic backgrounds or first language preferences. The Telephone Interpreter Service often deals with interpreters with National Accreditation Authority for Translators and Interpreters (NAATI) professional accreditation. The NAATI organisation is run by the Commonwealth, State and Territory governments for the purpose of providing accreditation and other credentialing services for translators and interpreters and related activities in Australia and New Zealand (NAATI, 2012).

The professionals that provide the interpreting service for people with limited English language proficiency within different community activities often work under different titles such as: community interpreters, liaison interpreting, *ad hoc*, contact, three-cornered and dialogue interpreting (Merlini & Favaron, 2003). Community interpreting is a service that is provided throughout different community settings, such as in police stations and courts, hospitals and schools and through social services (Valero-Garces & Martin, 2008). Collard-Abbas (1989) defines community interpreting as:

the type of interpreting done to assist those immigrants who are not native speakers of the language to gain full and equal access to statutory services (legal, health, education, local government, social services) (p. 81).

Interpreting services provided within the health care sector for patients with limited English language proficiency in the Australian context is one type of community interpreting. Interpreters that work within the health care sector in Australia are accredited by NAATI (National Accreditation Authority for Translators and Interpreters, 2012).
Despite the emerging policies and actions undertaken by the Australian government to provide interpreting services in different health care institutions for patients with limited English language proficiency, current interpreting services have been described as not adequate, not available or not accessible for all patients with limited English language proficiency (Garrett, Forero, et al., 2008a). Relevant research in this area indicates that there are several difficulties faced by patients with limited English language proficiency within the health care setting in the Australian context.

In Garrett and colleagues’ study (2008a), the authors conducted a multicultural telephone survey that was later matched with medical record reviews of 258 bilingual speakers with limited English language proficiency from nine different language groups in a particular hospital within the Australian health care context. This study aimed to examine the relationship between clinical complexity and interpreter usage using the Model of Interpreter Usage and Complexity. This model is based on the following concept: for greater clinical complexity, higher usage of professional interpreters is expected. To measure clinical complexity, Garrett and colleagues’ study used the communication complexity score (CCS), which consists of eight weighted scores referring to various administration and treatment procedures used with patients in the hospital. This score’s eight items together reflect those factors that can make patients’ hospitalisation and communication complex. The study reported that only about a third of the participants had used professional interpreters while stayed at the hospital. Also, half (51 per cent) of the participants with limited English language proficiency identified that they were affected by their inability to speak English, seeing their lack of English as a barrier that negatively affected their hospital stay. In addition, this study identified a clear relationship between the use of interpreters and the patients’ CCS. Patients with high or moderate CCSs were more likely to have interpreters, while patients with low CCSs were not provided with these services. The study also provided evidence that interpreter services are not universally available and/or accessible for patients with limited English language proficiency.
and that many patients continue to use family members or friends as interpreters in meeting their health care needs. Garrett and colleagues’ study also confirmed the relationship between complexity and language proficiency as an issue that needs to be considered to guarantee health care quality and safety for patients with limited English language proficiency.

As part of the same study by Garrett, Dickson, Young, Whelan and Forero (2008), qualitative analysis was performed of seven focus group discussions with a total of 49 patients with limited English language proficiency and 10 carers who belonged to five different language groups. All focus group discussions were conducted using professional interpreters. The study aimed to achieve better understanding of patients with limited English experience within the health care context in Australia, and to identify critical factors leading to those patients’ perceptions of care. Throughout this study, the term cultural competence was used to refer to the behaviours, attitudes and policies applied to assure the negotiation process to provide appropriate and equitable care for people from different cultural and linguistic backgrounds in the health care settings. From the participants’ point of view, lack of cultural competence by health care providers was described as including inattention to their cultural morals and even as being racist. Participants stressed their need for language facilitation services in such health care settings. The study finally concluded that successful and culturally competent health care services provided for patients from different cultural and linguistic backgrounds need to be based on two main factors. Firstly, health care providers need to negotiate the appropriateness of services provided for each person in each health care setting. Secondly, ongoing community consultation must be maintained so that health care service providers’ cultural competency can develop in line with community changes.

Ferguson and Candib (2002) reviewed literature on how differences between physicians and patients in race, ethnicity and language influence the quality of the physician–patient relationship. They concluded that patients with limited English language proficiency might experience several
limitations in health care settings such as challenges to establish rapport, engender physician empathy, and receive information or be involved in medical decision-making. Garrett (2009) similarly identified the provision of interpreter services as an important factor for increasing patients’ satisfaction, improving patients’ understanding and access to services, encouraging patients to participate in decision making, increasing the level of patients’ compliance with the recommended treatment, and decreasing medical errors.

While there is clearly a need for interpreter services in the health care setting, however the interpreters’ role is not clearly defined or understood by various health care professions, including speech pathologists. Therefore, the following section will focus more on the role played by health care interpreters within health care settings in bridging communication gaps between health care providers and patients that do not share the language of communication. In addition, challenges and difficulties faced by interpreters in this setting will be discussed further.

3.5. Health Care Interpreters, Difficulties, Role Perception, Re-conceptualise Role Perception

The published literature in this field shows that challenges are not only faced by patients with limited English language proficiency in health care settings; interpreters also face different challenges and complexity when working with health care professionals for bilingual speakers in the health care context. The difficulties faced by interpreters within the health care sector emerge from the fact that interpreters cannot simply work as neutral communication facilitators in the health care context as is required in more adversarial institutional contexts, such as in court. Instead, due to the nature of the health care setting, it has been argued that they also work as mediators and constructors of the interaction between service provider and bilingual speakers (Angelelli, 2004). In being part of the process of facilitating the provision of care, interpreters become co-participants in the communication event rather than conduits of information between two parties (Angelelli, 2004). On the other hand, interpreters perceive their role only as facilitators of the understanding process
between the communication parties, and do not consider that role to extend to giving any advice for any of the communication parties. As such, the tensions that arise between the different aspects of the role and responsibilities of interpreters in the health care setting have been the subject of much exploration (Angelelli, 2004, 2008; Clark, 1998; Davidson, 2000, 2002; Garrett, Dickson, et al., 2008; Garrett, Forero, et al., 2008a; Garrett, Forero, Dickson, & Klinken Whelan, 2008b; Karliner et al., 2007). These studies will be discussed in more detail through the following paragraphs in order to identify types of difficulties emerge in health care settings when providing services for bilingual speakers with limited English language proficiency through interpreters.

Davidson (2000) conducted a study that investigated interpreters’ role in the medical interview of patients with limited English language proficiency within the internal medicine section of a hospital in the US. Qualitative ethnographic data were obtained from several recorded observations of medical interviews with patients and quantitative data were obtained from surveys completed by the interviewed participants. The ethnographic observations included 10 recorded English-Spanish medical interviews with Spanish patients in the presence of interpreters, compared with 10 English-English medical interviews with English monolingual patients. Findings from this study showed that interpreters in health care settings typically played a major role in running the interview rather than just conveying sequences of utterances. In addition, interpreters were observed to take on the role of asking and answering questions for and from the patients, thus potentially detracting from physicians’ rights and authority. Interpreters were also observed to apply selective interpreting within the interviews.

Davidson (2000) concluded that the unexpected implication of the study was that interpreters did not appear to act as advocates or ambassadors for patients; instead, they appeared to work as gatekeepers that kept the interaction between patients and physicians on track and physicians on schedule. Lack of training was considered as an important issue in this study, as
physicians were untrained in how to use interpreters. Moreover, the interpreters’ training was limited to how to translate 50 basic medical terms before they participated in the study, and they did not have any training as to how to interpret discourse processes. In view of this lack of training, it is important to be cautious in generalising the findings from this US study to the Australian context, where NAATI training is a requirement for employment. This study also identified issues related to time pressure for physicians and interpreters as a major challenge faced by interpreters, which frequently resulted in shortened medical interviews.

Angelelli (2004) has criticised the standard single style of interpreting used by interpreters in such interpreting settings. Angelelli reported that interpreters in the health care sector usually use the same style of interpreting within all different interpreted settings. She argued that interpreters instead need to deal with each communication event based on each setting’s circumstances and needs. Angelelli (2004) also emphasised the lack of research on interpreters’ perceptions of their role and the intrinsic tensions involved.

The research presented in this thesis includes a qualitative study using several focus group discussions with interpreters for exploring their perceptions of their own role, specific to the speech pathology sector. Speech pathology settings are different from other health care settings in terms of the importance of the linguistic elements to be clearly identified and clarified to the speech pathologist for applying adequate and appropriate assessment and treatment procedures for bilingual speakers. Hence, recommendations and suggestions from the present research can contribute to further research into the roles played by interpreters in speech pathology settings, as well as into developing new ways to improve the partnership between interpreters and speech pathologists, and their understanding of each other’s roles when working together for bilingual speakers.
3.6. Health Care Interpreters and Speech Pathologists

This current research will focus mainly on exploring the interpreter-mediated aphasia assessment session for bilingual speakers, and more particularly on the importance of interpreters applying combinations of interpreting and translating styles when working with speech pathologists. As will be discussed further in this chapter, the speech pathology session provides interpreters with a challenge to their more typical role expectations and constraints. It will be argued that, there is a greater need for sight translation and specific feedback regarding their (the interpreter’s) observations of the patient’s speech and language use. Due to the specific challenges of speech pathology sessions, it becomes crucial for speech pathologists and interpreters working together for bilingual speakers to identify their expectations of each other. This particular issue will be discussed further though the following paragraphs.

Langdon (2002) has published guidelines for interpreters and speech pathologists based on her professional opinion on what needs to be known by speech pathologists and interpreters when working together for bilingual speakers in the speech pathology context. Langdon discusses a range of practical strategies for consideration by speech pathologists, including seating position (interpreter face-to-face with client); the use of both simultaneous and consecutive interpreting as needed; the need to manage instruction and information giving to allow the interpreter to keep pace; and the need to recognise the limitations of standardised assessments when administered via interpreters. Langdon also highlights the differences faced by interpreters in speech pathology sessions as compared to in other health care settings, for example, the need to adapt to the client’s communication disability, and the likelihood that the interpreter will be asked to provide information as to the accuracy of the speech and language used by the client. While these ideas discussed by Langdon can be seen as useful, it needs to be noted that they are based on expert opinion rather than on empirical research.
Langdon and Quintanar-Sarellana (2003) conducted a survey that gathered Spanish-English bilingual speech pathologists’ notions concerning working with interpreters for bilingual students and their parents. This study revealed that briefing was seen as a very helpful procedure, but that the lack of flexibility in scheduling was viewed as a barrier. The interpreted session was described as more likely to be successful when both professionals were familiar with the process and when the same professionals had worked together over time. This study highlighted the importance of interpreters’ linguistic abilities, cultural awareness and their understanding of the needs of parents of children with communication disorders. The study identified the importance of interpreters rendering a meaning-based interpretation of students’ messages. Finally, the study recommended the notion of certification for interpreters to work with speech pathologists.

Kambanaros and Van Steenbrugge (2004) conducted a case study that included translated responses of a Greek bilingual individual with aphasia during confrontation naming in their native language. The speech pathologist who conducted the assessment had limited experience assessing bilingual speakers with language disorders using interpreters, while the interpreter had limited experience interpreting language assessments for patients with language disorders. In addition, there was no time for the speech pathologist and interpreter to brief each other regarding the assessment to be administered. Greek-translations of parts of selected standardised language assessment tools were used throughout the assessment session. The study compared the findings of the speech pathologist regarding the nature of aphasic errors gained through the interpreter-mediated assessment with the researchers’ retrospective translation of the responses; substantial differences of diagnostic and clinical significance were found. The study stressed the importance of speech pathologists sharing basic information with interpreters concerning the assessment aims and the expected speech and language behaviour. This finding aligns well with the empirical research previously presented earlier in this thesis (Isaac, 2002a; Roger, 2003).
Roger and Code (2011) provided a detailed report on three case studies (which appear to have been drawn from original research by Roger, 2003). The 2011 report examined the content validity of interpreter-mediated aphasia assessment sessions for bilingual speakers within the Australian context. The study involved three aphasia assessment sessions conducted in a Sydney hospital by monolingual English-speaking speech pathologists, interpreters and bilingual speakers with aphasia (Cantonese, Vietnamese and Tagalog). Each recorded session was then re-played for a bilingual speech pathologist who spoke the first language of the bilingual speaker with aphasia. This step allowed the researcher to identify any existing threats to the content validity of the obtained interpreter-mediated aphasia assessment sessions. The bilingual speech pathologists were asked to identify any loss of information, misunderstanding or misrepresentation of any element of the course of the encounter. In addition, this step aimed to provide insights into the characteristics of the interpreted test items and the nature of patients’ responses compared with the interpreted responses provided by the interpreter when obtaining the assessment session. This study’s findings revealed that administering aphasia assessment for bilingual speakers through the assistance of interpreters is vulnerable to interference (Roger & Code, 2011).

Roger and Code (2011) conducted a study to identify any existing threats to the content validity of interpreter-mediated aphasia assessment sessions for bilingual speakers. Threats were observed throughout the administration stage of the test items and throughout the process of repeating back patients’ responses for the speech pathologists through interpreters. Roger and Code’s (2011) study illustrated the adverse influence of interpreters’ lack of knowledge about the purpose of the assessment and about how to identify the elements of the test items or patients’ responses that are important. They also noted difficulties arising from speech pathologists’ lack of knowledge about other languages in terms of semantic, syntactic, phonological and pragmatic/discourse features. They concluded that speech pathologists’ and interpreters’ lack of knowledge about each other’s fields were major factors that negatively affected the content validity...
of the aphasia assessment sessions for bilingual speakers. The study finally reported some specific ways to ensure the content validity of such sessions. These recommendations included the need for pre-session debriefing and the planning of test administration to allow speech pathologists to provide interpreters with an overview of the assessment purpose and strategies. This would also allow interpreters to identify assessment items unlikely to work with the targeted language group and to arrange for the substitution of those materials with other more appropriate assessment items. Further, this would allow interpreters to work on the written items that need to be translated before commencing the assessment session. As another advantage of this recommended pre-planning, Roger and Code (2011) suggest that when evidence of uninterpretable aphasic symptoms or uninterpretable grammatical deficiencies occurs during the session, the interpreter would be better able to describe features of patients’ responses, such as neologism and paraphasias.

Clark (1998) conducted a study that included several focus group discussions with interpreters and speech pathologists (numbers not reported) working in the health care sector in Melbourne, Australia. The study aimed to explore the degree to which there is a shared understanding of the two professions’ roles. Participants in this study identified that they had faced difficulties when working together in such situations, ascribing these difficulties to several issues. These issues were lack of professional training, no establishment of rapport between the two professionals, speech pathologists’ lack of knowledge about other cultures and languages, the use of family members in interpreting, and a divergence in speech pathologists and interpreters’ perceptions of each other’s roles. Interpreters in this study described their role as to transmit information and give feedback about the cultural appropriateness of the testing material used with bilingual speakers in such situations. The study revealed a mismatch in the expectations and role perceptions between the two professional groups, which seemed to cause confusion and frustration among them when working together.
From the preceding discussion, it is apparent that interpreters who work with speech pathologists to assess bilingual speakers are usually placed under linguistic and ethical demands by speech pathologists. Therefore, the following part of this chapter will further discuss the Australian Institute of Interpreters and Translators’ (AUSIT, 2008) Code of Ethics, which established eight principles that need to be followed by interpreters working with all disciplines, including with the speech pathology discipline. These principles are professional conduct, confidentiality, competence, accuracy, impartiality, employment, professional development and professional solidarity.

Interpreters working within speech pathology and/or other health care professions need to adhere to these principles, each of which can be argued to have implications for speech pathologists.

The professional conduct principle states that interpreters are to prepare for the interpreting assignment before it commences and must be able to provide an explanation about their role to those with and for whom they work. They must also adhere to appointment times and deadlines. In light of this principle, speech pathologists may need to recognise the previously discussed importance of pre-session preparation for interpreters. Preparation for the interpreting assignment seems to relate to other principles specified by the code of ethics, such as the competence principle, which states that interpreters are expected to accept only interpreting assignments they feel competent in performing, and to withdraw from the assignment immediately upon identifying that an assignment is beyond their competency (AUSIT, 2008). Speech pathologists may need to consider the experience of interpreters in facing the challenges of speech pathology sessions, and consider adjusting their session demands to ensure that the interpreter is working within their range of competence.

Interpreters are also expected to ensure that the conditions under which they work facilitate rather than hinder communication, as stated by the competence principle in the code of ethics (AUSIT, 2008). Under the competence principle, interpreters are required to ensure that they and
the client share the same language, and that they can understand each other’s speech. These two issues raise implications for the speech pathologist in terms of how best to communicate with a person with a communication disability. In this case, if any part of the communication is unclear, it becomes the interpreters’ right and responsibility to ask for repetition, rephrasing or explanation, as stated under the impartiality principle (AUSIT, 2008). As speech pathologists need to control stimuli presentation to interpret the responses provided by the patient, it would appear important for the speech pathologist to make it a priority to discuss how the need for repetition and rephrasing should be managed through the different stages of the assessment session.

Interpreters are not responsible for what clients say or write. Interpreters are not to voice or to write an opinion, solicited or unsolicited, on any matter or person in relation to an assignment (AUSIT, 2008). This issue has been signalled in previous research and will be taken up in this thesis. In the speech pathology context, the role of the interpreter in providing feedback regarding the adequacy and accuracy of the language used by the client is a special feature of speech pathology sessions and represents a dilemma for the interpreter, which they must navigate to ensure their ethical conduct. The impartiality principle in the Code of Ethics also requires interpreters not to alter, make additions to or omit anything from their assigned work. Interpreters are required to maintain their professional development in which they are expected to enhance their language skills by pursuing further relevant study and experience (AUSIT, 2008).

Merlini and Favaron (2005) conducted a study within two health care facilities in Melbourne, Australia. Three recorded interpreted speech pathology sessions were conducted involving Italian speaking first-generation immigrants, English-speaking speech pathologists and NAATI accredited interpreters. The study aimed to investigate interpreting practices within speech pathology settings. This study used Mishler’s notion of ‘voice’ to describe the context of interpreter-mediated interaction between the speech pathologist and the bilingual speaker, exploring
the extent to which interpreters chose to adopt the ‘voice of medicine’ or the ‘voice of the lifeworld’. The focus for analysis was on selected linguistic features ranging from turn taking and topic development, to the interpreter’s choice of footing, departures from the primary speakers’ utterances and use of prosodical resources.

Merlini and Favaron (2005) stated the following as a description of the interpreter’s role in speech pathology sessions in this study:

All of the three sessions have shown evidence of the interpreter’s pronounced involvement in the interaction. This was seen as taking many forms: from her sharing in the speech pathologist’s control of turn-taking and topic development, to her adopting the footings of principal, responder and, occasionally, pseudo-co-principal, to her making phatic, emphatic and explanatory additions and slowing down elocution for the benefit of the patient (p. 294).

They concluded that interpreters in speech pathology sessions seem to share the role of controlling turn taking and topic development with speech pathologists.

This chapter has provided a discussion of interpreting services within the health care sector in Australia to identify the difficulties and challenges faced by communication parties. While the available empirical research is limited, the research to-date has identified that the complexities of interpreter-mediated assessment requires consideration of multiple perspectives. One way to move toward a more in-depth understanding of these perspectives is presented in the next section.

3.7. Modelling Communication in Monolingual and Bilingual Health Care Settings

Angelelli (2004) has described the interpreter’s role across interpreted communicative events (ICE) from different point of views. The three main bodies of knowledge and theories that describe the interpreter’s role will be discussed in the following paragraph, while the focus will be
upon further description of one of these three models. These three theories are the social theory, sociological theory and the linguistic anthropology theory.

The lens of social theory views the interpreter as a human being with his/her own beliefs, norms, values and rules, and with the capacity to affect the interpreter interaction through ICE as does any other agent in the society who works within an institution. Here, the interaction would not be viewed as an individual-to-individual relationship, but rather as an interpersonal relationship between the three communication parties. Thus, the relationship of power would take place within this situation. The doctor is the producer, with the knowledge needed by the patient. The patient has the least power in the interaction, while the interpreter, who knows both languages, also becomes a producer for the monolingual interlocutors (the doctor and the bilingual patient), who are consumers in such situations. In other words, through the lens of social theory, the interpreter is placed, alongside the doctor and patient, within the particular human interaction that occurs in the health care ICE as a member of the institution.

Sociological theory views the interpreter as a person who brings his/her self to the interaction occurring between the three parties in such settings, and who forms his/her own impression regarding the two other parties. This model identifies that the doctor in such settings contributes through his/her scientific knowledge; the interpreter contributes through interpretation skills; and the patient contributes through describing her/his illness. Each party then forms an impression regarding the other two parties based on social factors such as gender, race and age. The importance of self and other definitions becomes very important in such settings to help each party to form appropriate and accurate impressions in the interaction situation, both of themselves and of others.

The interpreter’s role. This model was reconstructed by Angelelli (2004) when she used Hymes model of ‘the taxonomy of speaking’, which focuses on defining the communicative event based on the following seven factors: participants; channels and their mode of use (such as speaking or writing); the various codes shared by the participants (for example, linguistic and/or kinesic); the setting in which communication is occurring; the forms of messages and their genres (from single-morpheme sentences to organised routines and styles); the attitudes and contents of the message; and the events themselves.

In the present research, the focus is on the interpreter-mediated assessment session for a bilingual speaker with aphasia, and the issues raised by Angelelli (2004) have been extended to develop a framework to inform this focus. The key differences between the monolingual setting (MS) and the health care IS are presented below through three tables developed by the researcher to align with the three main aspects of discourse (field, tenor and mode) as identified by the Systemic Functional Linguistic approach developed by Halliday and Matthiessen (2004). Under this approach, ‘field’ refers to what meanings are being exchanged; ‘tenor’ refers to the role relationship of the interactants; and ‘mode’ refers to the role language is playing in the exchange of meaning. Here, these definitions are applied to discuss the interactions in an interpreter-mediated aphasia assessment session. Table 3 presents the field of discourse in relation to interpreter-mediated discourse.
Table 3

*Field of discourse: Comparison of monolingual and interpreted assessments.*

<table>
<thead>
<tr>
<th>Aspect of communication</th>
<th>Interactants</th>
<th>Monolingual assessment</th>
<th>Interpreted assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical setting</td>
<td>SLP</td>
<td>Familiar</td>
<td>Familiar</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Unfamiliar</td>
<td>Unfamiliar</td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td>Unfamiliar or familiar</td>
</tr>
<tr>
<td>Cultural setting</td>
<td>SLP</td>
<td>Familiar</td>
<td>Unfamiliar</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Familiar</td>
<td>Familiar</td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td>Familiar</td>
</tr>
<tr>
<td>Purpose</td>
<td>SLP</td>
<td>Negotiated directly with patient</td>
<td>Negotiated indirectly via interpreter</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Negotiated directly with speech SLP</td>
<td>Negotiated directly (‘embedded’ negotiation)</td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>SLP</td>
<td>Negotiated directly with patient</td>
<td>Negotiated via interpreter</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Negotiated directly with SLP</td>
<td>May need to modify message conveyed (add, comment)</td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SLP = Speech pathologist; PT = Patient; INT = Interpreter

3.7.1. Field of discourse.

The field of discourse is concerned with the physical setting, cultural setting, purpose and topic discussed in the interaction. These components will be discussed further in the following paragraphs in relation to how they might occur in an IS, in which an interpreter is used, as compared to how they might occur in an MS.
3.7.1.1. Physical setting.

Time and place of the assessment session are important factors in communication, as they provide the context for what is being said. According to Angelelli (2004), in an MS, time and place of the assessment session are evident to all communication parties. However, this is not to say that they mean the same for the monolingual speech pathologist and the patient. The speech pathologist is more familiar with the setting than is the patient; the patient and speech pathologist are at the opposite extremes of a familiarity continuum. In contrast, in an IS, the time and place of the assessment session are not equally evident for the three parties. The setting plays an essential role in communication by providing the context for what is being said, even if the setting is not constructed in the same way. The interpreter may be more familiar with the setting than is the patient. If we place the interpreter on the continuum of familiarity with the setting, and if the speech pathologist is at the familiar extreme while the patient is at the unfamiliar one, the interpreter is closer to the speech pathologist’s end.

3.7.1.2. Cultural setting.

According to Angelelli (2004), in the MS, the speech pathologist and the patient may not share the culture completely, as they do not belong to the same speech community (speech pathology), where one speech pathologist might be a more permanent dweller than the other. The patient only interacts in this setting on those occasions that he/she communicates with a speech pathologist. In contrast, while in the IS, the speech pathologist, the patient and the interpreter still may not share the culture completely because they do not belong to the same speech community (speech pathology), that community may be more accessible or evident for the interpreter than for the patient. This is because the patient might be used to a different setting in his/her own culture, while the interpreter explores the setting not as a full outsider, but rather as a discovering party.
Moreover, for the interpreter, the situation may allow for clarification, helping him/her to understand the setting better.

3.7.2. Purpose of discourse.

According to Angelelli (2004), in the MS, the three parties negotiate the outcomes of the event directly. There is the possibility for direct negotiation and the parties are familiar with the outcomes (the speech pathologist talks to the patient directly about his/her speech, language issues and uses of technical language). Turning the negotiation into a learning process or experience for the patient or speech pathologist is not expected. Talking to family members first or bypassing the patient is not acceptable. Conversely, in the IS, the interpreter cannot do his/her job if he/she does not understand what the particular outcome of the communication event is (that is, is it an interview to make a decision about the assessment, such as in the case of conducting a case history, or is it an interview to prepare for the assessment itself).

Such three-party negotiations add more layers to the complexity of the interaction than are typically present in a monolingual interview. Outcomes of the relationship between the patient and the speech pathologist vary across languages and cultures. The interpreter needs to be aware of them and to negotiate them as they emerge. That is, the interpreter may need to alert parties to issues that are not acceptable across cultures, and they also engage in lengthy explanations about the issues discussed. Overall, there are more embedded purposes in the IS than in a like MS speech event.

3.7.3. Topic of discourse.

According to Angelelli (2004), in the MS, participants can follow the topic and change the topic by carefully following the meaning of what is being said. This does not mean that it is comprehensible to both but the monolingual situation allows for direct negotiation. On the other hand, in the IS, the message content is likely to be more concrete than the message form and

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therefore it might be more accessible to a quasi-member of a community. The interpreter can follow a topic and a change of topic by carefully following the meaning of what is being said. The other participants cannot and will depend on interpreter to do this. The interpreter adds another layer of content as he/she explains, mitigates, and brokers.

