Supporting Fijian Children’s Communication

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Submitted to Charles Sturt University in the fulfilment of the requirements for the degree of Doctor of Philosophy

September 2017
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Certificate of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Charles Sturt University or any other educational institution, except where due acknowledgment is made in the doctoral research. Any contribution made to the research by colleagues with whom I have worked at Charles Sturt University or elsewhere during my candidature is fully acknowledged. I agree that this doctoral research is made accessible for the purpose of study and research in accordance with the normal conditions established by the Executive Director, Library Services or nominee, for the care, loan and reproduction of theses.

Suzanne C. Hopf
2 June, 2017
Acknowledgements

Growing a community of practice requires the organic building of relationships over time. My PhD was a journey with many fellow companions: some who stayed for the whole journey, others only a part. All have been members of a “research community” that have worked together in preparation of this thesis. Thankfully, throughout many talanoa [discussions] over the last four years, my community has listened patiently and provided thoughtful comments that have shaped the final content in this thesis. There is still much for me to do in Fiji; however, I am forever grateful to the many people who have supported my endeavours thus far and consequently touched this work. I look forward to working together in the future.

Special mention must go to my PhD community at Charles Sturt University. Firstly to my supervisory team Sharynne McLeod, Sarah McDonagh, and Cen (Audrey) Wang. There could have been no better primary supervisor for me than Sharynne. Sharynne knew when to go before me to sell my story, to stand beside me to tell my story, and stand behind me to provide a supportive hand, a necessary prod, and the occasional push. She also knew when to bring in the talents of others like Sarah and Audrey who have balanced the dynamics within our team so well. We may have presented as an unlikely quartet but through our joint efforts I believe we have begun to compose a piece of work that sets the stage for the voices of Fijians with communication disabilities to be heard. Finally, special thanks to PhD companions past and present (especially Helen Blake, Kate Crowe, Sarah Masso, Ben Pham and Sarah Verdon). Once upon a time we joked about “standing on the shoulders of our giant”; however, you are all “giants” in your own right now. I am so proud to be associated with you all and cannot thank you enough for the emails when I least expected them, the shared resources, and the regular reality checks.

There are so many people to thank within Fiji and beyond. Some have been involved in preparation of the specific papers within this thesis and are mentioned therein whilst others played their part elsewhere. All shaped my thought processes and were critical to completion of this doctoral research. Special thanks to: The Minister and staff at the Fiji Ministry of Education, National Heritage, Culture and Arts (MoENHCA) for authorising this study; the participants (students, staff, and caregivers who welcomed me into their school community, the community members in Nadi, Lautoka, and elsewhere who shared their thoughts); Karen Wylie who shared her methodology for Study 1 and incredible brain throughout; A/Prof Paul Geraghty (co-
author and translation) and Dr Fiona Willans of USP for being the amazing brilliant scholars that you are and sharing some of that brilliance with me; Epenisa (Ben) N. Rakanace (co-author and research assistant), Sala Sauqaqa (research assistant), Akata Naleledawa (research assistant), and Doreen Caucau (research assistant) for keeping this study going when I couldn’t be present or was focussed elsewhere; Vaseva Liku, Masi Rakanace, and Tevita for your cultural insights and helping hands; the many SLPs who have visited Fiji for your shared stories, especially Terri Walker; and, Janet Lotawa for acting as expert guide on this journey into cultural competence. To all I say, "Thank you, vinaka vakalevu, and bahut dhanyavaad".

To all the family and friends who have looked after my kids, sent me funny emails, and sang the praises of my research to anyone who would listen, thank you for believing in this research. Special thanks to my Mum, whose philanthropic example and belief in my potential to rise to all challenges that God places before me has guided my life. Hopefully, I am on the right path at long last.

And finally to Mark, Lily, and Gemma who have selflessly provided the love and stability that I needed to immerse myself in the selfish act of a PhD. I love you beyond forever.
Ethics Approval

*Voci vakavudi*

[Related down to the smallest detail, without hiding anything]

In accordance with conducting respectful ethical research in the Fijian context, this doctoral research endeavoured to follow principles of *talanoa* research expressed in the Fijian proverb noted above and described in the works of Nabobo-Baba (2006)¹ and Otsuka (2006)². Specifically, the author aimed to uphold high ethical standards whilst analysing and reporting the data with academic rigor.

The study was approved by the Fiji Ministry of Education, National Heritage, Culture and Arts (MoENHCA, RA 29/14) and Charles Sturt University Ethics in Human Research Committee (approval number 2014/153).

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Abstract

The purpose of this doctoral research was to identify and create culturally and linguistically appropriate support for children’s communication in Fiji that could be used to inform practices of speech-language pathologists (SLPs) and other communication specialists. This doctoral research describes a mixed-methods study that was conducted in four stages and is presented as a series of nine publications.

Stage 1 (Papers 1 and 2) involved reviewing policy documents and literature regarding the historical support available for people with communication disability (PWCD) in Fiji. Factors influencing specialist services for PWCD in Fiji included a range of barriers (e.g., geographical and financial) and drivers of change (e.g., adoption and implementation of international conventions). The reviews also revealed the presence of a variety of agents of delivery of intervention in Fiji including visiting internationally qualified SLPs, disability care workers, and traditional healers.

Stage 2 (Papers 3 and 4) involved a survey of 144 Fijians to determine community beliefs, attitudes, and practices for supporting PWCD. Participants’ beliefs about the cause of communication disability were analysed thematically revealing that beliefs clustered around three themes: (1) internal causes: impairment, disorder or disease states of the body; (2) external causes: environmental and personal factors; and (3) supernatural causes: fate or curse. Attitudes towards PWCD placed restrictions on PWCD’s participation in Fijian society.

Stage 3 (Papers 5, 6, and 7) involved a study of 75 students (35 in year 1 and 40 in year 4) and their caregivers and teachers from a multiracial, multilingual, urban primary school to gather context-specific knowledge about the communication environment, and the speech, language, and literacy use and proficiency of Fijian children. These Fijian students and their conversational partners were linguistically multi-competent using between one and five languages. Proficiency in the students’ main language and English was reported to be higher compared to proficiency in other additional languages. On measures of direct assessment of English language and literacy proficiency, raw scores were correlated with academic performance, the students’ main language status, and/or their father’s education.

Stage 4 (Papers 8 and 9) began the work of developing culturally and linguistically appropriate resources and assessments for the children in Stage 3. A contrastive review of the phonological features of two Fiji English dialects (Fijian Fiji English and Fiji Hindi Fiji English) was conducted to assist SLPs in the assessment of speech production. Additionally, the Intelligibility in Context Scale was validated for
the Fijian context to provide a simple parent-report screening tool about the success of communication within the children’s environments.

The findings of this research acknowledge the social, cultural, and linguistic capital of Fiji to inform provision of services to PWCD. Recommendations from this doctoral research include the need to: (1) develop culturally appropriate assessments and interventions that acknowledge Fijians’ belief systems, build on communities’ communication strengths, and involve partnership with the diverse agents of intervention in Fiji, and (2) consider the cultural and linguistic environment and the purpose of communication when assessing multilingual children in Fiji.
Publications and Conference Papers Arising from this Research

Publications (in order that they appear in this doctoral research)


Additional Publications


Editorials


Conference Papers and Posters (peer reviewed, published abstracts)


**Invited Presentations (non-peer reviewed)**


**Government Submission**

Note on Style

Style
To disseminate the results of the doctoral research broadly, the nine papers in this thesis have been written for a diverse range of journals targeting different disciplines (i.e., speech-language pathology, education, and linguistics), published in different countries (i.e., Australia and internationally), and with different audiences (i.e., researchers and practitioners). For example, Paper 6 was an invited book chapter that enabled us to explore students’ language use in depth within a book about multilingual friendships.

All published papers appear in the format in which they were published with permission from the respective journals. Papers in press (paper 4) or submission (paper 6) are formatted in the style requested by the relevant journal. The reference list of Parts 1, 2, and 3 are single-spaced to align with Charles Sturt University’s guidelines for doctoral research submission.

Tables and figures are formatted in the style of the journal in which they were submitted; therefore, the formatting of tables and figures throughout the thesis may not be consistent with APA guidelines. Figures and tables included in thesis Parts only (i.e., not included in one of the above stated papers) are notated with Roman numerals (I-IX). Figures and tables that are included in published or submitted manuscripts are noted with numerals as per publisher requirements.

Spelling and Language Conventions
The overall doctoral research adheres to the American Psychological Association publication manual (6th edition) using Australian/British English spelling. However, as per publisher requirements, the eight papers and one book chapter adhere to the spelling, language, style, and transcription requirements of the journal in which they are/are to be published.
Statements from co-authors confirming the authorship contribution of the doctoral candidate

Paper 1

As co-author of the paper entitled *Services for people with communication disability in Fiji: Barriers and drivers of change*, I confirm that Suzanne C. Hopf has made the following contributions:

- Conceptualisation of the paper
- Review and interpretation of the literature
- Writing, editing, and revision of the manuscript

Furthermore, I agree to the inclusion of the paper in this doctoral research submitted for examination.

Name: Suzanne C. Hopf  
Date: 11 May 2017

Name: Sharynne McLeod  
Date: 11 May 2017
Paper 2

As sole author of the paper entitled *Services for people with communication disability in Fiji: Clinical insights*, I confirm that I have made the following contributions:

- Conceptualisation of the paper
- Review and interpretation of the literature
- Writing, editing, and revision of the manuscript

Furthermore, I agree to the inclusion of the paper in this doctoral research submitted for examination.

Name: Suzanne C. Hopf
Date: 11 May 2017
As co-authors of the paper entitled *Communication disability in Fiji: Community cultural beliefs and attitudes*, we confirm that Suzanne C. Hopf has made the following contributions:

- Design of the research questionnaire
- Conceptualisation of the paper
- Review and interpretation of the literature
- Collection and analysis of data for review
- Writing, editing, and revision of the manuscript

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

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Name: Sarah H. McDonagh  
Date: 22 May 2017

Name: Epenisa N. Rakanace  
Date: 11 May 2017
Paper 4

As co-authors of the paper entitled *Communication disability in Fiji: Community self-help and help-seeking support*, we confirm that Suzanne C. Hopf has made the following contributions:

- Design of the research questionnaire
- Conceptualisation of the paper
- Review and interpretation of the literature
- Collection and analysis of data for review
- Writing, editing, and revision of the manuscript

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Name: Epenisa N. Rakanace
Date: 11 May 2017
Paper 5

As co-authors of the paper entitled *Linguistic multi-competence of Fiji school students and their conversational partners*, we confirm that Suzanne C. Hopf has made the following contributions:

- Design of the research questionnaires
- Conceptualisation of the paper
- Review and interpretation of the literature
- Collection and analysis of data for review
- Writing, editing, and revision of the manuscript

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

Name: Suzanne C. Hopf  
Date: 11 May 2017

Name: Sharynne McLeod  
Date: 11 May 2017

Name: Sarah H. McDonagh
Date: 22 May 2017
As co-authors of the paper entitled *Fiji school students’ multilingual language choices when talking with friends*, we confirm that Suzanne C. Hopf has made the following contributions:

- Design of the research questionnaires
- Conceptualisation of the paper
- Review and interpretation of the literature
- Collection and analysis of data for review
- Writing, editing, and revision of the manuscript

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Date: 11 May 2017

Name: Sharynne McLeod
Date: 11 May 2017

Name: Sarah H. McDonagh
Date: 22 May 2017
Paper 7

As co-authors of the paper entitled *English language and literacy proficiency of multilingual urban Fijian primary school students*, we confirm that Suzanne C. Hopf has made the following contributions:

- Design of the research questionnaires
- Conceptualisation of the paper
- Review and interpretation of the literature
- Collection and analysis of data for review
- Writing, editing, and revision of the manuscript

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

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Name: Sarah H. McDonagh  
Date: 22 May 2017

Name: Sharynne McLeod  
Date: 11 May 2017
Paper 8

As co-authors of the paper entitled *A contrastive analysis of the phonologies of two Fiji English dialects: A diagnostic guide for speech-language pathologists*, we confirm that Suzanne C. Hopf has made the following contributions:

- Conceptualisation of the paper
- Review and interpretation of the literature
- Extraction and analysis of data for review
- Writing, editing, and revision of the manuscript

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

Name: Suzanne C. Hopf
Date: 11 May 2017

Name: Sharynne McLeod
Date: 11 May 2017

Name: Paul Geraghty
Date: 27 June 2017
As co-authors of the paper entitled *Validation of the Intelligibility in Context scale with school students in Fiji*, we confirm that Suzanne C. Hopf has made the following contributions:

- Conceptualisation of the paper
- Review and interpretation of the literature
- Collection and analysis of data for review
- Writing, editing, and revision of the manuscript

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

Name: Suzanne C. Hopf  
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Date: 22 May 2017
Part One

General Introduction
Orientation to This Doctoral Research

This doctoral thesis contains four parts presenting new knowledge about supporting Fijian children’s communication. As a doctoral thesis presented by publication there are eight papers and one book chapter included within.

Part One: General Introduction

Part One provides an orientation to the thesis and general introduction to the topic. The general introduction includes pertinent literature to orient readers to communication disability and the cultural and linguistic context of Fiji and identification of the theoretical framework applied in this thesis. It also includes limitations to the existing knowledge, and describes the research aims and paradigms used in this research. Due to the interpretive role played by the researcher an additional section is included that situates the researcher’s cultural lens and experiences.

Part Two: Supporting Fijian Communication

Part Two contains four papers that describe the historical perspective regarding services for people with communication disability (PWCD) in Fiji. Paper 1 outlines the barriers and drivers to development of specialised services for PWCD in Fiji. Paper 2 identifies seven agents of delivery of intervention for PWCD in Fiji including speech-language pathologists (SLPs), disability care workers and traditional healers. Paper 3 and Paper 4 present the findings from a community survey of 144 people regarding supporting Fijian communication. Paper 3 presents a qualitative analysis of the community’s cultural beliefs and attitudes towards Fijians with communication disability. Paper 4 presents a mixed-methods analysis of the self-help and help-seeking behaviours of these participants when supporting a Fijian child or adult with communication disability. Part Two concludes with a summary of the importance, limitations, and recommended future directions for research derived from Part Two findings.

Part Three: Fijian Children’s Communication

Part Three contains five papers that describe the context of Fijian children’s communication; their speech, language, and literacy use and proficiency; and the development of assessment resources and approaches that are culturally and linguistically sensitive. Four of the five papers draw
on a study of 75 students (35 in year 1 and 40 in year 4) and their caregivers and teachers from a multiracial, multilingual, urban primary school in Fiji. Paper 5 describes the linguistic multi-competence of the participants and their use of English, Standard Fijian, Fijian dialects, Fiji Hindi and additional languages (e.g., Standard Hindi, Rotuman, and Japanese). Paper 6 is an invited book chapter that used a convergent mixed-methods design of surveying, artefact collection, and observation to provide a rich description of the students’ multilingual language use and how this influenced friendships.

Papers 7, 8 and 9 focus on English speech, language, and literacy in Fiji. Paper 7 describes the English language and literacy proficiency of 75 students and the linguistic and socioeconomic factors influencing their proficiency. Paper 8 provides a contrastive analysis of two Fiji English dialects (Fijian Fiji English and Fiji Hindi Fiji English) to assist SLPs in the assessment of the speech production of these speakers. To provide a simple screening tool for SLPs and other agents of delivery of intervention for PWCD in Fiji, Paper 9 validates the Intelligibility in Context Scale (McLeod, Harrison, & McCormack, 2012a) for the Fijian context. Part Three concludes with a summary of the importance, limitations, and recommended future directions for research derived from Part Three findings.

Part Four: Conclusions and Contributions of this Doctoral Research

The questions posed in this doctoral research were designed to develop a greater understanding of Fijian children’s communication and the experience of living with communication disability in the multilingual context of Fiji. Through such an understanding the research has also made recommendations for the development of services, and the creation of assessments and interventions that are culturally and linguistically sensitive for the Fiji context. These issues are relevant to all Fijians but particularly those PWCD, their caregivers, the agents of intervention working with PWCD in Fiji, and to the policy makers who ultimately determine the future of services for PWCD in Fiji. To ensure that the information contained herein is accessible to this audience, Part Four includes two appendices that present the research findings to the Fijian Government and to future scholars and SLPs who volunteer in Fiji during short-term visits. These
appendices area considered to be important given that (1) Parts Two and Three contain detailed discussion of the research findings, implications for policy and practice, limitations, and future directions for research, and (2) a key purpose of this research was to provide advocates for PWCD with information that would assist them in their efforts to improve the sustainability, accessibility, and availability of services for children in Fiji.
Positioning of Self in the Research

The most serious breech to culturally responsive service delivery is not so much the lack of knowledge of the details of any given culture but the worker’s inability or unwillingness to develop self-awareness and a respectful attitude toward diverse and multiple points of view. Cultural humility requires an attitude and behavior that invites new information and new perspectives on an ongoing basis. (Ortega & Fullar, 2008, p. 8)

I am a Minority World trained SLP working in a Majority World country. I am an Australian with almost 20 years of experience working as a SLP in education, health, and private practice settings with clients across the life span. I moved to Fiji in early 2009 with my young family. Eight years later I am proud to call Fiji home and am soon to become a dual Australia-Fiji citizen. Living in Fiji fueled my interest in how communication disability is diagnosed in multilingual communities. Subsequent difficulties with obtaining a working visa led me to channel this interest into starting my doctoral research through Charles Sturt University in 2013 titled “Supporting Fijian Children’s Communication”. Simultaneously I began, locally and internationally, advocating for the rights of people with communication and swallowing disabilities in the South Pacific to receive culturally and linguistically sustainable specialist services.

Like many other SLPs who advocate for better availability and accessibility of specialist services around the world, my advocacy work is multifaceted and includes: (1) collating new knowledge about communication disability in Fiji; (2) providing an on-line space (via @SLPinFiji on Facebook and Twitter) to be a contact point for PWCD and their caregivers from the South Pacific to ask questions and to disseminate information that may be of interest to these same people; (3) maintaining a network of professionals, including ex-visiting SLPs, who have experience working in the South Pacific and who understand the unique cultural and linguistic factors that impact on supporting PWCD in this region; (4) mentoring Fijians who show an interest in becoming communication specialists; (5) liaising with visiting in-service and preservice-SLPs; and (6) lobbying governments to commit to the development of local

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3 Majority World countries are those countries that rank the lowest on the Human Development Index (HDI, UNDP, 2013). These counties are sometimes also referred to as “developing”, “low income”, or “third world”. Capitalisation of the words Majority/Minority World is per international usage of these terms.
communication specialist training centres to end the South Pacific’s reliance on international aid funded visiting SLPs.

What I did not realise at the beginning of this research and advocacy journey was that my worldview on how best to meet the needs of PWCD in this region would change considerably with each twist and turn of the doctoral research route. The published works of my SLP colleagues, opportunities to work on international projects and conference panels, and to be a member of peer review boards focused on issues of cultural and linguistic diversity have allowed me the opportunity to hear first-hand how expatriate SLPs around the world are developing their own cultural competence, and minimizing the potential impact of neocolonialism and the unequal power and privilege differentials that we hold as a consequence of our backgrounds (e.g., race, gender, age, education, socioeconomic status).

During each encounter locally and internationally I seek to fulfill the four essential competencies for effective global engagement proposed by Hyter and colleagues (2016): (1) dispositions (humility, self-reflectiveness, empathy, inquisitiveness, responsibility to promote equity and social justice), (2) knowledge (of one’s own and other’s culture and worldview, of consequences of globalisation, of relations of power and impact of privilege, of economic, political, and cultural realities of Majority and Minority World countries), (3) skills (awareness of self and others, experience with diversity, multilingualism, ability to create an inclusive environment and engage in global conversations that develop international partnerships and sustainable practices), and (4) attitudes (ability to act with reciprocity, to promote equity and social justice, and to value ethical behaviour).

Consequently, I acknowledge that my cultural lens has altered since I began this doctoral research by publication in early 2013 and that this may be apparent to the thesis reader. For example, Papers 1 and 2 were written at the beginning of my doctoral research journey and have a stronger SLP focus compared to Papers 3 and 4 that were written almost 2 years later. That said, throughout this research I have endeavored to interpret and report the data impartially; however, I acknowledge that the findings and recommendations of my research are likely to be influenced by my own cultural background, the aims of my advocacy work, and my continuous journey into cultural competence and humility.
Literature Review

Children in Fiji are much like children elsewhere in the world, in that, they contribute to, and have obligations to, the communities in which they live; and, when given the opportunity to, they have potential to learn and participate in a diverse range of activities in their everyday lives. However, as a consequence of being born in Fiji, a Majority World country, many of Fijian children’s opportunities and experiences are unique to the context in which they live. Unfortunately, we know little about these children or how they live in their context. What we do know is that Fijian children are heterogeneous. They are multiracial, multiethnic, multicultural, and multilingual. How these factors, and others, interact to influence development and create the daily experience of Fijian children, including participation in school life, is presently unreported. How restrictions to Fijian children’s capabilities, particularly the ability to communicate, influence these experiences is currently unexplored.

The Fiji context

Fiji is a group of over 300 islands that make up part of the Melanesian group of islands in the south-western Pacific Ocean (see Figure I). The 100 inhabited islands are spread over a distance of 18,271 square kilometres. A little over half of all Fijians live in major urban centres, where the bulk of paid employment is found. Fiji is a low to middle income Majority World Country and is the regional hub for economic and political activity in the south-west Pacific (Mangubhai & Mugler, 2006); however, over one in four Fijians live below the international poverty line (United Nations University, 2011). Attempts to reduce the number of Fijians living in poverty have been hampered by historical political unrest and environmental disasters.

Fiji’s strategic place in the regional economy, historical immigration patterns, and the rich cultural mix, result in a small country with a population of remarkable cultural and linguistic diversity. The Fiji 2007 Census revealed a population of 837,271 (Fiji Bureau of Statistics, 2016). Of these 57% were considered indigenous iTaukei Fijian, 37% Indian Fijian, that is, with Indian subcontinent ancestry, and 6% of either Pacific
island, European, or East Asian ancestry.

Ethnicity has been a significant determiner of participant inclusion and exclusion in past research. The two dominant ethnic groups, iTaukei Fijian and Indian Fijian, have commonalities and also differences that have been researched exclusively and contrastively for over 70 years. Most notably, the categorisation of each ethnic group within an individual or communal cultural framework has been used to justify iTaukei Fijian and Indian Fijian behaviour in diverse contexts such as business acumen and work ethic (Rao, 2005), research procedures (Nabobo-Baba, 2006; Otsuka, 2006a), attitudes and approaches to people with special needs (Tavola & Whippy, 2010), and education (Brown, Ward-Panckhurst, & Cooper, 2013; Otsuka, 2006b).
All Fijian children undertaking education in Fiji, regardless of ethnicity, have individual patterns of speech, language, and literacy development. Thus, whilst previous ethnicity-centred research will be acknowledged, and this doctoral research will record participant ethnicity, this research will report on observations and trends across this variable. Understanding English speech, language, and literacy development processes across ethnicities will provide valuable information on variables that may potentially be manipulated to improve future communication outcomes for all students (e.g., pedagogical practice, resources in the home/school/community).

**Communication in Fiji**

There are three official languages in Fiji: *iTaukei* Language (also known as Fijian, Bauan Fijian, or Standard Fijian), Hindi (also known as Hindustani or Fiji Hindi), and English (Republic of Fiji, 2013; Simons, & Fennig, 2017). In addition, a further seven indigenous languages and 12 immigrant languages are spoken in significant numbers. Diversity has led
Fijians to become fluent, not just in their main\(^4\) language, but also in the language of their neighbours and business associates (Tent & Mugler, 2008). Faced with the need for daily intercultural and linguistic exchanges Fijians are adept polyglots (Mugler & Tent, 2008).

Communication disability in Fiji is a poorly researched concept. What may be defined as a communication disability in one culture may not be considered an impediment in another. In order to understand the boundaries of a communication disability definition in Fiji it is critical to understand what typical communication looks like for any given community. Consequently, the following section provides a broad description of what is known about typical communication amongst both adult and child populations for the dominant linguistic groups in Fiji: Fijian\(^5\), Fiji Hindi, English, and minority languages.

**Fijian (iTaukei language).**

*Adults’ communication in Fijian.*

Fijian, most often the first language of iTaukei Fijians, has considerable dialectical variation based on the geographical location of the speaker (Geraghty, 1983; Pawley & Sayaba, 1971). The term *Fijian* refers to a group of languages which all arise out of the Austronesian language of the Malayo Polynesian family of languages brought from East Asia over 3000 years ago. These Fijian languages are split into two geographical subgroups\(^6\):

- **East Fijian-Polynesia:** including Bauan Fijian (approx. 650,000 speakers), Gone Dau (approx. 690 speakers), Lomaiviti (approx. 1,630 speakers), and Lauan (approx. 21,000 speakers); and
- **West Fijian:** including Western Fijian (approx. 83,000 speakers) and Namosi-Naitasiri-Serua (approx. 1630 speakers).

\(^4\) Fijians may speak more than one language from a very young age. Thus, it is possible that the main language at home, school, and work may all be different. It is also often difficult to ascertain which language has been acquired first. For the purpose of consistency in this thesis, the phrase **main language** is used to refer to the child’s main language that is spoken more often than others in the home. Main language is therefore consistent with vernacular or dominant home language but may not be the child’s first language.

\(^5\) In this thesis, the term “Fijian” is used to encompass the iTaukei language and all additional dialects of Fijian. Where there is a need to differentiate dialects the term “Standard Fijian” is used in place of iTaukei language to be consistent with previous literature on Fijian languages and “Fijian dialect” is used to refer to any other non-standard dialect of Fijian.

\(^6\) Numbers reported are for first language speakers only (Simons & Fennig, 2017).
Standard Fijian⁷, based on Bauan Fijian and also known as iTaukei language and colloquial Fijian, is considered the lingua franca of Fijian for the whole Fijian group, with approximately 330,000 first language speakers within Fiji and an additional 320,000 second or other language speakers (Simons & Fennig, 2017). Standard Fijian is also the language of instruction for iTaukei Fijian children in Years 1 to 3 at school.

In addition to the groupings above, Fijian dialects can be distinguished by more than 300 finer dialectical variations considered communalects (Geraghty, 1983). A communalect is a term used to describe a variety of a dialect shared by one to ten communities/villages within Fiji (most often only three) (Mangubhai & Mugler, 2006). Communalects maintain distinct linguistic characteristics and cluster along with patterns of the Eastern and Western dialect divisions discussed above.

As Standard Fijian is based on an eastern dialect most Fijian speakers, regardless of geographical location, can understand at least some of the other eastern dialects and communalects. In contrast, many eastern dialect speakers (e.g., from Suva, Lau, Taveuni) may have had little exposure to the western dialects (e.g., from Nadi, Ba, Raki Raki) and consequently may not understand much when they first hear a western dialect speaker (Pawley & Sayaba, 1971).

In addition to the regional dialects there are two non-regional varieties of Fijian: Meke Fijian, the traditional language of poetry and song, and a contact language known as Pidgin Fijian (Mangubhai & Mugler, 2006). Pidgin Fijian is a consequence of the inclusion of parts of other languages (e.g., Tongan, English, Fiji Hindi, Chinese) being incorporated into the Fijian language as workers and traders have sought to create common linguistic ground. Geraghty’s (1983) History of the Fijian Languages remains the seminal work on dialectical differences of Fijian languages. The reader is directed to this work for a detailed analysis of the phonetic, morphological, and syntactic characteristics of over 38 Fijian communalects.