3.7.4. Tenor of discourse.

Tenor of discourse includes the role each participant plays in the interaction as well as the power relationship, management of the interaction and norms for interaction (see Table 4).

3.7.4.1. Role in the interaction and power relationship.

According to Angelelli (2004), in the MS, the speaker or sender can be both the speech pathologist and the patient. However, the power differential between these two parties makes the speech pathologist perform the role of speaker more often. According to the receiver role, the interaction between the speech pathologist and the patient is constant. It is always possible to negotiate meaning directly, but power differentials are in place. In relation to the addressees, the addressors/speakers (speech pathologist/patient) identify the addressees (speech pathologist/patient) in each exchange. The speech pathologist/patient is able to see how the message and event may be anticipated at its destination. For example, does the patient understand the importance of the question? Is the speech pathologist going to feel compassion at the patient’s tone?
Table 4

Tenor of discourse: Comparison of monolingual and interpreted assessments.

<table>
<thead>
<tr>
<th>Roles in interaction</th>
<th>SLP → PT</th>
<th>SLP → INT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP</td>
<td>SLP ↔ PT</td>
<td>SLP → INT</td>
</tr>
<tr>
<td>PT</td>
<td>PT ↔ SLP</td>
<td>PT → INT</td>
</tr>
<tr>
<td>INT</td>
<td>INT → SLP</td>
<td>INT → PT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power relationship</th>
<th>SLP ≥ PT</th>
<th>SLP ≠ INT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP</td>
<td>SLP ≥ PT</td>
<td>SLP ≠ INT</td>
</tr>
<tr>
<td>PT</td>
<td>PT ≤ SLP</td>
<td>PT &lt; SLP, INT</td>
</tr>
<tr>
<td>INT</td>
<td>INT ≠ SLP</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Management of interaction (turn taking)</th>
<th>SLP → INT</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP</td>
<td>SLP ↔ PT</td>
<td>Unfamiliar</td>
</tr>
<tr>
<td>PT</td>
<td>PT ↔ SLP</td>
<td>Unfamiliar</td>
</tr>
<tr>
<td>INT</td>
<td>INT ↔ SLP</td>
<td>Familiar/Facilitator/ controller</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INT → SLP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INT → PT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>‘Norms’ for interaction in assessment and for interpreting</th>
<th>SLP → INT</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP</td>
<td>Familiar /Share the same norms</td>
<td>Unfamiliar</td>
</tr>
<tr>
<td>PT</td>
<td>Familiar/Share the same norms</td>
<td>Unfamiliar</td>
</tr>
<tr>
<td>INT</td>
<td>Facilitator and modifier for unshared norms ( Modifying and adding some components, and , educate about differences)</td>
<td></td>
</tr>
</tbody>
</table>

SLP = Speech pathologist; PT = Patient; INT = Interpreter

In the IS, the interpreter becomes the speaker and listener in embedded dialogues as patient and speech pathologist become listeners and speakers. The interpreter becomes the speaker even more often than the speech pathologist due to brokering communication between the two monolingual parties, especially when engaged in explanation of technical terms or cultural
adaptation. The interpreter is also the listener more often than are the other two interlocutors. According to the receiver, the interpreter becomes the hearer or receiver of every utterance. There is almost no verbal interaction between the patient and the speech pathologist except through the interpreter. In addition, because the patient and the speech pathologist do not share a language, the interpreter identifies the addressee. In doing so, the interpreter is able to see how the message and event may be anticipated at their destination. For example, is the speech pathologist going to be puzzled by the use of this home remedy? Thus, the interpreter is playing multiple roles as speaker, hearer, addressee and interpreter in each exchange.

3.7.4.2. Power relationship.

According to Angelelli (2004), in the MS, the intention of the participants and the strategies defined during the assessment interview are expressed directly (for example, Who is making the decision for the treatment? Who will the decision affect? Who is the party accommodating in the making of that decision?) and the power differentials will be played out by the patient and the speech pathologist. In the IS, the interpreter cannot do his/her job if he/she does not understand what the particular outcome of the communication event is (for example, Is it an interview to make a decision about the assessment like conducting case history, or is it an interview to prepare for the assessment itself?).

This three-party negotiation increasing the complexity in comparison to what might be expected in a monolingual interview. Outcomes of the relationship between the patient and the speech pathologist vary across languages and cultures. The interpreter needs to be attuned to these, and negotiate them as they emerge. For example, the interpreter may need to alert parties to issues that are not acceptable across cultures, and engage in lengthy explanations about the issues discussed. This means that there are more embedded purposes in the IS than in a like MS speech event.
3.7.4.3. Norms and management of the interaction.

According to Angelelli (2004), in the MS, participants generally share the same sense of appropriateness of asking, answering and turn taking. In addition, participants often share the same sense of what a hesitation or a lack of eye contact means. However in the IS, the speech pathologist and the non-English-speaking patient may not share the same sense of appropriateness of ways of speaking. For example, if the patient is from a Spanish-speaking country in which overlapping is the sociolinguistic rule during a conversation, while the speech pathologist is expecting turn taking, some tension may arise based on a misunderstanding or misconception of what is appropriate. In some instances, the interpreter as a third participant may try to be in control of the conversational traffic, adding an additional component to the tension. The interpreter may also decide to educate the other parties on this difference, adding a further component.

The interpreter will have a two-way focus on the interpreting of utterances. The interpreter is concerned with how to portray the speaker in a way that is acceptable to the listener and vice versa. For example, if the patient is Korean, he/she probably will not look the speech pathologist in the eye; if the speech pathologist is not familiar with Korean culture, he/she may become suspicious that the patient is hiding something. Thus, the interpreter needs to be alert to such cultural mismatches. Moreover, the interpreter, as another co-participant, brings another set of norms of interpreting that needs to be brokered.

3.7.5. Mode of discourse.

This includes the register or keys of interaction, channels through which speech is conveyed, and genre or type of discourse (see Table 5).
### Table 5

*Mode of discourse: Comparison of monolingual and interpreted assessments.*

<table>
<thead>
<tr>
<th>Register (key)</th>
<th>SLP</th>
<th>SLP &gt; PT</th>
<th>SLP ≠ INT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT</td>
<td>PT &lt; SLP</td>
<td>PT ≠ INT</td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td>INT &lt; SLP</td>
<td>INT &lt; PT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channel (oral, written, gestural)</th>
<th>SLP</th>
<th>Two-way, multi-channel combinations</th>
<th>Three way, multi-channel combinations, and transformations</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Genre (type of discourse)</th>
<th>SLP</th>
<th>SLP ↔ PT Directly negotiated</th>
<th>SLP → INT Negotiated indirectly via interpreter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT</td>
<td>PT ↔ SLP</td>
<td>PT ↔ SLP Directly negotiated</td>
<td>PT → INT Negotiated indirectly via interpreter</td>
</tr>
<tr>
<td>INT</td>
<td>INT → SLP</td>
<td>INT → PT Negotiated directly (‘embedded’ negotiation)</td>
<td></td>
</tr>
</tbody>
</table>

SLP = Speech pathologist; PT = Patient; INT = Interpreter

#### 3.7.5.1. Register.

According to Angelelli (2004), in the MS, the participants share a language, although they may have different registers and varieties of that language. The MS allows for negotiation and clarification. It also allows the speech pathologist and patient to focus on the tone, manner or spirit
of the other interlocutor. However, in the IS, the interpreter needs to be aware of different registers and varieties used by both participants. The interpreter shares a language with each party, although not necessarily the register or variety of that language. There is room for negotiation or clarification with each of the parties. The interpreter’s variety and register adds another layer of complexity to be considered. The interpreter is also the party responsible for focusing on the tone, manner or spirit of the other two interlocutors. The interpreter’s utterances add a third component to the interpreter-mediated assessment session in speech pathology.

3.7.5.2. Channels.

According to Angelelli (2004), in the MS, the participants have only one mode of input: each other’s utterances. However, in the IS, the interpreter has only one mode of input, but the oral channel can be split into threads (one for each participant when they overlap). Moreover, the interpreter adds another thread as his/her utterances are expressed via the oral mode.

3.7.5.3. Genre.

According to Angelelli (2004), in the MS, participants benefit from recognising the genre of the speech, which does not always coincide with the event. For example, the speech pathologist may teach the patient regarding some issues related to the assessment session, but the event is not a lecture. The recognition of the genre is the responsibility of the principle parties (the patient and the speech pathologist). However in the IS, there are benefits from recognising that the genre of the speech does not always coincide with the event. As the monolingual interlocutors do not have access to the original text, they depend on the interpreter to recognise its genre. However, the interpreter may decide to alter that text, and therefore cause two genres to co-exist. Sometimes this difference is not evident to the other participants and the interpreter has to alter the genre in his/her rendition.
Interpreted discourse has tended to be perceived as a trivially modified version of usual discourse. Davidson (2002) argues that, as a result of this, interpreters have come to be seen as a linguistic instrument rather than as a person who is engaged meaningfully in discourse to facilitate communication between interlocutors. The IS in health care needs to be viewed through the same lens as is used to view MS discourse. Davidson (2000) argues that the interpreter’s role in translated health care settings is not just to provide accurate translation. Rather, he/she needs to allow speakers to negotiate and achieve their goals through his/her action, with this potentially including editing, adding, deleting and modifying the content of messages to facilitate the communication process between interlocutors. In addition, more recently, the interpreter’s role has come to be recognised as shaping or even as creating those messages on behalf of patients. In some instances, interpreters may even run the whole interview with the patient (Davidson, 2000).

Based on the framework outlined above, to understand interpreter-mediated aphasia assessment sessions for bilingual speakers, researchers, speech pathologists and interpreters must recognise that the role of interpreters in such settings require full participation in the conversation. In other words, interpreters’ full participation refers to the ability of adding, deleting, editing, creating and modifying the content and form of messages to convey the meanings of those messages accurately. The full involvement of interpreters in ISs helps all interlocutors to achieve the goal of their conversation. This research aims to contribute towards facilitating the complete engagement of interpreters in speech pathology sessions with bilingual speakers in a health care context through the development of resources for assessment to help enhance the partnership between speech pathologists and interpreters in these sessions. More details regarding the development of the assessment guide for Arabic speakers with aphasia will be discussed in Chapter 7 of this thesis.
In addition, the same aspects and categories that used throughout this chapter to describe the interpreted speech pathology sessions for bilingual speakers will also be used in chapter 6 to analyse focus group discussions gathered with speech pathologists and interpreters. Chapter 6 will further discuss the process applied in using Angelelli’s framework in analysing the qualitative data of this research.
Chapter 4: Methodology Overview

This chapter presents an overall description of the methods that were used to conduct the empirical research presented in this thesis. A detailed description of the participant recruitment process, ethical considerations, sampling techniques, data management, data analysis and triangulation of findings will be provided. Further details regarding the methods used in each stage of the study will be provided in the later chapters presenting the results.

As discussed in Chapter 1, Australia is a multicultural and a multilingual nation, and this places a high priority on developing effective ways to provide speech pathology services to all speech pathology clients, including those with aphasia. To explore the experience of speech pathologists and interpreters who serve bilingual speakers in speech pathology clinics in Australia, it was considered essential to map out the challenges first from the viewpoint of speech pathologists through surveying speech pathologists. Since using one data source in conducting research may be insufficient to tell the complete story, this survey was then followed by the qualitative analysis of several focus group discussions conducted with interpreters and speech pathologists with experience in working together in speech pathology clinics for bilingual speakers. The third data source comes from detailed expert feedback in relation to the development of a resource for the assessment of Arabic speakers with aphasia.

4.1. Overview of Methods

In recent years, mixed research methods have been recommended as a new combination methodology because of their flexibility. Johnson and Onwuegbuzie (2004) argued that a new more superior research method (compared to mono-method research) can be used by complementing both qualitative and quantitative methods in the same research. As Brannen and Halcomb (2009) state,
mixed methods research has become favoured in health services and nursing disciplines for the purpose of achieving validation of research data and to enhance research findings.

According to Oliffe and Mortenson (2009), inconsistency in the use of terms to describe mixed methods research is common; for example, the terms ‘mixed method’ and/or ‘multi-method’ would refer to the same kind of study. Bazeley (2004) holds mixing research methods to involve side-by-side or sequential use of different methods, or when different methods are fully integrated in a single analysis. However, it appears more common to use the term ‘mixed methods’ when the research consists of two or more studies that are closely integrated and that build on each other. The current research uses the term ‘multi-method’ to describe the nature of the studies conducted, since although they built toward the final goal of the research, each stage was conducted independently in regard to data collection and analysis.

All research methods have their strengths and weaknesses, and using one method in collecting the research data may risk some bias that weakens the research in general and may only focus on one dimension of the area needed to be studied. Researchers working within qualitative approaches have argued for the usefulness of triangulation; that is, the act of combining several research methods to investigate the phenomenon under study more broadly (Bazeley, 2004).

Given the relative lack of empirical research in the area of interpreter-mediated aphasia assessment for bilingual speakers, the present research explored this area using both quantitative and qualitative approaches. Quantitative and qualitative data were obtained through a survey, and qualitative analysis was conducted for several focus group discussions to investigate the assessment of aphasia in bilingual speakers within the Australian context. Additional qualitative information was obtained to inform the development of a potential resource for speech pathologists providing interpreter-mediated aphasia assessment for Arabic speakers through consultation with an expert
panel. Discussion of this stage of the research is placed in Chapter 7 of this thesis, rather than in this chapter.

In the present research, the adoption of multiple research methods is argued to allow a clearer view of the assessment situation, which has been described as a challenging situation by researchers in the field. This has been achieved by considering the issues from different angles and dimensions to achieve a better understanding of the challenges faced by speech pathologists and interpreters when working together in conducting aphasia assessment session for bilingual speakers. Although each method used in this research, either qualitative or qualitative, has its own strengths and weaknesses, they have been used and combined to capitalise on their strengths while minimising the weaknesses through multiple data collection methods to facilitate the achievement of more representative and rich data and findings.

The multi-method approach was chosen by this research to discover and describe the current protocols used by speech pathologists in speech pathology clinics in Australia to assess bilingual speakers with aphasia. Since this research aims to facilitate the aphasia assessment process conducted by the monolingual speech pathologist and the interpreter for a bilingual speaker, the development of a new assessment guide to help to facilitate this process became important. Therefore, multi-methods were used as a helpful methodology that can describe and develop techniques that need to be used by the researcher practitioner (Johnson & Onwuegbuzie, 2004).

To begin, this research collected data to form a broad understanding of the range of views among speech pathologists regarding the challenges that emerge when they work together with interpreters to assess and treat bilingual speakers. This was accomplished by collecting both quantitative and qualitative data though surveying speech pathologists to learn more about their experiences regarding such assessment situations, as well as about the kinds of challenges they face when interpreters are mediating their assessment sessions.
The next stage of the research involved a more specific focus: analysing qualitative data obtained from several focus group discussions with speech pathologists and interpreters that work together for bilingual speakers within the Australian context. Focus group discussions were conducted with each professional group of participants separately, three interviews with groups of interpreters and two interviews with groups of speech pathologists.

The data from the focus group discussions that were used in the current research had been gathered previously by one of the researcher’s supervisors and her colleagues several years before the commencement of the current research. This data had not previously been analysed in depth. Those professionals who participated in the focus groups were English-speaking speech pathologists who worked in different speech pathology clinics in Australia, and interpreters who worked in the health care sector in Australia and had experience working with speech pathologists for bilingual speakers.

Based on the data generated and the results from the first two stages, the research moved to address the specific focus, to develop an assessment guide for the process of assessing aphasia in bilingual speakers. This was envisaged as a procedure that would facilitate the assessment process for both professional groups, and decrease the number of challenges arising from cultural and linguistic diversity, particularly when assessing Arabic speakers with aphasia.

4.2. Ethics Clearance

Ethical clearance was sought and approved by the University of Newcastle Human Research Ethics Committee (No: H-2009-0214). This enabled the student researcher to conduct the research that formed the basis of this thesis; that is, to conduct the survey, to access the focus group data and to obtain expert feedback on the development of the assessment guide.
4.3. Data Source One: Survey of Speech Pathologists

A survey of speech pathologists in Australia who work with aphasia patients was distributed to gather their experiences and perceptions regarding the assessment of aphasia in bilingual speakers. The survey explored the current assessment and management practices used by speech pathologists who work with bilingual speakers with aphasia within the Australian context, with a focus on assessment tools and strategies used when assessing bilingual speakers with aphasia. It also explored speech pathologists’ notions concerning the limitations and difficulties that they face in obtaining language assessments for bilingual speakers, and asked for their suggestions to improve this process. Speech pathologists were also asked for their ideas regarding the use of an alternative assessment tool or guide to facilitate the assessment process with bilingual speakers.

The survey, used as a first step in the research, consisted of open-ended questions as a qualitative method for collecting data, and closed-ended questions as a quantitative method of collecting more specific data. The purpose of including qualitative questions within the questionnaire was to avoid the possibility of excluding any important information in regard to challenges faced by the participants in assessing bilingual aphasia patients. Further, the qualitative approach can provide data with the potential to clarify any conflicting results from the quantitative data, and any limitations due to a lack of depth in the closed-ended questions was considered offset by the richness of the qualitative data to be elicited from the open-ended questions (Brannen & Halcomb, 2009). However, there are some weaknesses in implementing a multi-methods strategy within a survey, as qualitative data collection adds to the time for survey completion and analysis (Johnson & Onwuegbuzie, 2004).
Based on Halcomb, Davidson, Griffiths and Daly (2008), in this research, the quantitative data emerging from the survey were entered into the Statistical Package for the Social Sciences (SPSS) version 15.0 (SPSS Inc, Chicago, Ill, US) and analysed using descriptive statistics. The textual data were exported from SPSS into Microsoft Word for Windows 2003 (Microsoft Corporation, Redmond, Wash, US), whereupon descriptive content analysis was applied to them, and they were treated as nominal data.

4.3.1. Survey design and content.

The survey was designed to yield two major types of data regarding participants: behavioural and attitudinal. The survey consisted of different types of questions that focused mainly on the participants’ experience as speech pathologists; more particularly, gathering data about their experience working with bilingual speakers with aphasia. It also focused on gathering information regarding the participant’s notions regarding the development of an assistive assessment procedure for use with bilingual speakers with aphasia, in speech pathology clinics within the Australian context.

To maximise validity of the survey, it was based on theoretical considerations that have emerged through the previous studies about the assessment of aphasia in bilingual speakers within the Australian context (Roger et al., 2000). While the current survey was created based on a survey by Roger (2003), some questions were transmitted directly from Roger’s questionnaire, and the other questions were developed by the researcher depending on the existing literature in this specific area of research. As part of the development of the survey, it was reviewed critically by experienced researchers in the speech pathology discipline at the University of Newcastle, Australia, with the reviewing team including the researcher’s supervisor. The survey was then distributed for trial completion to seven local speech pathologists who subsequently provided
feedback before the final version was created. This process of revision aimed to identify any possible problems or ambiguities related to questions and terminologies used in the survey.

Further details about the development of the survey are provided in Chapter 5.

4.3.2. The Survey details, participants and distribution.

The population targeted through this study were speech pathologists that work with adults with aphasia in Australia. According to Dornyei (2003), one of the benefits of using surveys is their ability to gather a large amount of information while using comparatively less research time, effort and financial resources than other data collection methods. This study used an online questionnaire distributed to speech pathologist participants through the newsletters for Speech Pathology Australia Association and the Multicultural Interest Groups in New South Wales (NSW) and Victoria (VIC). There were 58 completed surveys, but the online distribution method used resulted in difficulties estimating the response rate (as discussed further in Chapter 5). Through chapter 5, the findings that emerged from the survey will be discussed further in more details.

4.4. Data Source Two: Focus Group Discussions

The transcripts of the focus group discussions that were analysed in the present research were from data gathered several years before the commencement of this research by one of the researcher’s supervisors and her colleagues. The previous project was titled ‘Health care interpreters and speech pathologists’, and the research team was Professor Christopher Candlin, Dr Peter Roger and Dr Elizabeth Armstrong from Macquarie University, with associate investigator Dr Alison Ferguson from University of Newcastle (the supervisor for this present research), with the research assistance of Dr Kim Isaac. The data were unable to be fully analysed due to time and funding constraints and the findings were not published. However, a number of conference papers presented the results of preliminary analyses (E. Armstrong, C. N. Candlin, A. Ferguson, K. Isaac, & P. Roger, 2005; E. Armstrong, C. N. Candlin, A. Ferguson, K. Isaac, & P. Roger, 2005; A.
The use of the data in the present study has been approved by each of the original investigators.

In this study, the focus group discussions were chosen as a data collection method to achieve four main goals. These are: (1) to enable the researcher to gain a preliminary overview of the issues and challenges that affect the provision of adequate speech pathology services for bilingual patients in Australia within the context of cultural and linguistic diversity; (2) to identify the major challenges that emerge during interpreter-mediated speech pathology sessions; and (3) to consider the findings arising from the analysis of the focus group discussions with the findings obtained from the survey used in this research for developing an aphasia assessment guide for use with bilingual speakers with aphasia.

4.4.1. Advantages of focus groups.

The use of focus group discussions yields a number of advantages. A large amount of data can be obtained from a discussion established between a group of individuals in the same amount of time it would take to conduct a one-to-one interview (Morgan, 1993). It is also cost effective and less time-consuming than individual interview (Beyea & Nicoll, 2000; Rabiee, 2004). Dynamic dialogue between participants may also generate more in-depth discussion compared with personal interviews, which could enable the participants to build on the ideas and thoughts of others. One of the most important advantages that focus groups can offer is giving participants the opportunity to discuss their own feelings, experiences, attitudes and views. It also offers them a relaxed atmosphere in which to talk about their interests and to offer suggestions that could improve the issue under study in the future (Beyea & Nicoll, 2000).

Hollander (2004) has noted that focus groups as a qualitative method of collecting data have gained in popularity among health and social care professionals, including those researching within
the speech pathology discipline. This popularity stems from their usefulness for exploring individuals' beliefs and feelings, as well as for explaining why they behave in the way that they do. Further, focus groups provide the researcher with rich experimental data.

This protocol of data collection provides the researcher with a less controlling role in the process of gathering information, which can be useful when the research seeks to develop an understanding of peoples’ perceptions and feelings about a particular issue, product, service or idea (Beyea & Nicoll, 2000), rather than presupposing the range of possibilities. One of the other main advantages of focus group discussions is that participants can validate the information discussed by other participants (Patton, 2002). Focus groups tend to be a flexible method of data collection due to the possibility of examining a wide range of topics in a variety of settings, using structured through to non-structured formats (Minichiello, Sullivan, Greenwood, & Axford, 2004).

In the case of the current research, analysis of the previously collected focus group data was chosen as a method because it was deemed suitable for exploring the situation of aphasia assessment for bilingual speakers more broadly. The main purpose of obtaining speech pathologists and interpreters’ focus group interviews was to generate a greater understanding of the issues and challenges they usually face when working to gather to assess or treat bilingual patients. This was because the groups had been conducted with both speech pathologists and interpreters with experience in working together in the assessment of bilingual aphasia patients. These interviews provided more information about the variety of perspectives of the participating professionals. It also allowed the present research to compare findings that emerged from group discussions with the questionnaire findings in order to help in developing the aphasia assessment guide that aimed to improve those professionals’ partnership and facilitate the process of assessing bilingual speakers with aphasia.
4.4.2. Limitations of focus groups.

In some contexts, limitations can emerge when more vocal participants dominate the discussion, while less assertive members of the group do not get the opportunity to participate equally (Carey, 1994; Holloway & Wheeler, 1996; Kitzinger, 1995; Krueger & Casey, 2000; Patton, 2002). Further, some participants’ lack of confidence and low self-esteem can affect their participation in focus group discussions (Carey, 1994; Fontana & Frey, 1994; Stewart & Shamdasani, 1990). In this current study, these limitations were not considered prominent, as the focus group facilitators were experienced researchers and the participants were highly trained and experienced professionals.

The representativeness of the focus group participants may be considered as a potential limiting issue (Stewart & Shamdasani, 1990). In the present study, the majority of participants were female, reflecting the composition of the professional groups. However, it needs to be noted that the targeted recruitment of experienced professionals could lead to difficulty generalising the results to the rest of the population (Krueger & Casey, 2000) without experience in interpreter-mediated sessions.

4.4.3. Focus group participants.

Speech pathologists and interpreters with experience in working in interpreter-mediated speech pathology sessions were invited to participate. There were five transcripts available from five focus group discussions. The first set of participants consisted of speech pathologists, who participated in one of five different focus groups. The second set of participants consisted of interpreters who also participated in one of five different discussions (see Chapter 6 for further details).

Chapters 5 and 6 will go into more detail about the two studies conducted by the current research involving the survey and focus group discussions. As previously indicated, Chapter 7
details the development of the aphasia assessment guide which is the outcome of this research. Chapter 7 will include the method of collection and the analysis of the third data source for this research—the expert feedback on the assessment guide. It will also provide more details about the face validity of the assessment guide that has been achieved through experts’ feedback; those who identified the assessment guide as a useful tool to be used with Arabic speakers with aphasia. In addition, the need for further research in future in order to investigate issues in regard to the assessment guide’s concurrent validity will also discussed further in chapter 7.
Chapter 5: The assessment of aphasia for bilingual speakers within the Australian context: Survey for Speech Pathologists

This chapter presents the development of the current survey and the results from its administration to speech pathologists working with bilingual speakers with aphasia. Limited previous research has focused on the difficulties and challenges that arise during the assessment of bilingual speakers with aphasia (Isaac, 2002a; Roger et al., 1996, 1998, 2000). Isaac (2002a) emphasised the need for more research into the important cultural issues surrounding both interpreter-mediated assessment and management practices. Similarly, Roger and colleagues (1996) called for more research into the involvement of interpreters, family members and other bilingual aides in the assessment process and development of cooperative relationships between speech pathologists and interpreters. According Roger’s (2003) survey, which was distributed to speech pathologists those who were frequently involved in the assessment of bilingual speakers with aphasia, speech pathologists reported significant difficulties in ensuring the adequacy of assessment through the use of interpreters, leading to the inaccurate description of patients’ problems. The barriers reported by these speech pathologists were the unavailability of interpreters, the unavailability of appropriate assessment materials to be used with the bilingual speakers with aphasia, and speech pathologists’ lack of knowledge regarding other languages and cultures.