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⁷ As this study is concerned with both spoken and written iTaukei language we use the term “Standard Fijian” throughout to be consistent with previous authors.
**Children’s communication in Fijian.**

Griffiths (2000) conducted the only published study to date of iTaukei Fijian children’s language acquisition. In the study, morphological development was reported for 24 preschool children aged 2- to 5-years speaking an unnamed Eastern Fijian dialect in a settlement located near Suva. Although the study was cross-sectional in nature, Griffiths concluded that the acquisition of morphemes to mark possession in this Eastern Fijian dialect appeared to progress in a “systematic developmental sequence” (p. 78). Specifically, “possession is first conveyed without morphological marking (by just naming the possessor or via an ill-formed construction Possession + Name of Possessor); later by using a pronoun of appropriate person and number (but ill-formed because it is not possessive). Next comes suffixation, starting with the default stem and singular number, progressing eventually to suffixation on common nouns” (Griffiths, 2000, p. 78). In the manuscript Griffith (2000) cites another study by Griffiths and Bavadra (in preparation) reporting iTaukei Fijian children’s pronoun development. Unfortunately, this study does not appear to have been published. To date there are no studies describing Fijian-speaking children’s speech or literacy acquisition.

**Fiji Hindi.**

**Adults’ communication in Fiji Hindi.**

The Indian diaspora of the 19th and 20th centuries resulted in a mixing of cultures and languages in Fiji. Fiji Hindi (also known as Fiji Baat) originated as a consequence of the need for a common language amongst Indian indentured labourers, Pacific Islanders, and English overseers working in the Fijian sugar cane fields from 1879 to 1916 (Siegel, 1998; Simons & Fennig, 2017). Fiji Hindi is predominantly a mix of a number of Indian continent languages, most notably Bhojpuri and Avadhi from the northeast of India where the majority of Indian indentured immigrants departed from on their journey to Fiji (Lal, 2005). However, Fiji Hindi also contains a melting pot of loan words from Fijian, English, and other less prevalent Indian continent languages. Fiji Hindi is most often the first language of Indian Fijians; however, Hindustani is formally recognised as the standard languages of the Indian Fijian population (Mangubhai and Mugler, 2006). The uniqueness of Fiji Hindi renders it unintelligible to a
speaker who only knows Hindustani.

Hindustani, of which there are two dominant local dialects (Shuddh Hindi and Urdu) was chosen by the Fijian Government as the standard form of Hindi to be used in Indian Fijian schools as both dialects already had written forms (Devanagari and Perso-Arabic scripts respectively). These dialects were said to embody the cultural and religious values of the Indian Fijian peoples (Kumar, 2010).

Hindustani is the language used in early schooling (Years 1 to 3) for Indian Fijian children, the language of the Hindu religion in Fiji, and occasionally the language of formal business transactions amongst the Indian Fijian community. The Fijian Government reportedly chose Hindustani as the standard language of Indian Fijians because at the time Fiji Hindi, the more common first language of Indian Fijians, was predominantly an oral language without a recognised literary form (Shameem, 2004).

Fiji Hindi and Hindustani are significantly different and very few Indian Fijians are fluent in Hindustani and most cannot read or write Hindustani (Lal, 2005; Siegel, 1998). The general perception as stated by Siegel (1998) and Lal (2005) is that Hindustani is only known by a “cultural elite” (Siegel, 1998, p. 199), with increasing evidence to suggest that English is replacing Hindustani for reading and writing purposes. However, Siegel (1998) notes that comprehension of Hindustani is reportedly higher than usage due to the high rates of exposure of Indian Fijians to Indian subculture (e.g., music and movies). However, it is Fiji Hindi, with approximately 380,000 native speakers, which is more widely spoken in Fiji (Simons & Fennig, 2017).

It is important to note that available information from other countries (e.g., India, US, Britain) on the impact of Hindi on English acquisition cannot be directly transferred to Fiji Hindi (e.g., Faroqi-Shah, 2012). In addition, there has been no complete study of the dialects of Fiji Hindi (Mangubhai & Mugler, 2006). However, differences in lexicon and morphology have been reported for northern (i.e., Vanua Levu and Taveuni) versus southern (Viti Levu) island groups (Mangubhai & Mugler, 2006). In addition, a pidgin Hindustani is reported to exist in rural areas of the sugar cane belt (Mangubhai & Mugler, 2006). Readers are directed to Siegel

**Children’s communication in Fiji Hindi.**

Shameem (2002a, 2002b) presents the only study of Fiji Hindi-speaking primary school aged children’s language use and proficiency. Shameem studied 48 Indian Fijian children across three school years, with average ages of 6 years (Year 1), 8 years (Year 3), and 11 years (Year 6) respectively. The children’s self-reported language use and proficiency were validated against their class teachers’ subjective reports. Shameem (2002a) revealed that children who spoke Fiji Hindi as their main language at home had high levels of language proficiency in Fiji Hindi by school age; however, urban students had lower Fiji Hindi expressive language proficiency than rural students, and expressive language proficiency in Fiji Hindi peaked at eight years of age with a loss of proficiency noted in the older children. Shameem (2002a) ascribed these results to higher English use in the urban regions and a greater use of English in the older age group for both academic and social language. In the same study, poor reading and Standard Hindi writing proficiency of Fiji Hindi-speaking children, in Devanagari or Perso-Arabic script, was also reported (Shameem, 2002a). To date there are no studies describing Fiji Hindi speaking children’s acquisition of phonology, morphology, semantics, or syntax.

**Fiji English.**

**Adults’ communication in Fiji English.**

Fiji English is the name given to the dialect of English spoken in Fiji. It is classified as “New English”, “non-native variety of English”, “indigenised variety of English”, or an “outer circle English” (Tent, 2001b, p. 162). Fiji English is heterogeneous at all linguistic levels due to a mix of speakers’ first language use, age, education, and socio-economic status (Mugler & Tent, 2008; Tent & Mugler, 2008). For this reason, Fiji English proficiency is considered to be on a linguistic spectrum from basilectal (heavily accented) to acrolectal (close to standard form) (Siegel, 1989; Tent, 2001a). Tent (2001a, 2001b) identifies five main varieties of Fiji English:

- Fijian English (FJE)
- Indo-Fijian English (IFE)
- Part-European English (PE) (highly similar to FJE)
Chinese Fiji English (CFE)
Rotuman English (RE).

English is considered the dominant lingua franca among people of Fiji who speak different first languages (Siegel, 1989). Additionally, there are approximately 6,000 residents of Fiji, predominantly of European ancestry, who state that English is their first language (Simons & Fennig, 2017). Consequently, English is the largest language group in Fiji and of importance in most inter-ethnic communication.

Literature exploring Fiji English has focused predominantly on Fijian English, with less attention to Indo-Fijian or other dialects of Fiji English. Readers are directed to Mugler and Tent (2008) and Tent and Mugler (2008) for a thorough description of the phonology and morphology of Fijian English and Indo-Fijian English.

Children’s communication in Fiji English.

Three authors have described the use or proficiency of children speaking Fiji English (Fox, 2003; Shameem, 2002a, 2002b; White, 2002). A study by Fox (2003) of language capacity of Fijian speaking children speaking “pure Fiji English” (p. 1) (basilectal Fiji English) in five primary schools and one secondary school revealed over 90 linguistic features unique to the study group. The unique features included: morphological features (e.g., omission of past tense, plural ‘s’, and past tense singular ‘s’ markers), lexical/semantic features (e.g., “full” used instead of fast or total, “trues up” for that’s true or I agree), syntactical features (e.g., changing subject-verb order in questions, omission of the verb to be, no passive sentence forms) and discourse/pragmatic features (e.g., questions are established by intonation rather than by word order). All of these features showed great variability.

Fox (2003) considered three features to be potential linguistic markers for the identification of basilectal Fiji English style of speaking in iTaukei Fijian children. These were:

- Omission of third person singular, (e.g., “My son cooks too”, said as, “My son cook too”).
- Collocations (a sequence of words or terms that co-occur more often than would be expected by chance), (e.g., “like that”, “like this”, “after that”).
• Lack of subordinating or coordinating conjunctions, (e.g., “He/she is a person that I know very well. However, he/she has not talked to me for two or three days”, said as, “A person I know very well he never talk to me two or three days”).

Fox (2003) also described 18 unique phonological features of basilectal Fiji English in Fijian speaking children. These include segmental (e.g., neutralisation of /s/, epenthetic vowels in consonant clusters, devoicing of labio-dental in word final position), and suprasegmental features (e.g., phonemic and syllable timed stress). Three phonological features were considered by Fox to be potential linguistic markers for identifying basilectal Fiji English in iTaukei Fijian children:

• Changing /v/ to [f] in word final position (devoicing)\(^8\) (e.g., *have* pronounced as “haf”).

• Reversing consonant order (metathesis) in /sk/ clusters (e.g., *ask* pronounced as “aks”).

• Changing /∫/ to [s] in all word positions (e.g., *crash* pronounced as “cras”).

Shameem (2002a, 2002b) described the English language use and proficiency of 48 Fiji Hindi-speaking primary school-aged children. She found that most children used English more than any other language at school and had high levels of English language proficiency that increased with age. White (2002) found a different pattern for the Fijian-speaking adolescents in her study who tended to use Fijian at school for most peer-to-peer interactions inside and outside the classroom. Of note, White (2002) found that female Fijian speaking students were more likely to speak English than male Fijian speaking students.

**Minority languages of Fiji.**

*Adults’ communication in minority languages.*

Many languages of the world are represented in Fiji; however, speakers of Chinese (Mandarin, Cantonese) and Indian (Hindustani, Gujarati, Panjabi, Tamil, Telugu, Malayalam) are present in significant numbers (i.e., greater than 100 speakers). There are also a number of other language communities in Fiji. These include:

\(^8\) However, in the example given by Fox (2003, p. 132), “I would love to”, the change of /v/ to /∫/ could also be considered a normal process of consonant assimilation in this context.
• Fiji sign language
• Rotuman - spoken by people from Rotuma, north of Vanuatu
• Kiribati - spoken by the Banaban people on the island of Rabe, near Vanuatu
• Tuvaluan - spoken by the Tuvaluan people of Kioa Island, close to Vanuatu.

Children’s communication in minority languages.

There is limited information about children’s communication in minority languages in Fiji. One study, Shameem (2002a), reported that Standard Hindi language and literacy proficiency and use of 48 Fiji Hindi speaking children peaked in Year 6 but fell in Year 8. The change was accounted for by the students’ higher use and proficiency in English.

Communication Disability in Fiji

Early identification and support of speech, language, and literacy difficulties is critical to minimising the impact of these difficulties across the life span (McCormack, McLeod, McAllister & Harrison, 2009). Prior to and post school entry, services for Fijians with speech, language, and literacy difficulties are the responsibility of the Fijian Government Ministry of Health and Medical Services (MoH). Throughout the school years, services for students with communication disability are the responsibility of the Fijian Government Ministry of Education (MoE).

Childhood disability was specifically recognised in the 2012-2015 Fijian Ministry of Health Child Health Policy and Strategy (MOH, 2012); however, provision of specialist rehabilitation services for children with disabilities is not presently a primary goal of the 2016-2020 National Strategic Plan (MoH, 2016). Provision of rehabilitation services for adults with disabilities is similarly not identified as a primary goal. The Fijian health services’ current primary aim as articulated in the 2016-2020 National Strategic Plan appears to be to provide adequate primary and preventative services that focus on: (1) curative and preventative paediatric services to reduce child mortality rates, and (2) managing acute episodes of ill-health in the adult population that arise from non-communicable diseases (MoH, 2016).

Increasing survival rates of newborns potentially results in higher rates of children born with long-term health and developmental disabilities.
Similarly, increasing survival rates of adults post-stroke potentially results in higher rates of adults with communication and swallowing disabilities. These children and adults are likely to require ongoing rehabilitation services (Milner, Duke & Bucens, 2013); however, only physiotherapists and dieticians are presently trained in Fiji. Other rehabilitation specialists commonly found in Minority World countries (e.g., SLPs, occupational therapists) are currently not available to support people with communication difficulties across the lifespan.

Fiji is considered a leading Pacific Island nation in the provision of educational services for children with disabilities (Tones, Pillay, Carrington, Chandra, Duke, & Joseph, 2017). Historically, children in Fiji who are identified with additional needs are educated in one of 19 segregated schools, referred to locally as special schools (MoE, 2012); however, in 2010 the Fijian Government endorsed the a national policy on special and inclusive education (MoE, 2016).

A review of the inclusive education process in Fiji by Tones et al. (2017) suggested that the all-inclusive approach to education was not appropriate for the unique cultural and linguistic context of Fiji. Instead Tones et al. (2017) reported that the current “twin-track” approach to educating children with disability in both mainstream and special schools remained appropriate given the “limited material resources, the unique sociocultural context and a complex mix of mediating socio-economic constraints” in Fiji (p. 1). Tones et al. (2017) went on to suggest that this is a pragmatic approach that befits the cultural and economic climate of Fiji. The authors further reported that students with sensory or physical disabilities without concomitant intellectual impairment were more easily accommodated in inclusive education settings than students with intellectual impairment who appear to be better placed in special schools. No specific comment was made about children with communication difficulties.

Information on who specifically provides services to children and adults with communication disability in the MoE and MoH is sparse. An almost 30-year-old review of services in Fiji for PWCD by Pressman and Heah Lee (1988) and personal commentary from Sweeny (1988) suggest that Fiji has a long history of reliance on the sporadic services of volunteer SLPs from countries providing financial aid to Fiji.
(1988) recommended that Fiji should focus the efforts of visiting international volunteer SLPs on preventative health programmes (e.g., training caregivers in language stimulation activities to reduce occurrence of language delay due to environmental deprivation).

A more recent review of the Pacific Islands rehabilitation workforce reported that speech-language pathology and occupational therapy were still in critically short supply despite their noted importance in “reducing the ongoing disability after stroke and for children identified with learning, motor and speech difficulties” (Gargett, Llewellyn, Short, & Kleinitz, 2016, p. 30). Given the report by Gargett et al. (2016) of the lack of development of speech-language pathology training, the authors recommended training an alternate workforce; specifically, skilled community-based rehabilitation specialists. To date there is no information on whether this activity has taken place.

As illustrated, available knowledge about Fijians with a communication disability is far from clear. There appears to be some communication specialist services available in Fiji supported by international volunteer SLPs; however, these services are likely to have limited availability and accessibility in a geographically dispersed country like Fiji. It is possible that the gap in specialist communication disability services is being met by other service providers (e.g., physiotherapy, nursing, traditional medicine practitioners) but this needs further investigation. This doctoral research will endeavour to fill that gap in our knowledge.

**Limitations to Existing Knowledge**

There is limited research that has described the historical and current context of multilingual speech, language and literacy skills of Fijian children in Fijian schools. There is even less research that has described linguistic variables that influence educational outcomes of different ethnic groups of Fijian children. The majority of this research is more than 10 years old and does not take into account recent political stability, nor fundamental changes to Fijian Government policy influencing the education sector (e.g., adoption of inclusive education practices). To date, despite an
acknowledgement in the literature of the importance of Fijian multilingualism, there has been no empirical study of Fijian children’s communication skills and how these skills influence children’s participation in Fijian society. Nor does previous research explore the educational outcomes of Fijian children from a capability perspective viewed through the lens of an international classification taxonomy. Finally, we currently do not understand how classroom, home, and community contexts are supportive of multilingual language learning and the needs of children with atypical speech, language, and literacy development. Understanding how the whole Fijian community can create equitable educational outcomes for all children, regardless of home language or culture, is certainly an area of research that requires greater attention in Fiji. This review has also noted the role of the Fiji Ministry of Health and Medical Services and Ministry of Education in supporting Fijian children’s communication. Presently there is little information regarding who specifically provides this support or what assessment and intervention services that these agents of intervention offer. Similarly, there is no information on what services the community find culturally acceptable. In order to determine if current services are truly accessible and equitable we must determine if they account for spoken languages and cultural variations in beliefs, needs, and desires of PWCD, their families, and the community in which they live.
Research Stages and Aims

The key objective of the doctoral research was to identify and create culturally and linguistically appropriate support for Fijian children’s communication. Consequently, this thesis describes a four-stage research programme that seeks to achieve seven aims (Table I):

**Research Stages**

- Stage 1 involved gathering knowledge from policy and literature regarding the historical supports available for PWCD in Fiji.
- Stage 2 involved gathering knowledge from the community about community beliefs, attitudes, and practices for supporting PWCD in Fiji.
- Stage 3 involved gathering context-specific knowledge about the communication environment, and the speech, language, and literacy use and proficiency of children in Fiji.
- Stage 4 began the work of developing culturally and linguistically appropriate resources and assessments that support children’s communication in Fiji.

**Research Aims**

- **Aim 1.** To determine facilitators and barriers to service development for Fijians with communication disability.
- **Aim 2.** To determine the services available to support Fijians with communication disability.
- **Aim 3.** To describe the beliefs about and attitudes towards Fijians with communication disability as identified by members of the Fijian community.
- **Aim 4.** To describe Fijian children’s communicative contexts.
- **Aim 5.** To describe Fijian children’s language and literacy use and proficiency in different communicative contexts.
- **Aim 6.** To determine if there are differences in speech and language use and proficiency as determined by child factors (e.g., age, gender, school year, ethnicity, main language, number of languages spoken) and contextual factors (e.g., household income, caregivers’ level of education, caregivers’ main language).
- **Aim 7.** To develop resources and approaches for visiting health care practitioners that are culturally and linguistically appropriate for the
In order to achieve these objectives and aims nine papers were written. See Table I demonstrating the alignment between the objectives, aims and papers.

**Theoretical Framework of this Doctoral Research**

In this doctoral research information from multiple sources (e.g., children, caregivers, teachers, other professionals, policy makers, etc.) was drawn together in order to create a profile of Fijian children’s communication and to understand how the Fijian community supports PWCD. The International Classification of Functioning, Disability, and Health (ICF, WHO, 2001) was used to create a common language for all stakeholders in this research, whilst respecting the individual as a sum of their many parts (abilities and impairments), within the multiple contexts of their life (e.g., home, school, work, community) (Lee, 2011; Vanleit, 2008).

The ICF incorporates body, personal, and societal dimensions of health. As illustrated in Figure II, the ICF is organised into seven components: Health Condition, Body Functions, Body Structures, Activities and Participation, Environmental Factors, and Personal Factors. Whilst each component is viewed as a discreet aspect that influences functioning, the framework recognises the interactions between components as displayed by the bidirectional arrows.

*Figure II. Interactions between the components of the International*
Each component of the ICF provides important information about a child’s constantly changing life. The Health Condition component is an umbrella term for the relevant disease, disorder, and injury/trauma. It may include a condition that is temporary, permanent, improving, or deteriorating. Body Functions are physiological functions of body systems, whilst, Body Structures are anatomical parts of the body, such as organs, limbs, and their components. When a Body Function or Body Structure has significant deviation or loss then the child is considered to have an impairment. Often the degree of impairment is positively or negatively influenced by external Environmental Factors (e.g., physical barriers, social networks, and societal attitudes) or internal Personal Factors (e.g., age, gender, race, lifestyle, coping skills, socio-economic status, education) which are particular to each child’s life and living. Ultimately the interaction of impairment and context determine a child’s ability to execute tasks or actions, which are Activities, at an individual level, and their full Participation in a social situation, at a societal level.

The ICF is a research tool, a clinical tool, a statistical tool, a social policy tool, and a tool for public education (WHO, 2007). This doctoral research applied the ICF for all of these purposes (Table I). As a research tool, the ICF acted as a broad framework that guided the choice and range of tools used to collect, analyse, and interpret the data. As a statistical tool the ICF was used as a coding tool in qualitative analysis for Papers 3 and 4. As a clinical tool, the ICF provided the framework: (1) upon which questionnaire and direct assessment information could be interpreted, (2) upon which the breadth of Fijian communication skills could be mapped in Papers 5, 6 and 7, and (3) to guide where to begin the process of developing tools for the Fijian context (Papers 8 and 9). As a social policy tool, Papers 1, 2, 3, and 4 explored inter-related aspects of Environmental Factors, Personal Factors, Activities and Participation that were relevant to the reality of living with a communication disability in Fiji. Application of the ICF allowed identification of functioning and contextual factors that potentially influence a person with communication disability’s full
participation in Fijian society, and priorities for future service development to meet the needs of PWCD.

Table I

**Summary of Thesis Section, Paper, Research Stage, ICF Components Investigated, Aims and Methods**

<table>
<thead>
<tr>
<th>Thesis section</th>
<th>Paper</th>
<th>Research Stage</th>
<th>Primary ICF components investigated</th>
<th>Aim</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Two</td>
<td>1</td>
<td>Environmental Factors</td>
<td>1. To determine facilitators and barriers to service development for Fijians with communication disability.</td>
<td>Literature review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Environmental Factors</td>
<td>2. To determine the services available to support Fijians with communication disability.</td>
<td>Literature review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Personal Factors, Environmental Factors, Activities and Participation</td>
<td>3. To describe the beliefs about and attitudes towards Fijians with communication disability as identified by members of the Fijian community.</td>
<td>Qualitative analysis of questionnaire data using thematic analysis (144 community members)</td>
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<tr>
<td></td>
<td>4</td>
<td>Personal Factors, Environmental Factors, Activities and Participation</td>
<td>2. To determine services available to support Fijians with communication disability.</td>
<td>Mixed methods: qualitative analysis of questionnaire data using thematic analysis and quantitative analysis of questionnaire data using descriptive statistics and non-parametric statistical analysis (144 community members)</td>
<td></td>
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<tr>
<td>Part</td>
<td>5</td>
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<td>4. To describe Fijian children’s communicative contexts.</td>
<td>5. To describe Fijian children’s language and literacy use and proficiency in different communicative contexts.</td>
<td>6. To determine if there are differences in speech and language use and proficiency as determined by child factors (e.g., age, gender, school year, ethnicity, main language, number of languages spoken) and contextual factors (e.g., household income, caregivers’ level of education, caregivers’ main language).</td>
<td>7. To develop resources and approaches for visiting health care practitioners that are culturally and linguistically</td>
<td>Literature review</td>
<td>Quantitative analysis of questionnaire data and direct assessment of</td>
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Factors, Activities and Participation appropriate for the Fijian context.

speech production using descriptive statistics and non-parametric statistical analysis (75 students, 75 caregivers, and 2 teachers)

Note: 1Stage 1 involved gathering knowledge from policy and literature regarding the historical supports available for PWCD in Fiji. Stage 2 involved gathering knowledge from the community about community beliefs, attitudes and practices for supporting PWCD in Fiji. Stage 3 involved gathering context-specific knowledge about the communication environment, and the speech, language and literacy use and proficiency of children in Fiji. Stage 4 began the work of developing culturally and linguistically appropriate resources and assessments that support children’s communication in Fiji. 2International Classification of Functioning, Disability and Health (ICF, WHO, 2001).

Methodology

To better understand the complex interrelations between communication and disability inherent in a multicultural and multilingual environment such as Fiji, this research required a method that could break down elements of the complex context (e.g., individual communication repertoires, use and proficiency) whilst simultaneously creating a holistic picture of the communication environment and how communication disability is viewed within this space. Understanding the Fiji context also required the researcher, a SLP, to cross traditional intellectual boundaries within this applied linguistic discipline. Mixed methods research that asked “what and how or what and why” (Woolley, 2009, p. 8) and had been used for trans-disciplinary multilingual studies (The Douglas Fir Group, 2016) was thus deemed well suited to the research within this thesis. Consequently, quantitative (Papers 5, 7, and 9) and qualitative (Paper 3) approaches were used separately, simultaneously (Papers 4 and 6), and collectively (across the presented thesis) to address different research aims. As a result of these multiple research methods, this research sought to satisfy the core aim of mixed methods research; namely, to achieve genuine integration of the quantitative and qualitative data collected from multiple sources (Creswell & Plano-Clark, 2011; Woolley, 2009).

The review of published literature was an important component in gathering information about communication disability in Fiji. The scant
available published white literature (one peer-reviewed paper and two commentaries) provided a broad introductory view of the research topic in Papers 1 and 2. Expansion of the search category to include grey literature (e.g., government and non-government organisation documents, social media, blog and newspaper entries) and personal commentary received via email was required to ensure that a rich picture of the historical services in Fiji for PWCD was reported (Papers 1 and 2).

Surveys (student, caregiver, teacher, and community), direct assessment of students’ communication skills, artefact collection, and observation provided quantitative and qualitative data. The four surveys used in this study were designed specifically for the purpose of this doctoral research. Each was based on literature from similar studies (e.g., Maloni et al., 2010; Marshall, 1997; Wylie, McAllister, Davidson, Marshall, Amponsah, & Ohenewa Bampoe, 2017) and pilot tested for the Fijian context. Purposive sampling was required for the school-based surveys (student, caregiver, and teacher) where a representative of the MoE selected the school and the head teacher selected the classes containing the student and teacher participants. After data collection, missing data were identified and students, caregivers, or teachers were contacted to obtain as much of the missing information as possible. Non-proportional quota sampling for the community survey was chosen as this method is said to provide representative sampling of different groups without requiring strict percentages of individuals to reflect actual total population characteristics (Morrow et al., 2007).

There were no tools for direct assessment of the children’s communication that had been validated in Fiji. Consequently, direct assessment of language and literacy (Paper 7) and speech (Paper 9), relied on the use of speech-language pathology assessment tools routinely used in similar international studies of multilingual children (e.g., Washington, McDonald, McLeod, Crowe, & Devonish, 2016). Artefact collection reported in Paper 6 included video and photographic recording of classroom-based teaching materials, students’ work samples, and aspects of the environment (e.g., building and classroom layout). A time-interval schedule was employed for classroom observations and also reported in Paper 6.
Quantitative data employed descriptive statistics and non-parametric analysis using SPSS® Statistics Version 23.0 (IBM®, 2015). Descriptive statistics were used to determine the frequency of responses for categorical variables ($n$ and %) or for continuous variables ($M$ and $SD$). Non-parametric analysis of the data (e.g., Chi-square test for independence, Mann-Whitney U test, Kruskal-Wallis test, Friedman test) was chosen due to the small sample size and frequent use of ordinal level data (Pallant, 2013). A modified Bonferroni adjustment was applied when using inferential statistical tests to correct for the possibility of Type 1 error (Field, 2013).

Qualitative analysis was conducted using inductive thematic analysis, guided by the “five phased analytic cycle” as describe by Yin (2016, p. 185): (1) compiling the data, (2) disassembling the data, (3) reassembling the data, (4) interpreting the data, and (5) drawing conclusions from the data. Application of Yin (2016) facilitated consideration of available frameworks (e.g., ICF, WHO, 2001), to move beyond descriptive analysis of the data, and to identify the meanings behind participants’ experiences. The NVIVO-10 computer software (QSR International Pty Ltd, 2012) was used to collate and analyse qualitative data.