5.1. Survey Aims

The present survey aimed to investigate the current difficulties that speech pathologists are facing when assessing bilingual speakers with aphasia through the assistance of interpreters. The study also aimed to explore whether the perceptions and reported practices of speech pathologists had changed or improved since the time of the previous survey (conducted 10 years before this current research). To this end, the survey instrument was based on that used by Roger’s (2003) previous survey (see Chapter 3 for additional information about his research). The survey also
sought speech pathologists’ opinions regarding alternative assessment practices, which was expected to help in developing an alternative and more appropriate assessment tool or guide to facilitate communication between speech pathologists, bilingual speakers with aphasia and interpreters, within the Australian context. It was anticipated that there would be some improvement of speech pathology practice provided for bilingual speakers across the past ten years; i.e. since Roger conducted his survey; given the reported improvements in the interpreting services provided within the health care sector for people with limited English language proficiency (Djité, 2010).

5.2. Survey Hypotheses

This study hypothesised that speech pathologists working with bilingual speakers with aphasia within the Australian context would report difficulties and challenges when providing aphasia assessment for such speakers. This study also hypothesised that speech pathologists might report similar barriers to those reported previously in the study by Roger and colleagues (Roger, 2003). While Roger’s survey was distributed to 56 speech pathologists working in different institutions in the metropolitan Sydney region (with 40 speech pathologists responding), this current survey was distributed nationally, to all speech pathologists in Australia working with aphasic speakers.

This study made use of an online survey consisting of 28 questions (see Section 5.3 for more details, and Appendix B for the full list of questions). An invitation with an accompanying hyperlink to the online questionnaire was distributed to speech pathologists around Australia through newsletters for Speech Pathology Australia and the Multicultural Interest Groups in NSW and VIC, inviting those who mainly worked with aphasia to respond. Fifty-eight surveys were returned.
5.3. Survey Tool

The questionnaire used in this study consisted of 28 questions, among which most (25) were multiple choice. The questions broadly fell under the categories of demographic/descriptive information, assessment, treatment, computer use competency and consultation experience with bilingual speech pathologists. Since the focus of this study is on assessment issues, questions concerning treatment fall outside the scope of this research.

Questions 13-17 and question 26 were treatment related questions. The survey also included multiple-choice questions that also provided opportunity for further comments - questions 4, 5, 7, 8, 9, 11, 14, 15, 16, 17, 19, 20, 21, 24, 25, 26, 27 and 28. The questionnaire was designed to take about 20 minutes to complete. All questions were then categorised under five headings. These five headings were demographic information; practices used by speech pathologists and difficulties faced; interpreter availability and associated difficulties; the competency, accuracy and effectiveness of assessments; and the last category comprised three different question types, divided into A, B and C. Category A asked speech pathologists for their suggestions concerning effective resources and tools; B asked about the participants’ computer competency for assessment and treatment purposes to identify if computerised assessment tools might be useful in providing more culturally and linguistically appropriate assessments for bilingual aphasic speakers; and C asked speech pathologists about their previous experience in consulting with bilingual speech pathologists. These categories are shown in Appendix B.

The validity of this survey was established and tested before being distributed to participants. This was done by following the two methods of testing survey validity as suggested by Choi and Pak (2005). First, similar questions to those used previously in Roger’s survey were built into the instrument to test the same concept. Q1 through Q9 were drawn from Roger’s (2003) survey. The second procedure used to test the survey’s validity was by conducting what Choi refers
to as the trial circle. As mentioned earlier in chapter 4, the survey was provided in a draft paper form for review by three experienced and expert speech pathologists, with the subsequent penultimate online form being trialled by an additional seven experienced speech pathologists. The final form of this survey took into account the feedback gathered from the expert speech pathologists that reviewed the survey.

5.4. Response Rate

Fifty-eight completed questionnaires were received from participating speech pathologists. Due to the widely disseminated electronic distribution, it is not possible to estimate the response rate for this survey (Bethlehem, 2010). The number of respondents was less than that obtained by Verna, Davidson and Rose (2009), who conducted an online survey aimed at investigating speech pathologists’ notions regarding their practice with patients with aphasia in relation to the International Classification of Functioning, Disability and Health in Australia (2006). That survey was distributed to 330 speech pathologists who worked with patients with aphasia in two regions of Australia: Queensland and NSW. Total responses received were 70, which indicated a 21 per cent response rate. The survey by Roger and colleagues (2000) used as a basis for the present survey obtained responses from 40 of 56 speech pathologists. This 71.5 per cent response rate may reflect the paper distribution within a focused target participant group. Given the difficulties in establishing the response rate for the present study, interpretation of the results needs to recognise the likelihood that respondents may represent highly motivated speech pathologists with a special interest in bilingual assessment.

5.5. Questionnaire Design Issues

In the current survey, the recommendations made by Gillham (2000) and Moser and Kalton (1971) regarding the importance of balancing simplicity versus superficiality in the selection of survey questions were considered. This survey attempted to avoid questions that might lead to
superficiality of the investigation. Questions were designed to be sufficiently simple to be understood by participants, and at the same time were developed to explore participants’ opinions, attitudes and experiences from their answers. In addition, questions were logically sequenced to move gradually from gathering basic and simple information into gathering deeper information regarding the process of aphasia assessment in bilingual speakers.

In this study, consideration was given to ways to overcome the effect of unreliable and unmotivated respondents. The questionnaire was a voluntary online survey, which was considered to facilitate the process of participating. In addition, the anonymous nature of the questionnaire may have helped in avoiding any social desirability bias (Newell, 1993; Wilson & McClean, 1994). Fatigue effects often occur with long questionnaires. However, as a strategy to avoid the effect of fatigue, participants were able to save their responses and to come back and complete the survey later if needed. Further, one of the positive factors that enriched data gathered from this survey was the qualitative nature of the questions provided by the survey. Most questions in this survey gave the participants the opportunity to discuss issues related to each question.

5.6. Data Analysis

The Survey Monkey internet tool was used in distributing the questionnaire and in the process of collecting the data. The analyses of the current survey data was conducted using the statistical software programs Microsoft Excel and SPSS, to consider any influence of speech pathologists’ experience on their responses to questions about providing aphasia assessment for bilingual speakers. The qualitative data that emerged were analysed following the descriptive analysis process to identify key content.

5.7. Survey Findings

This section presents the results of the survey used in this research. First, the demographic information about participants will be provided to identify the characteristics of the participants in
this study sample. This will be followed by the presentation of the main findings under each category of the survey tool. Statistical correlations identified between particular variables will also be further discussed. Finally, a summary of the findings that emerged from this part of the study will be discussed.

Note that not all speech pathologists’ participants answered all questions, therefore, when presenting findings in the following paragraphs, the number of respondents to each question has been provided and percentages were calculated based on number of responses.

5.7.1. Demographic information about participants.

5.7.1.1. Years of experience working with speakers with aphasia.

Most respondents in this survey were between 30 and 50 years old and reported having experience in working with speakers with aphasia. About 66 per cent (37/57) of the respondents had more than four years of experience, and about half of these 37 respondents were speech pathologists with more than six years of experience. About 25 per cent (14/57) reported that they had more than 10 years of experience. These results indicate that few new graduates participated in this survey (see Figure 1). The age profile of this study’s participants differs from that reported by Choi and Pac (2005) and Lambier (2002) for speech pathologists in Australia (24–34 years for speech pathologists born in Australia). Thus, the findings from this survey need to be interpreted with caution, as they represent the views of a relatively experienced group of speech pathologists.
5.7.1.2. Speech pathologists’ caseload of bilingual speakers with aphasia.

The majority of respondents (30/58) indicated that 10 per cent or less of their caseload within the past six months were bilingual speakers with aphasia. Seven respondents out of 58 indicated that more than 30 per cent of their caseload comprised bilingual speakers (see Figure 2).
Figure 2. Percentage of bilingual speakers with aphasia in caseload in the past six months.

Respondents were also asked to specify the languages other than English used by their clients seen in the past six months. In order of most to least often reported, the foreign languages used by the speech pathologists’ patients were: Italian, Vietnamese, Greek, Arabic, Cantonese, German, Mandarin, Spanish, Hindi, Macedonian and Korean. Some participants identified other languages that were not listed as options in the survey. In order of most to least often reported, these were: Turkish, Tagalog, Assyrian, Maltese, Philippine, various Aboriginal languages, French, Dutch, Russian, Polish, Hungarian, Croatian, Ukrainian, Czech, Bosnian, Swahili, Serbian and Tamil. These results reflect the representation of these languages within the Australian population (Australian Bureau of Statistics, 2006a), as well as reflecting the percentage of these bilingual speaker groups within the Australian population, as reported by SPAA (Speech Pathology Australia Association, 2005).
5.7.2. Procedures in use to assess bilingual speakers with aphasia.

In response to Q6, the majority of respondents (38/54; 68 per cent) indicated that they usually or always assessed the first language of bilingual speakers (see Figures 3 and 4). In Figure 3, the two columns (usually and always) were combined together to form one column which presented the 68% and indicated the majority, while Figure 4 shows all columns and percentages as participants responded.

![Bar chart showing Do you assess L1?](image)

**Figure 3.** Participants’ responses regarding whether they conduct first language assessment.

The majority of respondents reported that they mostly used family members to gather background information about the patient, while a minority reported the use of their own knowledge about other languages (11/54; 20 per cent) (see Table 6).
In question 5, participants were able to choose more than one option in regard to the assessment procedures they use to assess bilingual speakers with aphasia. Most respondents reported the use of more than one assessment procedure. The most frequently reported response concerning the assessment procedure were (from most to least commonly reported): screening (44/54; 82 per cent), use of the translated versions of standardised assessment tools (18/54; 33 per cent) and use of self-designed test (17/54; 31 per cent). There were an approximately equal number of responses for the use of functional assessment tools (26/54; 48 per cent) and standardised assessment tools (22/54; 41 per cent). The use of translated versions of standardised assessment tools was reported by 18 respondents (33 per cent) (see Figure 5). Other procedures reported in the respondents’ comments were obtaining assessment through the interpreter, and informal assessment and observation. One participant reported the use of internet sites that provide online language testing when asked about incorporation of available technology for assessment purposes.
Table 6

Strategies used to assess first language (listed in an order of frequency).

<table>
<thead>
<tr>
<th>Answer</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use family members to gather background information</td>
<td>51</td>
<td>94.4%</td>
</tr>
<tr>
<td>Interpreter</td>
<td>48</td>
<td>88.9%</td>
</tr>
<tr>
<td>General observation in everyday interaction</td>
<td>41</td>
<td>75.9%</td>
</tr>
<tr>
<td>Use family members for translation/interpretation</td>
<td>29</td>
<td>53.7%</td>
</tr>
<tr>
<td>Picture-based material</td>
<td>24</td>
<td>44.4%</td>
</tr>
<tr>
<td>Aphasia tests in the speaker’s first language</td>
<td>22</td>
<td>40.7%</td>
</tr>
<tr>
<td>Seek interpretation assistance from colleagues or other employees who know the speaker’s first language</td>
<td>22</td>
<td>40.7%</td>
</tr>
<tr>
<td>Own knowledge of other language</td>
<td>11</td>
<td>20.4%</td>
</tr>
<tr>
<td>Answered questions</td>
<td>54</td>
<td></td>
</tr>
</tbody>
</table>
Figure 5. Percentages of participants’ using different assessment tools for assessing bilingual speakers with aphasia.

When participants were asked about strategies they used to obtaining language assessment for bilingual speakers, the majority of respondents reported dealing with either interpreters or family members.

Respondents were also asked to choose the barriers they usually faced when assessing bilingual speakers with aphasia (Q8). Respondents were able to choose more than one answer. The majority of respondents reported difficulties in relation to the lack of availability of interpreters, often because of patients having uncommon languages or dialects. Other barriers reported included logistical or service availability problems and the skills of the available interpreters. Logistical problems included difficulties with appointment timing. Service availability problems included difficulty using the Telephone Interpreter Service provided by the health service due to difficulties experienced by patients when using this service (for example, hearing problems).
5.7.3. Interpreter-mediated assessment for bilingual speakers with aphasia.

The majority of respondents indicated it was sometimes difficult to secure an interpreter at the time of the assessment session for bilingual speakers with aphasia. Twenty-three of 50 respondents (46 per cent) reported that it was sometimes difficult to get interpreter, 17 of 50 (34 per cent) reported this as rare, 4 of 50 (8 per cent) said it was usual, 4 of 50 (8 per cent) had never found this to be the case, and 2 of 50 (4 per cent) reported that it was always difficult to get an interpreter for an aphasia assessment session for a bilingual speaker.

According to Q11, respondents were able to choose more than one answer in response to this question. The majority of respondents (36/49; 74 per cent) reported that when it was not possible to get an interpreter at the time of the assessment session for bilingual speakers, they mostly organised another appointment, 32 of 49 (66 per cent) reported they asked family members to do the interpreting during the assessment session, 17 of 49 (35 per cent) reported they asked colleagues or other employees who spoke the bilingual speaker’s first language to do the interpreting, and 14 of 49 (29 per cent) reported that they administered the test in the English language.
5.7.4. Perceived competency, accuracy, and effectiveness of such assessment.

One of the most important findings in this survey relates to speech pathologists’ perspectives of their competency in providing assessment for bilingual speakers with aphasia.
Despite the difficulties reported by speech pathologists when assessing bilingual speakers with aphasia, 25 of 51 (49 per cent) of respondents reported they felt fairly competent in obtaining such assessments. However, only 4 of 51 (8 per cent) reported feeling very competent.

Figure 8. How competent do you feel doing interpreter-mediated assessment when assessing bilingual aphasic speakers?

Similarly, despite the difficulties reported by speech pathologists in providing assessment sessions for bilingual speakers with aphasia, close to half of respondents (20/46; 44 per cent) reported that their assessment sessions with bilingual aphasia patients were fairly effective. However, 14 of 46 (31 per cent) reported their sessions as being fairly ineffective, 11 of 46 (24 per cent) said theirs were neither effective nor ineffective, 1 of 46 (2 per cent) felt their sessions with bilingual aphasia patients to be very ineffective, and none reported having very effective sessions (0 per cent).
Respondents were asked to identify any factors that influence the effectiveness of aphasia assessment session for bilingual speakers. Participants were able to choose more than one answer for this question. The major issues reported by participants as factors affecting the effectiveness of assessments sessions with bilingual aphasia patients were: the accuracy of the interpretation; interpreters’ lack of knowledge about the assessment purposes and strategies; speech pathologists’ lack of knowledge about other languages and cultures; and factors related to the time involved in assessment. The majority (39/47; 83 per cent) of participants reported that the accuracy of the interpretation was the most important factor seeming to influence the effectiveness of assessment for bilingual speakers with aphasia. Thirty-five of 47 (75 per cent) participants related the ineffective assessments to interpreters’ lack of knowledge regarding the assessment purposes and strategies, 30 of 47 (64 per cent) reported their own lack of knowledge about the bilingual aphasic speaker’s language and culture, and 15 of 47 (32 per cent) reported the influence of time consumed. An interesting comment was added by one of the participants into the free text box noted the negative effect of having different interpreters for the same patient across different sessions.
5.8. Ideas for Improving Assessment Procedure

5.8.1. Resources.

In question 21, participants were asked for their opinions about other tools and resources (provided as choices by the question) that would help them working with aphasic people of non-English-speaking backgrounds. Respondents were able to choose more than one answer for this question. The majority of respondents (44/47; 94 per cent) reported the need for new assessment materials that could match the bilingual aphasic speakers’ linguistic structures and cultural background, while (35/47; 75 per cent) reported the need for consultant bilingual speech pathologists who could provide assistance for interpretation purposes of bilingual speakers’ assessment findings and for treatment purposes. Thirty of 47 (64 per cent) reported that speech pathologists need more training courses and seminars to provide them with knowledge about other languages and cultures and train them on how to deal with bilingual speakers with aphasia. Twenty-six of 47 (55 per cent) reported the urgent need for adding more teaching materials for undergraduate speech pathology students to teach them about how to deal with speakers from different linguistic and cultural backgrounds. Finally, 10 of 47 (21 per cent) reported the need to facilitate the registration of more bilingual speech pathologists from overseas to practise in Australia.
Some participants added comments regarding other strategies that could help them in dealing with bilingual speakers with aphasia. These included lobbying for more interpreters, interpreters’ training for speech pathology practice, videoconferences and information packages in various languages in aphasia friendly format.

Participants were asked for their opinions about using computerised assisted software to assess bilingual aphasic speakers. The majority of respondents (36/41; 88 per cent) agreed with the idea. These respondents specified reasons such as the advantages that can be brought by locating information online and providing more information to patients, and the improvements in assessment of comprehension and the avoidance of interpretation biases that computerised assessments allow. Respondents who indicated their disagreement specified the difficulty they might face with electronic assessment tools due to the patients’ older age and/or their disability.
5.8.2. Bilingual speech pathologists as consultants.

The majority (37/45; 82 per cent) of respondents reported that they had had no previous consultation with other bilingual speech pathologists in regards to bilingual speakers with aphasia assessment results. Respondents who had previous consulted with bilingual speech pathologists reported having a colleague or student who spoke the patient’s first language. Participants were provided with a free text box to add their comments into this question. One of the participants who had no previous experience working with bilingual speech pathologists responded by adding: ‘Where do we find one?’, while another respondent added, that there was a lack of available bilingual speech pathologists within the Australian context.

![Figure 11. Consultation with bilingual speech pathologists.](image)

All respondents except one (44/45; 98 per cent) agreed that increasing the availability of bilingual speech pathologists in Australia would improve the services provided by monolingual speech pathologists for bilingual speakers with aphasia. Respondents stated that a bilingual speech pathologist with the same language as the aphasia patient would be able to give an informed
opinion as a first language speaker, provide translation in different dialects, suggest more appropriate resources, specify the most important areas to be assessed based on the patient’s background, help in targeting more appropriate treatment goals, and play a role as a knowledge base for monolingual speech pathologists.

![Pie chart showing the distribution of responses to a question about increasing the availability of bilingual speech pathologists.](image)

**Figure 12.** Speech pathologists’ agreement with increasing the availability of bilingual speech pathologists in Australia.

### 5.9. Statistical Analysis

SPSS statistical software was used to analyse the data from this questionnaire to calculate the Cross Tabulation tables, the Chi square tests $\chi^2$ and the P values between the different variables (and these will be described in the following paragraphs).

Participant speech pathologists’ years of experience was chosen as an important variable to explore in relation to the other variables in this study. To simplify the process of calculating the P values, the choices that were given under each question were combined together into two categories. Category one included two to three choices (those that described agreement or positive
tendency), while category two included the rest of the choices (disagreement or negative tendency). For example, Q1, which asked about participants’ years of experience, had four choices. These four choices were combined together to form two categories. The first category was 1 to 5 years of experience, while the second category was greater than 5 years of experience. In another question, Q3, participants were asked about the percentage of bilingual speakers in their caseload. Responses were organised into two categories: less than 30 per cent bilingual speakers with aphasia or greater than or equal to 30 per cent bilingual speakers with aphasia. All other questions (Q2, Q6, Q10, Q12, Q18, Q23, Q24, Q25, Q27, Q28) were re-categorised in the same way.

All of the above questions were compared with years of experience and revealed non-significant P values (except for Q3, second from the top in the above list) as identified beside each question in the above paragraph (see the table of results in Appendix B).

The only statistically significant result from the analysis of the survey data was found in relation to participants’ years of experience and the percentage of bilingual speakers with aphasia seen by participants during the previous 6 months ($\chi^2 = 4.139, p < .042, \text{two-tailed}$). Speech pathologists with less than 5 years of experience were roughly equal in their likelihood of having a substantial bilingual caseload, with 43 per cent reporting more than 30 per cent bilingual aphasic patients in their caseload. However, speech pathologists with more than 5 years of experience were less likely to have a substantial bilingual caseload (only 18 per cent reporting more than 30 per cent of caseload). Whether this difference reflects caseload allocation within institutional settings is not known. However, analysis of the data did not reveal any statistically significant differences between perceived competence and confidence dealing with bilingual speakers associated with years of experience. Therefore, as less experienced speech pathologists are handling larger bilingual caseloads, this does raise questions regarding the adequacy of professional preparation for less experienced speech pathologists given their likelihood of having a substantial bilingual caseload.
Table 7

Speech pathologists’ years of experience and percentage of caseload comprised of bilingual aphasic patients.

<table>
<thead>
<tr>
<th>(%) of bilingual aphasic patients seen by SLP during the past 6 months</th>
<th>Years of experience</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1-5 years</td>
<td>&gt;5 years</td>
<td>Total</td>
<td></td>
<td></td>
<td>Test</td>
<td>P value</td>
</tr>
<tr>
<td>&lt;30%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>57.1</td>
<td>23</td>
<td>82.1</td>
<td>39</td>
<td>69.6</td>
<td>4.139</td>
</tr>
<tr>
<td>&gt;=30%</td>
<td>12</td>
<td>42.9</td>
<td>5</td>
<td>17.9</td>
<td>17</td>
<td>30.4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>100.0</td>
<td>28</td>
<td>100.0</td>
<td>56</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

No statistically significant findings were found for years of experience and the following variables:

- Obtaining aphasia assessment in patients’ first language (P = 0.572)
- Difficulty getting interpreters for the purpose of assessing bilingual patients’ first language (P = 0.221)
- Feeling competent obtaining the aphasia assessment in patient’s first language (P = 0.963)
- How effective the assessment is for bilingual speakers with aphasia (P = 0.592)
- How confident the speech pathologists feel toward assessing language for bilingual speakers with aphasia (P = 0.277)
Experience using computerised assessment tools for the purpose of language assessment (P= 0.608)

Belief that using computerised assessment tools is effective to assess language for bilingual speakers (P= 0.549)

Previous experience in consultation with bilingual speech pathologists (P= 0.606)

Agreement with increasing the availability of bilingual speech pathologists within the Australian context (P= 0.545).

5.10. Discussion of Survey Findings

The current online survey aimed to gather speech pathologists’ notions regarding the current assessment practices used with bilingual speakers with aphasia within the Australian context. As mentioned previously, this survey aimed to extend the survey reported by Roger (2003), which collected speech pathologists’ opinions regarding the assessment of aphasia for patients from non-English language backgrounds. This current survey differed in some aspects to that conducted by Roger, such as with regard to the distribution strategy used (online rather than paper-based), the sample size (56 rather than 40) and participant location (Australia-wide rather than Metropolitan Sydney), number and type of questions (10 questions in common), and the range of issues explored (general assessment focus rather than interpreter-specific focus). Findings from this current survey supported Roger’s survey findings. The major findings shared by the two surveys are:

Speech pathologists in both surveys reported difficulties providing aphasia assessment for bilingual speakers within the Australian context. The current survey found that these difficulties are not just a phenomenon faced by speech pathologists working in Sydney, but are also faced by speech pathologists in different regions of Australia.
• Unavailability of interpreters was still reported as a challenge for monolingual speech pathologists who work with a large number of bilingual speakers with aphasia in the Australian context.

• Inappropriate assessment tools and materials were still reported to be a major barrier faced by speech pathologists when assessing bilingual speakers with aphasia in the Australian context.

• Speech pathologists’ lack of knowledge about different languages and cultures was still raised as a major challenge.

• Speech pathologists’ lack of skills and experiences dealing with speakers from different linguistic and cultural backgrounds continues to be noted.

• The need for more new appropriate assessment tools/materials to be used with bilingual speakers with aphasia was a crucial issue raised by the majority of speech pathologists responding to both surveys.

Findings from the current survey revealed that the majority of were speech pathologists with considerable experience working with speakers with aphasia. The most interestingly finding from this survey was that although speech pathologists reported difficulties in assessing bilingual speakers with aphasia, the majority reported feeling confident conducting aphasia assessment for bilingual speakers. However, despite most speech pathologists indicating the unavailability of interpreters and unavailability of appropriate assessment tools, the majority reported the aphasia assessment conducted for bilingual speakers to be fairly effective. This is less surprising when considering the findings of Roger, Code and Sheard (2000), who revealed that, while speech pathologists might assume their interpretation of assessment sessions for bilingual speakers with aphasia to be correct, reinterpretation of video-recorded assessment sessions obtained by Roger and colleagues’ study identified the presence of major interpretation errors. In addition, their findings revealed that inappropriate assessment materials and stimuli requiring on-the-spot translation by
interpreters resulted in the assessment containing different levels of linguistic complexity to that of the original targets. Roger and colleagues suggested that these sources of error and inappropriate interpretation emerged because of interpreters’ lack of knowledge about aphasia and the purpose of such assessments, as well as speech pathologists’ lack of knowledge about other linguistic and cultural backgrounds.

Further, although the majority of participants had no previous experience consulting bilingual speech pathologists about the assessment of bilingual speakers with aphasia, the majority agreed with the need to increase the availability of bilingual speech pathologists to improve assessment outcomes and treatment services provided for bilingual speakers as mentioned earlier through the previous paragraphs.

5.11. Survey Conclusions

The survey findings suggested that aphasia assessments that include a bilingual speaker with aphasia, an English-speaking speech pathologist and an interpreter can be challenging for several reasons. These include the use of inappropriate assessment tools, speech pathologists’ lack of knowledge about other cultures and languages, interpreters’ unavailability and the lack of consultation opportunities provided for monolingual speech pathologists by bilingual speech pathologists to facilitate the process of interpreting bilingual speakers’ assessment findings. These barriers may be seen to affect the services provided for bilingual speakers negatively. The speech pathologists that participated in this study reported the urgent need for more appropriate assessment tools for use with bilingual speakers with aphasia. Further, they reported the need to improve their own skills and experience working with bilingual speakers through attending more workshops and seminars to enhance their knowledge about other languages and cultures to be able to accept and deal with different bilingual speakers’ attitudes, beliefs, communication styles, religion and linguistic differences.
Chapter 6 will discuss findings emerge from the analysis of data obtained through focus group discussions with speech pathologists and interpreters in regard to their notion toward difficulties they face when working together to serve bilingual speaker in the speech pathology clinics in Australia. A triangulation process was applied to integrate the quantitative data gathers through the survey with the qualitative data gathered through focus group discussions in order to develop the aphasia assessment guide for bilingual speakers that would add a contribution to the body of research in this particular area. Chapter 7 will discuss further the development and modification processes applied in the development of this aphasia assessment guide.
Chapter 6: **Speech Pathologist and Interpreter Focus Group Discussions**

This chapter presents the main findings that emerged from analysing the qualitative data obtained to explore health care interpreter-mediated settings with bilingual speakers, particularly within the speech pathology setting in the Australian context. Throughout this chapter, the specific focus will be on findings that emerged from analysing the focus group interviews. The findings from the two data sources of the survey and the focus group discussions was used to develop the aphasia assessment guide as a useful assessment tool that can be added as a contribution to the body of research in this particular area.