Quality criteria for quantitative, qualitative, and mixed methods research were informed by Bryman (2006) and Bryman, Becker, and Sempik (2008) and continuously monitored throughout the study. As per these authors recommendations, different criteria for the quantitative (objectivity, internal validity, external validity, construct validity, face validity) and qualitative (confirmability, credibility, transferability, dependability) components of this doctoral research were employed (see Table II).
<table>
<thead>
<tr>
<th>Study Quality Criteria Parameters</th>
<th>Quantitative components</th>
<th>Qualitative components</th>
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<tbody>
<tr>
<td><strong>Objectivity</strong></td>
<td>Selection bias was reduced by ensuring the availability of survey administrators fluent in the major language groups.</td>
<td>Community survey participants were randomly selected across a range of sites (e.g., bus stop, shopping centre, produce market, sporting ground), and at variable times of the day and week, to reduce selection bias.</td>
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<td><strong>Confirmability</strong></td>
<td>As per <em>talanoa</em> research recommendations (Otsuka, 2006a) individual and community consultations occurred within the school setting to support caregivers’ and teachers’ completion of surveys. Similarly, year 4 students received survey familiarisation training prior to completing the student survey.</td>
<td>Pre-training of data collectors and use of a semi-structured interview ensured consistency of data collection between community survey participants.</td>
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<td><strong>Credibility</strong></td>
<td>Acknowledgement is made in Papers 5, 6, 7, and 9 of limited external validity due to participant characteristics in this study being different from the general population. For example, students, caregivers, and teachers, came from predominantly Standard Fijian speaking homes.</td>
<td>Participants were recruited from a variety of locations at different times of the day to ensure a randomised representative sample; however, acknowledgement is made in Papers 3 and 4 of limited transferability of community survey findings due to participant demographics not reflecting population ethnicity and education statistics of the whole of Fiji.</td>
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<td><strong>Internal validity</strong></td>
<td>Direct assessment instruments used were based on a thorough literature review and appraisal of previously applied instruments in different contexts.</td>
<td>Dependability of the data was maximised by: (1) thematic analysis of community survey using established method (Yin, 2016); (2) inter-rater reliability conducted during training of survey helpers; (3) researcher thematic analysis was cross-checked by cultural insider and by an experienced qualitative researcher, and (4) triangulation of data across qualitative and quantitative tasks.</td>
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<tr>
<td><strong>Convalidity</strong></td>
<td>The student, caregiver, and teacher survey questions were adapted from previously published studies and underwent pilot testing.</td>
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<td><strong>Construct validity</strong></td>
<td>Measurement error was minimised by: (1) piloting community survey; (2) training survey helpers and surveyors; (3) double entry of data into computer programme analysis (SPSS or NVIVO); (4) triangulation of data across qualitative and quantitative tasks; and (5) inter- and intra-judge reliability of phonetic transcription was calculated in Paper 9.</td>
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<td><strong>Dependability</strong></td>
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References


Lee, A. M. (2011). Using the ICF-CY to organise characteristics of


Vanleit, B. (2008). Using the ICF to address needs of people with disabilities in international development: Cambodian case study. Disability and Rehabilitation, 30(12-13), 991-998. doi:10.1080/09638280701800251


Part Two

Supporting Fijian Communication
Introduction to Part Two

Help must start from the present situation of the doers - not from a blank slate. Helpers must see the situation through the eyes of the doers - not just through their own eyes (Ellerman, 2000, p. 1).

Fiji has acknowledged its commitment to the development of policies to improve the lives of all people with disability (PWD) in the 2013 national constitution (The Republic of Fiji, 2013), through ratification of the United Nations (UN) Convention of the Rights of Persons with Disabilities (UNCRPD - UN, 2006), and via the Pacific Framework for the Rights of Persons with Disabilities 2016-2025 (PFRPD; Pacific Islands Forum Secretariat, 2016). Each of these documents identify the human rights of people with disability and outline the principles, duties, and obligations of Fiji, as a signatory to overcome social, legal, environmental, and political conditions that act as barriers to PWD’s full participation in society. One of these duties is to provide adequate resources to PWD to limit the impact of their disability on participation in society.

Adequate resources for PWCD in Fiji require an understanding of the prevalence of communication disability in the community and an appreciation of the preferences for resources by PWCD and the community. Information on the prevalence of communication disability in Fiji is inconsistent. Figures include: (1) 0.1% of the population of PWD in Fiji (Fiji National Council for Persons with Disability, FNCDP, 2010), (2) 39% of children enrolled in special schools (MoE, 2012), (3) 39.1% and 43.4% of children with otitis media presenting with speech impairment and activity limitations respectively (Fang et al., 2016). The disparity in figures no doubt reflects a difference in how speech/communication disability was defined in each report/study. Inconsistencies with disaggregation of disability data collected by different organisations within and outside Fiji is a concern (Sprunt, 2014). Efforts to disaggregate disability data within the education system via a trial of a new computer based coding system will hopefully rectify this inconsistency, and bring better understanding of the prevalence of communication difficulties amongst children in Fiji (Sprunt, 2014; Sprunt, Marella, & Sharma, 2016).

Community preferences for provision of services for Fijians with
communication disability are presently unexplored. The available literature (e.g., Gargett et al., 2016) states that communication specialist services for PWCD in Fiji (e.g., speech-language pathology, audiology, special-education teachers) are highly sought after and valued; however, there is limited information about the specifics of the specialist services that are provided (e.g., who, where, when, what, how often) or the alternative providers people turn to when specialist services are unavailable.

Creating sustainable services for PWCD living in Fiji requires visiting SLPs and policy planners to have a broad understanding of the many factors (barriers and drivers of change) influencing service provision (Hartley & Wirz, 2002). Pressman and Heah Lee (1988) identified difficulties with transference of professional skills and expertise from one context to another as the major barrier to service development in Fiji. The authors stated that the linguistic diversity in Fiji made it difficult to develop assessment and therapy materials in Fijian languages especially when there was a lack of research and information about children’s language development. Additionally, the authors acknowledged the need for Fijian language-speaking SLPs to understand the unique cultural and linguistic nuances present in this multilingual, multiethnic society.

Since Pressman and Heah Lee (1988) wrote their article there has been a growing body of international literature that outlines the efforts of SLPs working in other Majority World contexts. Some of this literature stresses the importance of applying a strengths-based approach to service delivery consistent with the ICF (WHO, 2001). For example, Scherer and Louw (2011) suggest that SLPs should focus on identification of strengths that the PWCD might have available personally or within their community. These strengths may act as protective factors in any given context; thus it is imperative that the visiting SLPs seek to understand personal and community perspectives about the causes of communication disability, attitudes towards PWCD, and the most culturally acceptable methods to support PWCD. Congruent with this perspective is a need to understand the ethnographic and cultural profile of the child with communication disability and the community in which they live (Louw & Avenant, 2002).

Identification of themes that are common to visiting SLPs working in Majority World countries may also be helpful to service development
(e.g., Hartley & Wirz; 2002; Marshall, 1997; Wylie, McAllister, Davidson, & Marshall, 2013). Hartley and Wirz (2002) identified five major stakeholder groups that need to be consulted when planning to develop speech-language pathology services in a Majority World Country: “government and non-government organizations, people with communication disabilities, their families and professionals” (p. 1543). Hartley and Wirz (2002) also illustrated through comparison of their own Communication Disability Model (CDM) and the International Classifications of Impairments, Disabilities and Handicaps (ICIDH-2, WHO 1999), a precursor to the ICF (WHO, 2001), that for development of services in underserved contexts to be sustainable they need to be directed across all dimensions of disablement (i.e., impairment, activity, participation, contextual factors). The work undertaken by Marshall (1997), a visiting SLP in Tanzania, provided an exploration of the contextual factors (e.g., community beliefs and attitudes) that may influence lack of service development for PWCD. Similarly, Wylie and colleagues (2013) discussion of underserved populations of PWCD internationally, provided an in-depth analysis of issues related to accessibility and availability of SLP services for PWCD that could encompass all dimensions of the ICF (WHO, 2001).

As a result of the noted service delivery literature, Papers 1 and 2 present reviews of white and grey literature that establish the historical context of service provision whilst exploring the factors (barriers and drivers of change) perceived to influence future service enhancement. Papers 3 and 4 sought to understand contextual factors influencing service provision for PWCD in Fiji. Paper 3 presents the findings of a survey of 144 community members’ beliefs about the causes of communication disability, beliefs about education and employment opportunities available for PWCD, and general attitudes towards PWCD. Paper 4, using data from the same survey as Paper 3, describes the perceived actions these 144 community members would undertake, and the services they would access, if they needed to support a person with communication disability. Papers 1 through 4 investigate all elements of the ICF (WHO, 2001); however, Environmental Factors that influence the Activities and Participation of PWCD is the primary focus of the four papers presented.
References


Paper 1

COMMENTARY

Services for people with communication disability in Fiji: barriers and drivers of change

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Submitted: 10 October 2013; Revised: 16 November 2014; Accepted: 28 February 2015; Published: 21 July 2015
Hopf SC, McLeod S

Services for people with communication disability in Fiji: barriers and drivers of change
Rural and Remote Health 15: 2863. (Online) 2015
Available: http://www rrh.org.au

ABSTRACT

Context: The World Health Organization’s World report on disability calls upon all nations to ‘remove the barriers which prevent [people with disabilities] from participating in their communities; getting a quality education, finding decent work, and having their voices heard’ (p. 5). People with communication disability (PWCD), as a consequence of their atypical communication, may be more likely to be excluded from society, and denied their basic human rights, than other people with disability. Fiji, a multicultural and multilingual nation in the south-western Pacific Ocean, has limited services for PWCD. Service providers in Fiji include disability care workers, special education teachers, traditional healers, and a small number of visiting volunteer speech-language pathologists. This paper outlines the historical and current barriers to, and drivers of change for, service development for PWCD in Fiji.

Issues: Five barriers to service development for PWCD in Fiji were identified. (1) A major structural barrier is the small population size to develop appropriate infrastructure including professional education programs. (2) Geographical barriers include the dispersed geography across 300 islands, low population density, the rural–urban divide, and risk of disaster from cyclones and flooding. (3) Linguistic diversity, while culturally important, can present a barrier to the provision of quality services that are available in the languages spoken by PWCD. (4) Cultural barriers include historical political instability, although Fiji has become more stable due to the recent democratic elections. The social climate affects development of services that are appropriate for different dominant cultural groups. (5) Financial barriers include low gross domestic product, low financial security and low human development index; however, the financial outlook for Fiji is steadily improving due to the change in political stability.

Lessons learned: Three levels of drivers of change were identified. Macro-level drivers included Fiji’s endorsement of international policy and increased globalisation (eg tourism). Meso-level drivers of change included receipt of foreign aid and support from international non-government organisations, development of disability-inclusive legislation and policy within Fiji, and strengthening of government policies that support disabled people’s organisations. Micro-level drivers of change included

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establishment of disabled people’s organisations by consumers, adoption of disability-inclusive policy and procedures by service providers, and changes in the perceptions of disability within the general community. Fijian prevalence data confirms that there is an underserved population of PWCD in need of specialist services. Significant advocacy work in the disability field by Fijian and international disabled people’s organisations has led to the Fiji government signing international policy (eg Convention on the Rights of Peoples with Disabilities), inclusion of disability rights in national legislation (eg 2013 Constitution of Fiji Islands) and localised policy and practice documentation (eg inclusive education policy by the Fiji Islands Ministry of Education). Continued service development is required if Fijians with communication disability are to have their needs met. The drivers of change at all levels are positioned well to overcome current barriers to change; however, a coordinated approach including macro-, meso-, and micro-level drivers is required to ensure the future development of adequate services for PWCD in Fiji.

**Key words:** agents of change, barriers and drivers of change, communication disability, Fiji, service development, speech-language pathology.

## Context

Fiji is a group of more than 300 islands in the south-western Pacific Ocean. Fiji’s strategic place in the regional economy, historical immigration patterns and rich cultural mix contribute to this small country a remarkable degree of cultural and linguistic diversity. Fiji’s population of more than 800,000 is from mixed ethnic backgrounds: 57% indigenous iTaukei-Fijian, 37% Fijian-Indian, with Indian subcontinent ancestry, and 6% of either Pacific island, European or East Asian ancestry.

Information about people with communication disability (PWCD) in Fiji is scarce, with prevalence of Fijians with communication disability reported in two public documents. The first, a 2010 survey by the Fiji National Council for Disabled Persons (FNCDP), reports that less than 1% of Fijians with a disability have a communication disability (approximately 1.4% of the total population). The second report, from the Fiji Islands Ministry of Education, National Heritage, Culture and Arts, states that 39.2% of children enrolled in special schools have a ‘speech disability’ (p. 27). This latter figure is closely aligned with international expectations from other majority world countries; for example, Wylie and colleagues indicate 25–49% of all African people with disability experience communication disability.

Services for PWCD in Fiji are limited. Hopf reviewed agents of service delivery for PWCD in Fiji and found a small number of qualified speech-language pathologists (SLPs) had visited Fiji in the past 25 years as volunteers predominantly providing one-to-one intervention and ad-hoc paraprofessional training to parents and teachers. Additionally there was evidence of alternative service providers (eg traditional healers, mid-tier workers, disability care workers) with a largely unknown skill base and methods of intervention. Pressman and Heah Lee also explored service provision for PWCD in Fiji. In the absence of in-country speech-language pathology services in Fiji, the authors recommended the use of paraprofessionals trained by SLPs and audiologists. Such a recommendation resonates with current international trends promoting the use of community-based rehabilitation (CBR) workers and population-based approaches to the provision of health services. Unfortunately, the Pressman and Heah Lee recommendation from 25 years ago to provide long-term paraprofessional training in Fiji has not been realised. Currently, there are no speech-language pathology professional preparation courses in Fiji, despite the development of courses for other allied health services offered through the Fiji National University (eg physiotherapy, pharmacy and dietetics), and speech-language pathology courses in countries surrounding the region (eg Australia, Guam, Hawaii, New Zealand).
SLPs from around the world have long been concerned about the mismatch between service delivery accessibility and availability and the needs of PWCD. These authors, and others, persistently challenge SLPs to engage in an ongoing discussion of service delivery re-evaluation to ensure SLPs are proactive in meeting the needs of PWCD. However, as Cheng illustrates in her summary of services in the Asia-Pacific region, speech-language pathology growth remains disparate, with the needs of PWCD remaining unmet in many Asia-Pacific nations due to the influence of country-specific sociopolitical, geographical, cultural and linguistic factors.

The aim of this article is to describe the barriers to development of services for PWCD in Fiji and to document the macro-, meso-, micro-level drivers of change as potentially facilitative for future service development in Fiji.

**Issues**

Consideration of the barriers and drivers to change for service development was recommended by Price. Use of this terminology has consequently been applied in development of services in majority world contexts for people with disability and specifically people with communication disability. An overview of the barriers and drivers to change for Fiji, based on the recommendations of Wylie and colleagues, is provided in Table 1 and will be described below.

**Barriers to development of services for PWCD in Fiji**

Five barriers to the development of services for PWCD were identified by Wylie and colleagues: structural, geographical, linguistic, cultural and financial. These barriers were applied to the Fijian context following a review of available literature including international and Fijian legislation, policy and practice documents.

**Structural barriers**: The Fiji 2007 census revealed a small multicultural population of less than 900,000 people. In comparison with other middle-income majority world countries that have begun to develop services for PWCD, Fiji has a small and diverse population, which potentially restricts the scope and availability of resources (eg financial and human resources, tertiary education).

**Geographical barriers**: Fiji's more than 300 islands are spread over a distance of 18,271 km. The 100 inhabited islands of Fiji have a relatively low population density of 47.1 people per km². However, a little over half of all Fijians actually live in major urban centres, where the bulk of paid employment is found. Specialist health and education services for Fiji tend to be located in the capital city or other major urban centres. The need for Fijians to travel long distances at significant personal cost may be considered a barrier to accessing service provision. Disaster risk is also a potential barrier to development of Fijian services and infrastructure.

**Linguistic barriers**: Fiji has three official languages: English, Fijian and Hindustani and significant numbers of speakers of Fiji Hindi, other non-standard indigenous Fijian languages (eg Luan), Rotuman, immigrant languages (eg Chinese) and Fiji sign language. In urban areas and in the domains of education, politics and industry, Fiji English is the language that dominates. Due to linguistic diversity there is often a mismatch between home language and the vernacular taught in schools. There may also be a linguistic mismatch between PWCD seeking services and the language of the service providers.

**Cultural barriers**: Fiji has experienced political instability in the form of three political coup d'etats, in 1987, 2000 and 2006. Military rule was in place from 2006 until democratic elections were held in September 2014. It is envisioned that democracy will bring in a new period of political stability. The new government was elected on a platform of racial equality. This should have an impact on the social climate that has historically been hampered by conflict amongst the two dominant ethnic groups: iTaukei Fijian and Fijian Indian.
Table 1: Barriers and drivers of change to support people with communication disability in Fiji

<table>
<thead>
<tr>
<th>Barriers to change</th>
<th>Structural</th>
<th>1. Population size</th>
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<tbody>
<tr>
<td>Geographical</td>
<td>1. Geography</td>
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<td></td>
<td>2. Population density</td>
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<td></td>
<td>3. Rural-urban divide</td>
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<td></td>
<td>4. Disaster risk</td>
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<tr>
<td>Linguistic</td>
<td>1. Linguistic diversity</td>
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<tr>
<td>Cultural</td>
<td>1. Political stability</td>
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<td></td>
<td>2. Social climate</td>
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<tr>
<td>Financial</td>
<td>1. Gross domestic product</td>
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<td></td>
<td>2. Financial security</td>
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<td></td>
<td>3. Human development index</td>
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<tr>
<td>Drivers of change</td>
<td>Macro-level</td>
<td>1. Endorsement of international policy</td>
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<td></td>
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<td>2. Increased globalisation</td>
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<td>Meso-level</td>
<td>1. Receipt of foreign aid and support from international NGOs</td>
<td></td>
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<tr>
<td></td>
<td>2. Development of disability-inclusive legislation and policy</td>
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<tr>
<td>Micro-level</td>
<td>1. Establishment of DPOs by consumer representatives</td>
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<tr>
<td></td>
<td>2. Adoption of disability inclusive policy and procedures by service providers</td>
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<td></td>
<td>3. Perceptions of disability within the general community</td>
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NGO, non-government organisation; DPO, disability people’s organisation.

Financial barriers: Fiji has experienced small but steady growth on the human development index (HDI) since 1980. For example, in 1980 Fiji had a HDI of 0.587, in 2000 Fiji had a HDI of 0.674, and in 2014 the HDI was 0.724, and was ranked 88th in the world. The gross domestic product (GDP) per capita in 2014 was $7552.21. Fiji’s financial security, as ranked by Moody’s, is considered B1 stable. The economy has been consistently hampered by persistent trade and budget deficits, making it one of the world’s largest per capita recipients of aid.

Fiji’s small population, slow growth performance in improving human development, recent history of political instability, high risk of disaster and perceived financial insecurity in international markets are key barriers to the development of services for PWCD in Fiji. With a return to democracy in Fiji from September 2014, concerns of political instability and financial insecurity may be partially alleviated in the future.

Drivers of development of services for PWCD in Fiji

In Fiji, a range of drivers of change are potentially facilitative for future service development in Fiji. Price identified three potential levels of change: macro-, meso- and micro-level. Macro-level changes are disability policy drivers that are deemed external and distant from an organisation (eg international conventions). Meso-level changes also act from an external point but are deemed close to the organisation (eg government policy). Micro-level changes are internal to the organisation, and thus by design are also close (eg staff member opinion, company guidelines). Using this framework, available literature, including legislation, policies and practices pertaining to communication disability in Fiji, was reviewed, and policy drivers at all levels were identified.

Macro-level drivers of change: At the macro-level there are two significant drivers. The first of these is Fiji’s active involvement in international policy development and resultant targets to achieve on behalf of all people living with a disability as a result of its membership in international human rights groups and signatory status to international frameworks and mandates. For example:

• In 2000, Fiji ratified the United Nations Millennium Declaration and Millennium Development Goals (MDGs), which include MDG2: universal education.
• In 2000, Fiji signed the Dakar Framework for Action and pledged to achieve Education for All targets.
• In 2003, Fiji endorsed the Bwako Millennium Framework and the Bwako Plus Five. Both documents pledge action towards an inclusive, barrier-free and rights-based society for all persons with disability in Asia and the Pacific.
• In 2004, Fiji signed the 1983 International Labour Organisation Convention 159 on Vocational Rehabilitation and Employment.
• In 2009, Fiji endorsed the Pacific Regional Strategy on Disability at the first Pacific ministerial meeting on disability organised by the Pacific Islands Forum Secretariat.

The second macro-level driver relates to increasing globalisation of world concepts, through international tourism, multimedia and information and communications technology. Fijians consequently have a greater chance of having contact with people from other countries (eg as a tourist travelling internationally, a recipient of a service provided by an international volunteer or a participant in an online community). These contacts provide opportunities for the sharing of new thinking, techniques and ideologies that subsequently influence future policy development. An example of international practice influencing Fijian practice is the development of the Pacific Open Learning Health Net. Developed in consultation with WHO, it offers free web-based learning modules for healthcare workers. It is supported by 38 learning centres located in 12 Pacific Island countries. Information for these courses is sourced from around the world.

**Meso-level drivers of change:** Considering the meso-level drivers of policy development, three powerful contributors to change are evident. First, foreign aid and international non-government organisations contribute a small amount to Fiji’s national budget; it remains important in some ministerial portfolios as a backup to budget shortfalls. Foreign aid agencies in Fiji have traditionally come from Australia, Canada, Japan, New Zealand and the UN. Within these countries and organisations, there is an increasing emphasis upon disability and quality-of-life issues, mandated under article 32 of the UNCRPD, which has led to development of disability-inclusive international development assistance programs. One example, the Disability-Inclusive Development Reference Group, has been effective in facilitating exchange of information between non-government organisations, Fijian disabled people’s organisations and international equivalents. They have also been critical in improving awareness of the CRPD and the social model approach to disability. In addition, international policy and strategies (eg Development for All Strategy) have given legitimacy to required Fijian legislative changes and budgetary allocations.

Government legislation and policy is the second meso-level driver. As stated in the macro-level discussion, Fiji’s government has committed to international mandates for improving the lives of people living with a disability. Importantly, these commitments have been translated into meso-level action within the policy and procedure documents of major governmental ministries. In addition, the government established the Fiji National Council for Disabled Persons (FNCDP) in 1994. The FNCDP observes a human rights model of disability. They are responsible for policy development and coordination of disability services across ministerial portfolios and monitoring of groups of people with disability in Fiji. The FNCDP 2008–2018 National Policy on Persons Living with Disability clearly supports provision of specialist services for people living with a disability. In addition to recognition of the need for capacity building it calls specifically for ‘strengthen[ed]...capacity of community-based rehabilitation officers, and other professionals (e.g., speech therapists, sign language
The other meso-level driver is the strengthening of Fijian government policies that support disabled people’s organisations. Fiji is a member of regional organisations with an interest in the welfare of people with disabilities. Key agencies include the Pacific Islands Forum Secretariat and the Pacific Disability Forum. Both agency websites provide links to local and international agencies with an interest in disability services in Fiji. As a member of such forums, Fiji has subscribed to their philosophies and has developed policy in accordance with their recommendations.

**Micro-level drivers of change:** The micro-level drivers of change can be viewed from three perspectives: that of consumer representatives, service providers and the general community. With regards to consumer representatives, Fiji has a strong and committed network of disabled people’s organisations supported by the national Fiji Disabled Persons Federation (previously Fiji Disabled Persons Association). Importantly for PWCD in Fiji, Fijian disabled people’s organisations are committed to ‘including people with all types of impairments’ (p. 60)47.

Service providers for PWCD in Fiji include people within the health and education sectors. Both sectors are in the early stages of adopting disability-inclusive practices within their own plans, policies and procedures. Prior to school entry, services for Fijian children with speech, language and literacy difficulties are the responsibility of the Fijian Ministry of Health. The ministry coordinates more than 900 village clinics, 1245 nursing stations, three area hospitals, 76 health centres, 19 subdistrict medical centres, three divisional hospitals, and three specialty hospitals with tuberculosis, leprosy and medical rehabilitation units48. Provision of specialist rehabilitation services for PWCD is not presently a primary goal of the ministry; their focus is on reducing child mortality rates49. Speech-language pathology services are not currently available to support children prior to school entry, nor at any time for adults who have acquired communication and/or swallowing difficulties.

Support for children with speech, language and literacy needs during the school years is provided by the Fijian Ministry of Education. Historically, children in Fiji who are identified with additional needs are educated in one of 19 segregated schools, referred to locally as ‘special schools’50. Tavola states that segregated schools mostly have mixed disability and mixed age enrolments and offer primary schooling of a very limited quality and with poor educational outcomes. Some are more care centres than schools.’ (p. 7)50. In addition, Tavola reports that ‘the majority of children living in rural, remote and scattered islands [with additional needs] have typically not attended school at all’ (p. 7)50. The Fiji Islands Ministry of Education developed the Policy in Effective Implementation of Inclusive Education in Fiji associations (eg Fiji Physiotherapy Association), and section 7 contains a wish to use ‘speech therapists’ (p. 11)50. Fijian special education teachers actively seek professional development opportunities locally and internationally5. Furthermore, in 2013, recruitment for special education needs coordinators in all education districts commenced to support the implementation of country-wide inclusive schools5.

Professional organisations in Fiji with an interest in supporting PWCD may include teachers’ unions and health workers’ unions. Data on staff perceptions of working with people with a disability or specifically PWCD is limited to the field of education56. Daveta found that teachers from different school settings supported inclusive education for children with mild disabilities only and indicated that children with severe disabilities should attend a special school57. These teachers identified several factors that ultimately acted as barriers to inclusion: severity and type of disability, perceived extra workload, inadequate pre- or in-service training, a lack of specialist teacher support, a lack of government funding, a lack of commitment from the Ministry of Education, and lack of consultation with teachers on development of inclusive
policy or curriculum\(^4\). Reflecting similar findings of
international research in this area\(^5\), Daveta’s findings are
important to consider given the recent trial of mainstream
schooling children with disabilities by the Fijian Ministry of
Education\(^6\).

The other driver at the micro-level relates to community
expectations. There is limited information about Fijians’
expectations for services for PWCD. The information
provided by teachers as already discussed\(^7\) and general
comments on community perceptions of disability in review
documents\(^8\) suggest community expectations for PWCD
may be low. It is possible that community expectations may
currently be acting as a barrier to policy development, rather
than a driver.

Lessons learned

Much has happened in Fiji over the past 25 years with respect
to financial and political stability and growth, and macro-
and meso-level drivers of change. However, not enough change
has happened for PWCD in Fiji. Prevalence data confirms
that there is a population of PWCD in need of services, yet
services remain minimal and PWCD remain underserved.
Fijian community organisations (eg Fiji Disabled Peoples
Association and their affiliates) and government portfolios
(eg FNCDO, Ministry of Education, Ministry of Health,
Ministry of Social Welfare) have made positive steps towards
service development for PWCD, including:

- adopting a human rights approach to disability and
  signatory status to the UNCRPD
- improving community awareness of disability issues
- facilitating disability-inclusive government and
  ministry policies (eg for inclusive education)
- recognising the need for specialist services in other
  allied health disciplines (eg dietetics and
  physiotherapy)
- conducting epidemiological research into disability
  prevalence
- committing to a ‘knowledgeable Fiji’ through
  extensive investment in information and
  communications technology\(^9\)
- maximising the limited speech-language pathology
  services that are available to date, especially with
  regards to capacity building
- undertaking risk reduction activities to reduce the
  impact of natural and economic calamities
- returning to democratic governance.

Unfortunately, local development of services for PWCD has
not been a priority for Fiji. The national health system has
prioritised primary health care and preventative services,
 focusing on poverty reduction, prevention of non-
communicable and infectious disease, improving sanitation,
and health system efficiency. These are erstwhile areas of
intervention, though such priorities are at the expense of
providing rehabilitation services for people already with
disability.

The analysis presented highlights the opposing forces at work
in developing services for PWCD in Fiji. Whilst progress has
been made in many areas of disability development, change
for PWCD remains static. The exact reasons for this are not
obvious. Buell states that ‘addressing any one demand or
supply barrier in isolation will not engender sustainable
change within a service or improve access for service users . . .
change requires energies to be directed across sectors’ (p.
35)\(^10\). In Fiji, it is possible that forces driving change are not
working collectively due to the ad-hoc and intermittent
supply of specialist knowledge about communication
disability in Fiji. The authors suggest that, as per Buell’s
recommendation, Fiji requires a coordinated approach that
combines the driving forces at all levels of Fijian society
before true momentum for change to services for Fijian
PWCD is achieved.

Individuals and organisations need to capitalise on these gains
for people with disabilities to ensure that services for PWCD
are significantly enhanced. A coordinated approach to service
development for PWCD from education, health, and private
sectors is required to sustain change. Most importantly,
sustainable change will need to be driven from within the Fijian community and informed by the knowledge of PWCD in Fiji, their supporters and current service delivery agents.

Acknowledgements

The first author wishes to extend her gratitude to the Fijians and visiting volunteers who have contributed to the discussions that underpin this writing. The first author acknowledges support from a Charles Sturt University Post-Graduate Research Scholarship (CSU-PGRS) and the second author acknowledges support from an Australian Research Council Future Fellowship (FT0990588).

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Paper 2

Services for people with communication disability in Fiji

Clinical insights

Suzanne Hopf

In Fiji, the government has recognised the importance of services for people with communication disability (PWCD); however, the need for services still exceeds supply, and it is unclear who is providing services to this population. It has been suggested that agents of delivery of intervention can comprise seven groups: qualified speech-language pathologists (SLPs), mid-tier workers, already qualified professionals trained for an additional new role, disability care workers, traditional healers and other professionals or family members guided by SLPs. In this paper, the role of each of these groups in the provision of services to PWCD in Fiji was reviewed. Results revealed that qualified SLP services in Fiji are restricted to those provided by international volunteer programs. Numerous other agents of delivery of intervention are available; however, their skill base and intervention methods remain largely unknown. There is a need to identify the skills and practices of non-SLP agents and to consider the potential for future direct SLP input, to ensure timely and adequate services are available to people with communication disability in Fiji.

Fiji, with a population of 837,271 people (Fiji Islands Bureau of Statistics, 2008), is a group of over 300 islands that make up part of the Melanesian group of islands in the south-western Pacific Ocean. It is the regional hub for economic and political activity in the south-west Pacific and has a rich cultural mix, with a remarkable degree of cultural and linguistic diversity (Mangubhai & Mulibi, 2006). Communication disability in Fiji is reported to be experienced by 39% of children enrolled in special schools (The Republic of Fiji, Ministry of Education, National Heritage, Culture & Arts, 2012), and 0.1% of the general population (Fiji National Council for Disabled Persons, RNCDP, 2010). The proportion of children with communication disability in mainstream settings is currently unreported in education data. The disparity in special school and general population prevalence figures may reflect a difference in how speech/communication disability was defined in each report. Fiji has acknowledged its commitment to the development of policies to improve the lives of all people with disability (PWD) in the new national Constitution (The People of Fiji, 2013). In addition, Fiji has ratified the United Nations (UN) Convention of the Rights of Persons with Disabilities (UNCRPD, UN, 2006), and the Incheon Strategy to “Make the Right Real” for PWD in Asia and the Pacific (United Nations Economic and Social Commission for Asia and the Pacific, ESCAP, 2012). Both of these documents identify the human rights of PWD and outline the principles, duties and obligations of Fiji, as a signatory to overcome social, legal, environmental and political conditions that act as barriers to PWDs full participation in society. These documents have been incorporated into local policy development, including The Republic of Fiji, Ministry of Education, National Heritage, Culture & Arts, and Youth and Sports, Policy in effective implementation of inclusive education in Fiji (2011). To date, implementation of this policy has included a partnership with the Australian Department of Foreign Affairs and Trade (DFAT) to trial inclusive education practices in five Fiji primary schools (Kelly & Wapling, 2012).

Specific provision for specialist services for people with communication disability (PWCD), such as speech-language pathology, is made in the Ministry of Education 2012–14 strategic plan (The Republic of Fiji, Ministry for Education, National Heritage, Culture and Arts, Youth and Sports, 2012) and inclusive education plan (The Republic of Fiji, Ministry for Education, National Heritage, Culture and Arts, Youth and Sports, 2011). However, while the importance of services for PWCD in Fiji is recognised in these and other government documents (e.g., Fiji Islands Ministry of Health, 2011), it remains unclear how these services are actually being provided, by whom, and in what context.

Responding to the multicultural, multilingual needs of PWCD around the world is a concern of speech-language pathologists (SLPs) (e.g., Buell, 2013; Hartley & Witz, 2002; Roulstone & Harding, 2013; Wickenden, 2013; Wyke, McAlistor, Davidson, & Mann, 2013). The issue of service delivery development for PWCD in Fiji was initially raised in 1988 by Pressman and Heah Lee, who conducted an
analysis of Fiji’s development priorities, to determine if Fiji was well positioned to commence “professional services in the field of communication disorders” (p. 43). The authors concluded that Fiji’s needs would be best met by the use of Fijian paraprofessionals trained by international SLPs. In 2014, Hopf and McLeod reviewed service development and reported that significant policy change has occurred in Fiji to support PWCD. Unfortunately, policy change does not necessarily translate to changes in service development and provision due to financial, political and environmental barriers (Hopf & McLeod, 2014), and it remains unclear as to who is providing services for PWCD in Fiji in the absence of SLPs.

The communication disability model for service development

In considering current and future service provision for PWCD in Fiji, it is useful firstly to identify the main stakeholders and potential agents of service (intervention) delivery. In 2002, Hartley and Winz developed the communication disability model for service development in Majority World Countries, which outlined a method for considering the needs of the four main stakeholders involved in service provision: PWCD and their families, a country’s government, non-government organisations (NGOs), and professionals involved in the delivery of services for PWCD. Wylie and colleagues (2013) have built on Hartley and Winz’s model and outline 12 domains that influence accessibility and availability of services, which ultimately determine if a service is meeting the needs of its people. These domains are: cultural appropriateness of service, sector delivering service, geographical domain, location of service, agent of delivery of intervention, level of intervention, recipients of intervention, focus of intervention, responsibility of services, sustainability of service, and rationalization of services. A brief review of each of these domains with respect to Fiji is presented in the Appendix.

This paper focuses on only one of these domains, the agents of delivery of intervention. Wylie and colleagues (2013) identify seven categories of agents: qualified speech-language pathologists (SLPs), mid-tier workers, already qualified professionals trained for an additional new role, disability care workers, traditional healers and other professionals guided by SLPs, or family members guided by SLPs. Wylie and colleagues give equal weight to the provision of intervention by SLPs and alternative (non-SLP) service providers, while at the same time acknowledging the important role SLPs may play in sharing knowledge with these other agents. Given Fiji’s status as a Majority World Country, and the observed lack of permanently based SLPs in Fiji, it is useful to consider other agents that may be involved in providing service to PWCD. In the following sections, service provision in Fiji is reviewed according to the role of each of the seven agents identified in the framework by Wylie and colleagues.

Qualified speech-language pathologists

Speech-language pathology services in Fiji are provided on an ad-hoc volunteer basis by international government agencies and freelance volunteers. Since 2006, eight qualified SLPs have been employed on short-term contracts (six months to two years) through two international aid agencies. At the time of writing this paper, there were no international aid funded SLPs in Fiji. Personal correspondence with five past volunteers and an article written by Park (2012) revealed that SLJ intervention methods in Fiji are diverse and strive to be responsive to the needs of the communities in which the SLPs temporarily live and work (A. Hammond, personal communication, 3 May 2013; L. Joseph, personal communication, 5 March 2013; M. Sullivan, personal communication, 1 May 2013). Interventions have involved using a mix of 1:1, small group and whole class teaching in addition to conducting parent and teacher in-services. The SLPs indicated that they needed to be adaptable and resourceful in the face of cultural, financial, and technical challenges (Park, 2012).

Story time in a remote Fijian school (Photo courtesy of Riese Beyond the Road)

Two freelance Australian volunteers (Fynes-Clinton, 2011; O’Heir, 2011), and a British SLP working for an NGO (Sweeney, 1998) are the only other recorded SLPs to have worked in Fiji. O’Heir (2011) reports volunteering for a Fijian NGO and providing training sessions for teachers. Sweeney volunteered with a visiting cleft lip and palate surgical team (J. Howell, personal communication, 23 July 2013), while Park (Fynes-Clinton, 2011) provided communication interventions for a young man with severe communication needs. It is likely that there are other SLPs who have visited Fiji and provided therapy services or professional development training to small groups of Fijian children or adults with communication disability. Unfortunately, their presence and activities are unrecorded. Encouragingly, international volunteer management agencies and NGOs are actively seeking SLPs willing to undertake self-funded short-term placements in Fiji.

In the absence of consistent local speech-language pathology services, the author has witnessed Fijian residents, particularly expatriates, taking up internet-based speech-language pathology services via telepractice models with SLPs located in Australia and the United States. Others, for example adults who have had a stroke, are traveling to other countries (e.g., India) to seek short-term rehabilitation.

There are presently no training courses for SLPs in the South Pacific, despite the presence of other allied health courses at a Fijian university (e.g., physiotherapy and dietetics). While the Fiji Island Ministry of Education is actively encouraging the presence of SLPs in Fijian schools, schools will remain reliant on the provision of SLP services by international aid agencies until such time as a better regional solution can be found.
Mid-tier workers

Wyle and colleagues (2013) describe mid-tier workers as those persons who have been trained to work with one group of people with communication disability. Reconceptualising the training of specialists in communication disability is pertinent for many nations where SLP services are limited and PWCDs needs are underserved. In Fiji, mid-tier workers support the work of visiting NGOs for a range of disabilities. For example, in the field of cleft lip and/or palate (CLP), a mid-tier worker trained by a maxillofacial surgical team from New Zealand works as the conduit between children with CLP, local hospitals and visiting international surgeons (J. Howell, personal communication, 23 July 2013). Mid-tier workers’ interventions are twofold. First, they provide advice and training to parents on how to use adaptive feeding methods to maximise nutritional support for their child with CLP prior to and post-surgical intervention. Second, they provide post-surgical review to ensure the success of the procedure and quickly field any concerns regarding infection to local medical personnel. To the author’s knowledge, mid-tier worker’s services are restricted to feeding and wound management. Children with CLP do not currently appear to receive services for communication development.

Mid-tier workers also work within the Fijian deaf community. For example, three NGOs, the Australian groups Carabez Alliance and Ears Inc, and the international CBMs Project Heaven, in conjunction with local and visiting international audiometrists and audiologists on “working holidays”, have played an important role in training Fijian mid-tier workers in basic aural care, hearing screening procedures, and sign language (Nawaw, 2006; Sun: Fijian Newsroom, 2007, May 2).

It is possible that visiting SLPs have also been involved in the training of mid-tier workers. As the previous two examples illustrate, the potential for using mid-tier workers to provide services for PWCD is a viable option for Fiji.

Hopefully, SLPs may find greater opportunities to be involved in training future mid-tier workers through face-to-face and internet-based technologies.

Already qualified professionals trained for an additional, new role

There was no evidence found to support the existence of already qualified professionals trained for an additional, new role as agents of delivery of intervention for PWCD in Fiji.

Disability care workers

Disability care workers exist in both health and education settings in Fiji. In the health sector, village (or community) health care workers are often the first point of contact for PWCD seeking support (Roberts et al., 2011). These are volunteer workers, chosen by their communities. They receive six weeks of initial training from the Ministry of Health and thereafter are required to complete one to two days of continuing education training annually (Roberts et al., 2011). The Fiji Islands Ministry of Health recognises the inadequacy of this training, and has consequently included an objective to improve training for village and community health care workers in the 2011–15 strategic plan (Fiji Ministry of Health, 2011, p. 16). There are also approximately ten community rehabilitation assistants (CRA) based in subdivisional hospitals around the country. Roberts and colleagues (2011) report that the CRAs were initially trained by an NGO in the 1990s. This training did not continue and their role in patient rehabilitation has largely been taken over by physiotherapists. Whether they were trained to support PWCD is unknown. In the education sector, special schools employ small numbers of teacher aides to help support children’s needs. These aides receive supplementary training depending on the needs of the children in their care (e.g., instruction in sign language, braille). Finally, there are a small number of residential care facilities in Fiji for children and adults with disabilities (Roberts et al., 2011). The training of workers in these facilities is also unreported.

Bett Sierra conducting Fiji teacher training session on project based learning (Photo courtesy of Rise Beyond the Poop)

As can be seen from the examples above, formalised training of workers in this category is minimal and training in communication disability unlikely. Since 2013, the Australia Pacific Technical College has offered a Certificate IV in Disability with a course subject titled “Communicate using alternative and augmentative communication (AAC) strategies” (Australia-Pacific Technical College, 2013).

Enrolments in this basic level of training may be useful in identifying disability care workers with a greater interest in communication disability who would benefit from additional specialist training.

Traditional healers

Fijians, regardless of ethnicity, have a rich cultural history with strong belief in the value of traditional healing practices and traditional medicines (Brown, Ward-Paranthurst, & Cooper, 2013; Roberts et al., 2011). Discussions between the author and Fijian parents and teachers reveal that traditional healers are regularly called upon to help children and adults with communication difficulties. While the exact nature of the intervention is unknown, Fijian people have reported the use of herbal medicines (inhaled and ingested), chanting, and digital manipulation of the larynx to be common practices.

Other professionals and family members guided by SLPs

Given the limited numbers of SLPs in Fiji, there has been little in the way of SLP-led training programs for other professionals (e.g., teachers, doctors, allied health workers) or family members. Only volunteer international aid SLPs, with their aim to create sustainable development, consistently provide training to personnel within their host organisation to ensure retention of knowledge and practices.
beyond the term of the SLP’s employment (A. Hammond, personal communication, 3 May 2013; L. Joseph, personal communication, 5 March, 2013; M. Sullivan, personal communication, 1 May 2013). Prior to 2013, training provided by volunteer SLPs was usually on a small scale, involving the teachers and caregivers of children from the facility to which the SLP was attached. Training activities included communication augmentation strategies and/or classroom accommodation and adaption techniques for children with communication disability. However, Joseph (personal communication, 27 November 2013) advised that she was involved in training groups of community health workers during her volunteer placement in Fiji. At the university education level, O’Heir (2011) offered brief accounts of her experience providing professional training to early childhood educators, teachers and delinquent. It is unknown whether these training sessions were repeated with subsequent university student intakes. Additionally, despite reporting the collection of data, no outcomes on the success of any of these interventions have yet been reported.

Limitations
The results reported above are limited in a number of ways. First, the author is not Fijian, and neither are any of the SLPs before her. Thus, the author brings with her an outsider’s viewpoint. Second, the evidence was obtained predominantly by desktop methods – no direct contact with representatives from non-SLP service providers. This decision was made by the author to ensure that the review did not contravene Fijian government restrictions on research. Any future research can only be enhanced by validating findings with direct consultation and cooperation with Fijian people.

Summary and future directions
There are numerous potential agents of delivery of intervention for PWCD in Fiji. However, there is limited evidence of the existence of “actual” agents of delivery of intervention other than qualified SLPs, who are available intermittently and are typically financed by international aid agencies or individuals. Currently, the numbers and locations of qualified SLPs are insufficient to meet the individual needs of PWCD in Fiji, or the specialist training needs of alternative agents of delivery of intervention. Given that there are no plans to create a speech-language pathology course in Fiji, nor an allocated budget to finance internationally trained SLPs to work in Fijian health or education institutions, PWCD will continue to rely on these potential alternative service providers or look to SLP options outside of Fiji.

One such SLP option is the use of innovative technologies, such as telepractice. Evidence of the efficacy of telepractice as a means of delivering specialist services for PWCD across the world is growing (Crowley & Baigori, 2011; Thordors, 2011). In Fiji, access to computers and internet services is improving rapidly. The Fijian government has committed to a knowledge-based Fiji through extensive investment in information and communications technologies (ICT) in health and education sectors. In the health sector, the Pacific Open Learning Health Network, developed in consultation with the World Health Organization, provides a forum for free web-based health care worker education (World Health Organization Regional Office for the Western Pacific, 2013). In education, distance education services are planned (The Republic of Fiji, Ministry for Education, National Heritage, Culture and Arts, Youth and Sports, 2012) and schools in rural and remote areas are establishing the infrastructure required to teach children how to use information and communications technology (The Fijian Government Media Centre, 2012).

SLPs have the potential to improve the skills of alternative agents of intervention for PWCD in Fiji through the use of innovative technologies. ICT can provide a future avenue for SLPs to conduct internet-based training sessions for other agents of delivery of intervention based in Fiji. Any such training would be enhanced by research which explores the current skill base and practices of current alternative agents of delivery of intervention. Once such information is known, supplementary training may be provided to ensure PWCD in Fiji are receiving interventions based on evidence and best practice.

There is little doubt that PWCD in Fiji require long-term, fully funded, linguistically and culturally appropriate services that are developed within the local context. To create a sustainable long-term solution, more information is required to complete the Hartley and Wint (2002) communication disability model for service development in Fiji. This review has sought to document one important stakeholder in service development, that is, people involved in the delivery of services for PWCD. The review has also provided a brief insight into two other stakeholder groups: the Fijian government and NGOs. However, to complete the picture, more information is required about the PWCD and their families in Fiji. Only through analysis of the realities of life for PWCD in Fiji, and with their active involvement in decision-making, can genuine advocacy efforts commence.

Acknowledgement
The author wishes to thank Anna Hammond, Jess Howell, Lydelle Joseph, Jessica McGrath, Susan Park, Megg Sullivan and Professor Shaynne McLeod for their assistance in the preparation of this manuscript.

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1 Majority World Countries are those countries which rank the lowest on the Human Development Index (HDI – UNDP, 2013). These countries are sometimes also referred to as “developing”, “low income”, or “third world”.

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| 86 | ICPSLP Volume 10, Number 2 2014 | Journal of Clinical Practice In Speech-Language Pathology | 85 |
Communication Disability in Fiji: Community Cultural Beliefs and Attitudes

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4. Research Assistant, Independent, Fiji

ABSTRACT

Purpose: Beliefs about communication disability vary according to the cultural context, and influence people’s attitudes and help-seeking behaviour. Little is known about Fijians with communication disability or the communities in which they live, and specialist services for people with communication disability are yet to be established in Fiji. An understanding of Fijian beliefs about the causes of communication disability and attitudes towards people with communication disability may inform future service development.

Method: An interpretivist qualitative research paradigm and the International Classification of Functioning, Disability and Health (ICF) framework informed this project’s design. Scenarios of adults and children with communication disability were presented to 144 participants, randomly sampled across multiple public spaces in two Fiji cities. Thematic analysis of responses to 15 survey questions revealed participant beliefs about the causes and attitudes towards people with communication disability.

Results: Three clusters describing perceived causes emerged from the analysis - internal, external, and supernatural. Major clusters across child and adult scenarios were similar; however, response categories within the scenarios differed. Community attitudes to people with communication disability were predominantly negative. These community attitudes influenced individual participants’ beliefs about educational and employment opportunities for Fijians with communication disability.

Conclusion: Determination and acknowledgement of individuals’ belief systems

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informs development of culturally appropriate intervention programmes and health promotion activities.

Implications: Speech-language pathologists and other professionals working with Fijian communities should acknowledge community belief systems and develop culturally-specific health promotion activities, assessments, and interventions.

Keywords: Fijian, multilingual, speech-language pathology, service development, disability perspectives

INTRODUCTION

Our beliefs underpin the development of our attitudes (neutral, positive or negative) and ultimately influence the way we participate in society (World Health Organisation & The World Bank, 2011). Beliefs and attitudes are informed by language, culture, and personal experience and are ‘learned, global evaluations of an object (person, place, or issue) that influences thought and action’ (Perloff, 2008). Research in international communities has revealed that the attitudes of people without disability towards people with disability influences the level of participation a person with disability has in society, and ultimately the level of handicap people with disability experience as a consequence of their disability (e.g., Haines-Wangda, 1996; Maloni et al, 2010; Thompson et al, 2011; Sanchez and Wood, 2016).

Beliefs and Attitudes about Communication Disability

Communication is central to our humanity (Emerick, 1988). Communication disability, a broad term that encompasses many different disorders of communication (e.g., stuttering, aphasia, speech sound disorders) varies significantly in presentation (e.g., type, age groups affected, severity, etc.). Understanding community attitudes to varying types of communication disabilities in different populations (e.g., adults, children) is critical to knowing whether resources need to be developed to reduce any stigma or disadvantage (e.g., socio-economic) experienced by people with communication disability (Thompson et al, 2011; Kavanagh et al, 2015). As it is difficult to capture the diversity among people with communication disability in a single study, few authors have investigated beliefs and attitudes towards communication disorders collectively. Instead, studies regarding beliefs and attitudes towards people with
communication disability have tended to focus on one type of communication disorder, for example, on people who: stutter (Bebout and Arthur, 1997; Pachigar et al, 2011; Abdalla and St Louis, 2012; Arnold et al, 2015); have dysphonia (Yiu et al, 2011; Amir and Levine-Yundof, 2013; Brannstrom et al, 2015); or, speech sound disorders -SSD (Burroughs and Small, 1991; Overby et al, 2007; McLeod et al, 2013). An exception is a Tanzanian study by Marshall (1997), though the closed-question responses that were provided for potential causes of a defined set type of communication disabilities may have inadvertently limited participants’ responses. In all studies, regardless of typology, negative beliefs and attitudes to people with communication disability prevail. The strength of this negativity may be influenced by: (1) the severity of the communication disability - e.g., mild versus severe stuttering (St Louis et al, 2013); (2) the perceived ability of the people with communication disability to control their communication disability - e.g., people with SSD are viewed more positively than those with weak speech (Saunders and End, 2013); and, (3) culture - e.g., Cantonese Americans held more negative beliefs about people with communication disability than European Americans (Bebout and Arthur, 1997).

Beliefs about the Cause of Communication Disability in Fiji

Fiji is a small western Pacific Island nation with a multicultural and linguistically multi-competent population (Hopf et al, 2016). Fiji has signed the United Nations Convention of the Rights of Persons with Disabilities (UNCRPD) (United Nations, 2006), and the Incheon Strategy to ‘Make the Right Real’ for people with disability in Asia and the Pacific (UNESCAP, 2012). Both of these documents identify the human rights of people with disabilities and outline the principles, duties, and obligations of Fiji, as a signatory to overcoming social, legal, environmental and political conditions that act as barriers to the full participation of people with disabilities within society. Provision of services for Fijian children or adults with communication disability is within the portfolios of the Ministry of Health and Ministry of Education, and is incorporated into local policy documents, including the ‘Policy in effective implementation of inclusive education in Fiji’ of the Ministry of Education, National Heritage, Culture and Arts, and Youth and Sports (MoENHCAYS, 2011).

Beliefs about the cause of communication disability in Fiji are unreported; however, there is a small body of work exploring these factors with respect to other disabilities and illnesses. Gill (1988) and Aghanwa (2004) found that participants
in Fiji indicated similar causes for illness despite their studies being almost 20 years apart, having different target groups and different purposes. Gill (1988) surveyed Indian Fijian women and sought to understand beliefs about causation of any illness. Aghanwa (2004) surveyed broadly across the community, and was interested in understanding beliefs about causation of mental illness. In response to the issues being researched, specifically, their study participants cited individual causes such as congenital/genetic, acquired and/or unhealthy behaviour; social causes such as poor relationships with others; and, supernatural causes such as the will of God and witchcraft. While not directly comparable, supernatural causes appeared to be less important to the participants in the study by Aghanwa (2004) than to those in the study by Gill (1988). The lack of belief in witchcraft as a cause of mental illness was ascribed by Aghanwa (2004) as possibly due to the ‘widespread western educational influences’ in Fiji: a phenomenon that needs further investigation.

**Attitudes towards Fijians with Communication Disability**

There has been an improvement in awareness and acceptance of people with disability, according to Maharaj (2011), who wrote about attitudes to disability in the Pacific region. Whether this remains true for people with communication disability in Fiji’s current climate, where literacy and employment are inextricably linked, is yet to be evaluated. People’s attitudes to communication disability may be inferred from the language used to describe the act of communicating. In Standard Fijian there are terms for communicative expertise that have an evaluative meaning, either positive or negative (P. Geraghty, personal communication, 2 September, 2016). For example, the iTaukei concept of talanoa, a meeting of people to discuss matters, is central to the management of important community matters. The importance placed on communication in the iTaukei Fijian culture is supported by the presence of words for a gifted speaker (e.g., cameme, madila) or someone good at explaining things (gusumacala). Words that describe or are associated with communication disability in Standard Fijian include samila (a speech sound disorder such as a lisp), kaka(stuttering) and galu(being mute). Other Standard Fijian words associated with communication disability include yameleka, meaning short-tongued, and cocri, meaning with cleft lip and/or palate (P. Geraghty, personal communication, 2 September, 2016). Fiji Hindi, the language spoken by most Indian Fijians, also includes communication disability terms, specifically goonga for any adult or child that cannot speak, and totlae or huklae for someone who has a stutter (G. Beer, personal communication,
19 September, 2016). The presence of local words associated with communication disability suggests that communication disability occurs in the Fijian community, but whether it is considered a barrier to societal participation has not been described.

Objective
Understanding community beliefs and attitudes to communication disability that reflect the unique linguistic and cultural community needs of Fiji is important for clinicians working with this community. Determination and acknowledgement of individual belief systems is imperative for developing culturally appropriate treatment programmes and health promotion activities (Anderson et al, 2003; Narayansamy et al, 2014). Thus, the main aims of this study are to describe Fijian community members’:

1. Beliefs about the cause of communication disability, and
2. Attitudes towards people with communication disability.

METHOD
This study adopted an interpretive paradigm within a qualitative research design.

Reflexivity Statement
The potential influence of the researcher on the research is acknowledged as per typical qualitative research protocol (O’Toole and Beckett, 2014). In this study, the first three authors are female Australians, and thus community outsiders (despite the first author having spent 7 years as a resident in Fiji) with backgrounds in speech-language pathology and special education. The fourth author is a male iTaukei Fijian, and therefore a community insider. While every effort has been made to balance the insider/outside perspectives of the research team, the authors’ backgrounds may have influenced subsequent data collection, analysis, and interpretation. Thus, in this research an attempt has been made to create a rich view of community beliefs and behaviour surrounding Fijians with communication disabilities through a combination of emic and etic viewpoints. As such, survey methods and analysis seek to hear the personal viewpoint of the kaiviti (Fijian born people) while simultaneously applying an interpretivist approach to data analysis that assumes application of the authors’ implicit knowledge of Fijian culture viewed from the perspective of those who are insiders (kaiviti) and outsiders (kaivalagi: not Fiji born).
Theoretical Orientation

Often research on beliefs and attitudes towards people with communication disability focusses on the immediate context of the individual (e.g., family, school). However, Trani et al. (2011) state that when conducting research there is a need to shift the focus from the individual to include the community in which people with communication disability live. The International Classification of Functioning, Disability and Health – ICF (World Health Organisation, 2001) provides a suitable framework to consider communities’ beliefs about communication disability (Threats and Worrall, 2004). The ICF considers the complex interactions that influence a person’s experience and, ultimately, quality of life by considering the interplay between body functions and structures, activities and participation, and environmental and personal factors. The ICF accommodates coding of causes and attitudes for all health states. The established use of the ICF and the strong link between ICF Environmental Factors and Participation measures (Maxwell et al., 2012) provides a suitable framework for investigating Fijian beliefs and attitudes. The use of the ICF as a theoretical framework suggests a deductive approach to the study; however, to ensure that preconceived notions of the data did not interrupt the inductive nature of the project, the authors did their best to ‘let the field reveal its reality first’ (Yin, 2016).