### 6.1. Qualitative Data

As previously discussed, the focus group discussions used in this research were gathered between 2003 and 2004 by the research’s supervisor Professor Alison Ferguson and her colleagues Dr Christopher N. Candlin, Dr Peter Roger and Dr Elizabeth Armstrong from Macquarie University and Dr Kim Isaac from the University of Newcastle. The collection of this data was funded by the Health Care Interpreter Service NSW, the Department of Immigration and Multicultural and Indigenous Affairs and the Macquarie University External Collaborative Research Grants Scheme. The data were provided to the present researcher analyst six years after the data were originally collected. Data were gathered from the transcripts of five focus group discussions with groups of speech pathologists and groups of interpreters, all of whom were working in health care settings in Australia. The group discussions were conducted with each group of professionals separately. The focus group structure made use of several broad open-ended questions as prompts for discussion, for example, ‘What things make it easier and what things make it harder for you and speech pathologists (or interpreters) to work together effectively?’
Two focus group discussions had been held with different speech pathologists; one group consisting of two speech pathologists, while the second group consisted of an unknown number of participants (it is unclear in the transcript). Three focus group discussions had been held with different interpreters, with each group consisting of 6–8 interpreters. Participant recruitment had been achieved through distributing invitations to speech pathologists and interpreters with experience working in the situation of assessing and treating bilingual speakers receiving speech pathology services. This source of data contributed to the overall validity of the current research because it included both professional groups; speech pathologists and interpreters. While the survey used by this research included only speech pathologists, the inclusion of interpreter participants in the focus group discussions was important for testing the phenomenon under study from a different perspective.

The data gathered though this particular source were obtained six years before the commencement of the current research, and so testing the validity of such data becomes crucial. The findings that emerged from Roger’s survey conducted prior to the focus group data collection, and the findings from the present survey were found to raise the same issues as emerged from the analysis of focus group data. Most notably, all of the three studies identified the need for more appropriate assessment tools to be used with bilingual speakers in speech pathology clinics in Australia. The three studies also stressed that speech pathologists and interpreters need to improve this professional partnership.

Data gathered from focus group discussions were analysed mainly to explore speech pathologists and interpreters’ perceptions about their partnership and roles when working together in interpreter-mediated settings. The qualitative data gathered from focus group discussions were analysed according to the model developed by Angelelli (2004), which illustrates the three main aspects of the interlocutors’ communication process through the interpreter-mediated health care
setting. These aspects were previously described in Chapter 3 as field, tenor and mode, and these categories are used to discuss the findings that emerged from the focus groups.

6.2. Data Analysis

Content analysis was used to analyse focus group discussions with interpreters and speech pathologists. Content analysis involves identifying the main substantive points in the focus group discussions transcript and categorising them. NVivo software was used to assist in the analysis of all focus group discussions. This software is considered a highly efficient and reliable tool in qualitative analysis of data (Iitoselliti, 2003). This software also helps the researcher in managing, accessing and analysing data, where the researcher responsibility remains to think, construct and account for the data and the methods and process of analysis, while simultaneously considering the richness and complexity required to analyse the qualitative data (Barry, 1998).

In this study, line-by-line analysis of the transcripts of the five focus group discussion transcripts formed the first step to gain a general impression about the data. This was followed by multiple reading attempts to code the transcripts. Each section of the transcripts was coded under particular names (word or phrases) that would best label that part of the data based on its main characteristics. These codes described the main topics and ideas identified and repeated several times by different participants through the transcripts, as suggested by Welsh (2002). The categorising process undertaken by the analyst (the researcher) continued throughout sequential analysis stages. Firstly, categories were developed based on all substantive statements that fell within a category that would best describe the statement characteristics, so that categories were developed that shared the same ideas and concepts. The next step in the analysis was to clustering those codes into families, whereby different subcategories (child nodes) sharing like characteristics and aspects were grouped together under a main category (tree node). Finally, all category decisions
were reviewed by the researcher, and any remaining coding queries were resolved through discussion with the researcher’s primary supervisor. The following three tables (see Tables 8, 9 and 10) present the main findings comparing the IS and the MS in relation to the key aspects of the context (field, tenor and mode) as described in Chapter 3 of this thesis.

6.3. Field of Discourse: Comparing the Monolingual and the Interpreted Settings

The field of discourse is concerned with the physical setting, cultural setting, purpose, and topic discussed through conversational settings. All of these aspects and other new emerging aspects will be used in describing findings emerge from analysing focus group discussions throughout the following paragraphs in this chapter.

6.3.1. Institution.

A major finding from the focus groups was the previously under-emphasised importance of the role of the institution in achieving (or not achieving) the purpose. In the Hymes model; as described by Angelelli (2004), the key aspects are identified as physical setting, cultural setting, purpose and topic. However, a frequent issue raised across the focus group discussions was the institutional setting. Institutional issues may relate to the wider cultural context, but the importance of this issue had not previously been raised or emphasised by the literature. Thus, the institutional setting aspect was added to the framework to improve the description of the interpreter-mediated speech pathology assessment session for bilingual speakers.
Table 8

Field of discourse, comparing monolingual and interpreted settings.

<table>
<thead>
<tr>
<th>Aspect of communication</th>
<th>Interactant</th>
<th>Monolingual assessment</th>
<th>Interpreted assessment</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional setting</td>
<td>SLP</td>
<td>SLP controls booking</td>
<td>Central booking systems, Play role in booking</td>
<td>Availability, INT choice, Procedures</td>
</tr>
<tr>
<td></td>
<td>ADMIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td>Having the rights to accept or refuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical setting (place, time)</td>
<td>SLP</td>
<td>Familiar</td>
<td>Familiar</td>
<td>Three-way conversation direction, Crowded stuffy rooms, Affected by time allocation (includes pre-session, post-session discussion)</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Unfamiliar</td>
<td>Unfamiliar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td>Unfamiliar or familiar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural setting</td>
<td>SLP</td>
<td>Familiar</td>
<td>Unfamiliar</td>
<td>INTs’ &amp; patients’ lack of knowledge about SLP, The need for first session familiarisation, or social chat</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Familiar</td>
<td>Familiar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td>Familiar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>SLP</td>
<td>Negotiated directly with each other</td>
<td>Negotiated indirectly via the interpreter, Negotiated directly (‘embedded’ negotiation)</td>
<td>Lack of pre-session briefing, The need for online clarifications (particularly the purpose of each testing step when INT gets it wrong)</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>SLP</td>
<td>Negotiated directly with each other</td>
<td>Negotiated via interpreter, May need to modify message conveyed (add, comment)</td>
<td>Affected by miscommunication and misunderstanding due to interpretation, INT modifications based on cultural issues</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In comparison with other setting issues, there is another ‘player’ in the interaction, as the administration system for booking and the administrators contribute to facilitating interpreter-mediated assessments. For example, in the current data, speech pathologists reported that booking systems did not allow multiple bookings to accommodate multiple assessment and treatment...
sessions for bilingual speakers, whereas they have this already controlled for monolingual speakers. Availability of interpreters who are proficient in minority languages was reported as a constraint on access by both speech pathologists and interpreters. For interpreters, unavailability was reported to affect the quality and quantity of speech pathology services provided for bilingual speakers in the Australian context, exacerbating existing gaps between sessions to be booked for bilingual speakers. This issue affects patients’ progress and leads to a loss in the rapport that was built with the patient on previous appointments.

Of particular interest was the discussion among interpreters regarding the importance of having the choice to reject a booking for a language and/or dialect with which they do not feel sufficiently competent. This was also raised in relation to having the choice not to accept a booking for a speech pathology session if the interpreter felt less confident doing it due to a lack of experience and/or training. The quote provided below illustrates the connection between interpreter’s choice and the ethical practice of interpreters:

*INT: It’s [the INT's] right to refuse. And it’s actually by the code of [unintelligible, ?ETHICS, ?PRACTICE), you know, if you don’t feel 100% [CONFIDENT] you better withdraw].*

From the current data, a particular match emerged between the institutional setting and the physical setting, in which interpreters’ unavailability was influenced by components of the physical setting such as the availability of car parking in busy areas. Interpreters reported that difficulty finding a car park would at times delay their attendance at speech pathology sessions for bilingual speakers, in turn influencing the quality and quantity of the service they could provide for bilingual speakers. Such practical issues have not been emphasised previously in the literature.
6.3.2. Physical setting.

In relation to the physical setting of each communication context, participants discussed factors they believed to affect the setting such as the speech pathology room in which the assessment is undertaken. For example, the assessment might be affected by the size of the assessment room in which the speech pathologist and the bilingual patient are to communicate indirectly through the interpreter. While in a monolingual speech pathology session the speech pathologist usually faces the patient, in an interpreted session for a bilingual speaker, the interpreter needs to face both interlocutors (that is, the patient and the speech pathologist) at the same time. Thus, the interpreter becomes the central point for both interlocutors. Some interpreters mentioned that speech pathologists usually prefer to sit to one side watching the interaction between interpreters and bilingual patients, while others would involve themselves within the three-directional conversation triangle, and participate as one angle of the triangle formed by the three interlocutors. For example, one speech pathologist reported:

*I always do the face-to-face thing, like, I won’t face the interpreter, I’ll make it a three-way conversation, and, but I’m actually not the person who is face-to-face with the interpreter, actually I’m on the side scribing and I’ll let both of these people talk.*

Interpreters identified the small stuffy speech pathology room as a negative factor that influenced their performance throughout the session. They also identified the negative effects of having more than one professional in the assessment room at the same time, especially for in-patients where interactions usually occur at a bedside within a hospital setting. Moreover, they identified the presence of speech pathology students as a negative factor affecting their performance.

For speech pathologists, the time allocation for the interpreted sessions was a main concern. They identified that with monolingual patients, the half hour session may be enough to conduct the
whole assessment. However, for bilingual speakers, with the presence of interpreters and all of the other barriers emerging from cultural and linguistic diversity, a half hour is not enough time to obtain a complete assessment. Speech pathologists raised this issue and emphasised the importance of booking extra time for such sessions. For interpreters, they also believed that more time is needed for interpreted sessions with speech pathologists, especially because they need more time to translate medical terminologies used by speech pathologists, which they may never have heard before. Therefore, interpreters might need more time to negotiate the meaning of some terminologies with speech pathologists to convey the correct meaning.

Time of day was another issue raised by speech pathologists and interpreters as a factor affecting the interpreted speech pathology sessions for bilingual speakers. Participants reported that time allocation relating to the time of day in which the session occurred was important. Morning sessions were considered easier due to concentration issues, and the fact that this time of day better suits patients with stroke, who may feel tired during afternoon sessions. For interpreters, time allocation was an important issue that they believed needed to be considered by speech pathologists and by the interpreting registration system when booking interpreter appointments.

The time allocation issue also included the preparation of the pre-session briefing and the post-session debriefing between the speech pathologist and the interpreter. The data showed that interpreters were concerned about the importance of pre-session and post-session discussions with speech pathologists because of several factors. One of these factors was the difficulty they faced when being asked to translate a list of words immediately during the session. In such cases, applying brainstorming becomes essential. However, brainstorming puts interpreters under stress, as well as consuming time. Interpreters believed that discussing such assessment lists with speech pathologists as part of pre-session discussion was the best option for saving time, and for being able to identify any inappropriate assessment items that may need to be modified or replaced with other
testing items. Interpreters also raised pre-session discussion as an important factor that facilitates their understanding of assessment targets. Interpreters believed this would help them to avoid any English language online discussion with speech pathologists in front of patients, who might become distressed if unable to understand such discussions. In contrast, speech pathologists preferred online discussions with interpreters more than booking extra time for pre-session and/or post-session briefing. Speech pathologists valued online discussion because it allowed them to provide interpreters with consistent cues needed during the assessment session to ensure the validity of assessment findings.

6.3.3. Cultural setting.

Interpreters asserted the importance of being informed about the bilingual patients’ occupational, educational and social background before starting the assessment session. On the other hand, speech pathologists were against this idea because they believed that this could easily happen within the few moments before commencing the assessment session for a bilingual speaker.

Monolingual and interpreted speech pathology sessions shared the patient’s unfamiliarity about the speech pathology field. Thus, in the interpreted speech pathology session, the patient is unfamiliar with the process of being assessed by a speech pathologist, just as the patient is in the monolingual setting. However, in the interpreted setting, the bilingual patient is also less familiar with the role the interpreter plays in such a session. Interpreters in the current study asserted that most bilingual speakers do not have previous experience with speech pathologists or interpreters. In view of this, interpreters emphasised the importance of first session familiarisation. They suggested that speech pathologists provide bilingual speakers with information about speech pathology, the speech pathologist’s role, the interpreter’s role, the purpose of the assessment session, and the importance of the interpreter in such sessions.
From the speech pathologists’ point of view, first session familiarisation was less explicitly raised. Speech pathologists emphasised the importance of providing the patient and the interpreter with the opportunity to start social interaction before starting the assessment part of the session. Their perspective about this issue (patients’ familiarisation) seems different from that of the interpreters. Speech pathologists in the focus group discussions commented that it was important to allow for this type of chat to occur to make all interactants feel more comfortable, and so that the session seemed less stressful, especially for the patients. As one speech pathologist stated:

the interpreter is a human as well and the patient is a human as well. Um, if you all of a sudden bring someone from my own culture coming in and talking to me and acting that they have no connection to me, I would find it quite uncomfortable.

Additionally, interpreters discussed the need to know more about the purpose of the assessment session. Thus, interpreters asserted the importance of the pre-session briefing with the speech pathologist as an opportunity for both professionals to establish the rules for the assessment session with a bilingual speaker.

Finally, interpreters also raised issues around the cultural appropriateness of the testing materials used with bilingual speakers in speech pathology clinics. These issues cross into a number of aspects of field, as well as tenor and mode, and so will be identified across these areas.

6.3.4. Purpose.

For monolingual speakers in a speech pathology setting, the speech pathologist and the patient usually have the opportunity to discuss the purpose of the assessment session directly, mainly because they share the same language and the same cultural background. However, in the IS, the purpose of the setting is discussed only indirectly between the speech pathologist and the bilingual patient via the interpreter. This mediation of the messages through the interpreter might be
embedded, and this would minimise the benefit of the direct negotiations about the purpose of the assessment between the speech pathologist and the bilingual patient. In the IS, the lack of pre-session briefing between the speech pathologist and the interpreter might be detrimental to the effective negotiation of the assessment session purposes. Interpreters identified that the cultural and linguistic inappropriateness of the assessment items to be used with the bilingual patient needs to be negotiated directly between the three communication parties to avoid any misunderstanding or misinterpretation during the assessment session. The issues around cultural appropriateness also relate closely to matters affecting interpersonal relationships. Therefore, this issue will be discussed further in the section below on tenor. Interpreters also asserted the importance of being provided with more description and explanation of the language and the speech behaviours expected from the patient, which might need to be identified by the interpreter. In addition, interpreters reported a preference for speech pathologists to discuss the purpose of the session with the bilingual patient via the interpreter, to acknowledge the importance of having the interpreter in the assessment session and the importance of the interpreting service for the patient benefit.

As expected from previous research in this area, the participants reported concerns that mistranslations and misinterpretation may occur because of the difference in the structure of each language translated by the interpreter. As mentioned earlier in Chapter 3, deletion and multi-meanings of some words are two problems that can occur when translating between Arabic and English, as identified by Izwaini (2006). This situation was also reported by one of the speech pathologists in the study data, who gave an example of an interpreter who misinterpreted the patient’s language and how this mistake greatly affected the Arabic patient’s responses and assessment outcomes. This speech pathologist indicated that the mistake was due to mismatch of both linguistic and cultural implications:
I had a question, a yes/no question, ‘are you a woman’ and in Arabic that turns out to mean ‘not a virgin’ and a virgin would be a ‘girl’ and, ah, so this lady was saying ‘no’, not a woman, and both the interpreter and I are going [non-verbal] and then the interpreter realised, you know? But if I had probably cued her for looking for things that might not be culturally appropriate, you know, she might have been thinking more along those lines. She was quite ashamed of her, the interpreter was actually quite ashamed of herself for not picking that one up straight away, because she just was thinking, she said, in her English mind, and not Arabic culture.

6.3.5. Topic.

The topic of discussion in the interpreted setting seems also to be affected by the cultural diversity between the three communication interlocutors. Miscommunication and misunderstanding were reported to occur between all participants where work was needed to clarify the focus of matters discussed in sessions, for example, clarification of why particular topics for case history were included can be related back to the issues discussed above regarding the need to clarify the purpose of sessions).

6.4. Tenor of Discourse: Comparing the Monolingual and the Interpreted Settings

Tenor of discourse includes the role each participant plays in the interaction, the power relationship, management of the interaction, and norms for interaction. All of these aspects will be used in describing findings that emerged from analysing focus group discussions’ data within the following paragraphs of this chapter.
6.4.1. Roles.

Interpreted sessions appeared to increase the potential complexities associated with the role of family members in the assessment, in comparison with in monolingual sessions (see Table 9). The lack of trust between the family members and the interpreter was described by participants in the interpreter focus groups as a major barrier they usually face in such settings.

Another source of reported mistrust related to linguistic non-equivalence when translating from language to language. This phenomenon appeared to affect the trust between the speech pathologist and interpreter, especially when the speech pathologist asks the interpreter to convey a long sentence and the interpreter conveys it using only a few words. This was reported to lead the speech pathologist to query the interpreter (*Did you ask the patient the same question I asked?*) One interpreter stated:

*She was doubting my ability to interpret. I mean, it offended me actually ... they expect word-by-word, um, translation. So if they say two words and you end up with five or six words they query or vice versa. Um. Yeah things, things like that, I mean there needs to be trust.*

However, a speech pathologist commented:

*I like your shorter translation thing, where you've just said something really long and they just say like five words. And vice versa.*

Another speech pathologist commented:

*Request clarification from the interpreter, I would say that, 'I actually noticed that mum just said a lot and she said little, um. Did you give me everything?' you know, something non-threatening, but, 'did I get it all word-for-word there?*
Another speech pathologist reflected a lack of trust in interpreters by saying:

*Sof they will start repeating things and giving more cues and things like that and so I'm probably a lot more controlling from the start because I'm not trusting them with anything.*

The presence of family members seemed to be important, particularly with children where the interpreter could ask parents for assistance in interpreting the speech of their child. However, interpreters and speech pathologists identified the defensive behaviour of some family member concerning the patient’s performance as a negative factor that influences such settings. In other words, some family members’ interference seemed to disturb interpreters and speech pathologists, especially when family members advocated for the patient and showed a lack of trust toward the interpreter’s performance. Moreover, some family members disturb the interpreter and the speech pathologist by cueing the patient (in this case, a child) during the assessment. One speech pathologist reported:

*because the interpreter was there and making her a fool, um, the interpreter’s not translating appropriate information, or the husband is having an argument with the interpreter because they’re not just doing the, like the interpreter, ah, the husband thinks the interpreter’s not doing a good job, and with that particular dynamic, or whether, um, the wife is upset because she’s shown awareness of her own deficits. I think that’s another thing.*
<table>
<thead>
<tr>
<th>Aspect of communication</th>
<th>Interactant</th>
<th>Monolingual assessment</th>
<th>Interpreted assessment</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles in interaction</td>
<td>SLP</td>
<td>SLP ↔ PT</td>
<td>SLP → INT</td>
<td>Trust, SLP rely on INT</td>
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<tr>
<td></td>
<td>PT</td>
<td>PT ↔ SLP</td>
<td>PT → INT</td>
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<tr>
<td></td>
<td>FAM</td>
<td>SLP ↔ FAM</td>
<td>INT ↔ FAM</td>
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<td></td>
<td>INT</td>
<td>INT → SLP</td>
<td>INT → PT</td>
<td></td>
</tr>
<tr>
<td>Power relationship</td>
<td>SLP</td>
<td>SLP ≥ PT</td>
<td>SLP ≠ INT</td>
<td>SLP, INT, &amp; PT are listeners and speakers at the same time, INT more powerful than SLP and PT, Shared power perception (partnership)</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>PT ≤ SLP</td>
<td>PT &lt; SLP, INT</td>
<td></td>
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<tr>
<td></td>
<td>INT</td>
<td>INT ≠ SLP</td>
<td></td>
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<tr>
<td>Management of interaction (turn taking)</td>
<td>SLP</td>
<td>Familiar/shared SLP ↔ PT</td>
<td>Unfamiliar SLP → INT</td>
<td>SLP decision, Affected by role perception, INT role differs depends on SLP preference</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>Familiar/shared PT ↔ SLP</td>
<td>Unfamiliar PT → INT</td>
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<tr>
<td></td>
<td>INT</td>
<td>Familiar/facilitator/controller INT → SLP INT → PT</td>
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<tr>
<td>Emotional support</td>
<td>SLP</td>
<td>SLP directly provide verbal support for PT</td>
<td>SP dependent on INT</td>
<td>Filtration effect</td>
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<tr>
<td></td>
<td>PT</td>
<td>Can express feeling more directly when sharing the same language with SLP</td>
<td>Experiencing linguistic and cultural barriers</td>
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<tr>
<td></td>
<td>INT</td>
<td>Not always prepared to deal with patients’ emotional distresses</td>
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The current data show that roles in the interpreted speech pathology session for a bilingual speaker are usually governed by the speech pathologist, where he/she plays the controller and the facilitator role throughout the whole assessment process. While some interpreters identified this to be the case, others reported that some speech pathologists do not manage this aspect of their role when allowing family members to interfere during the assessment session, which leads to conflict between the family and the interpreter. Interpreters believed that it was the speech pathologist’s responsibility to set up boundaries for family members’ interferences and to stop them when they cross such boundaries. One interpreter reported:

Yeah, and it’s not your interview, you can’t ask the speech pathologist, ‘please can you ask him not to interfere.’ Because your only just to be the voice there. They should consider, (other person spoke), yeah that’s their rule, exactly.

Another interpreter commented on the speech pathologist’s role in setting up the rules during the session by saying:

so that’s why the ground rules is [sic] very important for the client, as well as the client’s partners or parents and, yeah family.

Speech pathologists also reported that one of their roles is to prevent any conflict from occurring between patients’ family members and interpreters. One speech pathologist reported:

| Norms | SLP | Familiar/Share the same norms | Unfamiliar | • Affected by ethical considerations  
• Avoid online discussion in front of patient using foreign language  
• Governed by cultural and linguistic appropriateness of testing items |
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<tbody>
<tr>
<td>PT</td>
<td>Familiar/Share the same norms</td>
<td>Unfamiliar</td>
<td></td>
<td></td>
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<tr>
<td>INT</td>
<td>Facilitator and modifier for unshared norms (modifying and adding some components, and, educate about differences)</td>
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</table>
I feel...being the clinician you have to do something actively about it, rather than just sit back and let this go on and say ‘oh, this is not my problem, you two can have a fight’.

Interpreters also reported that in the MS, the speech pathologist plays the role of session controller. However, in the IS, the speech pathologist needs to play the role of both; educator as well as controller. Interpreters reported an expectation that the speech pathologist would educate them regarding the appropriate behaviours and responses for the patient. Interpreters added that the provision of some cues to assist them during the session by the speech pathologist was crucial. Speech pathologists appeared to perceive their role as being the same regardless of whether they were assessing monolingual or bilingual speakers. One speech pathologist reported:

*I, find that it’s the same again that I see myself as the facilitator or the director, you know, if it’s a session without an interpreter I’ll do exactly the same thing, facilitate the questions, chase down who I want to ask the questions of, who I want there and everything like that. I’ll ask people not to be there and everything like that, the same as I would without an interpreter.*

Interpreters reported that speech pathologists sometimes asked them to provide things that interpreters believed were not their responsibility, such as to administer the whole assessment, judge patients’ performance and/or report on patients’ progress over time. This finding as in accord with the previous literature in the field, in which issues have been raised as to the extent to which speech pathologists would (or should) ask interpreters to extend their usual role.

Some interpreters reported that their role was just to provide speech pathologists with word-by-word interpreting of patients’ responses, without further explanations of meaning. However, others reported that their role involved translation and interpretation of meaning at the same time. One interpreter reported:
Like, um, yeah when they ask him something he answered this word and then I’ll have to expand what this word mean[s]. So, it’s not just an interpreting.

Another interpreter reported:

*Our role is, we interpret whatever is being said. No more, no less. You know, that’s what they should know. And if they want, ah, more information they should ask for it. We cannot sort of just give it by ourselves ... You are becoming the assessor and that’s not what interpreters are for.*

However, interpreters also stated that it was one of their responsibilities to interpret patients’ gestures and body language because body language can differ across languages based on differences in cultural background.

### 6.4.2. Power relationship.

Speech pathologists and interpreters’ power seems substantially different in the interpreter-mediated assessment session as compared to within sessions for monolingual speakers. In the interpreted session, the speech pathologist, the interpreter and the bilingual patient are all acting as speakers and listeners with different degrees of power. However, in the monolingual session, the speech pathologist is more powerful than the patient, while in the interpreted setting, the interpreter is more powerful than the other interlocutors, mainly because he/she is the one who knows the two different languages used through the assessment session. One example of this power is where the interpreter takes a role in modifying the assessment items, to choose more appropriate testing materials based on the patient’s cultural background. In some situations, the speech pathologist may ask the interpreter to administer the whole assessment for the bilingual speaker, which makes the role of the interpreter even more powerful. This would also be the case should the speech pathologist ask the interpreter to assess and/or judge the patient’s performance. Interpreters reported
that this usually happens through the interpreter-mediated speech pathology session. In the words of one interpreter:

*also when the therapist is expecting you to give them an opinion of the language capability. That’s a bit difficult for me and it is as if you are doing a part of the job that, a part of the assessment that the therapist is to be making of course she cannot because she’s not understanding the language.*

Some interpreters do not like it when speech pathologists rely on them in this way, as one interpreter reported:

*Because the interpreter’s role is not to take over, whatever, you know, the professionals role.*

On the other hand, for some interpreters, all interlocutors are equal in the power. One interpreter commented:

*And establishing your rapport and establishing a team, like you were saying ‘oh, do we have a split loyalty between the professional and the patient?’ I see all three of us as being the team, so we got all equal standing.*

However, at least for one speech pathologist, the power relationship may be simultaneously collegial and imbalanced, as indicated by the following statement:

*I would see, if the interpreter comes in, I would just see the interpreter as an extra pair of hands, a colleague to work together.*

**6.4.3. Management of the interaction.**

As previously discussed in relation to the negotiation of purpose (see Section 6.3.4), and in relation to the power relationship discussed immediately above, the data reflect that it is the speech
pathologist’s decision as to whether to allow the interpreter to hold more management responsibility in the interpreted setting. Such management responsibilities can be like setting up rules for turn taking during the session about how and when to translate patients’ messages. For instance, as previously mentioned, some speech pathologists allow the interpreter to start the assessment session by initiating social conversation with the bilingual patient to build a rapport. Some speech pathologists also ask the interpreter to administer the assessment test and, at the end, to report to the speech pathologist.

Considerable differences among the speech pathologists were observed, with some seeming more flexible than others in allowing interpreters to hold more management responsibilities during the interpreted session. In contrast, there appeared to be greater consensus among the interpreters in reporting that they felt less comfortable with holding more management responsibilities during such sessions. For interpreters, this feeling of discomfort arose mainly because they were conscious of their lack of knowledge about the speech pathology field and they were worried about judging patients’ performance or progress. One interpreter reported:

*I give her (the speech pathologist) all the difficult areas afterwards and I ask her to take that away from me virtually, because I don’t like feeling guilty, I don’t want to feel that I’ve made an assessment that she puts down on paper.*

6.4.4. Emotional support.

The issue of emotional support emerged strongly from the current data. This has not been considered previously by the published literature. Participants reported that in speech pathology sessions, patients’ emotional distress is a common phenomenon, as is often associated with stroke. Emotional distress was also reported as occurring for bilingual speakers especially when they dealt with an interpreter already known to them as a member of their community. In interpreter-mediated sessions, the role of speech pathologists in managing and supporting patients’ emotional distress
seemed different from their role in dealing with monolingual patients’ distress. This appeared to arise from a ‘filtration’ effect that influenced the messages conveyed through the interpreter. When the speech pathologist’s words were conveyed by the interpreter to the bilingual patient (or vice versa), the resulting delay decreased the effect of the emotional messages expressed by the patient or by the clinician. One speech pathologist reported:

*I think it’s hard sometimes that you’re emotional, like as a speech pathologist, your emotional responses filter through someone else. You can still do tactile stuff with them, so it’s like, that’s delayed, like, even a few seconds behind them kind of (unintelligible), but sometimes it might be the content of what they’ve said that has an emotion attached to it.*

One speech pathologist indicated that this would be different in a monolingual session:

*But I mean if it was an English-speaking person, you know, there’s a sense of my emotional response that comes in, I think, a little quicker.*

From the interpreters’ point of view, emotional distress was reported to be one of the issues that greatly affected them, especially when dealing with younger adults who suffer depression due to their physical disabilities after stroke. One interpreter reported:

*It is difficult to work with younger people, for example one patient who had a stroke and he was only in his early 40s, and that was a difficult case because he was very frustrated and angry, and trying to avoid speech pathology, didn’t understand why he needed it. And, ah, also, patient who had problems following brain surgery. These are, these people are very difficult to work with.*

Another interpreter described patients’ emotional distress as a factor that can prevent both professions from doing their work properly. The interpreter commented:
he (the patient) was just in shock and everything was just negative. So, you know, that was my first impression, that neither of us (the speech pathologist or the interpreter) did the job.

Speech pathologists reflected that the only option they might have to deal with patients’ distresses would be through expressing more facial expressions to the bilingual patient instead of words.

6.4.5. Norms.

The participants in these focus group discussions focused primarily on the linguistic issues as being distinctive of speech pathology sessions. There was relatively less explicit discussion of instances in which the lack of shared culture among the participants might result in miscommunication or misunderstanding across interpreted speech pathology sessions. Where such instances were reported, they arose as a result of either culturally inappropriate test items, or problems with cultural mismatch arising from difficulty in finding linguistic equivalence across the languages (as in the woman/virgin example discussed in Section 6.3.4). The previously presented issues in relation to role and responsibility for negotiating miscommunication apply equally to this area.

Based on these findings for the aspect of tenor, the notion of collaborative partnership between speech pathologists and interpreters when working together for bilingual speakers is challenged. In relation to the notion of collaboration, the professional literature suggests that most speech pathologists would consider their approach to working with interpreters to be collaborative, but from the analysis of the current focus group discussion data, speech pathologists appear to take a dominant role in the interaction, and interpreters accept this role. The reports from both professional groups in these data suggest problems for the partnership, mainly due to the lack of communication about their roles and responsibilities within interpreted settings. In addition, problematic misunderstandings in relation to professional and ethical dilemmas for each profession were also identified through the data.
Thus, the main finding from this focus group data is that discussion regarding the roles of each interactant in the interpreter-mediated assessment session is a crucial part of the pre-session briefing between the speech pathologist and the interpreter. Setting up the rules and identifying each profession’s role before starting the session may help to improve the partnership between the speech pathologist and the interpreter during the session and may also decrease any undue family interferences and conflict with the interpreter, which can arise due to lack of trust.

6.5. Mode of Discourse: Comparison of Monolingual and Interpreted Assessments

Mode of discourse includes the register or key of interaction, channels that language is conveyed through, and genre or type of discourse. All of these aspects will be used in describing the findings emerged from analysing focus group discussions’ data within the following paragraphs of this chapter.

6.5.1. Register.

In the monolingual setting, the speech pathologist and the patient may share the same verbal and non-verbal language. However, they might differ in the register they use within the clinical setting; for example, the degree of formality used in the language choices made for any particular topic or circumstances. In the interpreted setting, the register is mainly established by the interpreter, who knows both languages, although not necessarily the varieties of register selected by the other parties. Therefore, in the interpreted setting, several register choices might be missed. Further, the filtration process of the conveyed verbal and non-verbal messages would affect the accuracy of the original messages. However, this depends on the interpreter’s register mode, how he/she understands the messages and chooses to convey them. In MS, there is a considerable variety of registers invoked throughout the session as the interactants become more familiar, or in response to specific assessment items. In the focus group discussions, the issues that arose related to
language choices within and across registers centred on dialectal issues, and the problems associated with the translation of standardised assessments.

Table 10

*Mode of discourse, comparing monolingual and interpreted settings.*

<table>
<thead>
<tr>
<th>Aspect of communication</th>
<th>Interactant</th>
<th>Monolingual assessment</th>
<th>Interpreted assessment</th>
<th>Key issues</th>
</tr>
</thead>
</table>
| Register (key) (formal or informal language) | SLP | SLP > PT Negotiation is applicable between SLP and PT about manner, tone and spirit. | SLP ≠ INT Negotiation is not applicable, missed through the three-directional way of conversation | • Filtration effect  
• Affected by INT independent assumptions  
• Affected by dialect mismatch  
• Affected by patients circumstance (age, disability) |
| | PT | PT < SLP | PT ≠ INT | |
| | INT | INT < SLP  
INT < PT | |
| Channel (oral, written, gestural) | SLP | Two-way, multi-channel combinations, mainly oral | Three way, multi-channel combinations and transformations | • Filtration of the original message via INT  
• Non-verbal gestures & facial expressions SLP↔ PT  
SLP↔ INT  
• The need for writing notes to avoid interruption and forget important information |
| | PT | | |
| | INT | | |
| Genre (type of discourse) | SLP | SLP ↔ PT Directly negotiated | SLP → INT Negotiated indirectly via interpreter PT → INT | • Translated message would miss the genre of the original message  
• INT responsibility to choose the appropriate genre to be used with the patient |
| | PT | PT ↔ SLP Directly negotiated | PT → INT Negotiated indirectly via interpreter | |
| | INT | INT → SLP  
INT → PT Negotiated directly (‘embedded’ negotiation) | |

SLP = Speech pathologist; PT = Patient; INT = Interpreter
The interpreters identified dialect mismatch and language switching as particular challenges faced by them within speech pathology sessions. Interpreters identified that they sometimes faced difficulties in identifying whether the patient’s unusual speech or language was due to difficulty, dialect differences, language switching or because of the existence of an actual speech disorder, such as might begin after a stroke. The interpreters also reported that the patients’ age and health status added to the difficulties in such situations, particularly when dealing with elderly patients. One interpreter reported:

Yes, except that it’s hard to translate what the patient is saying because the words are so distorted so you just give the health professional, the speech pathologist, your opinion. You say, ah, ‘this word was said incorrectly, mispronounced, distorted, or just mumbled, he mumbled, and I couldn’t understand anything, didn’t have any meaning.

Another added:

But it’s very difficult for us to interpret those mumbles. I think that’s one of the most difficult things in these types of sessions.

Interpreters also raised concerns regarding the cultural appropriateness of some testing materials. For example, interpreters identified the need to examine more closely the assessment materials before their use during the session, to allow for the modification of some items and to give time for reflection on the best possible translation of some words, to prevent the interpreter struggling with the meaning during the assessment session. Interpreters called this struggle a brainstorming demand.

In the current study, speech pathologists agreed with interpreters that challenges often emerge from the use of standardised assessment tools for bilingual patients due to the inappropriateness of those tools for use with patients from different cultural and linguistic
backgrounds. As one speech pathologist put it: *That whole standardised, inappropriate tools issue is such a nightmare.*

### 6.5.2. Channel and genre.

The current data revealed a close interrelationship between channel of communication; whether communication was oral, written or gestural; and the genre which refers to the type of discourse required in particular parts of the session. Naturally, such an interrelationship occurs in monolingual settings also. However, the discussion among participants in this study identified particular issues for ISs, in that interpreters necessarily relied upon both verbal and non-verbal channels to understand the meaning of texts sufficiently to then be able to interpret them. Thus, in ISs, the traditional separation of channels as part of the assessment process is disrupted. As previously discussed in Section 6.4.4, interpreters have noted that the non-verbal mode becomes important for application by interpreters to convey emotional messages that may be missed when using only the oral channel. Further, speech pathologists remarked that they sometimes used facial expressions and some gestures to provide emotional support for bilingual speakers instead of using the oral (verbal) mode.

Writing notes during the interpreted assessment sessions was one of the issues discussed by speech pathologists in relation to whether this could serve as a communication channel for use between interpreters and themselves in assessment sessions should be to avoid the interruption of spoken communication or the forgetting of important notes.

### 6.6. Focus Group Discussions: Conclusion

The analysis of the qualitative data obtained through several focus group discussions with speech pathologists and interpreters who work in the Australian health care context to serve bilingual speakers highlighted three issues that have previously been under-recognised. First, the institutional context in which speech pathologists and interpreters are able to arrange sessions was
reported to present barriers to patient care, and this is important to consider as one potential contributor to the lack of availability of adequate services, as reported in the survey data (see Chapter 5). Second, the role of family members in sessions, particularly assessment sessions, emerged as particularly problematic for interpreted sessions. While the active involvement of family members as an integral part of assessment is increasingly promoted within speech pathology models of care, their involvement can present challenges for interpreters, both in terms of families’ role expectations, the potential for professional/personal conflict and their expectations as to how sessions are run. Third, the emotional load of speech pathology sessions and how interpreters and speech pathologists can best manage patient distress was highlighted.

Speech pathologists reported their reliance on interpreters as communication facilitators and as cultural and linguistic informants or consultants. However, for the interpreters, the shift to the role of linguistic informant raised many issues in relation to their professional ethical principles regarding the use of their personal judgment within sessions. This issue was not discussed by speech pathologists, and its importance may not be fully recognised by them. In relation to the complex interplay of role expectations within this multi-partner encounter, both speech pathologists and interpreters had concerns about what interpreters were required to do in speech pathology sessions. In relation to the professional and ethical dilemmas identified as problematic for interpreter-mediated service delivery, both speech pathologists and interpreters discussed their professional concerns with regard to the validity of using standardised tests developed for English speakers in the interpreter-mediated context.

In relation to the notion of collaboration, the professional literature suggests that most speech pathologists would consider their approach to working with interpreters to be collaborative (Merlini & Favaron, 2005). However, from the analysis of the focus group data, it appeared that speech pathologists take a dominant role in the interaction, while interpreters accept this role. In
addition, many participants raised teamwork as an important issue affecting their partnership, and it appeared that the importance of professional trust has been previously under-emphasised in the published literature. The interpreters in this research appeared to prefer speech pathologists to take the lead in managing the interaction, such as to set up rules to control the session (including the control of family contributions). In developing collaboration, it appeared that interpreters might be more aware of the need for pre-session briefing with speech pathologists, while speech pathologists did not emphasise the importance of this, perhaps because they report the use of online collaboration during the session. From this, it seems that speech pathologists prefer online discussion with the interpreter or the writing of notes during the session, instead of booking extra time after or before the session to discuss details with interpreters.

The findings suggest specific directions for the education of both speech pathologists and interpreters in readying them to work together. This includes the importance of role clarification and negotiation in pre-session preparation, the need for alternative methods of assessment to standardised testing when sessions are mediated by interpreters, and greater understanding by speech pathologists of both the linguistic and cultural demands of interpreting in the health care context. This could be achieved through improving speech pathologists’ knowledge about the field of interpreting and translation and through improving their knowledge about other cultures and other most common languages used within the Australian health care context. This would also help speech pathologists to understand why interpreters are doing their job in a particular way, and promote the necessary foundation of trust for collaborative partnership.

In the following chapter, these findings were considered along with the findings from the survey in Chapter 5 and the previous research literature in developing a resource to assist an informed, collaborative and negotiated approach to assessment for aphasia.
Chapter 7: The Development of an Aphasia Assessment Guide for Arabic Speakers

It is apparent from the findings of the first two major studies of this research (presented in Chapters 5 and 6) that the assessment of aphasia in bilingual speakers presents as a challenging situation for all parties involved; speech pathologists and interpreters. The thorough review of previous research literature and findings presenting in previous chapter indicate that the challenges arise primarily due to lack of knowledge. This includes speech pathologists’ lack of knowledge about other languages and cultures, interpreters’ lack of knowledge about aphasia and the purpose of the assessment, and speech pathologists and interpreters’ lack of knowledge about each other’s roles and responsibilities. In addition, challenges also emerge due to the mismatch between speech pathologists and interpreters’ expectations about the aim of the assessment to be obtained for bilingual speakers. This becomes particularly evident if the interpreter is expected to play the role of language facilitator, cultural consultant and sometimes judge of patients’ language and speech abilities and disorders. Further, a lack of appropriate assessment tools for the assessment of aphasia in bilingual speakers was apparent throughout the analysis of the research data.

Therefore, in the third part of this current research, the focus turns to the development of an aphasia assessment guide for use with bilingual speakers’ in interpreter-mediated sessions in the Australian context. This represents a further step toward decreasing the challenges faced by speech pathologists and interpreters when working together to assess bilingual aphasic speakers. The assessment guide aimed to lead speech pathologists and interpreters toward more successful partnership when working together for bilingual speakers through providing them with helpful assessment resources and guidelines in regard to the role each professional plays during the assessment session. It was also designed to encourage them to conduct the pre-session discussion to allow the professionals to understand each other’s role and to clarify any ambiguity of terms,
concepts, or cultural issues related to the assessment session. This chapter will firstly provide a
general idea about the assessment guide and the purposes behind the development of this resource.
This chapter will then describe the process of developing the assessment guide based on
professionals’ opinions and suggestions that led finally to the achievement of face validity of this
resource.

7.1. The Scope of the Aphasia Assessment Guide for Arabic Speakers

The assessment of aphasia generally involves the observation of basic language areas
typically affected by the disorder. This includes naming (for example, the patient’s ability to
identify objects, colours, or other items with appropriate words or terms), repetition (for example,
the ability to repeat words from variable semantic categories, phrases and sentences),
comprehension (that is, the patient’s ability to understand spoken language), reading (that is, the
patient’s ability to understand written words, sentences and their meaning) and writing (that is, the
patient’s ability to communicate and record events with text). Spreen and Risser (2003) identified
six potential evaluation purposes for aphasia assessment: diagnostic assessment, descriptive
assessment, progress evaluation, assessment of functional or pragmatic communication, and the
assessment of related disorders.

Not all tests assess all language areas or perform all functions. For example, according to
Marshall and Wright (2007), the most commonly used aphasia batteries within speech pathology
clinics, and particularly for clinical training purposes in the US, are the Minnesota Test for
Differential Diagnosis of Aphasia (MTDDA) (2007), Porch Index of Communicative Ability
(PICA) (Schuell, 1972), BDAE (Porch, 1981) and the WAB (Goodglass & Kaplan, 1983). Some
tests involve syndromic protocols, while more recently, cognitive batteries have emerged to assist in
the planning of impairment-based therapies (Maximiliano, Macarena, & Yves, 2009). However, the
use of functional assessment strategies has a long history as fundamental to understanding the
impact of aphasia on patients’ basic communication in everyday life situations (Armstrong, Ferguson, & Simmons-Mackie, 2011).

As already identified in Chapter 1, the assessment of aphasia in bilingual speakers through the use of translated versions of standardised assessment batteries has been challenged due to the questionable validity of using tests with speakers from linguistic and cultural backgrounds other than those for which the tests were developed. Further, while self-designed assessment strategies are also commonly used (as found through the survey, see Chapter 5), these too present difficulties in relation to validation. Just as for monolingual assessment, the assessment of bilingual speakers requires input from family members, friends and professional colleagues. However, the use of such individuals to assist in the administration of assessment has been questioned, particularly in the Australian context, in which government policy supports the value of using trained interpreters in the health care context. Therefore, the most common strategy used by speech pathologists in Australia is the trained health care interpreter, who assists different health care professions when working with bilingual speakers with limited English language proficiency.

The aphasia assessment guide developed by this research is not an aphasia test. Rather, it has been developed for use alongside other suitable assessment tools summarised in Chapter 2. The guide aims to provide information useful for screening for the presence or absence of aphasia through the elicitation of specific everyday communication tasks, in an interpreter-mediated assessment session. The guide includes information for the interpreter about the expected language behaviour of patients with aphasia and the purposes of the speech pathologist in the session. As this assessment guide was developed for use with Arabic aphasic speakers, it provides speech pathologist with a basic description of the Arabic language. The information in the guide is designed to be read and assimilated quickly, and to form a basis for discussion and clarification within the pre-session briefing. In providing this information, the guide provides an assistive tool
for speech pathologists and Arabic interpreters to improve their partnership and facilitate the assessment process.

The assessment guide has considered the importance of guiding the speech pathologist and the interpreter toward obtaining a representative and accurate connected language sample from Arabic speakers with aphasia through allowing the interpreter to initiate conversational speech with the patient using the Arabic language. This stage of the assessment process is designed also to help with the development of rapport between the speech pathologist, the interpreter and the Arabic patient with aphasia. Moreover, the guide recognises the importance of obtaining patients’ connected language sample through storytelling, and it provides more appropriate screening items for use with Arabic speakers with aphasia, such as the Arabic lunar calendar, an image of a clock face with Arabic numbers, and structurally appropriate Arabic sentences and words for use in the screening evaluation. The guide provides interpreters and speech pathologists with selected adapted and modified assessment items that are designed to be appropriate for use with Arabic speakers. It also provides them with more appropriate and equivalent linguistic items, instead of requiring the Arabic interpreter to engage in sight translation of English test items, while also determining their level of difficulty and linguistic equivalence.

7.2. Description of the Aphasia Assessment Guide

As mentioned above, the guide is designed to assist in the assessment process, rather than to be a stand-alone test. The suggestions in this guide are based on information about the linguistic structure of the Arabic language and its cultures. Some parts of the guide are based on information provided by the Bankstown Area Multicultural Network (2010) and the Jordanian Arabic version of BAT (Paradis & El Halees, 1989). The assessment guide comprises five parts, described in terms of their purpose below (see Appendix D for a copy of the guide). The following table, Table 11, provides a summary of all parts included in the assessment guide:
### Summary table of parts included in the assessment guide.

<table>
<thead>
<tr>
<th>Parts</th>
<th>Purposes</th>
</tr>
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</table>
| **1. Before the session**  
- Interpreting and speech pathology  
- The Arabic language | Provides important information for the speech pathologist and for the interpreter about the need for the pre-session briefing and suggests some topics to be discussed during the briefing such as roles and expectations. It also provides basic information about Arabic language structure |
| **2. Starting the Session: Getting to Know Each Other**  
- Language history  
- Conversational interaction | Provides guidelines to initiating the conversation with the patient at the beginning of the session in order to build rapport in order to conduct the patient’s case history. This step aims to encourage the patient to start talking either through a direct conversation with the interpreter or through interpreter-mediated conversation between the speech pathologist and the patient. |
| **3. How Much Does the Patient Understand?**  
- Following instructions—short to longer  
- Answering questions—yes/no questions  
- Answering questions—simple to more complex | Provides suggested Arabic sentences; questions and commands; that aim to elicit the patient’s responses in order to test the patient’s understanding of spoken language. |
| **4. Resources for Eliciting Specific Language Skills**  
- Repetition  
- Story telling  
- Reading  
- Writing | Provides a reading and writing Arabic resource that can be used to elicit patient’s specific language skills in repetition, storytelling, reading and writing. |
| **5. Other Resources**  
- Telling the time—Clock using Arabic numbers  
- Telling the date—Arabic Calendar | Provides two additional resources; a clock with Arabic numbers and an Islamic calendar. These can be used to assess the patient’s ability to tell the time and the date and can be used by the interpreter if facing difficulty in eliciting production from the patient. The resources also can be used to encourage the patient to solve problems. |
Part 1, **Before the session**, provides some important information for both professions regarding the need for pre-session briefing and suggests some topics to be discussed before the session to allow both parties to understand their roles and responsibilities during the assessment session. This part consisted of two main sections; information for each professional and information about the Arabic language. The first section consists of two information paragraphs, one for the speech pathologist and the other for the interpreter. The paragraph for the speech pathologist provides information about expected challenges that the interpreter might face during the session. It also provides information that encourages the speech pathologist to engage in a pre-session briefing with the interpreter, creating an opportunity for them to discuss their roles and responsibilities and to ask and answer each other’s questions.

The second informational paragraph is for the interpreter. It provides some information about aphasia and the purpose of the assessment. It also informs interpreters about their role during the assessment session. For instance, this section identifies that interpreters will need to provide speech pathologists with direct and indirect interpretation and explanations of patients’ responses. It also encourages interpreters to use the resources supplied in the assessment guide if required. Further, this information paragraph encourages interpreters to provide speech pathologists with opinions and suggestions about the accuracy and the appropriateness of patients’ responses based on their understanding of the correct use of Arabic language structures and functions.

The second section of the first part in this assessment guide (**Information about the Arabic language**) is mainly for speech pathologists and provides them with general knowledge about the Arabic language as compared with the English language. This is expected to enhance speech pathologists’ awareness regarding the differences between the two languages. It will also contribute to preparing speech pathologists for expected differences and aphasic language use by patients. For instance, it provides some information about Arabic verbs, nouns, plurality, adjectives and word
order in Arabic sentences. Moreover, it provides speech pathologists and interpreters with useful websites to help them to gather more information. These websites include pictured vocabulary and grammatical description for a number of languages, including Arabic.

Part 2 of the assessment guide is considered as a starting point for the actual assessment session where the two professionals are to start with the patient’s language history and to encourage patients into more natural speech through initiating conversational talk. The initial section (History) involves the three conversational parties building rapport through talking about the patient’s background and language history. Throughout this stage of the assessment, either the interpreter or the speech pathologist is to start collecting information about the patient’s language background. The speech pathologist can start asking questions in English, and the interpreter can translate these to the patient and then back to the speech pathologist. However, the speech pathologist can alternatively allow the interpreter to start collecting the language history from the patient in Arabic to provide the interpreter with the opportunity to become more familiar with the patient’s dialect.

Under the latter scenario, the speech pathologist could observe natural conversation between the interpreter and the patient, to inform expectations regarding the patient’s speech or language disorders (Conversational speech). This section suggests some question prompts and resources such as a clock with Arabic numbers and an Islamic or lunar calendar that would help the interpreter engage the patient in natural conversational about his/her language and cultural background for the purpose of eliciting a natural language sample. The suggested resources in this assessment guide are provided at the end of the assessment guide (Other resources). This conversational speech section principally aims to allow the speech pathologist to observe and identify the patient’s speech prosody, fluency, articulation, intelligibility and pragmatic abilities.

Part 3 of the assessment guide (Understanding) is designed to assess the patient’s ability to understand spoken language. This is achieved through asking the patient to answer some questions
and to follow some instructions. These questions and instructions are gradually increased in difficulty and complexity. In addition, these questions and instructions can be provided for the patient with and without cues, depending on the patient’s ability to perform the task. The aims of this part of the assessment need to be clearly explained to the patient before beginning. This part also provides some suggested Arabic sentences that would help the speech pathologist and the interpreter to provide the patient with the questions and instructions, as well as sentences with and without grammatical mistakes to be identified by the patient. The English translations of these suggested Arabic questions and instructions are also provided for the speech pathologist to be able to monitor the assessment steps done by the interpreter under this part of the assessment section.

Part 4 of the assessment guide consists of four sections that aim to elicit patient’s specific language skills of repetition, storytelling, reading and writing.

The **Repetition** section is designed to assist the speech pathologist to identify and examine the following main areas: phonological and articulation abilities; ability to reproduce content (vocabulary) and form (grammar) accurately; and difficulties repeating nonsense words. Suggested Arabic sentences and words provided under this part are considered important for obtaining accurate assessment results from a bilingual speaker because usually languages are different in their language structures and sentence complexity. Therefore, translating sentences that are designed to assess patients’ repetition abilities in a different language to that being assessed creates a situation in which the test does not measure the target construct appropriately. This is because words or sentences that are hard or complex in one language may be very easy in other languages. For this reason, this section provides the interpreter with a selection of Arabic words and sentences provided in a sequence that gradually increases in difficulty. Some nonsense Arabic words (words with no meanings) are also provided.
The **Storytelling** section in the assessment guide aims to assess the patient’s ability to retell a familiar story without reading it directly from the provided written text. This part mainly aims to assess the patient’s naming ability and memory. The story chosen for this purpose was the Hare and the Tortoise, which is known as the Bunny and the Turtle in Arabic, and the assessment guide presents it in both languages. This story was chosen because people from both cultures (Arabic and Australian) should be familiar from Aesop’s fables. Before asking the patient to retell this familiar story, a brief explanation for the patient needs to be provided by the interpreter to explain the aim of retelling this story, to avoid annoying the patient by asking him/her to retell a story that is more often told to children. Throughout the retelling, the speech pathologist is to observe the patient to identify the existence of any articulation difficulties and/or naming difficulties.

The **Reading** section provides the same story for the patient, but in Arabic writing format, to assess the patient’s ability to read and understand the Arabic written language. This task can be conducted either by asking the patient to read aloud or to read silently. This step is then followed by asking the patient to retell the story or to give his/her own opinion regarding the moral of the story.

In the **Writing** section, the patient is asked to write the same familiar story; the Bunny and the Turtle or (the Hare and the Tortoise) using Arabic language, or to write something about his/her country of origin, or even a brief shopping list. This part of the assessment aims to assist the speech pathologist assess the patient’s ability to use correct meaning, grammar and spelling when writing. The speech pathologist needs to identify whether the patient’s dominant hand for writing has been affected by his/her stroke. However, the content of the patient’s writing is more important for observation than is the quality of his/her writing script.