Participants

Non-proportional quota sampling was the method chosen to recruit participants as it ensured representative sampling of different groups within a population; however, it did not require strict percentages of individuals to reflect actual total population characteristics (Morrow et al., 2007). Participants were randomly selected across a range of sites (e.g., bus stop, shopping centre, produce market, sporting ground), and at variable times of the day and week, to reduce selection bias. Table 1 provides a summary of the demographics of the 144 participants recruited in this study. Participant demographics for gender and age groups reflected population statistics (Fiji Bureau of Statistics - FBoS, 2007). The proportion of iTaukei Fijian participants equalled reported national ethnicity statistics (56.8%); however, the number of Indian Fijian participants (16.7%) was lower than expected (37.5%), and the number of other ethnicity participants (16.0%) was larger than national levels (5.7%). Similarly, the high proportion of participants from an urban residence (past or present) does not reflect the reality of the total Fijian population. Finally, the participants also had higher levels of
Table 1: Participant Demographics (N = 144)

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Table 2: Causes of Communication Disability identified during reassembling (Phase 3) of Data Analysis (N = 144)

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<td>10</td>
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<tr>
<td></td>
<td>Bottle-feed</td>
<td></td>
<td>‘My observation with my 2 toddlers was that one was breastfed and spoke when he was 2. The other was bottle-fed and spoke at 4 1/2 years old’ (P130).</td>
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<td>1</td>
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<tr>
<td></td>
<td>Multilingualism</td>
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<td>‘When there is more than one language spoken at home’ (P44).</td>
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<tr>
<td></td>
<td>Stress</td>
<td>Family</td>
<td>‘I think it can have to do with problems from home. The pressure can do that to people’ (P52).</td>
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<tr>
<td></td>
<td>Peers</td>
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<td>‘It is the environment they are living in. The peer pressure’ (P80).</td>
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<td></td>
</tr>
<tr>
<td>Traumatic experience</td>
<td>‘Shock. For example the loss of a child can send someone back to regress’ (P62).</td>
<td>5</td>
<td>4</td>
<td>9</td>
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<tr>
<td>Unhealthy lifestyle</td>
<td>‘Could be food. If they abuse their way of eating, diet. This can contribute to their disability’ (P97).</td>
<td>11</td>
<td>0</td>
<td>11</td>
<td></td>
<td></td>
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<tr>
<td>Drug use</td>
<td>‘It could be from consuming drugs’ (P25).</td>
<td>24</td>
<td>0</td>
<td>24</td>
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<tr>
<td>Impoverished environment</td>
<td>‘Keeping them locked up at home. There is no socialising’ (P5). ‘Being neglected. Not involved in family activities’ (P102).</td>
<td>17</td>
<td>31</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of exercise</td>
<td>‘It might be lack of physical activities’ (P22).</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of sleep</td>
<td>‘Lack of rest’ (P125).</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>‘They might not be looking after themselves well’ (P47).</td>
<td>10</td>
<td>0</td>
<td>12</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td>114</td>
<td>52</td>
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2. Internal

<table>
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<th>Category</th>
<th>Description</th>
<th>Count 1</th>
<th>Count 2</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>Birth trauma</td>
<td>‘Difficulty at birth of the child’ (P133).</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Cancer</td>
<td>‘Cancer’ (P62).</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Circulatory system</td>
<td>‘Some because of high blood pressure’ (P19).</td>
<td>12</td>
<td>0</td>
<td>12</td>
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<tr>
<td>Existing impairment</td>
<td>‘A disability of some sort, for example a speech impediment’ (P19).</td>
<td>2</td>
<td>21</td>
<td>23</td>
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<tr>
<td>Food allergy</td>
<td>‘Maybe food allergy caused’ (P77).</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Genetic</td>
<td>‘I believe it can be in the genes. It might be genetic’ (P52).</td>
<td>6</td>
<td>24</td>
<td>30</td>
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<tr>
<td>Category</td>
<td>Code</td>
<td>Frequency</td>
<td>Total</td>
<td></td>
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<tr>
<td>------------------------</td>
<td>-------------------------------</td>
<td>-----------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Infection</td>
<td>‘It may be thrush sickness’ (P14).</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Injury</td>
<td>‘They might have been in an accident’ (P54).</td>
<td>19</td>
<td>31</td>
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<tr>
<td>In-utero</td>
<td>‘Maybe the mothers are alcoholic and drank a lot during pregnancy’ (P6).</td>
<td>0</td>
<td>52</td>
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<tr>
<td>Mental health</td>
<td>Depression</td>
<td>2</td>
<td>0</td>
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<td></td>
<td>‘Mental issues. For example depression et cetera’ (P127).</td>
<td></td>
<td>2</td>
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<tr>
<td>Unspecified</td>
<td>‘Mental disease’ (P19).</td>
<td>1</td>
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<tr>
<td>Neurological</td>
<td>Bell’s Palsy</td>
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<tr>
<td>Brain damage</td>
<td>‘Stroke’ (P77).</td>
<td>52</td>
<td>0</td>
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<tr>
<td>Brain tumour</td>
<td>‘Take them to the hospital as they may have suffered a stroke or other medical condition. For example a brain tumour or hearing loss’ (P15).</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Degenerative</td>
<td>‘Degenerative diseases of nerve and muscle system’ (P135).</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Non-specific illness</td>
<td>‘Maybe they are just sick’ (P33).</td>
<td>13</td>
<td>19</td>
<td></td>
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<tr>
<td>Old age</td>
<td>‘Probably because they have grown old’ (P43).</td>
<td>4</td>
<td>0</td>
<td></td>
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<tr>
<td>Sensory</td>
<td>Hearing</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>‘Poor sight’ (P14).</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>127</td>
<td>135</td>
<td></td>
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<tr>
<td><strong>3. Supernatural</strong></td>
<td></td>
<td>254</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>Curse</td>
<td>‘Witchcraft practices’ (P123).</td>
<td>9</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Fate</td>
<td>‘God gave that’ (P82).</td>
<td>4</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>13</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><strong>4. Unknown</strong></td>
<td>Don’t know</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>254</td>
<td>203</td>
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</table>

www.dcijd.org  
Vol. 28, No.1, 2017; doi 10.5463/DCID.v28i1.600
tertiary education experience (47.9%) than previously reported in the general community (13.5%) (FBoS, 2007).

Instruments
The community survey was an adaptation of the survey methodology developed by Wylie et al (2017) for examining help-seeking and self-help for communication disability in Ghana. The current research extended the survey by adapting concepts from Maloni et al (2010) and Marshall (1997). A pilot study of the survey in Fiji revealed good content validity despite the questions having originated in other parts of the world (e.g., Africa). Following the pilot study, the question content remained unchanged but minor changes were made to the mode of gathering demographic information. The final survey contained 15 questions: 7 specific to children, 5 specific to adults, and 3 applicable to either children or adults. Before a specific question on how the participants would help a person with communication disability and what they believed to be the cause of communication disability in either a child or an adult, the following 2 fictional scenarios, developed by Wylie et al (2017), were presented:

1. Child scenario - I would like you to think about your family. Imagine there was a child in your family who was 5 years old and not yet talking (Wylie et al, 2017);

2. Adult scenario - Imagine that there was an adult in your family. When they woke up, you noticed that their speech was not clear and was very difficult to understand. It did not seem to improve. One side of their face was not moving well (Wylie et al, 2017).

Four additional questions probed personal and community attitudes, by enquiring how the community feels about people with communication disability, and what schooling and occupational opportunities should be available for people with communication disability. Finally, participants were asked to comment on any aspect of supporting people with communication disability in Fiji.

Procedure
Ethical clearance was obtained from both the Fiji Ministry of Education (RA 29/14) and Charles Sturt University Human Research Ethics Committee (2014/153). Four data collectors were trained to conduct the interviews: the first, second, and fourth authors, and a female iTaukei Fijian. All four were fluent in English; two were also fluent in Standard Fijian with rudimentary skills in Fiji Hindi. During
training of the data collectors, inter-rater reliability of the first author and each data collector’s interviewee response transcription was compared. Transcriptions of core concepts were in agreement in more than 90% of all cases.

Data was collected across a variety of public sites in the cities of Nadi and Lautoka, in Western Fiji. Data collectors, wearing an identifying T-shirt, approached people at random and provided them with an information sheet (available in English or Standard Fijian, in regular or large print). If the person agreed to become a participant, key information was read out loud by the data collector to ensure that the content had been understood. Participation in the study was voluntary, and informed consent was documented before specific questioning took place. Participants were informed that they could stop the interview at any time. The data collector wrote down the participant’s responses to each question as close to verbatim as possible. After the interview, participants were asked to take the completed form and either place it in a collection box (to denote participation) or keep the form (to denote withdrawal from participation). As a token of thanks, they were then offered a cold drink and biscuit/crackers.

Data Analysis

All interview responses were analysed using inductive thematic analysis, guided by the ‘five phased analytic cycle’ as described by Yin (2016), namely compiling the data, disassembling, reassembling, interpreting, and concluding. The idea was to move beyond a descriptive analysis of the data to identify the meanings behind these experiences. In Phase 1, all interview responses were typed, placed in a spreadsheet, then imported into the computer-assisted qualitative data analysis programme NVivo10. Phases 1 and 2 - compiling and disassembling coding - brought together responses across survey questions related to each study aim. Phase 3 had reassembling coded similar responses across a broad number of groups, and clustered responses. Where a framework was available, it was employed for coding. For example, when coding participants’ employment options for people with communication disability, the International Standard Classification of Occupations or ISCO-08 (International Labour Office, 2012) was applied. Finally, in Phase 4, these clusters were interpreted with reference to existing literature and the ICF, so that in Phase 5 conclusions could be arrived at. For example, while analysing the clusters relating to causal data, it involved following similar processes to those described in Haines-Wangda (1996), Kim (2001) and Aghanwa (2004). During Phases 3 - 5 of the analysis, consensus
checking between the first author and the fourth author, who had conducted the majority of the interviews, was carried out. If there was initial disagreement, discussion took place until a coding consensus could be reached. For reporting purposes, transcribed responses that were incomplete (e.g., due to omission as a result of time constraints during online transcription or Fiji English dialect differences) have been revised to reflect written Standard English grammar. Finally, where some questionnaires were partially incomplete due to interviewer recording error, it has been noted in tabulation.

RESULTS

Community Beliefs about the Causes of Communication Difficulties
Participants reported a large number of novel causes for communication disability. Table 2 lists the clusters, major codes, and sub-codes of reported causes of communication disability. Most participants could provide at least one or more potential cause for communication disability in either a child or an adult. However, there were 13 participants who did not know why a communication disability might occur: 5 participants did not provide an adult cause, an additional 5 did not provide a child cause, and 3 did not provide either an adult or a child cause. Three major clusters emerged from the gathered data: external, internal, and supernatural causes. External causes are ascribed to Environmental Factors from the ICF (WHO, 2001) acting upon the people with communication disability. These causes were judged as being within the direct control of people with communication disability or their caregiver/s. Internal causes, ascribed to impairments of Body Structure or Body Function from the ICF (WHO, 2001), were not attributable to the direct control of people with communication disability. Supernatural causes were also out of their control. Supernatural causes were considered as Environmental Factors (WHO, 2001) pertaining to social norms, processes and ideologies specifically related to spiritual and religious beliefs.

In both scenarios, participants more frequently cited internal rather than external or supernatural causes. In the adult scenario, external and internal causes were relatively evenly distributed; in the child scenario, internal causes were more than twice as many as external causes. These differences were mostly accounted for by the large number of causes related to poor lifestyle choices and life stressors for the adult scenario. Supernatural causes were much less frequent than the other clusters. Curse was evenly distributed for both scenarios, but fate was more than
twice as frequently mentioned for the child scenario. While the major clusters were present for both the child and adult scenarios, the trends within each cluster varied; thus each scenario is dealt with separately below.

**Community Beliefs about the Causes of Communication Difficulties in the Child Scenario**

Internal and external causes, both attributable to negligent caregiver behaviour, were the two most frequently identified causes for communication disability in a child. Poor parental health (an internal cause mostly attributed to the mother during pregnancy) was most often identified as the main cause. In-utero exposure to drugs (e.g., alcohol, marijuana, nicotine, kava), poor maternal diet, and failed abortion attempts were also commented on. For example:

“Comes from pregnancy if the mother doesn’t take care of herself. My friend is a marijuana smoker and her baby came out not talking” (P 98).

“Comes from a lack of vitamins and nutrients when the mum is still pregnant with the child” (P 12).

“I believe that in Fiji when some children are born they have a disability because the mothers try to abort their babies with Fiji medicine” (P 97).

Participants also understood the importance of a rich communication environment for supporting children’s communication development. Consequently, environmental deprivation, an external cause, was the next most frequently identified cause.

“From personal experience, I have seen a 3-year-old unable to speak because his parents neglect him and never talk to him. So he makes sounds instead of speaking. I think neglect by parents can be one of the contributing factors” (P 144).

The next three main causes of communication disability were internal. The blame for the disability shifted from the caregivers to circumstances considered beyond their control. One suggestion was a genetic predisposition:

“Isn’t that a medical question? Genetics. Something to do with genes. Doctors need to answer. That is a big question.” (P 62).

Another cause was a concomitant diagnosis (e.g., autism, learning disability, hearing or visual impairment, physical malformation or dysfunction):
“It can be psychological, for example, a traumatic experience, fear, or shyness. Or a child may have a physical disorder like tongue-tie or deafness” (P 135).

A third cause was accidental physical injury or sickness during birth or early childhood:

“Birth may have caused complications” (P 138).

“Sickness or accident after he/she was born” (P 133).

Consistent with Aghanwa (2004), supernatural causes were hardly reported as a cause for communication disability in a child. As a subcategory, fate was marginally more frequent than curse. With regard to fate, the communication disability was often seen as a gift from God, and an opportunity to learn rather than a punishment:

“I believe it’s God’s willingness to give that child that gift so that we as individuals are able to believe and understand that God is great” (P 17).

In contrast, a curse was a punishment for a historical misdeed done by the caregiver or child:

“Maybe because of the parents. Possibly some things the parents have done in the past” (P 23).

The final causes suggested by participants were all external. Caregiver abuse of the child (e.g., physical, psychological), experiencing family stress, or witnessing a traumatic event, were all thought to lead to a communication disability. Some participants believed that language exposure (e.g., the type or number of languages spoken at home or at school) could cause communication disability:

“Sometimes language. Teachers speak English/Urdu/proper Hindi. At home we speak our language. That’s the problem with the kids” (P 101).

**Community Beliefs about the Causes of Communication Difficulties in the Adult Scenario**

The adult scenario involved the sudden onset of communication disability. It was therefore not surprising that more than one-third of the participants directly mentioned that brain damage, most often stroke (cerebrovascular accident), was the cause of communication disability. Other internal causes that were reported were predominantly medically related. For example, conditions relating to cardiac (e.g., hypertension, myocardial infarction) or neurological function (e.g., Bell’s
Palsy, degenerative conditions) and cancer (brain or body). However, the most prevalent category for cause was external, namely, living an unhealthy lifestyle. Aspects of lifestyle within the control of people with communication disability (e.g., personal drug use, poor diet, lack of sleep or exercise) rated high within this scenario, as did living in an environment where others neglected the people with communication disability (particularly a lack of communication opportunities):

“They don’t take their health seriously. Too much alcohol” (P 16).

“Maybe they were neglected a lot and will find difficulty speaking after sometime” (P 24).

“Being neglected. Not involved in family activities” (P 102).

Mental health causes were classified as both external and internal. External causes were much more frequent and were predominantly related to difficulty in managing life stresses, for example, involving interactions with family, work, peers, or in general. Undergoing traumatic experiences was also a potential cause of communication disability:

“Distress. They’re worried about something and it just snaps their brain. My mum died of stroke. She had high blood pressure. She was angry with my brothers. She was half brain-dead and could only talk in one word” (P 100).

“Too much pressure from work or home” (P 2).

Internal causes related to mental health were rare, but included depression.

Another group of internal causes included infection, illness, and accidental injuries (especially to the head) when the person with communication disability was younger, or more recently:

“Also caused by a sickness that grows on the tongue like small boils. We use layalaya (wild ginger). We clean, we peel, we squeeze, and give to people. Also too many sweets can affect tongue. My cousin had that problem. He is okay now” (P 98).

“Maybe they are just sick” (P 33).

“Could be some injury when they were younger” (P 27).

“Due to a car accident or road casualties that the adult was present in. They might have gotten their nerves damaged” (P 121).
Attitudes towards People with Communication Disability
Attitudes towards people with community disability were noted by asking an indirect question about how the participants thought their community viewed such people, and two direct questions about issues of participation for people with communication disability - specifically, what education and employment opportunities the participants believed should be available to people with communication disability. Each of these is discussed below.

Community Attitudes to Fijians with Communication Disability
The responses of only 130 participants were recorded, as 8 participants’ responses to the question were uninterpretable due to illegible transcription, and 6 participants stated that they did not know how their community viewed people with communication disability. From the responses three clusters emerged: discrimination, disablism, and acceptance. The largest group of participants reported that attitudes to people with communication disability in their community were predominantly discriminatory. They stated that people with communication disability were viewed as less valuable to society, unwanted by some in the community, an object of pity, and the butt of ridicule. Such attitudes resulted in limited opportunities for participation in society:

“Sometimes people look down on people with disabilities. We don’t want to involve them with any activities” (P 37).

“They are not cared for. If we do something, they are only given a little bit of work” (P 97).

“The first reaction will be ‘oh, what a pity’. They feel sorry and think nothing” (P 61).

“Some don’t like them. They make fun of them” (P 65).

The next largest group of participants, those within the disabling cluster, stated that their community viewed people with communication disability as individuals in need of care:

“They support them when they need help” (P 7).

“They find ways to help them so that they can help themselves” (P 106).

“We’ll try our best to get back his normal talking” (P 101).

Within the two main clusters there was a large amount of cross-over. Frequently
participants would mention both community attitudes of discrimination and 
disablism in their responses:

“Some are good. They look after them. While others are bad and do not care for people 
with communication disability” (P 39).

“Some will support them while others discriminate against them” (P 21).

The smallest group of participants mentioned community acceptance of people 
with communication disability:

“My community views communication disability as part of the community and they 
are treated as equal as others” (P 9).

“It’s a normal thing because he’s just a normal human being” (P 41).

The following sections outline how these community attitudes translate to 
participation of people with communication disability in educational and 
employment opportunities.

Education Opportunities for Children with Communication Disability

The majority of participants stated that children with communication disability 
should attend a special school. The remaining participants recommended 
mainstream schooling, and one person recommended home-schooling. Two 
participants did not provide a response. When asked why children with 
communication disability should go to a special school, many of the responses 
were non-specific. Participants did not know exactly what a special school would 
provide that was different to a mainstream school, but responses clustered around 
four themes: specialised curriculum and materials, skill of teachers, supportive 
learning environment, and as a stepping-stone to mainstream schooling. Almost 
half of the participants believed that special schools make learning easier for 
children with communication disability as they have an easier curriculum and 
disability specific materials and teaching methods (e.g., sign language):

“[Special school] is the most best place for a special child with a disability to go to 
because they will learn more and better there” (P 12).

“Because [special school] will be easy, rather than going to a regular school” (P 37).

“Special schools have specially trained teachers and special equipment to meet the 
needs of disabled children” (P 123).
Many participants also believed that teachers at special schools had special training to support children with communication disability (or any disability):

“Since at [special school] we have skilful teachers who are able to communicate with them” (P 18).

“[Special school] is the appropriate place where they can be educated because the tutors are specialised in dealing with those cases” (P 55).

“People at [special school] are of the same nature. People at [special school] are trained for the same purpose and same disability” (P 94).

A similar number of participants believed that special schools have a more supportive learning environment than mainstream schools for children who need extra help to access the curriculum. Within this theme the participants’ primary concern was for the child’s emotional state. Consequently participants believed that special schools would be a haven from the discrimination that may be prevalent in mainstream schools. They also believed that special schools had a reduced student-teacher ratio, and that being around children with similar disabilities would create more opportunities for the child with communication disability to develop friendships:

“Regular school will have bullies, whereas in a special school they will be treated well” (P 23).

“Because at [special school] teachers have special training and can deal with individual needs. There are too many kids in a regular classroom to deal with a child with a speech problem” (P 102).

“In regular schools, children with disabilities are vulnerable to bullying and abuse, et cetera” (P 122).

“[Special school] allows for one-on-one teaching. And also being with like-minded children may help” (P 138).

“He or she would be with children that he or she can relate to” (P 131).

The final group of participants, who believed that children with communication disability needed special schools, felt that special schools were a stepping-stone to attending a mainstream school:

“In Fiji they put them in special school and analyse them there. Once the children can do the work, then they move them to regular school. My friend’s child was like
that. He was very slow. He spent one year in a special school then they put him in a regular school. Now he’s in year 8” (P 100).

“Send to special school first to better understand the condition. Regular school afterwards to blend in with the rest” (P 132).

Almost one-third of the participants believed that a child with communication disability should go to a mainstream school. In contrast to those who chose a special school, these participants were aware that communication disability did not presuppose existence of other disabilities (particularly intellectual). These participants thought that mainstream school attendance was a child’s right, that it would support the child’s self-concept development, and it would broaden the knowledge of teachers and typically developing children within the school:

“Everyone is equal and deserves the same education as every other child” (P 30).

“A child with communication disability isn’t necessarily slow or mentally ill. That child may need more care and support in attending a regular school, but at least he or she won’t be condemned to the title of a special needs child” (P 144).

“Allowing students to attend regular school will train all the teachers in our country to be more effective in every aspect of teaching” (P 9).

“It will be hard for the child in the beginning, but it will be a learning process for both him or her and the others [typically developing children]” (P 128).

There was one participant who believed that home-schooling was the best option for a child with communication disability:

“Neither [special or regular school]. I think the ideal situation for a child like this would be to home-school. Having people around him or her that know how they act is important. Regular school may be too harsh and special school would destroy all confidence” (P 120).

**Employment Opportunities for People with Communication Disability**

The majority of participants believed that people with communication disability were employable; however, almost one-fifth did not think a person with communication disability could do any type of work:

“How do they survive? Can’t say much. Go to welfare officer and ask for social welfare” (P 67).
“Can’t work. Someone will have to look after them” (P 75).

Of the participants who stated that people with communication disability were employable, one-sixth believed that these people could do any type of job if they had the right attitude and opportunity to learn:

“People with communication disability can do anything as long as their heart is willing to do it” (P 12).

“People with communication disability are able to do things that an average person can do. The only thing that they cannot do is speaking but that doesn’t mean they are different from us” (P 121).

The majority of the remaining participants believed that people with communication disability could work, but they would be restricted in their choice of employment by the extent of their disability. Referring to working in the tourism industry, one participant said:

“It’s more what they are not available to do. For example, they couldn’t do telecommunications or front-of-house. They can do back-of-house. It’s not harming their intelligence or physical ability I think” (P 62).

Analysis of the jobs suggested by these participants for people with communication disability reveals the group’s diverse beliefs. The two most frequent recommendations were professionals (e.g., artists, musicians, and teachers of the deaf) and elementary occupations (e.g., domestic help, packer, and messenger). Clerical support workers were next, particularly, office jobs that involved typing, followed closely by farming or fishing related occupations (coded as skilled agricultural forestry and fishery workers). Other suitable roles were craft and related trades or workers who worked with their hands (e.g., tailor, carpenter, handicraft maker), and least frequent was driver (coded under plant and machine operators and assemblers). It is noteworthy that no participant suggested that people with communication disability could hold a managerial or armed forces role.

DISCUSSION

The beliefs about the cause of communication disability in this community may relate to external, internal, and supernatural causes. Internal causes, based on concepts of impairment (in Body Structure or Body Function) and disorder or disease states (of a Health Condition), are essentially outside the control of people...
with communication disability (WHO, 2001). However, the study participants almost equally believed that the Environmental and Personal Factors displayed in the social behaviour of people with communication disability and/or their caregivers could similarly cause communication disability. Consistent with Aghanwa (2004), very few of the participants in this study ascribed supernatural causes to communication disability. A shift in causal belief systems has not changed the community attitudes reported. Similarly, as reported by previous authors about other groups of people with disability, people with communication disability are often treated by the members of this community as objects of discrimination or sympathy. When people with communication disability are viewed as different and requiring the help of others, the attitude translates into limited opportunities for meaningful participation in society, as evidenced in the education and employment findings presented. A discussion of each of these points follows.

**Changing Beliefs without Changing Attitudes**

Societal beliefs are an important element of attitude formation acknowledged in Environmental Factors of the ICF (WHO, 2001). Community beliefs about the cause of communication disability were predominantly rooted in an understanding of Western medical science; however, the difference in the adult and child scenarios suggested that these participants are ‘standing on the fence’ regarding beliefs about the cause of communication disability in a child. While they acknowledge the influence of disease and disorder concepts derived from Western medicine, many of them also ascribe social causes and apportion a large amount of blame to deprivation within the child’s pre- or post-natal environment. A positive factor that could be built upon in future health promotion activities is that many participants understand the importance of the social environment and acknowledge the need for a rich communicative environment for development of successful communication.

In contrast to other responses, supernatural causes of communication disability were infrequently mentioned. Initial studies investigating the cause of mental health (Gluckman, 1969) and general illness (Gill, 1988) reported a preponderance of traditional beliefs as the cause of these conditions. This study and two others conducted on mental health (Aghanwa, 2004; Sivakumaran et al, 2015) acknowledge some Fijians’ continued belief in supernatural causes; however, in all studies these beliefs appear secondary to other causes. This finding may suggest
a weakening of traditional beliefs over the intervening time period between these studies. Alternatively, it may also be accounted for by variability in beliefs across health conditions (communication disability versus mental illness).

While traditional beliefs were less frequently reported, this does not appear to have altered community attitudes towards people with communication disability. Participants predominately reported community attitudes as discriminatory or disabbling, and rarely accepting of people with communication disability. Such attitudes suggest that the dominant cultural value is one of social exclusion for people with communication disability. Such attitudes not only are in conflict with the premises of the 2006 United Nations Convention on the Rights of Persons with Disabilities, of which Fiji is a signatory, but also align with the reported view of many people in Western countries (for a summary see Thompson et al., 2011).

**Restricted Educational and Employment Opportunities for Fijians with Communication Disability**

The Convention on the Rights of Persons with Disabilities (United Nations, 2006) recognises that education and employment are a human right for all people with disabilities. The participants in this study placed participatory restrictions on people with communication disability with regard to education and employment. Most participants believed that children with communication disability should go to special schools. This finding may reflect the study’s sampling sites as there are 3 special schools in the area; however, it is more likely consistent with Tavola (2012) who stated that Fijians have a dominant ‘mind-set that children with disabilities should attend separate schools’. Recent efforts to introduce inclusive education (Pillay et al, 2015) to Fiji, and the print and television media associated with these efforts, may have influenced the opinion of the few participants who believed special school was not an option or only to be considered as a stepping stone to mainstream education.

Most participants believed that people with communication disability were employable. Given the high unemployment figures reported for people with disabilities in Fiji (e.g., 89% unemployment reported by FNCDFP, 2010; 78% unemployment reported by Devi, 2012), employment beliefs held by participants, despite the given restrictions, may offer hope. Whether beliefs about employability convert into employment opportunities for people with communication disability requires further investigation. The participants’ recommended employment
areas excluded authority roles (e.g., in the management and armed forces) and included a preponderance of roles that only required low-level formal education. Where professional roles were suggested, these were either related to the person’s disability (e.g., teacher of the deaf, translator of sign language) or a natural talent (e.g., musician, artist). Such beliefs, that assume incorrectly that people with communication disability are incapable of succeeding in advanced formal learning or as leaders in the Fijian community, need to be addressed by raising awareness about the potential of people with communication disability and by providing the necessary community support to ensure that these people reach their full potential.

CONCLUSION

To develop culturally competent models of service delivery for people with communication disability in Fiji, an understanding of community expectations for people with communication disability is important (Hopf and McLeod, 2015). The mismatch between results presented suggests that Fijian beliefs about, and attitudes towards, people with communication disability may be in a state of flux. Addressing negative attitudes requires development of an effective policy response from governments in Fiji and around the world. Thompson et al (2011) suggest that there are three policy levels for attitude change: personal, organisational, and structural. Significant work across all of these levels has been conducted in Fiji (Hopf, 2014); however, there is more that can be done. At the personal level, people with communication disability are rarely, if ever, a focus of disability-related media in Fiji. Raising awareness of the capabilities of people with communication disability through positive portrayal, supported opportunities for contact, and public media presentations may break down persisting stereotypes (Thompson et al, 2011). At the organisation level, resources are required to ensure that the community of people interacting with people with communication disability in education, health, and employment settings are well-informed. Providing widespread information and awareness training about the capacity of people with communication disability to be productive members of the community is a potentially effective method for reducing stigma (Thompson et al, 2011). At the structural level, the much-awaited Fiji ratification of the 2006 United Nations Convention on the Rights of Persons with Disabilities (Parliament of the Republic of Fiji, 2016) will hopefully result in the provision of the necessary resources (e.g., locally-trained culturally and linguistically matched speech-language pathologists / communication disability specialists) to ensure
that people with communication disability have the same opportunities to live happy productive lives as others in the community.