The fifth and final part of this assessment guide (**Other resources**) provides two additional resources; a clock with Arabic numbers and an Islamic calendar. These can be used to assess the patient's ability to tell the time and the date and can be used by the interpreter if facing difficulty in
eliciting the patient to produce speech. They also can be used to encourage the patient to solve problems. For example, What is the time now? If you have a doctor appointment at 3 o’clock, how much time do you have before your appointment? What is today’s date? When is your birthday? You have an appointment in three days’ time, can you show me that day on the calendar? These items were included as it was presumed that English speaking speech pathologists would be unlikely to be aware or have access to such resources in the context of assessment.

7.3. Face validity of the assessment guide; Expert Feedback on the Guide: Recruitment

Following the initial development of the aphasia assessment guide for Arabic speakers, professionals with specific expertise were invited to provide critical evaluation and feedback. These experts included English-speaking speech pathologists (working in Australian speech pathology settings with aphasic patients), Arabic interpreters working in the Australian context, and Arabic speech pathologists from Jordan and Egypt. Eliciting feedback from those professionals was an important step in the development of the assessment guide mainly because those professionals represent the targeted population who will use the assessment guide and benefits from its usability.

The first group (English-speaking speech pathologists from Australia) were those speech pathologists that had participated in the survey (the first study conducted by this research) and that had indicated their interest in participating further. The second group (Arabic interpreters from Australia) were listed in the publicly available NAATI Online Directory http://www.naati.com.au/pdsearch/pdsearch.aspx, and had indicated ‘health’ as one of their preferred work areas. The third group of participants were the Arabic speech pathologists from Jordan and Egypt. Those expert Arabic speech pathologists working in both clinical and academic settings, and included some of the researcher’s colleagues and teachers. Recruiting these Arabic speech pathologists was important given their considerable experience working with Arabic speakers with aphasia, as well as due to their knowledge of Arabic language structures, as they were
all Arabic native speakers. The assessment guide was sent to four English-speaking speech pathologists, 104 Arabic interpreters and four Arabic speech pathologists.

Participants were asked to provide Yes/No responses to specific questions about each section of the guide in relation to the cultural appropriateness of the items, the most useful items, and the potential usefulness in the Australian context. They were also asked to provide general comments and suggestions about each part of the guide (see Appendix C for the specific questions provided to participants).

7.4. Expert Feedback on the Guide: Responses

Six completed responses were received from two English-speaking speech pathologists, two Arabic interpreters and two Arabic speech pathologists. A summary of feedback areas is provided in Table 12 (above), along with the decisions regarding necessary changes to the guide based on that feedback. Details of the feedback are presented below (see Appendix E for the revised and final draft of the assessment guide, with changes made based on the experts’ feedback).

7.4.1. Purpose.

7.4.1.1. English-speaking speech pathologists.

In response to this question, the two participating English-speaking speech pathologists indicated that the assessment guide appeared to be very helpful and useful for the purpose of assessing Arabic speakers with aphasia, particularly because of the resources (the clock with Arabic numbers and the Arabic calendar), which would not be available for them in the Australian speech pathology clinic. They also indicated that the information provided about the Arabic language and the Arabic cultural background was very helpful. They agreed with the importance of proving them with a familiar Arabic story.
One English-speaking speech pathologist disagreed with the writing assessment part in the assessment guide because he/she thought it assessed a high level of writing ability. Instead, he/she suggested that using a less complex test, such as writing single words or letters, would be easier and more helpful in assessing speakers with aphasia, especially those with hand paralyses or weaknesses due to their stroke.

7.4.1.2. Arabic speech pathologists.

All Arabic speech pathologists from Jordan and Egypt agreed with the usefulness of the assessment guide. Their further comments on other parts of the assessment guide will be provided in the following sections of this chapter. The Arabic speech pathologists suggested that the language used in the tool be changed from Standard Arabic to Modern Arabic in order to increase its accessibility (refer to Chapter 2 for discussion of the Arabic language).

7.4.1.3. Arabic interpreters.

The two Arabic interpreters also agreed that the assessment guide would be useful in facilitating assessment of Arabic aphasic patients. However, they raised some issues relating to the role they would play in that setting. First, they agreed with the part in the assessment guide that provides information about each profession’s role within the assessment session. Interpreters agreed with the importance of their role in providing speech pathologists with their opinions and suggestions. They indicated that interpreters are usually not allowed to play this role when working with health care professionals other than speech pathologists. The participating interpreters also agreed with the importance of this role because they know more about the patient’s first language and culture than do the monolingual speech pathologists. Interpreters also highlighted the importance of being informed about the patients’ country of origin to help them to identify the dialect to be used with each patient. Moreover, the interpreters noted that the patients’ level of
education can affect their performance and choice of the appropriate assessment items during the assessment session.

Table 12

*Summary of expert feedback on the guide.*

<table>
<thead>
<tr>
<th>The assessment guide sections</th>
<th>Participants’ Responses</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E.S.SLP’s</td>
<td>A.S.SLP’s</td>
</tr>
<tr>
<td>Purpose</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Before session: Information for each Professional</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Information about Arabic language</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>History</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Conversational speech</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Understanding</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Repetition</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Story telling</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Reading</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Writing</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Other resources: Clock</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Other resources: Calendar</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1 + indicated that changes were suggested by participants
   □ indicated that no changes were suggested by participants
7.4.2. Pre-session briefing.

7.4.2.1. English-speaking speech pathologists.

Only one English-speaking speech pathologist disagreed with the way in which the Arabic language structure was described. This speech pathologist suggested describing the Arabic language as: ‘Arabic is a semantic language which is characterised by a limited vocalic system and a rich consonantal system’; rather than as currently expressed in the guide: ‘the Arabic language is a Semitic language, characterised by a limited vocalic system and a rich consonantal system’. This comment appeared to indicate a confusion of the terms ‘semantic’ and ‘semitic’. The same speech pathologist also suggested using the word ‘orthography’ instead of the word ‘language’ when describing letters used by Arabic speakers.

7.4.2.2. Arabic speech pathologists.

Arabic speech pathologists were satisfied with the contents of the information sections provided in the assessment guide. However, one Arabic speech pathologist suggested sending the Arabic language structure part of the assessment guide to a linguist for professional checking.

7.4.2.3. Arabic interpreters.

Arabic interpreters also agreed with the importance of pre-session debriefing between themselves and speech pathologists. According to one interpreter, speech pathologists need to check the dialect used by the patient before booking the interpreter, to ensure that the interpreting service can book an interpreter who speaks the patient’s dialect or who speaks the closest possible dialect to the patient.

One Arabic interpreter added a comment about the ethical issues that may need to be discussed between the speech pathologist and the interpreter before commencing the assessment
session for an Arabic speaker with aphasia. For example, the need to maintain the same register, including rendering utterances and expressions as the client produces them, should be discussed.

7.4.3. History taking.

7.4.3.1. English-speaking speech pathologists.

Both English-speaking speech pathologists agreed with the usefulness of the questions provided in the assessment guide to elicit patients’ conversational speech.

7.4.3.2. Arabic speech pathologists.

Arabic speech pathologists also agreed with this part of the assessment guide, and provided no further suggestions.

7.4.3.3. Arabic interpreters.

Arabic interpreters agreed with this part of the assessment guide. However, one Arabic interpreter suggested an alternative question instead of question number 2 in the language history part of the assessment guide. The interpreter suggested replacing the question ‘What is your first language?’ with ‘What language do you speak at home?’

7.4.4. Conversational speech.

7.4.4.1. English-speaking speech pathologists.

Both English-speaking speech pathologist participants agreed with the usefulness of this part and indicated that the questions are helpful.

7.4.4.2. Arabic speech pathologist.

One Arabic speech pathologist disagreed with the questions used under this part. He/she thought asking patients about their usual daily life activities would be more useful than the way suggested by the assessment guide to encourage patients to speak. The same speech pathologist
suggested adding some items under this part of the assessment that would help the speech pathologist to identify articulation errors, paraphasias, agrammatism and perseveration before considering the patient’s speech content prosody and pragmatics abilities.

7.4.4.3. Arabic interpreter.

One Arabic interpreter indicated that the interpreter’s involvement in conversational speech with the patient while the speech pathologist observes would hide patient’s real speech and language abilities. He/she believed that the interpreter might use some adaptive language management procedures while talking with the patient in a language with which the speech pathologist is not familiar. Therefore, this might mislead the speech pathologist and hide patient’s speech and language disabilities.

7.4.5. Understanding.

7.4.5.1. English-speaking speech pathologists.

One English-speaking speech pathologist participant suggested that it would be helpful and clearer if a word were provided beside each part in the assessment guide to identify the professional that should undertake that part of the assessment (for example, ‘for the speech pathologist’, ‘for the interpreter’, ‘for both the speech pathologist and the interpreter’).

Another English-speaking speech pathologist suggested a brief explanation by the interpreter for the speech pathologist concerning the English sentences provided by the assessment guide under each part to clarify the idea of using incorrect sentence structures. This would also help speech pathologists to provide the interpreter with appropriate prompts during the assessment session if needed. The second speech pathologist also suggested the same idea by indicating the need for adding a sign beside the incorrect Arabic sentences as a prompt for the interpreter.
7.4.5.2. Arabic speech pathologists.

Both Arabic speech pathologists disagreed with the object names used in this part of the assessment guide. They believed using single words that referred to familiar objects would be more useful to start with. They suggested words like (door, window and pen) to be followed by less familiar objects. They also identified the need for consideration of the patient’s physical abilities when starting this part, as some requests could be replaced by ones requiring less physical movement. For instance, replace the request (Put the paper next to the pen) with (open your mouth and close your eyes). Arabic speech pathologists suggested more useful alternative sentences to be used as requests under this section based on their knowledge of aphasia assessment and their experience dealing with Arabic aphasic speakers who speak different dialects. Moreover, they disagreed with the use of the traditional Arabic language (the standard Arabic language) in providing such requests, as they preferred the use of another more non-traditional Arabic dialect that is more familiar for most Arabic speakers.

One Arabic speech pathologist suggested changing the instructional sentences through making them shorter, to simplify them for patients. He/she suggested deleting the politeness words used at the beginning of each instructional sentence. He/she also replaced some of the Yes/No questions with other questions that seem easier and more directed especially for people with stroke and expected language disorders.

7.4.5.3. Arabic interpreters.

For the Arabic interpreters, although they all agreed with this part of the assessment guide, they suggested some changes in words and sentences provided in the guide based on their knowledge of the Arabic language structure and their experience working with speech pathologists. These changes suggested by interpreters were considered to be more accurate and equivalent than
those used in the first draft of the assessment guide. For example, to substitute the following sentence with another more appropriate one:

ضع القلم تحت الورقة ثم أعطني القلم

Instead of

ضع القلم تحت الورقة ثم أعطني قلم الرصاص

7.4.6. Repetition (words, sentences).

7.4.6.1. English-speaking speech pathologists.

The two English-speaking speech pathologist participants agreed with the usefulness of the words and sentences provided in this section of the assessment guide. They especially agreed with the importance of providing the IPA (International Phonetic Alphabet) for all words included in this section, although one speech pathologist also suggested providing IPA for correct and incorrect (nonsense) words and sentences. They suggested that this would help speech pathologists to identify the missing phonemes or words when the patients repeat those words in Arabic.

7.4.6.2. Arabic speech pathologists

Both Arabic speech pathologists suggested some changes to this section to simplify words and sentences used in the repetition part of this assessment guide or to replace them with more familiar, simpler and easier words and sentences. These changes also provided more familiar, non-traditional language and dialect for Arabic speakers with aphasia.

7.4.6.3. Arabic interpreter.

One Arabic interpreter suggested using Arabic words that contain the same equivalent sounds provided in the English words for achieving linguistic equivalence between the English
words and the Arabic words used under this part. The same Arabic interpreter indicated that from his/her experience working with speech pathologists, the Arabic sentences provided in this part of the assessment guide should be replaced with other, more linguistically equivalent sentences that do not contain the words ‘if’ ‘and’ or ‘but’.

7.4.7. Storytelling.

7.4.7.1. English-speaking speech pathologists.

The English-speaking speech pathologists agreed with the importance of providing the Arabic text of a familiar Arabic story. However, they did not provide any comments concerning any changes on this part of the assessment guide due to their lack of knowledge about Arabic writing and reading texts.

7.4.7.2. Arabic speech pathologists.

The Arabic speech pathologists disagreed with the Arabic translated version provided in this part of the assessment guide for the story telling. They suggested a better and more equivalent translated version of the story (as was also suggested by the Arabic interpreters in the following paragraph).

7.4.7.3. Arabic interpreters.

The Arabic interpreters agreed with the usefulness of this part. However, one Arabic interpreter suggested an alternative Arabic translated version of the story provided in the assessment guide because he/she believed this alternative version would work better with different Arabic dialects. This interpreter suggested this alternative translation of the same story based on his/her broad experience translating English texts into Arabic, especially within the health care setting for Arabic people who live in Australia. The other Arabic interpreter also suggested an alternative Arabic translated version of the story based on his/her awareness of what would work better for all
Arabic patients from different countries and who use different dialects. The alternative translated version of the story is included in the revised version of the guide.

7.4.8. Reading and writing.

7.4.8.1. English-speaking speech pathologists.

Both English-speaking speech pathologists agreed with the reading and the writing sections provided in the assessment guide. However, one of them indicated that these sections are more helpful for interpreters than for speech pathologists because speech pathologists cannot read or write Arabic texts. As mentioned before, an alternative Arabic translated version of the story as suggested by one of the Arabic interpreters was included in the revision of the guide.

7.4.8.2. Arabic interpreters.

As already mentioned earlier, the Arabic interpreters suggested changing the story used under this section.

7.4.8.3. Arabic speech pathologists.

The Arabic speech pathologists suggested the replacement of the Arabic translated version of the story with another more linguistically equivalent, as suggested by the interpreters. However, concerning the writing part of the assessment guide, one of the Arabic speech pathologists suggested the use of simple written orders, such as ‘write down you name’, instead of asking patients to write a story or a description text. The same Arabic speech pathologist mentioned that the use of long sentences would be sufficient for assessing surface writing disorders, while writing letters would help in diagnosing deep dyslexia.
7.4.9. Other resources (clock and calendar).

7.4.9.1. English-speaking speech pathologists.

As mentioned earlier, English-speaking speech pathologists agreed with the usefulness of providing a clock with Arabic numbers and an Arabic lunar calendar in the guide, based on the phases of the moon as suggested by (Paradis & El Halees, 1989), mostly because they had not been previously aware of such resources.

7.4.9.2. Arabic speech pathologists.

One Arabic speech pathologist suggested providing a clock face without hands. Using such a resource, the speech pathologist could ask patients to identify different times through several attempts. Speech pathologists also suggested providing these resources with a large print, instead of the small print used in the assessment guide.

7.4.9.3. Arabic interpreters.

The Arabic interpreters suggested using other different calendars instead of the lunar calendar. They indicated the Islamic calendar (which is provided by the assessment guide, but which is only used in Saudi Arabia), or the Gregorian or Ancient Phoenician calendars, as used by other Arabic countries. One Arabic interpreter indicated that using the Egyptian months would be easier for almost all Arabic speakers.

7.4.10. Further suggestions.

Participants were asked to provide further suggestion or any further testing items that they believed were important and were ignored by the assessment guide.
7.4.10.1. English-speaking speech pathologists.

As mentioned earlier, the English-speaking speech pathologists suggested the need for more explanations by speech pathologists to interpreters regarding the purpose of using the linguistically incorrect (nonsense) English sentences. Speech pathologists believed that this would work as prompts to help interpreters to identify patients’ ability in differentiating between the correct and incorrect sentences. Finally, both English-speaking speech pathologists indicated that the assessment guide is a very helpful tool for use within the Australian context. English-speaking speech pathologists asserted their need for such assessment tools, and asked that this guide be provided for them and their colleagues upon completion. They noted that this kind a tool is needed in the Australian hospital setting, not only for use with Arabic patients, but also for use with other bilingual speakers (after obtaining the required translation, adjustments and modifications for use with patients from other linguistic and cultural backgrounds.

7.4.10.2. Arabic speech pathologists.

The Arabic speech pathologists indicated their agreement with the assessment guide in general. As mentioned earlier, they provided some suggestions for changes and improvements to the guide.

7.4.10.3. Arabic interpreters.

Arabic interpreters were happy with the assessment guide. They indicated that it is a useful tool for use with Arabic speakers with aphasia. One interpreter suggested the need to provide Arabic speakers with aphasia with more information about the interpreter’s role and to explain that speech pathologists need to deal with aphasic patients as friends rather than as foes. The same Arabic interpreter suggested that interpreters need to improve their awareness of the difficulty of bilingual assessment situations and that they need to prepare themselves to be more tolerant and patient so that they can deal with the additional professional and ethical demands. The other Arabic
interpreter emphasised the importance of being informed about the patient’s county of origin so as to be able to replace any non-equivalent questions with a more appropriate set of questions, based on the patient’s dialect and cultural background.

7.5. Expert Feedback: Conclusion

In general, all participants (English-speaking speech pathologists, Arabic speech pathologists and Arabic interpreters), indicated their agreement with the usefulness of the aphasia assessment guide to be used with Arabic speakers within the Australian context. However, some important and useful suggestions were also provided by participants to improve the assessment guide and to enhance its effectiveness.

This type of assessment guide was developed in response to the findings that emerged from the survey that confirmed the previously published literature, which indicated that speech pathologists are in need of more appropriate assessment resources and tools to assist them and interpreters in working together for bilingual speakers with aphasia. The design and scope of the guide developed throughout this research was based on the findings that emerged from the focus group participants’ perspectives about their need for more resources to facilitate speech pathology sessions conducted for bilingual speakers via the assistance of interpreters. The assessment guide also considers the areas identified by focus group participants regarding the need to reduce the load that interpreters usually experience when required to perform immediate sight translation. In addition, the assessment guide provides guidance to speech pathologists concerning the role of the interpreter, how to work with interpreters, and the importance of pre-session briefing, as well as providing information about the language of the person with aphasia.

Thus, the nature of the current aphasia assessment guide, which developed throughout this research, is innovative. As the first of its kind, the Arabic Aphasia Assessment guide developed through this research needs to be tested in order to prove that it adds a contribution to the
management of aphasia assessment for bilingual speakers within the context of cultural and linguistic diversity. Face validity of the aphasia assessment guide was achieved through eliciting professionals’ feedback after reviewing its contents. The main purpose of developing the aphasia assessment guide was to provide speech pathologists and interpreters with a resource that would facilitate the assessment process of aphasia in bilingual speakers through providing them with a more appropriate assessment tool designed to improve those professionals’ partnership.
Chapter 8: **Discussion and Conclusions**

This chapter aims to bring the work to a conclusion. The first part of this chapter will provide an overall summary of the major findings. The second part emphasises the contribution of this research to helping speech pathologists and interpreters work together with bilingual speakers with aphasia to provide easier and more effective assessments. The third part will identify the limitations of the present research and potential areas for further research. Finally, the fourth part of this chapter will discuss the implications of this research for clinical practice, professional development and future research.

### 8.1. Main Findings

This research used a survey to explore speech pathologists’ perspectives regarding the assessment of aphasia in bilingual speakers, and to identify the type of difficulties they face when working with interpreters. The main finding of this research emphasised that there has been no change across the last 10 years as regards the challenges faced by speech pathologists during interpreter-mediated assessment of aphasia in bilingual speakers.

The lack of appropriate assessment tools was identified as a major barrier faced by speech pathologists in such settings. Speech pathologists in the survey identified that they usually use either screening assessment tools or translated versions of standardised aphasia assessment batteries when dealing with bilingual speakers with aphasia. However, previous research has suggested that the use of translated versions of aphasia assessment batteries is inappropriate and inaccurate due to the lack of norms available in the targeted language. Translated versions of aphasia batteries can also be inappropriate for use with people from linguistic and cultural backgrounds other than those for whom those batteries were originally developed (Roberts, 1998, 2008). Roberts (2008) added
that there is a lack of reliable and valid aphasia assessment tests for bilingual speakers that can
demonstrate sensitivity to detect patients’ progress over time and that can discriminate between
levels of impairment. Therefore, this finding of the current research raises important questions
around the extent to which assessments for bilingual speakers in the existing situation can be
considered adequate.

The current research found that speech pathologists’ lack of knowledge about other
languages and cultures is another barrier that affects the assessment session. Further, speech
pathologists lack experience in consulting with bilingual speech pathologists, an issue that has not
been considered previously by researchers in this particular area. Although Roger (2003) asserted
the need for more bilingual speech pathologists in Australia as an important facility in the provision
of bilingual speakers with assessments and treatment in their first language, this is not an easy target
to achieve.

While the current research identified that for obtaining aphasia assessment for bilingual
speakers speech pathologists usually use interpreters, interpreters’ unavailability emerged as a
barrier toward providing adequate speech pathology services for bilingual speakers in speech
pathology clinics around Australia. This issue was also previously identified by Roger’s research,
but it still emerges as a major challenge faced by speech pathologists. As previously discussed in in
Chapter 3, despite the policies and actions undertaken by the Australian government to provide
accredited interpreting services across health care institutions for patients with limited English
language proficiency, the interpreting service has been described as not adequate, not available or
not accessible for all patients with limited English language proficiency (Garrett, Forero, et al.,
2008a).

The survey also identified that, although some speech pathologists would usually cancel an
appointment and arrange another for the bilingual patient in cases that it is not possible to get an
interpreter for the assessment session, others reported using family members, colleagues or friends as an alternative option to provide interpretation. The involvement of untrained interpreters in the health care setting is controversial in the Australian context, given the concerns over the potential for conflict of interest and potential invasion of privacy for patients (Garrett, Forero, et al., 2008a).

From the analysis of the focus group discussions, findings highlighted important differences between speech pathologists and interpreters in the way that these professional groups regard the involvement of family members within sessions mediated by accredited interpreters. The speech pathologists’ reports echoed the emphasis placed by Roger (2003) on the importance of family members in obtaining patients’ language history and for the purpose of involving them in carrying through therapeutic goals and learning communication strategies. However, the interpreters in the present research identified concerns regarding what was seen as interference by family members during speech pathology sessions for bilingual speakers. The model, based on the work of Angelelli (2004), used in the present thesis to describe interpreter-mediated speech pathology communicative events did not address the role of family members in such settings. According to the focus group interview findings, interpreters were against any family interference, while speech pathologists permitted interference, especially when working with children. The present research identified family inclusion in ISs to be of importance to speech pathologists, but problematic for interpreters. This area in particular becomes crucial area that has been neglected in the literature to date. More research is needed on this issue.

Findings from both studies also asserted the urgent need for more appropriate assessment tools and materials to be made available in speech pathology clinics for use with bilingual speakers. These materials would replace the old standardised assessment tools designed to be used with people from particular cultural and linguistic backgrounds. Interpreters’ lack of knowledge about the speech pathology field and the nature of patients’ communication disorders are others factors
identified in this research as providing challenges for both professions when working together to assess aphasia in bilingual speakers. This finding was previously reported by Kambanaros and Van Steenbrugge (2004), who concluded that speech pathologists and interpreters’ lack of knowledge about each other’s practice is a major barrier in assessing language and speech disorders in bilingual speakers via interpreters.

Pre-session briefing has been emphasised in the previous literature as a major strategy for managing the need for knowledge and skill sharing between the two professions (Isaac, 2002a; Roger, 2003). This was another important finding of the present research. Interpreters stressed the importance of the pre-session briefing with speech pathologists, which, they argued, would allow them to learn more about the patient’s background, their role as interpreter during the session, the speech and language behaviours to be expected from the patient with aphasia, the modification and substitution of inappropriate assessment items with more appropriate items suited to the patient’s linguistic and cultural background, and the translation of written documents before commencing the session to avoid brainstorming. The importance of the pre-session briefing between interpreters and speech pathologists is well recognised at an institutional level. The Australian Institute of Interpreters and Translators Code of Practice (AUSIT, 2008) states as a requirement that interpreters and translators undertake appropriate preparations for translation and interpretation assignments before they commence the assessment.

In considering the nature of the partnership and teamwork between speech pathologists and interpreters when working together to serve bilingual speakers, this research found that interpreters consider working with speech pathologists as placing high demands on them, and as potentially affecting the quality of the interpreting. This finding has been previously identified by several scholars, who have discussed the demands placed on interpreters in the health care sector (Angelelli, 2004, 2008; Clark, 1998; Davidson, 2000, 2002; Garrett, Dickson, et al., 2008; Garrett,
Forero, et al., 2008a, 2008b; Karliner et al., 2007). Among the increased demands placed on interpreters, as reported in the present research, is the shift in role expectations, which sees the interpreter taking an even more central role in the assessment interaction. Interpreters in the present research reported that speech pathologists often place them in a more controlling role in the sessions; for example, they may provide explanations to patients and/or judge patients’ speech and language in assistance of the speech pathologist. Interpreters in the current research identified such role shifts to be a source of professional discomfort. These findings reflect the prominence of these issues for the professional partnership as shown in previous research (Clark, 1998; Isaac, 2002a), and emphasise the important implications for designing professional development for both speech pathologists and interpreters.

A further finding of this research is that aphasia assessment for bilingual speakers is a neglected area that needs more research, particularly with a view to developing appropriate assessment tools and guidance to facilitate speech pathologists and interpreters in working together to perform aphasia assessments for bilingual speakers. Past literature emphasised this issue by identifying the difficulties that emerge when using formal assessment tools with bilingual aphasic patients (Centeno, 2009; Fabbro, 2001a; Roberts, 1998). The previous literature has also raised the need for targeted research into the development of comparable test versions in different languages. In addition, researchers have called for more culturally and linguistically appropriate assessment materials to be used with bilingual speakers to decrease challenges faced by speech pathologists and interpreters when using translated versions of aphasia tests or when implementing the English language aphasia test via interpreters (Baker, 1993, 1995c; Isaac, 2002a; Isaac & Hand, 1997; Isaac et al., 2004; Kambanaros & Grohmann, 2011; Lorenzen & Murray, 2008; Roberts, 1998, 2008; Roger & Code, 2011; Roger et al., 1996, 1998, 2000).
Informed by the previous research, and taking into consideration the key findings from the survey and the focus group studies, the current thesis reported the development of an aphasia assessment guide aimed at facilitating the interpreter-mediated assessment process for Arabic speakers with aphasia (see Chapter 7). The assessment guide aims to establish a basis for collaboration by providing speech pathologists and interpreters with explanations about each other’s role, and the key information needed by each profession in terms of the nature of aphasia and the of the Arabic language.