**Implications**

The results of this study suggest that Fijians in the study sample are aware of people with communication disability in their communities and have developed belief systems that influence the participation of these people in society. Speech-language pathologists and other professionals working with Fijian communities should acknowledge the belief systems of this community and develop culturally specific health promotion activities, assessments, and interventions accordingly.

**Limitations**

All efforts were made to ensure the credibility and dependability of the data analysis presented; however, a number of limitations are evident. There were two potential issues with survey design. Firstly, in a multilingual community, the term ‘communication disability’ is potentially confused with the ability to communicate in more than one language, rather than a language disability per se. Possible evidence of this confusion was provided by one iTaukei Fijian participant who, when asked if he/she knew anyone with communication disability, stated, “My cousin is married to an Indian woman and sometimes we don’t understand”. Secondly, structuring the survey with the scenario questions, prior to questions asking about beliefs and attitudes may have predisposed the participants to respond in a certain way. This was more likely in the adult scenario where dominant beliefs about cause were clearly centred on the possibility of the adult in the scenario having had a stroke. The sample of participants is also likely to have influenced results, as there were a higher number of educated urban dwelling participants and fewer Indian Fijian people than the numbers reflected in national statistics. Finally, the authors have interpreted attitudinal responses that indicate that a person requires help, as disabling. Understanding more about how Fijians help people with communication disability could clarify whether the helpful behaviour reported in this study is actually enabling or disabling.

**ACKNOWLEDGEMENT**

Our utmost gratitude to the Fijian community for their involvement in this research: vinaka vakalevu (thank you). Also thanks to Dr Ann Cheryl Armstrong (University of the South Pacific), Dr Paul Geraghty (University of the South Pacific), and...
Pacific), Ms Gina Beer (Fiji National University), Mrs Doreen Caucau and Ms Felicity McKellar for their assistance with preparing this manuscript. Finally, thanks to Mrs Karen Wylie (Ghana/University of Sydney) for generously sharing her PhD research method. This research was supported in part by an Australian government Endeavour Post-graduate Research Scholarship and an Australian Linguistic Society Gerhardt Laves scholarship.

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www.dcijd.org Vol. 28, No.1, 2017; doi 10.5463/DCID.v28i1.600


www.dcjd.org Vol. 28, No.1, 2017; doi 10.5463/DCID.v281i600


www.dcidj.org


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Paper 4

doi:10.1080/17549507.2017.1337226
Communication disability in Fiji: Community self-help and help-seeking support

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Abstract

Purpose: To understand how a Fijian community supports people with communication disability (PWCD) and whether their support is associated with participant demographics.

Method: Thematic analysis of 144 questionnaires that asked about participants’ actions to support a fictional child and adult with communication disability.

Results: Participant responses fell into two categories: what they would do directly (self-help) and people and places where they would seek assistance (help-seeking). Self-help behaviours included: making a change to their own communication style or mode; trying to change their own and others’ behaviour; teaching new skills; praying; changing the physical environment; seeking information independently; assessing or observing; and, using traditional medicine, Western medicine, or traditional belief practices. Help-seeking behaviours included seeking help from: other community members; education professionals; a professional in another country; spiritual leaders; traditional belief practitioners; traditional medicine practitioners; western health care practitioners; or, an alternative provider (e.g. home, orphanage, nursing home). Younger participants and those of iTaukei Fijian ethnicity were more likely to seek help from other community members.

Conclusion: This Fijian community actively supports people with communication disability within available networks. Development of speech-language pathology services for people with communication disability living in similar communities should harness the informal knowledge within these networks.

Keywords: Communication disability; Fiji; professional issues; ICF; developing communities

Introduction

Functional communication is considered a human right and central to successful participation in society (United Nations, UN, 2006). When communication is impaired a person may experience activity limitations and participation restrictions that influence their ability to contribute as equal members of their communities (World Health Organization, WHO, 2001). Communication disabilities have considerable variability in aetiology and presentation. They may be congenital, developmental, or acquired. Resultant impairments can range from mild to profound and involve Body Functions and/or Body Structures involved in speech, language, and/or hearing and Activities and Participation related to communication (WHO, 2001). Communication disability affects a person’s “ability to receive, send, process, and comprehend concepts or verbal, non-verbal and graphic symbol systems” (American Speech-Language-Hearing Association, ASHA, 1993). The level of disability that arises when a person cannot communicate is dependent on Personal and Environmental Factors, including the context and culture in which that person lives; however, communication disability is considered a prevalent condition world-wide (McLeod, McAllister, McCormack, & Harrison, 2014; WHO & The World Bank, 2011; Wylie, McAllister, Davidson, & Marshall, 2013). When required, support for people with communication disability (PWCD) involves individuals, their family and/or the community.

Communication disability in Fiji

The culturally and linguistically diverse Republic of Fiji is located in the south-western Pacific Ocean. In 2007, the Fijian population of 837,271 was predominantly indigenous iTaukei (57%), Indian Fijians (37%) with Indian subcontinent ancestry, and other people with Pacific Islander, European, or
East Asian ancestry (6%) (Fiji Bureau of Statistics, FBS, 2007). Fiji is a secular state; however, in the 2007, population census the majority of Fijians identified themselves as Christian (64.4%), Hindu (27.9%), or Muslim (6.3%) (FBS, 2007). Fiji is traditionally a rural society but urban-drift has resulted in the majority of Fijians now residing in large coastal urban towns and cities (FBS, 2007). Fijians are linguistically multicompetent, speaking on average three languages (Hopf, McLeod, & McDonagh, 2017). The official languages are Standard Fijian, Fiji Hindi, and English. Standard Fijian, Standard Hindi, or Urdu are taught as vernacular languages in years 1–3. Beyond year 3 (age 8), education is conducted in English (Geraghty, 2017). In 2007, 22% of the population had completed 6 or fewer years of primary education, 52.7% had completed an additional 6 years of secondary education, 13.5% had undertaken post-secondary studies.

In March 2017, the Fijian Government ratified the UN Convention on the Rights of Persons with Disabilities (CRPD, UN, 2006). Ratification demands a level of commitment from the Fijian Government to develop culturally and linguistically appropriate services for people with disabilities in Fiji that is embodied in the recently developed 2016–2025 Pacific Framework for the Rights of Persons with Disabilities (Pacific Islands Forum Secretariat, PIFS, 2016). An understanding of the countrywide prevalence of communication disability, the range of services for PWCD, and community methods for supporting PWCD (whether these involve seeking outside help or not) will provide the research data called for in the 2016–2025 Pacific Framework for the Rights of Persons with Disabilities, and help support the Fijian Government to meet its legal obligations for supporting PWCD.

Prevalence of communication disability in Fiji

Quantifying prevalence of communication disabilities in a country is important to establishment of whether the need for services for PWCD is being met (Wylie et al., 2013). In Fiji, communication disability is not measured in the national census data and the available data on prevalence has differing definitions of what constitutes a communication disability. The Fiji National Council for Disabled Persons (FNCDP, 2010) provides a broad definition of “communication disorder” as “speech and language disorders, which refer to problems in communication and in related areas such as oral motor function” (p. 6). This definition appears to encompass both communication and swallowing disabilities. The FNCDP study only reports communication difficulties experienced by, and assistive devices required by, those with hearing or visual impairment, omitting communication disability from other or unknown causes. FNCDP (2010) cite a prevalence figure of 1.3% of people with disabilities who have communication disorder rather than a percentage of the total Fijian population. This 1.3% does not account for communication disability experienced by people with multiple disabilities, who numbered 25.5% of people with disabilities in the report, and is different from data from other countries indicating that the majority of people with disabilities also have a communication disability (WHO & The World Bank, 2011).

An alternative source of prevalence data, but only for children, is the Annual Report of the Fiji Government Ministry of Education, National Heritage, Culture and Arts (MoENHCA, 2014). MoENCHA oversees 17 special schools that provide services for children aged 5–18 who have difficulty accessing the curriculum in the 732 mainstream primary schools. In the 2014 Annual Report, children’s disability categories were listed as “physical, speech, hearing, vision, intellectual, multiple, autisttic, hyperactive, and Down Syndrome” (MoENCHA, 2014, p. 34). MoENCHA Prevalence rates of speech disability for the 17 national special schools reported in the 2014 Annual Report ranged from 0.0% to 70.9%. Once again these data are limited by the population reported (only children attending special schools), lack of definition for what constitutes inclusion in the “speech disability” category reported, and the possible underreporting of the co-occurrence of communication disability in other reported health condition/impairment categories.

Inconsistencies in prevalence data collected by different organisations within and outside Fiji are a concern (Sprunt, 2014). Efforts to more effectively disaggregate disability data within the education system via a trial of a new computer-based coding system will hopefully rectify this inconsistency and bring better understanding of the prevalence of communication difficulties amongst children in Fiji (Sprunt, 2014; Sprunt, Marella, & Sharma, 2016); however, this will not provide an indication of adults with communication disability.

There is recognition in the literature of a significant population of PWCD in Fiji that require support, including specialist services, to ensure their full participation in Fijian society (e.g. Gargett, Llewellyn, Short, & Kleinitz, 2016; Hopf, 2014; Hopf & McLeod, 2015; Hopf, McLeod, McDonagh, & Rakanacce, 2017; Pressman & Heath Lee, 1988; Sweeny, 1988). Until such time that reliable prevalence data is available this literature may have to suffice as evidence of the needs of PWCD in Fiji.

Services for Fijians with communication disability

Provision of evidence-based practices and guidelines for rehabilitation services is a central tenet of the
World Report on Disability (WHO & World Bank, 2011). Speech-language pathologists (SLPs) are internationally recognised professionals who undertake evidence-based assessment, diagnosis and rehabilitation of communication disorders (Llewellyn, Gargett & Short, 2012; WHO, 2013, 2016). These professionals work in conjunction with PWCD, their caregivers and others in a multidisciplinary team (e.g. audiologists, medical practitioners) to reduce the impact of impairments and activity limitations on PWCD’s participation in society (Threats, 2008).

Fiji does not have a local cadre of SLPs (Gargett et al., 2016; Hopf, 2014); however, along with occupational therapy, speech-language pathology was nominated by 33 respondents, from predominantly government and disabled persons organisations, as “the most important” and “most needed” rehabilitation services in the South Pacific (Walji & Palmer, 2012, p. 10). Instead, self- or international aid-funded, volunteer SLPs provide sporadic services (Hopf, 2014). The visiting SLPs usually only work from one site or with one organisation and stay in Fiji from a few days (e.g. providing a workshop) to up 2 years (Hopf, 2014). These ad hoc SLP services are reportedly not meeting the perceived and actual needs of PWCD in Fiji (Walji & Palmer, 2012).

Enderby and Davies (1989), based on an analysis of British data over 30 years ago, suggest that minimum speech therapy provision should equate to 26 qualified SLPs per 100,000 population. This is a predicted ideal for the Minority World context with a much larger population and a lengthy history of speech-language pathology training prior to publication of the Enderby and Davies manuscript. This number also assumes that SLPs are the main providers of services for PWCD. Fiji, a Majority World Country with a relatively small population, no SLP training facilities, and a reported non-SLP workforce already supporting PWCD (Hopf, 2014; Pressman & Heath Lee, 1988) would require a minimum of 217 SLPs if the Enderby and Davies (1989) guideline was applied for the 837,271 people in Fiji (FBOs, 2007). Yet, WHO (2013) reported that only 41% of lower-middle income countries, like Fiji, had more than one SLP per million population. While the ideal numbers and real numbers for SLPs in Minority and Majority World countries are different, the Enderby and Davies (1989) analysis may provide a benchmark for which to aim.

Supports for Fijians with communication disability

In the absence of permanent speech-language pathology services, there is little understanding about how the Fijian community support PWCD. Supporting a person with a disability may involve actions that involve applying a person’s own knowledge (e.g. through self-help techniques) or seeking information from others (e.g. through formal services or informal networks). To date, there is no reported information on self-help or help-seeking behaviours for PWCD in Fiji.

Self-help behaviours

In situations where the formal services for PWCD are limited or difficult to access people often turn to their own knowledge or informal sources of help (self-help) (Marshall, Goldbart, & Phillips, 2007). Auxier, Forster, and Kuruleca (2005) reported that Fijians with mental illness, especially the indigenous iTaukei Fijian population, often turn to their community. This outward focus is consistent with the traditionally practiced collectivist culture of iTaukei Fijians; consequently, they look beyond the self to the leaders in their community (e.g. chiefly family members, elders, and spiritual leaders) to advise them on the best way to live (Auxier et al., 2005; Rao, 2005). However, people of many different cultures reside in Fiji. Indian Fijians represent the other major culture in Fiji. Rao (2005) suggests that Indian Fijians are also collectivist at home but practice individualism in the workplace, evidenced by their historical success as entrepreneurs in Fiji. In contrast, Brison (2007) suggests that this cultural division is not so simple for modern day Fijians who try to balance principles of collectivism and individualism against the needs of any given context. Furthermore, Hopf, MeLeod, McDonagh, and Rakesh (2007) did not find any difference in 144 community respondents’ beliefs about the cause of communication disability based on Fijian sub-ethnic groups. It is possible that iTaukei Fijians and Indian Fijians may support PWCD differently in self-help and help-seeking behaviours. If so, this may influence health prevention and promotion, and planned intervention services, are distributed to these communities.

Wylie and colleagues (Wylie et al., 2016; Wylie, McAllister, Davidson, Marshall, Ampomsah, & Onewa Bampoe, 2017) reported on self-help practices to support PWCD in the Majority World country of Ghana. Ghana has a large population of 26.4 million people, a small cadre of speech-language therapists (SLTs; four citizens and two expatriates), and has recently commenced in-country training of SLTs. Wylie and colleagues identified the activities that the 136 Ghanaian respondents stated they would undertake when supporting a person with communication disability: (1) seek help or advice from others, (2) pray, (3) administer first aid or give traditional medicine, (4) provide comfort, well-being, or opportunities for exercise, (5) undertake teaching activities (e.g. correct the PWCD’s speech, provide educational aids), (6) change their own interaction style and/or attitude, (7) employ others with skills to assist, (8) assess or observe and educate self on best way to help, and (9) seek
funding. These findings provide a useful point of comparison for a similar study in Fiji.

Help-seeking behaviours

With regard to help-seeking, a review by Hopf (2014) identified six alternative potential agents of delivery of intervention for PWCD in Fiji. These were: visiting qualified SLPs, mid-tier workers (e.g. people trained to assist babies born with cleft lip and/or palate), disability care workers (e.g. people working as caregivers in nursing homes and special schools), traditional healers (e.g. herbalists, massage therapists), other professionals trained by SLPs (e.g. teachers, physiotherapists), or family members guided by SLPs.

In Fiji, agents of intervention working in the health or education systems are most often comprised of professionals who have received formal instruction and hold recognised qualifications in their field. Traditional healers may include both complementary and alternative medicine practitioners (e.g. herbalist, masseuse), hereafter referred to as traditional medicine practitioners, and traditional belief practitioners (e.g. spiritualist) whose knowledge is often passed from generation to generation (Singh, 1986).

Jaramillo (2015), in reporting on traditional belief practices for PWCD in Belize, suggests that western medicine and traditional beliefs can complement each other. In Belize, western medicine provides compensatory strategies to alleviate the impact of a communication impairment and a scientific explanation that removes blame from the family, whilst traditional beliefs provide a sense of spiritual healing that helps “families cope with life a disability” (Jaramillo, 2015, p. 48). Western and traditional methods to support PWCD can coexist if both methods do not cause physical or psychological harm to the PWCD.

Professionals from the health and education sectors, including SLPs, are guided by evidence-based practice tied to a developing body of research. The traditional approach to illness and healing comes from a different perspective.

Roberts et al. (2011) estimate that 80% of the Fijian population use herbal medicine. According to Singh (1986), Indian Fijian traditional medicine practitioners focus on healing a variety of ailments (physical and mental) with naturally occurring ingredients in response to evaluation of a person’s bodily symptoms (much like a western health practitioner). Singh (1986) lists only one herbal medicinal use related to communication; that is, garden mint leaf juice as a medicinal cure for “hoarseness and loss of voice” (p. 70). The methods of Fijian traditional belief practitioners, still the preferred help-agent for some Fijians with mental health illness (McDonald, 2015; Sivakumaran, George, Naker, & Nandanachandran, 2015), are generally cloaked in secrecy (Singh, 1986). Fijian traditional belief practices are reported to listen to the client’s complaints and interpret their maladies as a consequence of imbalance in the client’s spiritual existence (e.g. curse, possession). Spiritualist treatment is said to focus on blessing curative agents (e.g. threads to be worn, ash, water, oil), chanting, prayer, and following rituals related to food (e.g. fasting) or activity (Singh, 1986). For example, children wear tokens related to supernatural and spiritual beliefs affixed to their clothing or person (e.g. crucifix, prayer beads/strings, herbal pouches).

Wylie et al.’s (2016; 2017) study in Ghana reported on help-seeking practices to support PWCD. Wylie et al. identified six sectors to which the 136 Ghanaian respondents stated they would seek help from when supporting a person with communication disability: (1) western health care (e.g. doctor, specialist, nurse, SLP), (2) religion (e.g. God, mallow, imam, priest), (3) traditional belief (e.g. spiritualist, fetish priest, witchdoctor), (4) traditional medicine (e.g. herbalist, native doctor), (5) education (teachers), and (6) community (e.g. elders, community members). These results reveal the rich tapestry of help-seeking behaviour in which Ghanaians engage.

Currently, it is not known what self-help methods Fijians apply to support PWCD or which formal or informal services are accessed (help-seeking) to support PWCD. Knowledge of these behaviours may help to inform future service enhancements aimed at supporting the needs of PWCD in Fiji.

Study aims

(1) To describe what a community of Fijians believe that they, and other people, would do to support a person with communication disability. In describing this we sought to identify (a) What self-help methods Fijians apply to support PWCD; (b) Which agents of intervention that Fijians seek help from PWCD.

(2) To evaluate whether self-help and help-seeking actions described by the community are correlated with demographic attributes (e.g. ethnicity, home language, age, gender).

Method

This study applied mixed methods using an interpretivist paradigm and the International Classification of Functioning, Disability, and Health (ICF, WHO, 2001) as the framework. Ethical approval for this study was provided by the Fiji Ministry of Education, National Heritage, Culture and Arts (MoENHCA, RA29/14) and Charles Sturt University Human Research Ethics Committee (2014/153).

Reflective statement

We acknowledge the potential influence of the researchers’ cultural and educational backgrounds.
on the results presented (O’Toole & Beckett, 2014). The first four authors are academics with backgrounds in speech-language pathology, special education and educational psychology. The first author has lived in Fiji for 7 years and the fifth author is iTaukei Fijian, and, therefore, a community insider. As cultural outsiders, the first four authors have respectfully sought to apply concepts of the Taalona research protocol described by Otsuka (2005). Specifically, our planning involved collaboration with, and our interpretations have been cross-checked with, cultural insiders from the Fijian community. These collaborations involved community members of different ethnicity, age, gender, and education; including the fifth author.

**Participants**

There were 144 adults who participated in the community survey. The participants were randomly selected across a range of sites (e.g. bus stop, shopping centre, produce market, sporting ground), at variable times of the day, in two urban western Fiji towns (Nadi and Lautoka) using non-proportional quotas sampling. This method was chosen as it ensured representative sampling of different groups within the Fijian population without requiring strict percentages of individuals to reflect actual total population characteristics (Morrow et al., 2007). Participants identified as female (n = 71, 49.3%), male (n = 69, 47.9%) or did not specify their gender (n = 4, 2.8%). The participants identified as iTaukei Fijian (n = 82, 56.9%), Indian Fijian (n = 24, 16.7%), of ‘other’ ethnicity (n = 23, 16.0%), or unspecified (n = 15, 10.4%). Whilst gender, age and percentage of iTaukei Fijian participants reflected population characteristics described in the 2007 census (FBos, 2007), there was a lower percentage of Indian Fijian participants, and higher percentage of other ethnicity, urban dwelling, and tertiary educated participants than might be expected by national statistics. Table I provides a summary of the demographics of the 144 participants recruited in this study. Forty-one participants provided written responses and 114 provided verbal responses that were transcribed by a member of the research team.

**Instruments**

The community survey was an adaptation of survey methodology developed by Wylie and colleagues (Wylie et al., 2016, 2017) examining help-seeking and self-help for communication disability in Ghana. The current research adapted the questionnaire for the Fijian context and incorporated concepts from

Table I. Comparison of participant demographics with proposed supports for people with communication disability (n = 144).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Self-help only</th>
<th>Help-seeking only</th>
<th>Both self-help and help-seeking</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Child scenario</td>
<td>Adult scenario</td>
<td>Child scenario</td>
<td>Adult scenario</td>
</tr>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Female</td>
<td>25 (18.1)</td>
<td>11 (8.4)</td>
<td>34 (24.6)</td>
<td>46 (35.1)</td>
</tr>
<tr>
<td>Male</td>
<td>23 (16.7)</td>
<td>8 (6.1)</td>
<td>34 (24.6)</td>
<td>52 (39.7)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>6 (4.3)</td>
<td>1 (0.8)</td>
<td>10 (7.0)</td>
<td>10 (7.0)</td>
</tr>
<tr>
<td>20-&lt;30</td>
<td>13 (9.4)</td>
<td>3 (2.3)</td>
<td>22 (15.8)</td>
<td>31 (23.5)</td>
</tr>
<tr>
<td>30-&lt;40</td>
<td>16 (11.5)</td>
<td>5 (3.9)</td>
<td>21 (14.7)</td>
<td>26 (18.3)</td>
</tr>
<tr>
<td>40-&lt;50</td>
<td>5 (3.6)</td>
<td>4 (3.0)</td>
<td>9 (6.3)</td>
<td>13 (9.2)</td>
</tr>
<tr>
<td>&gt;50</td>
<td>7 (5.0)</td>
<td>5 (3.8)</td>
<td>16 (11.5)</td>
<td>15 (10.9)</td>
</tr>
<tr>
<td>Main language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fijian</td>
<td>30 (23.1)</td>
<td>13 (10.5)</td>
<td>43 (30.2)</td>
<td>56 (40.0)</td>
</tr>
<tr>
<td>Fiji Hindi</td>
<td>9 (6.9)</td>
<td>3 (3.0)</td>
<td>12 (8.5)</td>
<td>14 (10.4)</td>
</tr>
<tr>
<td>English</td>
<td>5 (3.6)</td>
<td>4 (3.0)</td>
<td>9 (6.3)</td>
<td>13 (9.2)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.8)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iTaukei</td>
<td>32 (25.0)</td>
<td>13 (10.5)</td>
<td>45 (32.1)</td>
<td>58 (42.0)</td>
</tr>
<tr>
<td>Indian</td>
<td>7 (5.5)</td>
<td>3 (2.3)</td>
<td>10 (7.0)</td>
<td>13 (9.2)</td>
</tr>
<tr>
<td>Other</td>
<td>7 (5.5)</td>
<td>1 (0.8)</td>
<td>14 (10.9)</td>
<td>16 (11.5)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>4 (2.9)</td>
<td>2 (1.5)</td>
<td>6 (4.3)</td>
<td>10 (7.1)</td>
</tr>
<tr>
<td>High-school</td>
<td>19 (13.6)</td>
<td>9 (6.8)</td>
<td>28 (20.0)</td>
<td>37 (26.3)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>25 (17.9)</td>
<td>6 (4.5)</td>
<td>31 (22.3)</td>
<td>37 (26.3)</td>
</tr>
<tr>
<td>Parental status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>22 (15.6)</td>
<td>9 (7.6)</td>
<td>31 (22.3)</td>
<td>40 (28.6)</td>
</tr>
<tr>
<td>No</td>
<td>23 (16.4)</td>
<td>6 (5.1)</td>
<td>29 (20.6)</td>
<td>35 (25.0)</td>
</tr>
<tr>
<td>PWCD contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8 (6.3)</td>
<td>2 (1.7)</td>
<td>10 (7.0)</td>
<td>12 (8.5)</td>
</tr>
<tr>
<td>No</td>
<td>36 (28.3)</td>
<td>15 (12.5)</td>
<td>40 (28.6)</td>
<td>55 (39.0)</td>
</tr>
</tbody>
</table>

PWCD, people with communication disability. n.s. = p value was not significant.
Maloni et al. (2010) and Marshall (1997). The Fijian community survey included 15 questions (predominantly open-ended) about the support needs of people with communication disability in Fiji. The questions were set against two fictional scenarios of a person with a potential communication disability developed by Wylie et al. (2017). In the first child scenario, participants were asked “to think about your family. Imagine there was a child in your family who was 5-years-old and not yet talking at all” (Wylie et al., 2016, 2017). In the second adult scenario, participants were asked to “imagine that there was an adult in your family. When they woke up, you noticed that their speech was not clear and was very difficult to understand. It did not seem to improve. One side of their face was not moving well” (Wylie et al., 2016, 2017). In both scenarios the interviewer asked the participant to respond to questions about what they would do and from whom they would seek advice or help. Given previously reported reticence of people to talk about their use of traditional practices (Byford & Veenstra, 2004), both direct questions from Wylie et al. (2017; e.g. “What would you do? Is there anything you can think of that you would do to your own behaviour or change at home to help with the talking? Who would you go to for advice or help?”), and indirect questions from Wylie et al. (2017; “What do you think other people might do, or what are some other places they would go for help?”) were asked to elicit possible agents of intervention sought by Fijians wanting to support PWCD. Piloting of the community questionnaire confirmed that it was culturally appropriate for the Fiji setting even though it was informed by work undertaken by Wylie et al. (2017) and Marshall (1997) in Africa, and Maloni et al. (2010) in Bangladesh.

Procedure

Four research assistants were trained to administer the community questionnaire: the first two authors and two iTaukei Fijian university students. Participants were approached by one research assistant randomly at each site and asked if they had time to respond to a short questionnaire on communication disability. If they said yes, they were given a survey information sheet that outlined the purpose of the study and participant and research assistant responsibilities. In cases where participants only skimmed or glanced at the information sheet, the research assistant read through each section to ensure the participant understood their commitment before commencing. Once confirmation of understanding was obtained, consent was documented on the record form, and the formal interview began. Participants had the choice of writing or verbalising their responses. Participants who chose to write their responses were asked to complete the questionnaire independently. Participants who chose to respond verbally were interviewed by a research assistant who transcribed responses verbatim, as much as possible, to retain the integrity of the information. In cases where a speaker’s speech rate was too rapid for verbatim online transcription, core concepts were recorded with as much verbatim information as possible.

At the completion of the questionnaire, participant consent was once again confirmed by asking the participant to place their completed form into a box. Some participants were then offered a cool drink and snack (depending on the context of the interview).

Analysis

Qualitative analyses were conducted before the quantitative analyses. A thematic analysis was conducted incorporating the five-phased analytic cycle by Yin (2016) (for a full description see Hopf, McLeod, McDonagh, & Rakanace, 2017). Data were coded using computer assisted qualitative data analysis program NVivo10 (QSR International Pty Ltd, 2012).

For the quantitative data analysis, thematic categories, clusters and sectors identified during qualitative analysis and demographic information were then coded using SPSS® Statistics Version 23.0 (IBM®, 2015). Descriptive statistics determined the frequency of responses for categorical variables (n and %) or for continuous variables (M and SD). The percentage of valid cases was reported.

To determine associations between categorical variables (e.g. ethnicity and help-seeking sector), the data were analysed using non-parametric statistics. Chi-square tests of independence were conducted between participant intentions for people with communication disability (self-help/help-seeking/both) and demographic information for both the child and adult scenarios. Chi-square analysis requires at least 80% of the cells with expected frequencies at, or above, five. In cases with more than 20% of the cells with expected frequency less than five we used Fisher’s exact test which produces the exact probability of the Chi-square statistic that is accurate when sample sizes are small. We also referred to standardised residuals to understand the nature of the associations. Standardised residuals larger than 2 indicate that a particular cell was significantly higher or lower than the expected, contributing to the overall significance of the Chi-square test statistics. Cramer’s V and odds ratio were used to interpret the effect size. A Cramer’s V value of 0.1 indicates a small effect, a value of 0.3 indicates a medium effect, and a value of 0.5 or greater indicates a large effect (Cohen, 1988). Finally, either Mann-Whitney U Tests or Kruskal-Wallis tests were used to determine whether any given demographic were associated with the number of help-seeking sectors identified for themselves, others or combined (self plus others).
Result

Community supports for Fijians with a communication disability

Participants’ initial responses fell into two categories: actions they would take themselves (self-help) and people and places where they would seek assistance (help-seeking) to support a child or adult family member with communication disability.

In the child scenario (n = 144), the majority of participants stated that they would seek help for the child (n = 71, 49.3%). A further 49 participants (34.0%) stated that they would engage in self-help, whilst 22 participants (15.3%) stated that they would engage in both self-help activities and seek-help from others. Two participants (1.4%) stated that they did not know what they would do.

For the adult scenario (n = 135), participants more frequently stated that they would seek help (n = 101, 74.3%) compared with those that would only offer their own help (n = 19, 14.0%), or both self-help and seek help (n = 15, 11.0%) and only one participant (0.7%) stated they did not know what they would do. Table I outlines the results for self-help and help-seeking behaviour according to participant demographics for each scenario. Thematic analyses of participants’ responses for self-help and help-seeking are discussed below.

Self-help methods Fijians apply to support PWCD

The Fijian participants described a diverse range of self-help methods to support PWCD. Ten thematic clusters were identified as described below and in Table II. A change to their own communication style or mode was the most prevalent method indicated to support PWCD for the adult scenario, and second most prevalent for the child scenario. More specific behaviour changes often involved adjusting aspects of pragmatic/social language (horo we say something rather than the content of what we say). For both the adult and child scenarios, participants stated that they would need to speak clearly, slowly, softly, or kindly:

- “Say things clearly to him. If there is no understanding, then use gesture to show needs, and introduce symbols” (P102-adult).
- “I will speak slowly so they can understand” (P50-adult).
- “I would change the tone of speech. [PWCD] should not see anger displayed in my speech” (P61-adult).

Many participants also suggested using gesture, written communication and formal sign language systems. For example:

- “I would teach him how to talk by using sign language” (P49-child).
- “I would love to communicate with that adult using the sign language” (P140-adult).

Using a specific teaching strategy to support PWCD was more prevalent in the child scenario (highest frequency response) than the adult (7th highest response). There was a wide range of suggested teaching activities for children. The most prevalent involved increased language stimulation (more time spent with the child speaking together) and increasing one’s expectations regarding the child’s verbal output. These activities included using literacy materials, labelling, articulation training, story telling, and singing. For example:

- “Whenever I use something, I’ll show him and mouth the name in front of him so he can say it out loud” (P11-child).
- “I would use story books. Reading daily to the child can be a way of helping the child” (P111-child).
- “Call to the child ‘Come and sit’. Tell a story” (P93-child).
- “Try to read and sing to the child. Keep the child active verbally” (P42-child).

Others thought that watching educational television programmes could help children with a communication disability: “Try and get him to watch kids cartoon, for example Dora. Dora has repetition to help build speech and communication” (P102-child). For the adult scenario the most frequent teaching strategy was language stimulation by allocating more time together with PWCD.

The second most prevalent method for supporting an adult with communication disability, and the third most for supporting a child was for the participant to change their own or others behaviour around PWCD. Frequently this was a non-specific change. For example, in the child scenario, many participants wanted to “give [the child] love and take care of them” (P83-child), or “just try to help [the child] learn how to speak” (P57-child). In the adult scenario participants said they would “act friendly” (P34-child), or “be very patient and understanding” (P112-child).

Participants’ religion was not recorded but “prayer” featured frequently in both the adult and child scenarios. Praying with PWCD was seen as an opportunity to both increase interaction and seek God’s support in PWCD’s recovery. Participants also thought that they would need to improve the overall wellbeing of PWCD. They stated they would achieve this by being generally helpful or, more specifically, by improving PWCD’s mood, living environment and physical health (through diet change or exercise):

- “I would give him all the support and give him the right food that can help with his or her vocal chords” (P28-child).
- “I’ll try my best to help him or her in any way possible” (P57-child).
- “I will try and keep him or her happy” (P58-adult).
Table II. Self-help methods, identified by participants for themselves and others, for a child or adult with communication disability (n = 144).

<table>
<thead>
<tr>
<th>Self-help behaviour</th>
<th>Participant examples for child scenario</th>
<th>Participant examples for adult scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change own communication style or mode</td>
<td>Use sign language; change the way I talk; talk slowly; speak clearly; speak softly; speak one language; speak kindly; speak like an adult; try to understand, do not rush what they are trying to say, simplify language; [talk] with a lower tone; speak face-to-face</td>
<td>Use hand gestures; use sign language; write down to communicate; speak clearly; speak softly; talk slowly to them; speak kindly; keep on talking to them; pay more attention to what they say; listen carefully; try to understand; change the way I talk to the adult; try to be close to him at every time when talking</td>
</tr>
<tr>
<td>Change own and others’ behaviour</td>
<td>Have patience; be kind; encourage the child; give him all the love and care he needs; give the child special attention; spend one-on-one time with the child; take them to gatherings; bring myself to the child’s level; treat equally – the same as a normal kid; stop siblings talking for them</td>
<td>Be kind; be patient and understanding; be humble, cautious and support that person; love them and treasure them; I would spend a lot more time with that adult trying to make them talk; act friendly; respect him; be calm, get yourself together; encourage, talk positive to him or her</td>
</tr>
<tr>
<td>Teach them</td>
<td>Make conversation; talk more; try and teach him how to talk; read to them regularly and ask lots of questions; play child programmes that help them educationally; encouraging sessions in speech pronunciation, listening, speaking, etcetera; showing them things and saying “this is this”; work with music and song; tell a story; make the child talk; learn another language; teach him or her sign language; play games to make communication fun</td>
<td>Change the vocabulary we use in our conversations; help them talk and how to pronounce the words; tell them to repeat themselves; encourage short sentences, use of pictures, writing down, etcetera; we sang hymns she enjoyed and when she felt like it she would hum or sing certain words</td>
</tr>
<tr>
<td>Pray</td>
<td>Exercise our faith through prayers and fasts and believe that some day a miracle healing will come through, pray together.</td>
<td>I will pray for him or her; pray; pray for him.</td>
</tr>
<tr>
<td>Change the environment</td>
<td>Give the child healthy food and lots of exercise; create a playing area; keep the noise down</td>
<td>Ask everyone at home to care for him more; change that adult’s diet and get him or her to do regular exercise; he should be comfortable with less noise, and his own room that is spacious and clean</td>
</tr>
<tr>
<td>Seek information independently</td>
<td>Get some information; try and find some ways to help him or her to be able to talk; research the subject</td>
<td>Research what I can do to help me understand what’s going on; maybe try and find out reason</td>
</tr>
<tr>
<td>Assess or observe</td>
<td>Just learn from his or her actions what they want to do</td>
<td>Observe it, then see if it’s within my capacity to help; say “what’s wrong, what happened? Is any part of the body paining or do you want a massage?”</td>
</tr>
<tr>
<td>Use traditional medicine practices</td>
<td>In Fiji we use herbal medicine, give it to kids, and some can then talk; I would give him or her some herbal medicine to drink</td>
<td>Give him a massage, or some Indian herbal medicine; drink herbal medicine; use warm water all over their body that would help them</td>
</tr>
<tr>
<td>Use western medicine practices</td>
<td>–</td>
<td>Give them medication; give them medicine; put ice on face</td>
</tr>
<tr>
<td>Use traditional belief practices</td>
<td>–</td>
<td>Take them to a hot spring; we can do some actions or make them things that will make them talk; pull out their tongue</td>
</tr>
</tbody>
</table>

“Take them for physical exercise or get somebody with experience to train them. Make healthy meals” (P20-adult).

A number of participants stated that they would give PWCD traditional medicine. In the child scenario, only herbal medicine was mentioned, whilst in the adult scenario massage and herbal medicine were mentioned. In addition a very small number of participants stated that they would use western medicine or traditional belief practices for adults. Western medicine involved giving over-the-counter pharmaceuticals (e.g. paracetamol). Traditional belief practices were described generally, for example P105-adult said, “We can do something like actions or make them things that will make them talk”.

Agents of intervention that Fijians use when seeking help for people with communication disability

Thematic analysis revealed many agents of intervention that grouped into eight sectors from which participants proposed to seek help themselves or that they believed from where others would seek help for PWCD: community member, education professional, agent in another country, spiritual leader, traditional belief practitioner, traditional medicine practitioner, western health care practitioner and an alternative provider. In the case of alternative providers, participants used this response to indicate the situation when they or another person did not seek help from a specific expert, for example, “Most do nothing. They stay in village. Don’t go to school” (P79-child), or when they mentioned sending PWCD to a community institution (e.g. an orphanage or nursing (old-people) home). Table III provides examples of the participant descriptors within each thematic sector.

The total number of sectors identified by each participant did not differ significantly for the child (M = 2.9, Median = 3, range = 0–6) versus adult scenarios (M = 2.5, Median = 2, range = 0–6). Trends within the data reflecting how often a particular sector was mentioned as somewhere the
Table III. Help-seeking sectors, identified by participants that would be used by themself and others, for a child or adult with communication disability (n = 144).

<table>
<thead>
<tr>
<th>Help-seeking sector</th>
<th>Participant examples of descriptors</th>
<th>Child scenario</th>
<th></th>
<th>Adult scenario</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Self n (%)</td>
<td>Other n (%)</td>
<td>Self n (%)</td>
<td>Other n (%)</td>
</tr>
<tr>
<td>Community member</td>
<td>Relatives, friends, elders, neighbours, government, world-wide-web, PWCD and caregivers, non-government organisations</td>
<td>65 (45.1)</td>
<td>37 (25.7)</td>
<td>58 (40.3)</td>
<td>28 (19.4)</td>
</tr>
<tr>
<td>Education professional</td>
<td>School, special school, teachers, university teacher, kindergarten, children’s centre, Hilton school, preschool, Suva Gospel school, tutorials</td>
<td>48 (33.3)</td>
<td>18 (12.5)</td>
<td>1 (0.7)</td>
<td>2 (1.4)</td>
</tr>
<tr>
<td>Agent in another country</td>
<td>Travel overseas</td>
<td>1 (0.7)</td>
<td>2 (1.4)</td>
<td>0 (0.0)</td>
<td>3 (2.1)</td>
</tr>
<tr>
<td>Spiritual leader</td>
<td>Pastor, priest, ministry, church leaders, church minister, preacher, temple, mosque, prayer groups</td>
<td>27 (18.8)</td>
<td>35 (24.3)</td>
<td>23 (16.0)</td>
<td>26 (18.1)</td>
</tr>
<tr>
<td>Traditional belief practitioner</td>
<td>Witchcraft, witchdoctor, hot spring, special clans, magical streams</td>
<td>0 (0.0)</td>
<td>18 (12.5)</td>
<td>1 (0.7)</td>
<td>20 (13.9)</td>
</tr>
<tr>
<td>Traditional medicine practitioner</td>
<td>Masseuse, herbalist, village doctor, Fijian medicina, traditional doctor, herbal medicine, alternative remedies</td>
<td>9 (6.3)</td>
<td>20 (13.9)</td>
<td>11 (7.6)</td>
<td>16 (11.1)</td>
</tr>
<tr>
<td>Western health care practitioner</td>
<td>Hospital, doctor, medical, nurse, health centre, specialists, qualified people, expert, therapist, counselor, psychiatrist, dispensary, ambulance, speech-language pathologist, physiotherapist, therapist</td>
<td>97 (67.4)</td>
<td>27 (18.8)</td>
<td>125 (86.8)</td>
<td>27 (18.8)</td>
</tr>
<tr>
<td>Alternative provider</td>
<td>Old-people’s home, orphanage, the village, leave at home</td>
<td>0 (0.0)</td>
<td>9 (6.3)</td>
<td>3 (2.1)</td>
<td>7 (4.9)</td>
</tr>
</tbody>
</table>

Figure 1. Help-seeking sectors, reported by Fijian participants (n = 144) to be used by themself and others, for a child or adult with communication disability, listed from highest frequency to lowest.

participant stated they versus another person would go are illustrated in Figure 1. For both scenarios participants stated that they would primarily seek help from a western health care practitioner (e.g. doctor, nurse). In contrast, for the child scenario, participants stated that other people would most likely seek help from their community or a spiritual leader before seeking the expertise of a western health care practitioner. Similarly, in the child scenario, no participant said that they would personally access a traditional belief practitioner or an alternative provider; however, they thought that other people would use these sectors. A similar trend was noted for the adult scenario where other people were believed to more likely access traditional belief practitioners or an alternative provider (usually via placement in a nursing home).

**Correlation of participant demographics with help-seeking sectors**

A series of non-parametric analyses were conducted to determine if participant demographics were correlated with reported supports. Chi-Square tests of independence indicated no significant associations for the adult or child scenarios, between the categories of self-help, help-seeking, or both and the participants’ main language, age, gender, ethnicity, level of education and previous contact with a person with communication disability (Table I). However, correlation of demographics with the identified seven help-seeking sectors revealed numerous significant associations with participants’ age, main language, ethnicity, education level and parental status (Table IV).
Age

With respect to participants’ age, both the child ($\chi^2 (2, n = 141) = 8.60, p = 0.01$; Cramer’s $V = 0.25$) and adult ($\chi^2 (2, n = 134) = 6.05, p = 0.05$; Cramer’s $V = 0.21$) scenarios revealed age effects when the participant was referring to themselves and whether they would seek help from the community. For the child scenario, participants aged less than 30 were 4.6 times more likely, and participants aged between 30 and 50 were 3.2 times more likely, to say that they would seek help from the community than participants aged over 50. For the adult scenario, participants aged less than 30 were 2.4 times more likely than participants aged between 30 and 50, and 2.6 times more likely to say that they would seek help from the community than participants aged over 50.

For the adult scenario, participants’ choice of the traditional belief sector as a preferred help-seeking sector for others was significantly associated with age, $\chi^2 (2, n = 104) = 7.40, p = 0.03$; Cramer’s $V = 0.27$. Participants aged less than 30 were 4.8 times more likely, and participants aged over 50 were 6.4 times more likely than participants aged 30-50 to say that others would go to a traditional belief sector for help.

A Kruskal–Wallis test revealed a statistically significant difference in the total number of sectors identified for themselves, for the adult scenario, for age of participant (Gp1, $n = 53$: 18–29 years, Gp2, $n = 59$: 30–49 years, Gp3, $n = 22$: 50+ years), $\chi^2 (2, n = 134) = 6.35, p = 0.04$. The younger group (18–29 years) recorded more sectors with a higher median score ($Md = 2$) than the other two age groups, which both recorded median values of one.

Main language

Main language was significantly associated with community member as the preferred sector for themselves in the adult scenario, $\chi^2 (3, n = 126) = 10.40, p = 0.01$; Cramer’s $V = 0.29$. Fijian dialect speakers were 4.4 times more likely, and English speakers were 3.5 times more likely, to seek help from a community member than Fiji Hindi speakers.

Ethnicity

Ethnicity was significantly associated with community member as the preferred sector for themselves in the adult scenario, $\chi^2 (2, n = 122) = 6.40, p = 0.04$; Cramer’s $V = 0.23$. iTaukei Fijians were 2.0 times more likely than Indian Fijians, and 3.8 times more likely than participants of another ethnicity to seek help from the community. For the child scenario, participants choice of a community member as a preferred help-seeking sector for others was also significantly associated with participant’s ethnicity level, $\chi^2 (2, n = 101) = 6.93, p = 0.03$; Cramer’s $V = 0.26$. Participants who were Indian Fijian were 3.2 times more likely and participants with other ethnicity were 3.1 times more likely to say that others would seek help from the community. For the child scenario, ethnicity was associated with the choice of the education sector when referring to themselves ($\chi^2 (2, n = 129) = 8.86, p = 0.01$; Cramer’s $V = 0.26$). When referring to themselves, participants who were iTaukei Fijian were 3.7 times more likely than Indian Fijian participants and 3.5 more likely than participants of another ethnicity to say that they would personally seek help from the education sector.

Education level

For the child scenario, participants’ choice of the spiritual leader as a preferred help-seeking sector for themselves was significantly associated with participants’ education level, $\chi^2 (2, n = 142) = 7.64, p = 0.02$; Cramer’s $V = 0.23$. Participants who had a primary school education were 6.6 times more likely than high school-educated participants, and 3.3 times more likely than tertiary educated participants, to seek help from a spiritual leader for a child with a communication disability.

A Kruskal–Wallis test revealed a statistically significant difference in the total number of sectors identified for themselves, for the adult scenario across education levels (Gp1, $n = 11$: primary school, Gp2, $n = 58$: high school, Gp3, $n = 66$: tertiary), $\chi^2 (2, n = 135) = 6.46, p = 0.04$. The high school group recorded a higher median score ($Md = 2.5$) than the other two education groups, which both recorded median values of one. This result is likely due to the fact that age and highest level of education are highly correlated. $\chi^2 (2, n = 141) = -0.25, p < 0.01$.

Parental status

Parental status was significantly associated with community member as the preferred sector for themselves in the adult scenario, $\chi^2 (2, n = 120) = 4.31, p = 0.04$, Cramer’s $V = 0.21$. Participants who were not parents were 2.4 times more likely to seek help from a community member than participants who were parents.

A Kruskal–Wallis test revealed a statistically significant difference in total number of sectors identified for themselves, for the adult scenario, for parental status. Post-hoc Mann–Whitney U tests revealed a small statistically significant difference for the adult scenario between different parental status in total sectors for themselves ($U = 1290.0, z = -2.70, p = 0.01, r = 0.24$) and total combined (themselves and others) sectors ($U = 1280.0, z = -2.57, p = 0.01, r = 0.23$). Participants who were parents (Self: $Md = 1.0, n = 71$; Combined: $Md = 2.0, n = 71$) identified fewer sectors than those who were not parents (Self: $Md = 2.0, n = 49$; Combined: $Md = 3.0, n = 49$).

Discussion

In this mixed methods study examining the behaviours of a Fijian community for supporting PWCD,
Table IV. Non-parametric association between demographics and reported help-seeking sectors for people with communication disability (PWCD; n = 144).

<table>
<thead>
<tr>
<th></th>
<th>Community member</th>
<th>Education professional</th>
<th>Agent in another country</th>
<th>Spiritual leader</th>
<th>Traditional belief practitioner</th>
<th>Traditional medicine practitioner</th>
<th>Western healthcare practitioner</th>
<th>Alternative provider</th>
<th>Total sectors stated by participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-practices reported by Fijians</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender*</td>
<td>0.44</td>
<td>0.00</td>
<td>0.94</td>
<td>0.00</td>
<td>0.00</td>
<td>1.36</td>
<td>2.80</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Age</td>
<td>8.60*</td>
<td>6.05**</td>
<td>2.66</td>
<td>1.53</td>
<td>1.48</td>
<td>5.87</td>
<td>2.50</td>
<td>1.53</td>
<td>0.61</td>
</tr>
<tr>
<td>Main language</td>
<td>2.04</td>
<td>10.40**</td>
<td>5.63</td>
<td>4.18</td>
<td>5.76</td>
<td>0.98</td>
<td>4.81</td>
<td>4.18</td>
<td>4.03</td>
</tr>
<tr>
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*Yates’ correction for continuity reported; **Mann–Whitney U test statistic is reported for variables with two categories; *p<0.05 and **p<0.01 for two-tailed correlation analysis.
there was evidence of a broad range of self-help and help-seeking activities.

**Self-help methods for Fijians with communication disability**

The Fijians in this study reported a variety of ways that they would help PWCD in their care: making a change to their own communication style or mode; changing their own and others’ behaviour; teaching new skills; praying; changing the physical environment; seeking information independently; assessing or observing and using traditional medicine, western medicine or traditional belief practices. These responses were firmly centred in the Fijian tradition of respect and universal love for community (Brison, 2007).

Supporting PWCD involved making their lives easier and more comfortable. A number of participants’ suggestions are consistent with possible recommendations that would be made by a SLP, albeit with less specificity than would be expected from a SLP. For example, a SLP may advise a family to supplement, rather than replace, oral communication with another modality (gesture, sign or symbol) to aid PWCD’s comprehension. A SLP also might suggest that communication partners of PWCD modify the manner in which they speak to meet the needs of PWCD, but rather than saying speak slower, kinder or softly, as recommended by the participants, the SLP may also recommend amplification, simplification or extension of specific aspects of the speech signal and/or language content and structure. To ensure that PWCD in Fiji are given every opportunity to meet their potential, it is recommended that the Fiji health, education, and disability sectors improve public awareness of the breadth of possible intervention methods for PWCD.

In many ways, the self-help findings presented for Fiji are similar to those presented by Wylie et al. (2016) for Ghana. For example, participants from both countries would seek help from others; they would try to increase their own knowledge of PWCD’s needs through observation, assessment and seeking additional information; they would change their own communication style or attitude; teach communication strategies and find and use teaching materials; use their own skills in traditional medicine practices and pray. The diversity of responses exemplifies the resourcefulness of the participants in both of these countries. Ideally, future health promotion activities in Fiji will: (1) acknowledge caregivers beliefs about communication disability; (2) consider the knowledge and resources caregivers have available; (3) consider caregivers preferences for service provision; and (4) incorporate evidence-based methods to support the communication development/rehabilitation needs of PWCD.

**Help-seeking sectors for Fijians with communication disability**

The participants in this study were active seekers of help when it came to supporting PWCD. They indicated that they would seek help from: other community members; education professionals; a professional in another country; spiritual leaders; traditional belief practitioners; traditional medicine practitioners; western health care practitioners or an alternative provider (e.g. home, orphanage, nursing home). Individual participants suggested up to six possible sectors where they or others may seek help to support an adult or child with communication disability. Only a small percentage of participants indicated that they or others would do nothing or go nowhere. Of note, the sectors identified in Fiji are similar to those noted for participants in Ghana by Wylie et al. (2016, 2017), the exception being the addition of the overseas help sector for Fiji.

Untreated or poorly treated communication disability has a significant impact on the person’s educational and employment outcomes. Increasing people’s awareness of treatment options for PWCD via health promotion activities in conjunction with the Fiji National Centre for Health Promotion is essential in ensuring that PWCD meet their potential (Negin, Roberts, & Lingam, 2010). Health promotion activities will need to work through existing sectors (e.g. spiritual leaders, traditional medicine practitioners) and acknowledge peoples’ cultural, linguistic, and social differences to ensure access to the broader community and success.

Western health care practitioners were the preferred option for where a person said they would seek help for an adult PWCD in their care and the second most favoured after community members for a child with communication disability (Table III). The fact that participants are looking to western-based medicine and science for help suggests that these participants believe western health care practitioners have skills necessary to support PWCD. Hypothesised reasons for this action may be that they believe western medicine might cure PWCD or absolve them of any blame (Jaramillo, 2015). Or, western health care practitioners may offer PWCD and their caregivers a medical explanation for the communication disability that provides a more socially acceptable explanation for their difficulties (Jaramillo, 2015). The high prevalence of seeking help from western health care practitioners compared with other sectors suggests that this is the sector in which future service enhancements should take place.

The use of non-western medicine options (e.g. spiritual leader, traditional belief practitioner) was more often ascribed to the potential actions of others. However, it is possible that because participants recognised these alternative service providers as valid options for others they may also seek help
from these sectors. Fijians place high importance on the ability to communicate competently; therefore, these participants access many sectors to improve the communication of PWCD. Consistent with Jaramillo’s (2015) findings in Belize, these results suggest that these participants see the validity of western medicine or education practices sitting alongside traditional medicine and beliefs.

Seeking help from the community also ranked highly for both child and adult scenarios. In the child and adult scenarios, participants’ age was associated with whether they personally would consult with the community sector. This finding is likely an artefact of the fact that age may assume greater potential exposure to certain phenomena. So that, younger participants who have less life experience are more likely to seek the advice of more experienced others in their community. Inexperience is also possibly a factor in why younger participants sought help from more sectors than older participants; however, this may also reflect the younger generations’ confidence in accessing alternative sources of community information (e.g., the Internet) and speaking openly about disability in their community.

In addition to age, ethnicity and main language spoken were correlated with the choice of the community sector. These two demographic variables were highly correlated with iTaukei Fijians more likely to speak a Fijian dialect than other ethnicities. This finding suggests that Fijian dialect-speaking iTaukei Fijians were more likely to seek help from their community than other ethnicities or those of the same ethnicity that spoke a different language (e.g., English, or Hindi). However, main language and ethnicity were not associated with the total number of sectors that participants identified. Thus, whilst Fijian dialect-speaking iTaukei Fijians tendency to consult their community is consistent with the reported collectivist nature of this community (Rao, 2005), this behaviour did not limit the scope of help-seeking this sub-group undertook.

The results of this study suggest that in addition to the six agents of intervention suggested by Hopf (2014; visiting qualified SLPs, mid-tier workers, disability care workers, traditional healers, other professionals trained by SLPs, or family members guided by SLPs) community members and spiritual leaders also play an important role in supporting PWCD in Fiji. To improve service delivery for Fijians with communication disability, it will be important to develop a policy dialogue between all of the identified sectors that operate across sections of the community. It will also be important for future research to partner with PWCD and their caregivers to examine which sectors are more effective than others.

Limitations
The survey questions were based on scenarios rather than observing the practice of participants directly. The scenarios depicted (child: delayed communication development; and, adult: acquired communication disability) may have influenced the breadth of the participants’ responses. In addition, the choice of sites (public areas in an urban setting) and interviewers (iTaukei Fijian and Australian) may have influenced our sampling frame. Consequently, rural residing and/or Indian Fijian participant numbers did not reflect population statistics. It is possible that our site selection (public places) and time of sampling (within working hours) may have influenced the numbers of Indian Fijians available to participate. Finally, participants’ beliefs about the cause of communication disability may be correlated with their actions to support PWCD. Future research is required to ascertain if the beliefs of Fijians influence their self-help and help-seeking behaviour.

Conclusion
The participants in this study stated they and others would help PWCD participate in Fijian society by applying their own knowledge or seeking the advice and support of others in the community. The self-help practices reported focused on creating a loving, nurturing, supportive environment for PWCD. Future service development for PWCD should capitalise on the Fijian spirit of generosity and willingness to help so that the limited specificity of self-help techniques reported can be strengthened with international evidence-based practices that have been adapted for the unique linguistic and cultural environment of Fiji.

The variety of sectors and identified agents of intervention to contact within these sectors suggest that participants would actively seek answers and support for PWCD and use available resources. Specific techniques to support communication may be available from the professionals that these participants stated they would seek help; however, the methods of each of these sectors remain poorly understood. Future research should seek to understand the intervention methods, and outcomes, of these sectors. For example, what advice do PWCD and their caregivers receive from their doctor, teacher, community, spiritual leader or traditional healer? As noted by Marshall (2003), sharing of information between sectors working with PWCD may promote greater cultural competence and evidence-based practice for all.

Acknowledgements
Our utmost gratitude to the Fijian community for their involvement in this research: vinaka vakalevu and
Declaration of interest

There are no real or potential conflicts of interest related to the manuscript.

Funding

This work was supported by an Australian Government Endeavour Post-graduate Research Scholarship, an Australian Government Research Training Program Scholarship and an Australian Linguistic Society Gerhardt Laves scholarship awarded to Suzanne C. Hopf.