The expert feedback obtained on the prototype of the guide was found to shape the guide in contributing to its linguistic accuracy, cross-cultural appropriateness, as well as contribute to establishing the face validity of the assessment guide. Reviewing previously published literature indicated that there are no guides of a similar nature. Therefore, the development of the aphasia assessment guide undertaken by this research represents a unique contribution to the body of research in this particular area. Further research is needed to test the usefulness and appropriateness of the assessment guide in clinical settings. It is suggested that the content and design also can be used as a model for the development of other assessment guides in other languages after obtaining the required adjustments and modifications to suit the target language and cultures.

8.2. Limitations

One limitation of the survey conducted in the present research relates to its electronic distribution, which precluded determination of the response rate, making it difficult to assure the typicality of the respondents. In interpreting the findings from the survey, it is considered important to recognise that the respondents may represent a more experienced and motivated section of the speech pathology profession. Further research could usefully target specific groups of speech pathologists for whom interpreter-mediated sessions are less commonly encountered; for example, rural/remote clinicians.
Second, the survey used in this research involved self-report by speech pathologist participants, and may or may not reflect actual practices. For example, speech pathologists in the present study reported that they felt competent providing assessment for bilingual speakers, but the investigation of actual competence was outside the scope of the present research. Given that Roger (2003) identified that the speech pathologists that participated in his study were not completely competent in their assessment of bilingual speakers, this issue emerges as an area for further research.

In relation to the focus group study for the present research discussed in Chapter 6, the researcher had access to the de-identified transcripts of the discussions, but was not present during the data collection. This has necessarily limited the researcher’s ability to disambiguate some statements in the transcripts. In consideration of this limitation, the analytic process avoided undue emphasis on ‘once-off’ contributions, and focused on identification and reporting of consistent themes across the transcripts of multiple focus group discussion.

The preliminary stage of development of the aphasia assessment guide for Arabic speakers is inherently limited. Limitations as to the scope and practicality of the guide itself will become clearer after using the assessment guide and testing its usefulness and validity. While the assessment guide is still at an early stage of its development process, the feedback from experts suggested adequate face validity for its designed purpose. Further research is crucial to investigate issues such as concurrent validity. This would be particularly useful for the assessment guide, which would need to be compared with other assessment tests used by speech pathologists to assess aphasia in bilingual speakers, such as the BAT.

8.3. Implications for Practice and Clinical Services

Based on the main findings that have emerged from the current research, it becomes apparent that the assessment of aphasia in bilingual speakers within the Australian context is
challenging. The findings from the research raise the need for new and multiple ways to tackle this problem, which has remained unchanged despite the recommendations of previous research. For example, professional advocacy for the value of increased availability of bilingual speech pathologists in the Australian context would have important implications in relation to changing policies on governmental skilled migration, language policies, professional association regulation and government registration. In addition, more research is needed to help to understand the reasons underpinning the lack of bilingual professionals in the health care field, and particularly in the speech pathology field within the Australian context. Such research would also generate more suggestions for providing beneficial facilities for improved assessment, and for eliminating the emerging barriers. Also, as previously suggested by Roger (2003) and Iitoselliti (2003), there is not only a need to increase the number of bilingual speech pathologists, but also to deploy the currently available bilingual speech pathologists more strategically in consultative roles to provide a state-wide and national resource for monolingual speech pathologists working with bilingual speakers.

Increasing the awareness and use by monolingual speech pathologists of currently available online resources that provide useful information about different languages would also provide useful support, and potentially drive the impetus for increased development of such resources. The assessment guide developed through this research considered as a useful resource to increase speech pathologists’ awareness about the Arabic language. The assessment guide also provides guidelines for each profession about his/her role within each part of the assessment session, which may prove generally useful. In addition, the guide encourages the use of patients’ personal, functionally relevant materials, which could be brought by family members to the assessment session. Such materials, depending on their nature, could reduce the burden on interpreters for sight translation. Further, the use of patients’ personal resources would enhance the partnership between speech pathologists and interpreters, and contribute toward improving the accuracy, adequacy and appropriateness of assessment for bilingual speakers with communication disorders.
The importance of the pre-session briefing as a foundation for the productive partnership between the speech pathologist and interpreter was found in the present research, as is consistent with previous research in this area. However, it is also apparent from the present research findings that the acknowledgement of the need for pre-session briefing needs to be considered alongside the equally powerful need to acknowledge the logistical issues that restrict interpreter availability to attend sessions for the time required to build effective partnerships. The assessment guide developed in the present research may assist in the management of this dilemma, as it also provides some brief instruction for speech pathologists about the Arabic linguistic and cultural background and for interpreters about aphasia and the purpose of the assessment. In addition, it provides interpreters with a brief discussion about the role they are expected to perform within the session, through negotiating such roles and goals that aim to be achieved with speech pathologists before the session. The inclusion of this informational part within the assessment guide was based on Isaac’s (2002a) suggestions on the importance of a deep understanding of clinical goals and procedures to facilitate clear communication between the speech pathologist and the interpreter.

While the collaborative partnership between speech pathologists and interpreters is raised repeatedly throughout this research, it is here suggested that a strong relationship can be achieved through arranging more training and educational courses that integrate both professions. More particularly, the research findings indicate that speech pathologists need more training courses that provide them with useful information about the nature of the interpreting process and the role that interpreters play within the speech pathology setting. It is also suggested that it is important for speech pathologists to understand more about the regulatory principles that guide the work of interpreters, such as their code of ethics. Likewise, the research suggests that interpreters would benefit from more training courses about speech pathology practice, terminology, symptoms associated with speech and language disorders, the purpose of assessments, and the aims and targets derived from conducting such assessments. In addition, the research supported the notion that
professional preparation programs for speech pathology students are well situated to provide foundation studies designed to increase awareness and skills in relation to cultural and linguistic diversity, as suggested previously (Roger, 2003).

8.4. Implications for Further Research

This section provides a brief recapitulation of those areas that were suggested throughout this chapter as warranting further investigation.

The present research found that the challenges reported over the past 10 years are still apparent. The lack of change raises concerns, especially given the many suggestions provided in the expert literature for clinicians. This suggests that a productive direction for future research would be to explore barriers and facilitators of organisational and institutional change, rather than solely focusing on the practices of the individual practitioner (as has been the main focus of research to-date, including the present research).

Less controversially, the present research findings add to the ongoing call for the development of more appropriate assessment tools to facilitate valid and reliable assessment of bilingual speakers. In particular, the present research suggests a need to explore alternative types of assessment specifically designed to enable the assessment process in an interpreter-mediated context. Further research is needed to investigate the concurrent validity and reliability of the assessment guide developed in the present research.

This study identified the role and interactional management of family members within interpreter-mediated sessions as a previously neglected area of investigation. Given the divergence in perceptions reported by speech pathologists and interpreters in the present research regarding family interruption, this area would benefit from further research. It is possible that the application
of conversation analysis methods to these complex multi-party interactions would yield insights useful for guiding both professional groups, as suggested by Ferguson (2007).

Further research was identified as necessary to reveal more about the needs of speech pathologists whose bilingual-light caseloads render their need for an interpreter as a relatively rare event. It is suggested that for these clinicians, there may be additional support needs requiring considering in developing training and services.

Most centrally, further research is needed to understand and improve the clinical processes involved in assessment through means of interpreter-mediation that is linguistically accurate, adequate for the purposes of the assessment, and appropriate to the cultural and individual needs.

8.5. Conclusion

This thesis aimed to contribute to the literature on the assessment of aphasia for bilingual speakers, as the lack of empirical research into the clinical reality of bilingual aphasia and its assessment and treatment had been previously identified as a weakness in the literature (Roberts, 1998). Thus, the current research aimed to explore the assessment of Arabic bilingual speakers from a clinical and practical viewpoint. This research used a multi-method approach to explore the assessment of aphasia in bilingual speakers within a culturally and linguistically diverse society.

The thesis argued that the issues arising from interpreter-mediated delivery of speech pathology services are important, not just internationally, but particularly given the context of Australia’s diversity of cultural and linguistic backgrounds and the policy undertakings of government in ensuring access to services for all Australians. Further, the present research found that, when comparing the present findings to the issues identified by Roger (2003) and Isaac (2002a), little has improved in relation to the apparent quality and quantity of speech pathology services provided for bilingual speakers in the Australian context over the last 10 years.
The lack of appropriate assessment tools and guidelines for use in aphasia assessment for bilingual speakers was an important finding of this research. In addition, interpreters’ unavailability and a lack of bilingual speech pathologists within the Australian context were identified as barriers that work against obtaining effective aphasia assessments for bilingual speakers. Therefore, as a contribution of the current research for the practice of aphasia assessment in bilingual speakers, an aphasia assessment guide was developed by this research. The assessment guide can be considered as a further step toward facilitating the assessment process and towards enhancing speech pathologists and interpreters’ collaborative partnership.

The research findings suggest the need for institutional change to actively promote and utilise bilingual speech pathologists, to facilitate the logistical availability of interpreters, and to promote professional preparation and ongoing professional development for both speech pathologists and interpreters. Further research is needed to develop assessment tools and to determine how best to use those tools to improve services for bilingual speakers.
References


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Safi-Stagni, S. (1992). Normal and pathological breakdown in Arabic. (Doctor of Philosophy Dissertation), The Louisiana University and Agricultural and Mechanical, Louisiana, USA. (9301102)


Appendices

Appendix A: Arabic Alphabet

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## Appendix B: Survey questions

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<td>Q1</td>
<td>How many years of experience do you have working with adults with aphasia?</td>
<td>Demographic</td>
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<td>Q2</td>
<td>Approximately how many adults with aphasia have you treated in the past six months?</td>
<td>Demographic</td>
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<td>Q3</td>
<td>What percentage of these adults spoke English as a second language?</td>
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<td>Q4</td>
<td>Please list their first languages, and estimate the number of speakers for each language.</td>
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<td>What procedures do you use to assess the language of bilingual speakers with aphasia?</td>
<td>1</td>
<td>Select one or more from a list of five</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q6</td>
<td>In cases where an individual’s first language (L1) is not English, do you carry out assessment of L1?</td>
<td>1</td>
<td>Select one only from a list of five</td>
<td>No</td>
</tr>
<tr>
<td>Q7</td>
<td>What strategies do you (would you) use to assess L1?</td>
<td>1</td>
<td>Select one or more from a list of eight</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q8</td>
<td>What barriers do you encounter in the assessment process?</td>
<td>1</td>
<td>Select one or more from a list of six</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q9</td>
<td>In cases where L1 assessment is not undertaken, what are the reasons for this?</td>
<td>1</td>
<td>Select one or more from a list of four</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q10</td>
<td>How often is it difficult to get an interpreter for assessing the bilingual aphasic speaker?</td>
<td>2</td>
<td>Select one only</td>
<td>No</td>
</tr>
<tr>
<td>Q11</td>
<td>When it was not possible to get the interpreter at the time of the assessment session, what did you do?</td>
<td>2</td>
<td>Select one or more from a list of four</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q12</td>
<td>How competent do you feel doing interpreter-mediated assessment when assessing bilingual aphasic speakers?</td>
<td>3</td>
<td>Select one only</td>
<td>No</td>
</tr>
<tr>
<td>Q18</td>
<td>In your opinion, how effective is the assessment for bilingual aphasic speakers?</td>
<td>3</td>
<td>Select one or more from a list of five</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q19</td>
<td>What influences your opinion regarding effectiveness?</td>
<td>3</td>
<td>Select one or more from a list of four</td>
<td>Yes Specify others</td>
</tr>
<tr>
<td>Q20</td>
<td>To what extent might the following affect the accuracy of assessment? (please rank, from 1</td>
<td>3</td>
<td>Likert scale please rank,</td>
<td></td>
</tr>
<tr>
<td>Q21</td>
<td>What, tools and resources would help you in your work with aphasic people of non-English-speaking backgrounds?</td>
<td>Most to 9 Least)</td>
<td>from 1 Most to 9 Least for each of the nine factors listed</td>
<td>4-A</td>
</tr>
<tr>
<td>Q22</td>
<td>What ‘generation’ do you fall into?</td>
<td>Demographic</td>
<td>Select one only from a list of three</td>
<td>No</td>
</tr>
<tr>
<td>Q23</td>
<td>How confident are you in using computers in assessment and therapy?</td>
<td>4-B</td>
<td>Select one only from a list of five</td>
<td>No</td>
</tr>
<tr>
<td>Q24</td>
<td>Do you have experience in using computerised assessment tools? (E.g., This may have involved presentation of stimuli to patients on a computer screen and/or recording responses through the computer keyboard. Include any experience in computerised assessment pre-testing in therapy software.)</td>
<td>4-B</td>
<td>Select Yes or No</td>
<td>If yes, please describe</td>
</tr>
<tr>
<td>Q25</td>
<td>Do you think that computerised assessment tools might be useful in providing more culturally and linguistically appropriate assessments for bilingual aphasic speakers?</td>
<td>4-B</td>
<td>Select Yes or No</td>
<td>If yes, please describe If no, please describe</td>
</tr>
<tr>
<td>Q27</td>
<td>Have you ever sought for a consultation with a bilingual speech pathologist for the purpose of analysis and synthesis for bilingual aphasic speakers’ assessment responses and findings?</td>
<td>4-C</td>
<td>Select Yes or No</td>
<td>If yes, please describe</td>
</tr>
<tr>
<td>Q28</td>
<td>Do you think that increasing the availability of bilingual speech pathologists to provide a consultation service might be useful in providing more culturally and linguistically appropriate assessments for bilingual aphasic speakers?</td>
<td>4-C</td>
<td>Select Yes or No</td>
<td>If yes, please describe If no, please describe</td>
</tr>
</tbody>
</table>
Question categories

Demographic information category, describing the respondents and their caseloads
Q1, Q2, Q3, Q4, Q22

Category (1) Procedures used in the assessment: general category of procedures in use to assess bilingual aphasic speakers, difficulties and limitations
Q5, Q6, Q7, Q8, Q9

Category (2) Interpreter-mediated assessment for bilingual aphasic speakers: availability and implications
Q10, Q11

Category (3) Speech pathologists’ notions toward their competency in obtaining the assessment and its accuracy and effectiveness
Q12, Q18, Q19, Q20

Category (4) Ideas for improving assessment procedures
A Category of speech pathologists’ opinions regarding effective resources and tools that would facilitate the assessment procedure
Q21
B Category of speech pathologists’ competency using computers in providing speech pathology services for patients
Q23, Q24, Q25
C Category of speech pathologists’ notion toward bilingual speech pathologist consultants
Q27, Q28
Appendix C: Questions provided for participants to elicit their feedback on the assessment guide

<table>
<thead>
<tr>
<th>Question</th>
<th>Type of answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think this guide would help speech pathologists to work with an interpreter to assess Arabic speakers with aphasia in an English-speaking country like Australia?</td>
<td>Yes OR NO</td>
</tr>
<tr>
<td>If yes, could you please identify the most helpful items? Why might these be helpful?</td>
<td>Yes OR NO</td>
</tr>
<tr>
<td>If not, could you please identify inappropriate items that are provided in the guide? How might these be modified?</td>
<td>Yes OR NO</td>
</tr>
<tr>
<td>Could you please comment on each part of the guide?</td>
<td></td>
</tr>
<tr>
<td>Pre-session briefing</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>History taking</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>Talking (conversational speech)</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>Listening (understanding spoken language)</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>• Pointing, Instructions, Questions, Syntactic Comprehension</td>
<td></td>
</tr>
<tr>
<td>Repetition (words, sentences)</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>Reading</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>Writing</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>Other resources (clock, calendar)</td>
<td>Written comments OR Agreement</td>
</tr>
<tr>
<td>Could you please provide us with any further suggestions about missing items that you feel would be important to be included in the guide to achieve the aim of the assessment?</td>
<td>Suggestions and further comments in written form</td>
</tr>
<tr>
<td>Any other comments?</td>
<td>Giving the opportunity to discuss further comments they feel would be important for the modification process of this assessment guide</td>
</tr>
</tbody>
</table>
Appendix D: The Aphasia assessment guide for bilingual speakers: particularly Arabic aphasic speakers

Assessment Guide for Speech Pathologists and Interpreters

Arabic Version

Aphasia

Research Version: Aphasia Assessment in Arabic Speakers

(Please do not quote without permission from researchers)

This resource forms part of the doctoral research of Samar Al-Amawi at the University of Newcastle, Australia under the supervision of Professor Alison Ferguson and Dr Sally Hewat Speech Pathology, School of Humanities and Social Science University of Newcastle NSW 2308

For further information contact:
Email:
Email:
Aphasia

This guide is being developed to assist English-speaking speech pathologists and Arabic interpreters working together in assessment sessions for Arabic speakers with aphasia in an Australian hospital setting. The guide is designed to assist in the assessment process, rather than to be a stand-alone test. The suggestions in this guide are based on information about the linguistic structure of the Arabic language and culture. Some parts of the guide are based on information provided by the Bankstown Area Multicultural Network (2010) and the Jordanian Arabic version of the Bilingual Aphasia Test (Paradise, 1989), which is available as a free download from: http://www.mcgill.ca/linguistics/research/bat/#arabic
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   1.2. The Arabic Language
2. Starting the Session: Getting to Know Each Other
   2.1. Language History
   2.2. Conversational Interaction
3. How Much Does the Patient Understand?
   3.1. Following instructions—short to longer
   3.2. Answering questions—yes/no questions
   3.3. Answering questions—simple to more complex
4. Resources for Eliciting Specific Language Skills
   4.1. Repetition
   4.2. Story telling
   4.3. Reading
   4.4. Writing
5. Other Resources
   5.1. Telling the time—Clock using Arabic numbers
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1. Before the Session

1.1. Interpreting and Speech Pathology

For the Speech Pathologist

Interpreting is not as simple as providing a word-for-word translation. To capture the same meaning, it is often necessary to change the grammatical structure substantially. The interpreter may not be able to interpret in a way that provides for direct semantic or syntactic equivalence.

Interpreters face unique challenges when working with speech pathologists.

- Interpreters may have difficulty understanding the patient because of the communication difficulty itself.
- Interpreters’ ‘meta-knowledge’ of their own language will vary in the same way as for any speaker, and so it may difficult for them, for example, to understand fully the speech pathology concerns around specific grammatical constructions.
- When interpreting for other professionals, interpreters are advised NOT to provide opinions, but when working with speech pathologists, their opinion about the accuracy and appropriateness of communication is vital.

The speech pathologist and interpreter need to have at least 5 minutes of pre-session discussion that will allow both of them to clarify and identify the session’s purpose, task sequence, expected responses and the role and responsibilities of each professional during the session.

For the Interpreter

Aphasia is a language disorder that results from damage to the parts of the brain that are responsible for language. The disorder typically impairs the expression and understanding of language as well as reading and writing.

In an assessment session, the speech pathologist aims to examine the patient’s ability to understand, speak, read and write. Each area needs to be assessed separately.

The role of the interpreter during the session may involve:

- Interpreting explanations, questions and responses. Where direct translation of items is a problem, the resources provided in Arabic in this guide may be useful.
- Providing an opinion of the accuracy and appropriateness of the patient’s responses, based on an understanding of the typical use of Arabic.
1.2. The Arabic Language

- The Arabic language is a Semitic language, characterised by a limited vocalic system and a rich consonantal system.
- The structure of the Arabic language involves the use of word roots with morphological endings determining the meaning.
- The Arabic language consists of 28 letters, 25 consonants and 3 vowels, with only 15 letter shapes to represent the 28 consonant phonemes. Arabic is read and written with joined letters from right to left.
- The word order of Arabic sentences differs from English language sentences. Arabic sentences start with the verb, then the subject and end with the object (VSO).
- Arabic verbs usually consist of two, three or (rarely) four consonants, from which words are usually built. One Arabic verb can form many different words that come from the basic verb root. A basic structure is an arrangement of the positions of consonants and vowels linked with the verb root to form these verbal structures (Bohas, Guillaume & Kouloughli, 1990).
- Plurality in Arabic is specified using forms for dual (two) and plural (more than two).
- Arabic nouns (and verbs also) can be changed to form the dual and plural, feminine or masculine forms.
- Adjectives are morphologically like nouns. Usually adjectives agree with the noun in gender, number, case and definiteness. In Arabic phrases, a word that functions as the qualifier typically follows the qualified term. Thus, an adjective follows the noun it qualifies in the standard Arabic noun phrase.

The following website provides useful introductory information—including a pictured vocabulary and grammatical description—for a number of languages, including Arabic
http://www.languageguide.org/

2. Starting the Session: Getting to Know Each Other

2.1. Language History

Finding out about the patient’s language background provides an important opportunity for the speech pathologist, patient and interpreter to find out information about each other and to build rapport. Sometimes, the history is obtained by the speech pathologist asking questions that the interpreter then repeats for the patient in their own language.

However, an alternative is for the speech pathologist to ask the interpreter to initiate the conversation, using the sorts of questions listed below as a guide. This approach provides an opportunity for the speech pathologist to observe the patient in a more natural conversational interaction, and provides an opportunity for the interpreter to become familiar with any dialectal or individual differences in the patient’s language. These questions also help in identifying the patient’s awareness regarding his/her speech and language problems.
• Are you having any problems with your communication?
• What is your first language?
• Do you know any other languages?
• When you were a child, what language did you use at home, at school and with friends?
• Before you came to hospital, what language(s) did you use at home, at work and with friends?
• Which language(s) do you prefer to use now?

2.2. Conversational Interaction

Similarly, either the speech pathologist or the interpreter can engage the patient in general conversation about their cultural background, to obtain a natural language sample. The questions below also help to reveal more about the cultural background of the patient. It is useful to have resources such as maps and a calendar (see Section 5.2) to support this kind of conversation.

• Where are you originally from?
• Have you visited your country recently?
• Tell me about your visit.

During this conversation, the speech pathologist is typically interested to observe the following abilities:

• Speech prosody and fluency (the intonation and easy flow of speech)
• Articulation (intelligibility of speech)
• Grammatical use of language (use of words in sentences, use of grammatical parts of speech)
• Pragmatic ability (social skills such as turn taking and topic maintenance)

3. How Much Does the Patient Understand?

The speech pathologist is also interested to find out to what extent the patient understands what other people say. To test understanding, the speech pathologist will ask the patient to follow instructions or to answer questions—some easy and some more difficult. The speech pathologist needs to see what the patient can do both WITH and WITHOUT OTHER CUES. For this reason, the speech pathologist needs the interpreter to avoid using any gesture that might cue the patient, and to avoid repeating the instruction or questions unless asked to do so.

It is useful to explain to the patient why this task is being done. For example: *We want to check how much you can follow what is said to you, so we are going to ask you to do some things and we are going to ask some questions. Some will be easy, and some will be harder, but just do the best you can. Let us know if you would like us to repeat what we have said.*
### 3.1. Following Instructions: Short to Longer

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point to the pen.</td>
<td>من فضلك إلمس القلم</td>
</tr>
<tr>
<td>Point to the ceiling.</td>
<td>من فضلك أشر إلى السقف</td>
</tr>
<tr>
<td>Point to the desk and the window.</td>
<td>من فضلك أشر إلى الطاولة و إلى الشباك</td>
</tr>
<tr>
<td>Put the paper next to the pen.</td>
<td>ضع الورقة بجانب القلم</td>
</tr>
<tr>
<td>Put the pen under the paper and give me the pencil.</td>
<td>ضع القلم تحت الورقة ثم أعطني قلم الرصاص</td>
</tr>
</tbody>
</table>

### 3.2. Answering Questions: Yes/No Questions

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does spring come after winter?</td>
<td>هل يأتي الربيع بعد الشتاء</td>
</tr>
<tr>
<td>Does the sun rise in the morning?</td>
<td>هل تشرق الشمس في الليل</td>
</tr>
<tr>
<td>Do flowers smell white?</td>
<td>رائحة الورد بيضاء</td>
</tr>
<tr>
<td>Can a boy eat an orange?</td>
<td>هل يأكل الولد البرتقالة</td>
</tr>
<tr>
<td>Can a man drink sand?</td>
<td>هل يشرب الرجل الرمل</td>
</tr>
</tbody>
</table>
3.3. Identifying Grammatical Mistakes

Explain to the patient: *This time I am going to say some sentences. Some of them will be correct, and others will have mistakes. Let me know if the sentence is correct or not.*

<table>
<thead>
<tr>
<th>English ‘gloss’</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>The boy pushes the girl.</td>
<td>الولد يدفع البنت</td>
</tr>
<tr>
<td>She pushes him.</td>
<td>هي تدفعه</td>
</tr>
<tr>
<td>He pushes her.</td>
<td>هو يدفعها</td>
</tr>
<tr>
<td>The boy is the one who pushes the girl.</td>
<td>الولد هو الذي يدفع البنت</td>
</tr>
<tr>
<td>The girl is the one who is pushed by the boy.</td>
<td>البنت هي التي يدفعها الولد</td>
</tr>
<tr>
<td>She does not push him.</td>
<td>هي لا تدفعه</td>
</tr>
<tr>
<td>He does not push her.</td>
<td>هو لا يدفعها</td>
</tr>
<tr>
<td>The girl is not pushed by the boy.</td>
<td>البنت لا يدفعها الولد</td>
</tr>
<tr>
<td>The boy is not pushed by the girl.</td>
<td>الولد لا يدفعه البنت</td>
</tr>
</tbody>
</table>

4. Resources for Eliciting Specific Language Skills

4.1. Repetition

The speech pathologist may want to find out whether the patient can repeat words and sentences, as this helps observe the following:

- Ease and accuracy of articulation (by giving the patient words or sentences that are easy to say as well as ‘tongue twisters’).
- Whether the patient can reproduce the content (vocabulary) and form (grammar) accurately (by giving the patient words that are more or less familiar and sentences that are more or less predictable).
- Whether knowing the meaning of a word makes it easier or harder to repeat (by giving the patient real words and nonsense words).

This sort of task is often difficult to interpret on the spot, as a word or sentence that is hard to say or complex in one language may be very easy in another (or vice versa). The following resources may be useful for repetition tasks in Arabic.

It is useful to explain to the patient why this task is being done. For example: We want to see what things make talking easier or harder for you. *We would like you to try to repeat some words and sentences. Some will be easy, and some will be harder, but just do the best you can. Let us know if you would like us to repeat what we have said.*
Real words

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>دار</td>
</tr>
<tr>
<td>Night</td>
<td>ليل</td>
</tr>
<tr>
<td>Money</td>
<td>مال</td>
</tr>
<tr>
<td>Teacher</td>
<td>معلم</td>
</tr>
<tr>
<td>Security</td>
<td>حرس</td>
</tr>
</tbody>
</table>

Nonsense words

<table>
<thead>
<tr>
<th>Phonemic representation (IPA)</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tal</td>
<td>تال</td>
</tr>
<tr>
<td>Saw^l</td>
<td>سول</td>
</tr>
<tr>
<td>Faj^s</td>
<td>فجس</td>
</tr>
<tr>
<td>kaʕ^l</td>
<td>كعل</td>
</tr>
<tr>
<td>Ḥalfaj</td>
<td>حلفج</td>
</tr>
</tbody>
</table>

Sentences (low to high probability of difficulty)

<table>
<thead>
<tr>
<th>English ‘gloss’</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Mum feeds the baby.</td>
<td>الأم تطعم الطفل</td>
</tr>
<tr>
<td>The Dad is disappointed.</td>
<td>الأب متشائم</td>
</tr>
<tr>
<td>Kids are playing in the garden.</td>
<td>الأطفال يلعبون في الحديقة</td>
</tr>
<tr>
<td>The boy does not wake up his mother.</td>
<td>الولد لا يوقف أمه</td>
</tr>
<tr>
<td>It was a wonderful summer holiday.</td>
<td>كانت إجازة صيفية رائعة</td>
</tr>
<tr>
<td>He conducted a longitudinal study of immigrants.</td>
<td>أجرى دراسة مطولة على المهاجرين</td>
</tr>
</tbody>
</table>
4.2. Storytelling

The speech pathologist may want to listen to the way the patient tells a familiar story. This task allows for detailed observation of the content (vocabulary), form (grammar) and the overall coherence of the story.

It helps to use a very familiar story because, even if the patient has difficulty understanding, the main ideas can be guessed. The story suggested here is the traditional Aesop’s fable known in English as the Hare and the Tortoise, which may be familiar to Arabic speakers as the Bunny and the Turtle.

<table>
<thead>
<tr>
<th>English</th>
</tr>
</thead>
</table>

**The Hare and the Tortoise**

There once was a hare who bragged about how fast he could run. Tired of hearing him boast, the tortoise challenged him to a race. All the animals in the forest gathered to watch. The hare ran down the road for a while and then paused to rest. He looked back at the tortoise and cried out, ‘How do you expect to win this race when you are walking along at your slow, slow pace?’

The hare stretched himself out alongside the road and fell asleep, thinking, ‘There is plenty of time to relax’. The tortoise walked and walked. He never, ever stopped until he came to the finish line.

The animals who were watching cheered so loudly for the tortoise, they woke up the hare.

The hare stretched and yawned and began to run again, but it was too late. The tortoise was over the line. After that, the hare always reminded himself, ‘Don’t brag about your lightning pace, for slow and steady won the race!’
السلحفاة والأرنب

هناك قصة قديمة عن سباق بين السلحفاة والأرنب. عرف الأرنب أنه أسرع بكثير من السلحفاة. وقد كان واثقا جدا من الفوز لدرجة أنه استلقي على جانب الطريق من أجل غفوة. استغرق الأرنب بالنوم. في غضون ذلك، تابعت السلحفاة السباق ببطء وثبات حتى خط النهاية. وعندما استيقظ أخيرا وأسرع نحو النهاية، كان قد فات الأوان. إن مغزى هذه القصة هو ‘البطء والثبات يحرز السباق.’

When you do this task, the patient should not see the written version.

It is useful to explain to the patient why this task is being done. For example:

We want to see how you communicate when you tell a very familiar story. We usually ask people to tell us a story that they may have heard when they were children, or which they may have told their children or grandchildren. Do you know the story of the Hare and the Tortoise (the Bunny and the Turtle)? Have a look at the picture. Can you tell that story to me?

(It may help some patients to show the picture provided below.)
4.3. Reading

The speech pathologist may use the same story to ask the patient to read it in Arabic (either reading aloud or silently).

السلحفاة والأرنب

هناك قصة قديمة عن سباق بين السلحفاة والأرنب. عرف الأرنب أنه أسرع بكثير من السلحفاة. وقد كان واثقا جدا من الفوز لدرجة أنه استلقي على جانب الطريق من أجل غفوته. استغرق الأرنب بالنوم، في غضون ذلك، تابعت السلحفاة السباق، ببطء وثبات حتى خط النهاية. وعندما استيقظ أخيرا وأسرع نحو النهاية، كان قد فات الأوان. إن مغزى هذه القصة هو ‘البطء والثبات يحرز السباق’.

The speech pathologist may ask the patient to have another attempt at retelling the story, or might ask the patient for their opinion about the story (For example: What is the moral of the story? Do you think this applies in real life?)

4.4. Writing

The speech pathologist might ask the patient to write in Arabic. For example, they might be asked to write the story of the Hare and the Tortoise, a short description of their country of origin, or even a short shopping list.

The speech pathologist will be interested to know if the writing is correct in meaning, grammar and spelling.

(Note that many patients with aphasia may need to use their other hand to write, as their right hand/arm may be paralysed. This means that the patient’s writing may be slow and the letters may be difficult to write. However, the speech pathologist is interested in WHAT they write, rather than whether or not the writing is neat.)
5. Other Resources

5.1. Telling the Time

A clock with Arabic numbers is provided below. It will be useful for patients who do not know English numbers, or who prefer the Arabic clock.

The speech pathologist might ask the patient to show a particular time (e.g. 10 o’clock) or to solve a problem using the clock (For example: You have an appointment at 3 o’clock. Look at the time on this clock. How much time do you have before your appointment?)

5.2. Telling the Date

Countries in the Arabic world often use the Islamic calendar (provided below). This resource may be useful for patients who are more familiar with this calendar.

The speech pathologist might ask the patient to show a particular date (For example, Which is today’s date? When is your birthday?) or to solve a problem using the calendar (For example, You have an appointment in three days’ time. Can you show me that day on the calendar?).
Appendix E: The Modified aphasia assessment guide

Assessment Guide for Speech Pathologists
and Interpreters

Arabic Version

Aphasia

Research Version: Aphasia Assessment in Arabic Speakers

(Please do not quote without permission from researchers)

This resource forms part of the doctoral research of
Samar Al-Amawi at the University of Newcastle, Australia
under the supervision of
Professor Alison Ferguson and Dr Sally Hewat
Speech Pathology, School of Humanities and Social Science
University of Newcastle NSW 2308

For further information contact:
Email:
Email:
This guide is being developed to assist English-speaking speech pathologists and Arabic interpreters working together in assessment sessions for Arabic speakers with aphasia in an Australian hospital setting. The guide is designed to assist in the assessment process, rather than to be a stand-alone test. The suggestions in this guide are based on information about the linguistic structure of the Arabic language and culture. Some parts of the guide are based on information provided by the Bankstown Area Multicultural Network (2010) and the Jordanian Arabic version of the Bilingual Aphasia Test (Paradise, 1989), which is available as a free download from: http://www.mcgill.ca/linguistics/research/bat/#arabic
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7. Before the Session

7.1. Interpreting and Speech Pathology

For the Speech Pathologist

Interpreting is not as simple as providing a word-for-word translation. To capture the same meaning, it is often necessary to change the grammatical structure substantially. The interpreter may not be able to interpret in a way that provides for direct semantic or syntactic equivalence.

Interpreters face unique challenges when working with speech pathologists.

- Interpreters may have difficulty understanding the patient because of the communication difficulty itself.
- Interpreters’ ‘meta-knowledge’ of their own language will vary in the same way as for any speaker, and so it may be difficult for them, for example, to understand fully speech pathology concerns around specific grammatical constructions.
- When interpreting for other professionals, interpreters are advised NOT to provide opinions, but when working with speech pathologists their opinion about the accuracy and appropriateness of communication and cultural patterns is vital.

The speech pathologist and interpreter need to have at least 5 minutes of pre-session discussion that will allow both of them to clarify and identify the session’s purpose, task sequence, expected responses and the role and responsibilities of each professional during the session.

For the Interpreter

Aphasia is a language disorder that results from damage to the parts of the brain that are responsible for language. The disorder typically impairs the expression and understanding of language as well as reading and writing.

In an assessment session, the speech pathologist aims to examine the patient's ability to understand, speak, read and write. Each area needs to be assessed separately.

The role of the interpreter during the session may involve:

- Interpreting explanations, questions and responses. Where direct translation of items is a problem, the resources provided in Arabic in this guide may be useful.
- Providing an opinion of the accuracy and appropriateness of the patient’s responses, based on an understanding of the typical use of Arabic.

7.2. The Arabic Language

- The Arabic language is a Semitic language, characterised by a limited vocalic system and a rich consonantal system.
- The structure of the Arabic language involves the use of word roots with morphological endings determining the meaning.
• The Arabic language consists of 28 letters, 25 consonants and 3 vowels, with only 15 letter shapes to represent the 28 consonant phonemes. Arabic is read and written with joined letters from right to left.

• **The word order** of Arabic sentences differs from English language sentences. Arabic sentences start with the verb, then the subject and end with the object (VSO).

• **Arabic verbs** usually consist of two, three or (rarely) four consonants, from which words are usually built. One Arabic verb can form many different words that come from the basic verb root. A basic structure is an arrangement of the positions of consonants and vowels linked with the verb root to form these verbal structures (Bohas, Guillaume & Kouloughli, 1990).

• **Plurality** in Arabic is specified using forms for dual (two) and plural (more than two).

• **Arabic nouns** (and verbs also) can be changed to form the dual and plural, feminine or masculine forms.

• **Adjectives** are morphologically like nouns. Usually adjectives agree with the noun in gender, number, case and definiteness. In Arabic phrases, a word that functions as the qualifier typically follows the qualified term. Thus, an adjective follows the noun it qualifies in the standard Arabic noun phrase.

• The following website provides useful introductory information—including a pictured vocabulary and grammatical description—for a number of languages, including Arabic [http://www.languageguide.org/](http://www.languageguide.org/)

8. Starting the Session: Getting to Know Each Other

8.1. Language History

Finding out about the patient’s language background provides an important opportunity for the speech pathologist, patient and interpreter to find out information about each other and to build rapport. Sometimes, the history is obtained by the speech pathologist asking questions that the interpreter then repeats for the patient in their own language.

However, an alternative is for the speech pathologist to ask the interpreter to initiate the conversation, using the sorts of questions listed below as a guide. This approach provides an opportunity for the speech pathologist to observe the patient in a more natural conversational interaction, and provides an opportunity for the interpreter to become familiar with any dialectal or individual differences in the patient’s language. These questions also help in identifying the patient’s awareness regarding his/her speech and language problems.
• Are you having any problems with your communication?
• What is your first language?
• Do you know any other languages?
• When you were a child, what language did you use at home, at school and with friends?
• Before you came to hospital, what language(s) did you use at home, at work and with friends?
• Which language(s) do you prefer to use now?

8.2. Conversational Interaction

Similarly, either the speech pathologist or the interpreter can engage the patient in general conversation about their cultural background, to obtain a natural language sample. The questions below also help to reveal more about the cultural background of the patient. It is useful to have resources such as maps and a calendar (see Section 5.2) to support this kind of conversation.

• Where are you originally from?
• Have you visited your country recently?
• Tell me about your visit.
• During this conversation, the speech pathologist is typically interested to observe the following abilities:
  • Speech prosody and fluency (the intonation and easy flow of speech)
  • Articulation (intelligibility of speech)
  • Grammatical use of language (use of words in sentences, use of grammatical parts of speech)
  • Pragmatic ability (social skills such as turn taking and topic maintenance)

9. How Much Does the Patient Understand?

The speech pathologist is also interested to find out to what extent the patient understands what other people say. To test understanding, the speech pathologist will ask the patient to follow instructions or to answer questions—some easy and some more difficult. The speech pathologist needs to see what the patient can do both WITH and WITHOUT OTHER CUES. For this reason, the speech pathologist needs the interpreter to avoid using any gesture that might cue the patient, and to avoid repeating the instruction or questions unless asked to do so.

It is useful to explain to the patient why this task is being done. For example: We want to check how much you can follow what is said to you, so we are going to ask you to do some things and we are going to ask some questions. Some will be easy, and some will be harder, but just do the best you can. Let us know if you would like us to repeat what we have said.
9.1. Following Instructions: Short to Longer

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point to the pen.</td>
<td>من فضلك إلمس القلم</td>
</tr>
<tr>
<td>Point to the ceiling.</td>
<td>من فضلك أشر إلى السقف</td>
</tr>
<tr>
<td>Point to the desk and the window.</td>
<td>من فضلك أشر إلى الطاولة و إلى الشباك</td>
</tr>
<tr>
<td>Put the paper next to the pen.</td>
<td>وضع الورقة بجانب القلم</td>
</tr>
<tr>
<td>Put the pen under the paper and give me the pencil.</td>
<td>ضع القلم تحت الورقة ثم أعطني قلم الرصاص</td>
</tr>
</tbody>
</table>

9.2. Answering Questions: Yes/No Questions

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does spring come after winter?</td>
<td>هل يأتي الربيع بعد الشتاء</td>
</tr>
<tr>
<td>Does the sun rise in the morning?</td>
<td>هل تشرق الشمس في الليل</td>
</tr>
<tr>
<td>Do flowers smell white?</td>
<td>رائحة الورد بيضاء</td>
</tr>
<tr>
<td>Can a boy eat an orange?</td>
<td>هل يأكل الولد البرتقالة</td>
</tr>
<tr>
<td>Can a man drink sand?</td>
<td>هل يشرب الرجل الرمل</td>
</tr>
</tbody>
</table>

9.3. Identifying Grammatical Mistakes

Explain to the patient: *This time I am going to say some sentences. Some of them will be correct, and others will have mistakes. Let me know if the sentence is correct or not.*

<table>
<thead>
<tr>
<th>English ‘gloss’</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>The boy pushes the girl.</td>
<td>الولد يدفع البنت</td>
</tr>
<tr>
<td>She pushes him.</td>
<td>هي تدفعه</td>
</tr>
<tr>
<td>He pushes her.</td>
<td>هو يدفعها</td>
</tr>
<tr>
<td>The boy is the one who pushes the girl.</td>
<td>الولد هو الذي يدفع البنت</td>
</tr>
<tr>
<td>The girl is the one who is pushed by the boy.</td>
<td>البنت هي التي يدفعها الولد</td>
</tr>
<tr>
<td>She does not push him.</td>
<td>هي لا تدفعه</td>
</tr>
</tbody>
</table>
He does not push her.  
الولد لا يدفعها

The girl is not pushed by the boy.  
البنت لا تدفعها الولد

The boy is not pushed by the girl.  
الولد لا تدفعه البنت

10. Resources for Eliciting Specific Language Skills

10.1. Repetition

The speech pathologist may want to find out whether the patient can repeat words and sentences, as this helps observe the following:

- Ease and accuracy of articulation (by giving the patient words or sentences that are easy to say as well as ‘tongue twisters’).
- Whether the patient can reproduce the content (vocabulary) and form (grammar) accurately (by giving the patient words that are more or less familiar and sentences that are more or less predictable).
- Whether knowing the meaning of a word makes it easier or harder to repeat (by giving the patient real words and nonsense words).

This sort of task is often difficult to interpret on the spot, as a word or sentence that is hard to say or complex in one language may be very easy in another (or vice versa). The following resources may be useful for repetition tasks in Arabic.

It is useful to explain to the patient why this task is being done. For example: We want to see what things make talking easier or harder for you. *We would like you to try to repeat some words and sentences. Some will be easy, and some will be harder, but just do the best you can. Let us know if you would like us to repeat what we have said.*

Real Words

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>دار</td>
</tr>
<tr>
<td>Night</td>
<td>ليل</td>
</tr>
<tr>
<td>Money</td>
<td>مال</td>
</tr>
<tr>
<td>Teacher</td>
<td>معلم</td>
</tr>
<tr>
<td>Security</td>
<td>حرس</td>
</tr>
</tbody>
</table>
### Nonsense Words

<table>
<thead>
<tr>
<th>Phonemic representation (IPA)</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tal</td>
<td>تال</td>
</tr>
<tr>
<td>Saw^l</td>
<td>سول</td>
</tr>
<tr>
<td>Faj^s</td>
<td>فجس</td>
</tr>
<tr>
<td>kaʕ^l /Ko /I/</td>
<td>كعل</td>
</tr>
<tr>
<td>Ṭalfqʃ</td>
<td>حلفج</td>
</tr>
</tbody>
</table>

### Sentences (low to high probability of difficulty)

<table>
<thead>
<tr>
<th>English ‘gloss’</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Mum feeds the baby.</td>
<td>الأم تطعم الطفل</td>
</tr>
<tr>
<td>The Dad is disappointed.</td>
<td>الأب متشائم</td>
</tr>
<tr>
<td>Kids are playing in the garden.</td>
<td>الأطفال يلعبون في الحديقة</td>
</tr>
<tr>
<td>The boy does not wakeup his mother.</td>
<td>الولد لا يوقف أمه</td>
</tr>
<tr>
<td>It was a wonderful summer holiday.</td>
<td>كانت إجازة صيفية رائعة</td>
</tr>
<tr>
<td>He conducted a longitudinal study of immigrants.</td>
<td>اجرى دراسة مطولة على المهاجرين</td>
</tr>
</tbody>
</table>

### 10.2. Storytelling

The speech pathologist may want to listen to the way the patient tells a familiar story. This task allows for detailed observation of the content (vocabulary), form (grammar) and the overall coherence of the story.

It helps to use a very familiar story because, even if the patient has difficulty understanding, the main ideas can be guessed. The story suggested here is the traditional Aesop’s fable known in English as the Hare and the Tortoise, which may be familiar to Arabic speakers as the Bunny and the Turtle.
The Hare and the Tortoise

There once was a hare who bragged about how fast he could run. Tired of hearing him boast, the tortoise, challenged him to a race. All the animals in the forest gathered to watch. The hare ran down the road for a while and then paused to rest. He looked back at the tortoise and cried out, ‘How do you expect to win this race when you are walking along at your slow, slow pace?’

The hare stretched himself out alongside the road and fell asleep, thinking, ‘There is plenty of time to relax’. The tortoise walked and walked. He never, ever stopped until he came to the finish line.

The animals who were watching cheered so loudly for the tortoise, they woke up the hare.

The hare stretched and yawned and began to run again, but it was too late. The tortoise was over the line. After that, the hare always reminded himself, ‘Don’t brag about your lightning pace, for slow and steady won the race!’

Arabic

السلحفاة والأرنب

هناك قصة قديمة عن سباق بين السلحفاة والأرنب. عرف الأرنب أنه أسرع بكثير من السلحفاة. وقد كان واثقا جدا من الفوز لدرجة أنه استلقى على جانب الطريق من أجل غفوة. استغرق الأرنب بالنوم. في غضون ذلك، تابعت السلحفاة السباق، ببطء وثبات حتى خط النهاية. وعندما استيقظ أخيرا وأسرع نحو النهاية، كان قد فات الأوان. إن مغزى هذه القصة هو ‘البطء والثبات يحرز السباق’.
When you do this task, the patient should not see the written version.

We want to see how you communicate when you tell a very familiar story. We usually ask people to tell us a story that they may have heard when they were children, or which they may have told their children or grandchildren. Do you know the story of the Hare and the Tortoise (the Bunny and the Turtle)? Have a look at the picture. Can you tell that story to me?

(It may help some patients to show the picture provided below.)
The speech pathologist may use the same story to ask the patient to read it in Arabic (either reading aloud or silently).

The speech pathologist may ask the patient to have another attempt at retelling the story, or might ask the patient for their opinion about the story (For example: What is the moral of the story? Do you think this applies in real life?)

10.4. Writing
The speech pathologist might ask the patient to write in Arabic. For example, they might be asked to write the story of the Hare and the Tortoise, a short description of their country of origin, or even a short shopping list.

The speech pathologist will be interested to know if the writing is correct in meaning, grammar and spelling.

(Note that many patients with aphasia may need to use their other hand to write, as their right hand/arm may be paralysed. This means that the patient’s writing may be slow and the letters may be difficult to write. However, the speech pathologist is interested in WHAT they write, rather than whether or not the writing is neat.)
11. Other Resources

11.1. Telling the Time

A clock with Arabic numbers is provided below. It will be useful for patients who do not know English numbers, or who prefer the Arabic clock.

The speech pathologist might ask the patient to show a particular time (e.g. 10 o’clock) or to solve a problem using the clock (For example: You have an appointment at 3 o’clock. Look at the time on this clock. How much time do you have before your appointment?)

11.2. Telling the Date

Countries in the Arabic world often use the Islamic calendar (provided below). This resource may be useful for patients who are more familiar with this calendar.

The speech pathologist might ask the patient to show a particular date (For example, Which is today’s date? When is your birthday?) or to solve a problem using the calendar (For example, You have an appointment in three days’ time. Can you show me that day on the calendar?).
## Calendar Months in Egypt, Iraq, Sudan and Yemen Edit

<table>
<thead>
<tr>
<th>No.</th>
<th>Month</th>
<th>Arabic Name In Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January</td>
<td>يناءير yanāyir</td>
</tr>
<tr>
<td>2</td>
<td>February</td>
<td>فيراير fibrāyir</td>
</tr>
<tr>
<td>3</td>
<td>March</td>
<td>مارس māris</td>
</tr>
<tr>
<td>4</td>
<td>April</td>
<td>أبريل abrīl</td>
</tr>
<tr>
<td>5</td>
<td>May</td>
<td>مايو māyū</td>
</tr>
<tr>
<td>6</td>
<td>June</td>
<td>يونيو yūniyū</td>
</tr>
<tr>
<td>7</td>
<td>July</td>
<td>يوليه yūlia</td>
</tr>
<tr>
<td>8</td>
<td>August</td>
<td>أغسطس aġustus</td>
</tr>
<tr>
<td>9</td>
<td>September</td>
<td>سبتامبار sibtambar</td>
</tr>
<tr>
<td>10</td>
<td>October</td>
<td>أكتوبر uktūbar</td>
</tr>
<tr>
<td>11</td>
<td>November</td>
<td>نوفمبر nūfambar</td>
</tr>
<tr>
<td>12</td>
<td>December</td>
<td>دسامبار dīsambar</td>
</tr>
</tbody>
</table>

## Syrian Calendar in Syria, Lebanon, Jordan and Palestine Edit

<table>
<thead>
<tr>
<th>No.</th>
<th>Month</th>
<th>Arabic Name In Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January</td>
<td>الثاني كانون kānūnu al tānī</td>
</tr>
<tr>
<td>2</td>
<td>February</td>
<td>شباط Šubāt</td>
</tr>
<tr>
<td>3</td>
<td>March</td>
<td>آذار ādār</td>
</tr>
<tr>
<td>4</td>
<td>April</td>
<td>نيسان nīsān</td>
</tr>
<tr>
<td>5</td>
<td>May</td>
<td>أيار ayyār</td>
</tr>
<tr>
<td>6</td>
<td>June</td>
<td>حزيران / huzayrān</td>
</tr>
<tr>
<td>No.</td>
<td>Month</td>
<td>Arabic Name</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1</td>
<td>January</td>
<td>النار أين</td>
</tr>
<tr>
<td>2</td>
<td>February</td>
<td>النوار</td>
</tr>
<tr>
<td>3</td>
<td>March</td>
<td>الربيع</td>
</tr>
<tr>
<td>4</td>
<td>April</td>
<td>الطير</td>
</tr>
<tr>
<td>5</td>
<td>May</td>
<td>الماء</td>
</tr>
<tr>
<td>6</td>
<td>June</td>
<td>الصيف</td>
</tr>
<tr>
<td>7</td>
<td>July</td>
<td>ناصر</td>
</tr>
<tr>
<td>8</td>
<td>August</td>
<td>هانيبال</td>
</tr>
<tr>
<td>9</td>
<td>September</td>
<td>الفاتح</td>
</tr>
<tr>
<td>10</td>
<td>October</td>
<td>الثمر التمور</td>
</tr>
<tr>
<td>11</td>
<td>November</td>
<td>الحرش</td>
</tr>
<tr>
<td>12</td>
<td>December</td>
<td>الكانون</td>
</tr>
</tbody>
</table>
### Calendar Months in Algeria and Tunisia

<table>
<thead>
<tr>
<th>No.</th>
<th>Month</th>
<th>Arabic Name</th>
<th>In Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January</td>
<td>جانفي</td>
<td>jānfī</td>
</tr>
<tr>
<td>2</td>
<td>February</td>
<td>فيفري</td>
<td>fifrī</td>
</tr>
<tr>
<td>3</td>
<td>March</td>
<td>مارس</td>
<td>mārs / māris</td>
</tr>
<tr>
<td>4</td>
<td>April</td>
<td>أفريل</td>
<td>afrīl</td>
</tr>
<tr>
<td>5</td>
<td>May</td>
<td>ماي</td>
<td>māy</td>
</tr>
<tr>
<td>6</td>
<td>June</td>
<td>جوان</td>
<td>juwān</td>
</tr>
<tr>
<td>7</td>
<td>July</td>
<td>جويلية</td>
<td>juwīlyā</td>
</tr>
<tr>
<td>8</td>
<td>August</td>
<td>أوت</td>
<td>ūt</td>
</tr>
<tr>
<td>9</td>
<td>September</td>
<td>سبتمبر</td>
<td>sibtambir</td>
</tr>
<tr>
<td>10</td>
<td>October</td>
<td>أكتوبر</td>
<td>uktūbir</td>
</tr>
<tr>
<td>11</td>
<td>November</td>
<td>نوفمبر</td>
<td>nūfambir</td>
</tr>
<tr>
<td>12</td>
<td>December</td>
<td>ديسمبر</td>
<td>dīsambir</td>
</tr>
</tbody>
</table>

### Calendar Months in Mauritania

<table>
<thead>
<tr>
<th>No.</th>
<th>Month</th>
<th>Arabic Name</th>
<th>In Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January</td>
<td>ينابير</td>
<td>yannāyir</td>
</tr>
<tr>
<td>2</td>
<td>February</td>
<td>فبراير</td>
<td>ibrāyir</td>
</tr>
<tr>
<td>3</td>
<td>March</td>
<td>مارس</td>
<td>mārs</td>
</tr>
<tr>
<td>4</td>
<td>April</td>
<td>إبريل</td>
<td>ibrīl</td>
</tr>
<tr>
<td>5</td>
<td>May</td>
<td>مايو</td>
<td>māyū</td>
</tr>
<tr>
<td>6</td>
<td>June</td>
<td>يوني</td>
<td>yūn yū</td>
</tr>
<tr>
<td>No.</td>
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Calendar Months in Morocco Edit

(http://calendars.wikia.com/wiki/Arabic_names_of_calendar_months)