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References


Conclusion to Part Two

There were three aims of the research presented in Part Two. The first was to determine the facilitators and barriers to service development for Fijians with communication disability. The second, to determine the services available to support Fijians with communication disability. The third, to describe the beliefs about and attitudes towards Fijians with communication disability as identified by members of the Fijian community. Fulfilling these aims provided information about the Environmental Factors influencing service provision for PWCD in Fiji. What was evident from this research is that Fijians are skilled at finding services for PWCD that fit with their belief systems; even when SLPs are unavailable.

The literature reviews undertaken in Papers 1 and 2 identified potential agents of delivery of intervention within Fiji (e.g., mid-tier workers, professionals, and family members trained by SLPs). These papers also identified service delivery modes (e.g., telepractice) and methods (e.g., collaborative, transdisciplinary) that may compensate for barriers to service accessibility and availability evident in Fiji. Over 20 years ago, Price (1996), writing about service development for people with disabilities in the South Pacific, noted that “lack of a coordinated approach and common goals has held back the development of more adequate services” (p. 66). The key message from Papers 1 and 2 is that a coordinated approach to service development for PWCD in Fiji is still required for future service enhancements to take place. Lessons learned on how to build local skills and capacity in other Majority World countries where SLP services are unavailable may serve as exemplars for Fiji’s future (e.g., India: D’Antonio & Nagajaran, 2003).

Paper 3 highlighted a dissonance between stated beliefs about, and attitudes towards, PWCD in Fiji. Community survey participants’ beliefs were consistent with recent literature from Fiji (e.g., Aghanwa, 2004; Sivakumaran et al., 2015) and internationally (e.g., Thompson, Fisher, Purcal, Deeming, & Swarikar, 2011). This literature states that even whilst participants’ beliefs may be predominantly grounded in western medicine, their attitudes are predominantly negative towards PWCD. Outcomes from
Paper 3 filled a gap in the knowledge identified in Paper 1 revealing that negative community attitudes may be limiting the participation of PWCD in education and employment settings. Community attitudes may also act as barriers to provision of support for PWCD, as the community may not want to invest in development of services for a group of people that they may not believe will be productive members of society. Results support the need for a community awareness campaign to raise awareness about the capabilities of PWCD.

Results presented in Paper 4 revealed that an absence of locally trained SLPs does not presume a lack of local knowledge about communication disability, or result in an absence of action on the part of Fijians with communication disability and their caregivers. The participants in this study had numerous ideas about how they could support a person with communication disability (e.g., language stimulation, massage, herbal remedies) and stated that they would actively seek the opinions of a diverse range of alternative agents of intervention to support the person with communication disability (e.g., community members, other western health care providers, spiritual leaders, traditional healers).

Acknowledging that community systems are already in place for PWCD in Fiji is critical to understanding what recommendations should be made to the community and policy makers on whether, and if so how, to enhance future services. The community participants’ belief in the benefits of western health care providers as appropriate sources of help for PWCD indicate that future training efforts should be focused in this sector; however, providing training to agents from all identified sectors will be required to ensure access to all PWCD in need.

What was evident from Papers 1 and 2 is that visiting SLPs have practiced intermittently in Fiji for over 30 years providing direct intervention and training paraprofessionals. These SLPs’ services have been recognized as critical to improving the lives of PWCD in Fijian policy (e.g., MoE, 2012) and regional academic literature (e.g., Gargett et al., 2016); however, as is evident in Papers 3 and 4, when a service is not consistently available and accessible, people look to other places for answers. So whilst PWCD in Fiji are underserved by SLPs they are not underserved by others who are viewed by the community as having expertise with communication
disability.

Understanding that Fijians value the services of these alternative service providers in Fiji is important for determining where to focus future visiting SLPs training efforts. As stated in Paper 2 much of this training has historically been given to teachers in the education sector or community-based rehabilitation workers in the health sector. Given the small population spread across a large geographical region, the need to expand training efforts to additional alternative service providers is warranted. Given the results presented in Part Two, it is likely that information sharing sessions with traditional medicine practitioners and spiritual leaders, that seek to identify mutually agreeable methods to facilitate children’s communication development may have significant community reach.

Positive “change requires energies to be directed across sectors” (Buell, 2013, p. 35). For service availability, accessibility, and quality to improve in Fiji the agents of intervention identified in Papers 2 and 4 will need to work collectively and capitalise on positive changes in local policy and the changing beliefs systems identified in Papers 1 and 3. This includes ensuring that quality information and knowledge about PWCD is available to everyone in the community (Buell, 2009). It is evident that future research needs to explore the expertise and practices in the sectors identified in Papers 2 and 4, and collate this knowledge base for the betterment of all: practitioners and PWCD. All current service providers, and any future communication specialist training programme in Fiji, will hopefully then be able to draw on this knowledge base to create consistency across sectors and broaden our understanding of evidence-based, culturally and linguistically sustainable services for PWCD.

Limitations of this Research

It is difficult to create an accurate snapshot of service provision anywhere as services are rarely static. For example, in Papers 1 and 2, every effort was made to collate the available literature and to contact all SLPs who may have worked in Fiji in the past; however, since publication of these papers, it has come to light that additional SLPs from non-English speaking countries (e.g., Japan, Holland) have worked intermittently in Fiji. In addition, at the time of writing this doctoral research, an Australian-trained SLP was volunteering to train two part-time speech-language
pathology assistants at the Frank Hilton Organisation Early Intervention Centre in Suva (Terri Walker, personal communication, January 11, 2017). It is likely that there are many more examples of SLPs and other service delivery agents in Fiji than noted.

It should be noted that transferability of community survey findings reported in Papers 3 and 4 is limited due to the participant demographics not accurately reflecting population ethnicity and education statistics for the whole of Fiji. Our study participants had higher levels of iTaukei Fijian ethnicity and tertiary education experience than is indicated by the most recent 2007 Fijian household census data (Fiji Bureau of Statistics, 2016). The education level of the participants did not factor significantly in our own study; however, in Paper 4, younger participants and those of iTaukei Fijian ethnicity were more likely to seek help from “other community members” than older participants or those with other ethnicities respectively. Expansion of the study undertaken in Papers 3 and 4 to alternative urban sites, rural and remote areas, and with a broader mix of ethnic backgrounds is warranted.

Survey construction may also be considered a limitation. The scenarios depicted in the community survey (child: delayed communication development; and, adult: acquired communication disability) and reported in Papers 3 and 4 may have influenced the breadth of the participants’ responses. Similarly, differentiation of communication disability subtypes (e.g., speech/voice/fluency/language disorder) was not made. It is possible that participants may react to different presentations of communication disability contrarily. Finally, and most importantly, involvement of PWCD and their caregivers in any future research is critical to understanding the reality of their lives in Fiji.

References
Part Three

Fijian School Children’s Communication
Introduction to Part Three

In 2012, 22% of Fiji’s population was at school age (MoE, 2012). Of the total population, an estimated 3% were aged 4- to 5-years (preschool age), 12% between 6- and 13-years (primary school age) and 7% between 14- and 18- years (secondary school age). Early childhood education and care (ECEC) is available in some areas of Fiji; however, many children do not begin formal schooling until they turn five, when they may begin a half-day kindergarten programme. Compulsory schooling commences in year one when a child turns six. Primary school education in Fiji is from Year 1 to Year 6.

Primary Years Curriculum

The National Curriculum Framework (MoE, 2007) is inclusive of children with special needs in addition to being inclusive of multicultural and multilingual contexts in which the curriculum is implemented (United Nations Educational Scientific and Cultural Organization, UNESCO, 2011). The National Curriculum Framework has seven key learning areas, or groups of subjects, that have similar ways of viewing and knowing the world (MoE, 2007). The key learning areas are: “expressive and creative arts; healthy living and physical education; language [emphasis added] (Fijian, Hindi, English, Rotuman, Urdu, Mandarin, French, Tamil, Punjabi); mathematics; science; studies of society and economic development (social studies); and technology” (UNESCO, 2011, p. 10). Children are expected to “be empowered learners; communicate effectively [emphasis added]; conduct investigations; make decisions; select and use information; show enterprise; understand change, balance and relationships” (UNESCO, 2011, p. 10). Key learning area assessment in primary school is classroom-based (CBA). In addition, since 2004, the Fiji Islands National Literacy and Numeracy Assessment (LANA) is administered to Years 4, 6 and 8 (MoE, 2012).

Classroom Language of Instruction

In Fiji, the National Curriculum Framework (MoE, 2007) prescribes a simultaneous dual-language learning, late exit programme of bilingual education (Guglielmi, 2008). That is, the classroom language of instruction is to be in the child’s vernacular (i.e., language the same or similar to the
child’s *main language*\(^9\) at home) for the first three years of primary schooling. English is taught as a second language subject throughout these first three years in Fiji classrooms. In the fourth year of primary school the medium of instruction becomes English, with the vernacular taught as a language subject and/or used to support children’s understanding of key concepts.

The National Curriculum Framework (MoE, 2007) prescribes the vernacular of iTaukei Fijian children as Standard Fijian and the vernacular of Indian Fijian children as one of two dialects of Hindustani (Standard Hindi or Urdu)\(^{10}\). Unfortunately, the choice of one language as medium of instruction over another may inadvertently advantage or disadvantage one linguistic group within a country over another (Mangubhai, 2002; Mangubhai & Mugler, 2006). This is a common problem in many multilingual communities around the world (e.g., India, Singapore, & South Africa: Hornberger & Vaish, 2009; Vanuatu: Willans, 2011).

The problem for Fijian children (iTaukei or Indian Fijian) is that the vernacular taught at school in the first three years (Standard Fijian, Standard Hindi, or Urdu) is rarely the child’s main language (Shameem, 2002b). iTaukei children who speak an Eastern Fijian dialect as their main language may be advantaged over others as Standard Fijian is based on an Eastern Fijian dialect. The Indian Fijian community experiences a similar dissonance regarding their vernacular education. For most Indian Fijian children entering school, their main language is Fiji Hindi; however, the vernacular of the classroom for these children is a standard form of Hindi or Urdu. Consequently, these children are also not learning in their vernacular. When dissonance between main language/dialect and vernacular occurs it is

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\(^9\) As described in Part One, most Fijians may speak more than one language from a very young age. Thus, it is possible that the main language at home, school, and work may all be different. It is also often difficult to ascertain which language has been acquired first. For the purpose of consistency in this thesis, the phrase *main language* is used to refer to the child’s main language that is spoken more often than others in the home. Main language is therefore consistent with vernacular or dominant home language but may not be the child’s first language. For example, a child’s first language may be the Ra dialect of Fijian but on entering school the child may decide to only speak English in the home making English that child’s main language.

\(^{10}\) While Standard Hindi and the Bauan Fijian dialects have been designated as the vernacular languages of Indo-Fijian and Fijian children respectively, children may have little knowledge of these languages. Both languages have been imposed by force of circumstances because they are vehicles for literacy at a time when Fiji Hindi and the other Fijian dialects were considered pre-literate.
often English that is the primary language in the classroom for educators (Shameem, 2002b). When there are multiple languages spoken in a mixed main language group of students, teachers are reported to use English instruction over other Fijian languages (Shameem, 2004).

Supporting Fijian children’s communication in the primary school years requires an understanding of the complex linguistic context in which children are living and learning. Previous studies of primary school children’s language (e.g., Shameem 2002a, 2002b) are more than 15 years old, do not take into account more recent changes to classroom language guidelines (e.g., 2007 National Curriculum Framework), and were based on a single main language group (e.g., Fijian or Fiji Hindi). Consequently, Part Three presents five papers that aim to provide a rich description of the current linguistic reality for two groups of Fijian school students. Papers 5, 6, 7, and 9 are based on the findings of a mixed methods study of the language use and proficiency of 75 primary school students (35 in Year 1 and 40 in Year 4) from different language backgrounds, their 75 caregivers (reporting on father, mother, and child-minder behaviours), and 25 teachers (see Table III for an overview of the study stages).

Table III

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Note: For the 40 Year 4 students stages 4 to 8 occurred in September to December, 2014 (term 3). For the 35 Year 1 students stages 4 to 8 occurred in January to April, 2015 (term 1).

Throughout Papers 5, 6, 7, and 9, the theoretical focus is on the interaction between Body Functions and Contextual Factors (Environmental Factors and Personal Factors) (WHO, 2001). Surveying of the three participant groups and subsequent quantitative analysis provided a picture
of the students’ linguistic multi-competence at an individual, family, school, and community level in Paper 5. In Papers 6 and 7 aspects of this linguistic environment were considered more closely. In Paper 6, mixed methods were used to provide a rich description of the students’ use of language within the school environment, focusing predominantly on the role of language in friendships. In Paper 7 the results of direct assessment of the 75 students’ English language and literacy proficiency were described in relation to Personal Factors (e.g., main language, father/mother education level, and socioeconomic status) and Environmental Factors (e.g., number of household occupants). Using information gained in the contrastive review undertaken in Paper 8, Paper 9 presents speech intelligibility and preliminary results of direct speech assessment to validate the Intelligibility in Context Scale (McLeod et al., 2012) for use with Fijian children.

References


Shameem, N. (2004). Language attitudes in multilingual primary schools in


Paper 5

Linguistic multi-competence of Fiji school students and their conversational partners.

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ABSTRACT This study explored linguistic multi-competence in Fiji students and their conversational partners through a description of linguistic diversity in one school community. Students’ caregivers (n = 75), teachers (n = 25) and year 4 students (n = 40) in an urban school of Fiji completed paper-based questionnaires regarding: 75 students, 75 mothers, 75 fathers, 25 child-minders, and 25 teachers (N = 275). Participants spoke an average of three languages, ranging between one and six languages including: English (99.2%), Standard Fijian (86.4%), a Fijian dialect (76.8%), Fiji Hindi (66.1%), and additional languages (41.7%, e.g. Standard Hindi, Rotuman, Samoan, Cook Island Maori, Bislama, and Japanese). The common main languages spoken by participants were Standard Fijian, Fiji Hindi, or English. The students typically spoke the main language of both or one of their parents (92%). Consistent with teacher, parental, and student report, English was the main language spoken by the students at school. In the community, the students’ language use was influenced by ethnicity of the communication partner and languages within the students’ repertoire. The students were more likely to code-switch with their father, mother, or siblings than their grandparents. This study demonstrates linguistic multi-competence and emphasizes the importance of considering the individuals’ and communities’ total linguistic repertoire and competence.

KEYWORDS: Fiji; Fiji languages; multilingualism; linguistic multi-competence
Introduction

Linguistic multi-competence

Multilingualism and linguistic multi-competence are complementary linguistic concepts (Franceschini, 2011). Definitions of multilingualism consider such factors as, but not limited to, age of acquisition (simultaneous versus sequential), proficiency (equal/balanced/harmonious versus conflictual), and level of exposure (including quantity and quality). What is common across these definitions is recognition that ‘language use in multilinguals is a matter of choice and reflects a speaker’s values and belief systems’ (Carroll, 2015, p. 9). In this study our definition of multilingualism is the ability ‘to comprehend and/or produce two or more languages in oral, manual, or written form [with at least a basic level of] functional proficiency or use, regardless of the age at which the languages were learned’ (International Expert Panel on Multilingual Children’s Speech, 2012, p. 1). Cook (1995, 2016a, 2016b) builds on the many definitions of multilingualism and draws from diverse fields of linguistic research to suggest that the term multilingualism is insufficient to describe the diversity of linguistic experience across the world. Cook defines linguistic multi-competence as ‘the overall system of a mind or a community that uses more than one language’ (2016a, p. 2) and recognises that all languages within a person’s repertoire are inter-related and affect the whole mind, not language alone. Cook’s notion of the mind of linguistically multi-competent individuals being unlike that of monolinguals is supported by research in fields as diverse as linguistic relativity (e.g. Murahata, 2011) and functional neuroimaging (e.g. Abutalebi, 2008). Murahata (2011) provides examples of multilingual and monolingual speakers’ colour perception and categorization abilities that reveal significant differences in thinking. Functional neuroimaging, as summarized by Abutalebi (2008), suggests that whilst the cognitive control network involved in language processing appears shared between languages within the same mind, the mode of operation of this network may be different for monolinguals versus multilinguals, and also for low versus high proficient multilinguals. Understanding these differences between individuals is important to developing theories of second language acquisition. Understanding
differences between communities is important in developing appropriate public policy (especially in education).

Developing appropriate research and practice models for educational, health, or other contexts, requires holistic knowledge of community language use across environmental contexts (e.g. the home, school, and community) (Mangubhai, 2002). Cook (2016a, 2016b) suggests three premises for applying a linguistic multi-competence paradigm as a research framework. The first premise is that multi-competence concerns the knowledge of more than one language in the same mind or the same community and the relationships between these languages. Premise 2 is that the multi-competent speaker should not be compared to monolingual native speaker norms. And finally, premise 3 suggests that multi-competence influences the speaker’s whole mind such that they perceive and encode information differently to monolinguals. Given Fiji’s long-standing history of multilingualism, unique languages, ethnicity and culture (Mangubhai & Mugler, 2003), we have chosen to apply Cook’s definition of linguistic multi-competence as our overarching framework for this study.

**Fiji**

Geography, population mix, and government policy have created a multilingual society in Fiji. The Fiji community is spread over 300 South Pacific islands. Fijian, the language of the indigenous peoples (locally referred to as iTaukei) has rich geographical dialectical differences, with over 300 variants called communalects (Geraghty, 1983). A standard variety of Fijian (hereafter referred to as Standard Fijian) arose in the 18th century as a consequence of British colonial settlement. Concurrently, English began its ascension in Fiji. Today the local variety is commonly referred to as Fiji English (Tent, 2000) and is the language of educational instruction (Mangubhai & Mugler, 2003). In addition, as a result of the Indian diaspora of the 19th and 20th centuries, a mixing of cultures and languages created a new language, Fiji Hindi, spoken as the first language of most Indian Fijians. Finally, many other immigrant community languages are spoken in significant numbers (e.g. Rotuman, Cantonese). Such cultural and linguistic diversity has resulted in a need for Fijians to become adept speakers, not
just in their home language, but also in the language of their neighbours and business associates (Tent & Mugler, 2008).

**Fiji language use**

Understanding how a community uses their languages, with whom and in what contexts, is essential for development of appropriate public policy, particularly in the educational context. Data collected in previous studies of language use in Fiji is over ten years old (May, 1990; Mugler & Tent, 1998; Shameem, 2002a, 2002b; Siegel, 1973; Singh, 2008; White, 2002) and has predominantly been undertaken in the east of the main island of Fiji from where Standard Fijian originates. Mugler and Tent (1998) provide a summary of the early studies of Fijian language use in addition to results of the most comprehensive language use study to date conducted in Fiji in 1993. Their questionnaire surveyed almost 1000 participants, aged over 15, and was conducted in the national capital, Suva. The authors found minimal English language use in the home: more than 90% of respondents used Standard Fijian, a Fijian dialect, or Fiji Hindi as their main (home) language. However, participants switched between their languages in different contexts (home versus work) and with different conversational partners (family versus friends). An additional analysis of code-switching found this behaviour to be influenced by ethnicity (iTaukei Fijians code-switch less than Indian Fijians), age (older people code-switch less than younger people), and education level (lower educated people code-switch less than higher educated people). Two more recent language use studies by Shameem (2002a, 2002b) and White (2002) were conducted with smaller and younger populations and focused on single linguistic groups. Shameem (2002a, 2002b) explored 48 Fiji Hindi speaking children’s multilingual language use and proficiency across three school grades. Shameem’s Indian Fijian students were all multilingual. Proficiency results revealed high receptive and expressive English language proficiency that increased with age (commensurate with exposure to schooling). The students’ Fiji Hindi results revealed high receptive language proficiency (children in rural areas performing higher than those living in urban areas); however, a peak in proficiency was noted in the third year of schooling with a slight decline in the sixth year. The students’ proficiency in Standard Hindi or Urdu (taught
as the vernacular in schools despite rare usage in the community) was generally low (expressive skills) to mid-range (receptive skills). Similarly, Standard Fijian proficiency was noted as minimal in the Indian Fijian students. In contrast, White (2002) in her ethnographic study of adolescent iTaukei Fijian students’ language use and attitudes, reported that the vast majority of adolescent iTaukei Fijian students used very little English at school or outside. The rural iTaukei Fijian students in her study predominantly spoke an unidentified dialect of Fijian to each other in all contexts. In school, White stated that most students used a Fijian dialect in peer-to-peer interactions outside of the classroom and within lessons to discuss class lessons among themselves. White observed a gender difference in this behaviour, with female iTaukei Fijian students using more English than males. Finally, Singh (2008) presented an observational- and questionnaire-based study of adult inter-ethnic communication and code-switching in Suva. Singh found that most inter-ethnic communication between iTaukei and Indian Fijians used Fiji English with many borrowings from Fijian and Fiji Hindi. Written language proficiency tests revealed that Indian Fijians were more likely to be proficient in Fijian than iTaukei Fijians in Fiji Hindi. In addition, older and male Fijians were more proficient in their additional language than younger or female participants. Singh (2008) also reported that a majority of Fijians believe knowing the languages of other people in the community is important. In summarizing this research, we see a mixed picture of multilingualism in the Fiji community emerging. In Fiji, multilingualism is viewed positively and is influenced by individual factors (e.g. age, gender, and education) and community factors (e.g. ethnic mix and geographic location).

Rather than embracing the diverse linguistic repertoires, and proficiency levels, within the community, current educational policy and previous research on Fiji’s languages has tended to compare the many languages used in Fiji to external standards (Mangubhai & Mugler, 2003). English comparisons in particular discuss high (acrolectal) versus low (basilectal) standards of English production within the Fiji community and compare with international varieties of English where English is the dominant language (e.g. Australia, England, New Zealand, and USA) (Hundt, Zipp, & Huber, 2015). Even within the vernaculars, an argument of
diglossia (Fijian dialect (low): Standard Fijian (high); Fiji Hindi (low): Standard Hindi (high)) has been presented (Kumar, 2001). Some authors argue that favouring external language standards potentially devalues native languages and may lead to language loss in a community (Mugler, 1999). Current educational policy places high importance on attaining competence in the acrolectal standards of each language (Standard Fijian, Hindi, and English). The potential for disadvantaging students whose main (home/mother-tongue) language is not one of these educational standards is significant (Mangubhai, 2002). If appropriate, re-conceptualizing the Fiji linguistic space from a linguistically multi-competent perspective may allow Fijians to be compared with linguistically like Fijians. This may allow development of educational programmes for students that capitalize and build on the students’ language strengths.

A current picture of Fiji students in a multilingual, multiracial, urban environment, where Standard Fijian is not indigenous to the area but still used in education and official contexts, is required to determine the level of complexity within their linguistic environment. Consequently this study aims to describe linguistic diversity via language use, proficiency, and code-switching of a group of Fijian students’ and their conversational partners (mother, father, child-minder, and teacher).

Method

Participants
The Ethics Committee of the Fiji Ministry of Education, National Heritage, Culture and Arts (MoENHCA), allocated a school upon which the head teacher selected one classroom within each of the year 1 and year 4 groups to participate. Study information sheets and consent forms were distributed to:

(1) Primary caregivers of students in year 1 (n = 36) and year 4 (n = 41). Permission to participate from 75 caregivers was received (97.4% response rate). Assent to participate was subsequently received from the 75 students.

(2) Twenty-five teachers working in classrooms at the school. Permission to participate from 25 teachers was received (100.0% response rate).
Participant demographics are summarised in Table 1 with additional detail below.

**Students**
Forty students from year 4 assented to participate in the study. The 40 student participants in year 4 ranged in age from 108 to 125 months (9;0–10;5 years) ($M=115.3; SD = 4.3$). There were 23 (57.5%) males and 17 (42.5%) females. Where ethnicity was reported ($n = 39$) the student came from households that were iTaukei Fijian ($n = 25, 64.1%$), Indian Fijian ($n = 9, 23.1%$), and Rotuman or mixed ethnicity ($n = 5, 12.8%$). Almost all student participants had lived their whole life in the same geographical region of Fiji ($n = 38, 95.0%$). The two students who had lived elsewhere, had lived in other regional areas of Fiji.

**Caregivers**
Caregiver participants ($n = 75$) were those who completed the caregiver questionnaire. Caregivers were female ($n = 55, 76.4%$) or male ($n = 17, 22.7%$). The relationship of caregiver participants to the students was as mother ($n = 51, 68.0%$), father ($n = 18, 24.0%$), aunt/uncle ($n = 3, 4.0%$), grandparent ($n = 2, 2.7%$), or unreported ($n = 1, 1.3%$). Caregivers’ ages ranged from 20s or below ($n = 10, 13.3%$), 30s and 40s ($n = 61, 81.3%$), to 50s and above ($n = 4, 5.3%$). Caregiver ethnicity included: iTaukei Fijian ($n = 48, 66.7%$), Indian Fijian ($n = 13, 18.1%$), other ethnicity ($n = 11, 15.3%$), or undisclosed ($n = 3, 6.7%$). The school had a low socio-economic enrolment with caregiver reported annual household incomes ($<$FJD10,000: $n = 24, 45.3%; FJD10,000–FJD20,000: $n = 24, 45.3%; >FJD20,000: $n = 5, 9.4%$) below the expected average household income for urban households of FJD23,036 as reported in the 2008–2009 Household Income and Expenditure Questionnaire (HIES, Narsey, 2011).

**Teachers**
There were 25 teacher participants. There were more female ($n = 15, 60.0%$) than male ($n = 10, 40.0%$) teachers. They ranged in age from in 20s ($n = 2, 8.0%$), to in 50s ($n = 1, 4.0%$), with most teachers being in their 30s or 40s ($n = 22, 88.0%$). Half were from iTaukei Fijian backgrounds ($n = 14,
The remaining teacher participants were Indian Fijian (n = 6, 24.0%), or another ethnicity (n = 5, 20.0%). All teachers (n = 25, 100.0%) had lived their whole life in Fiji. All teachers held formal teaching qualifications (certificate: n = 15, 60.0%; diploma: n = 6, 24.0%, bachelor: n = 3, 12.0%, or graduate certificate/diploma: n = 1, 4.0%). One teacher was studying for a masters degree.

**Instruments**

Information on language use and competence was collected via three researcher developed paper-based questionnaires (student, caregiver, and teacher questionnaires). The questionnaires were informed by previous research exploring Fiji children’s linguistic profiles in Fiji (e.g. Mugler & Tent, 1998; Shameem, 2002a, 2002b; White, 2002) and internationally (Australia – McLeod, Baker, McCormack, Wren, & Roulstone, 2013–2015). All questionnaires were pilot tested and found to have good face validity. All questionnaires were offered in Standard Fijian, Hindi, or English.

The student questionnaire included questions regarding what language/s the students used with various conversational partners (mother, father, siblings, grandparents, friends, teachers, religious leaders, and strangers of iTaukei, Indian Fijian, or European background). For example, students were asked, ‘What is the main language that you speak with your mother at home?’ The 68-question caregiver questionnaire requested information about the student and home conversational partners, demographics (e.g. social and medical history), speech and language competence, language usage patterns, and learning environments. The caregiver questionnaire was used to report: the main and additional languages spoken at home by students, mothers, fathers, and child-minders; language competence (very well, somewhat well, not very well, and not at all) in seven pre-identified languages (English, Standard Fijian, a Fijian dialect, Fiji Hindi, Standard Hindi, Urdu, and Arabic); and other languages as identified by the caregiver; and, mother’s, father’s, and child-minder’s code-switching behaviour when speaking to the student (e.g. ‘How much does the mother of the child mix the languages (in the same sentence) she speaks when she speaks to the child?’ with available responses of not at all, a little, and a lot). The teacher questionnaire reported teacher demographics.
language use and competency, and teaching practices. Only the teachers’ main language at home and language competence was requested.

**Procedure**

**Community consent**
A *talanoa* is a traditional meeting with members of a Fiji community and is an essential element in designing culturally appropriate research in Fiji (Otsuka, 2005). Four talanoa sessions were conducted during the planning and initial implementation phases of the study: with the head teacher and a senior staff member; with all teaching staff; and finally, with two caregiver groups (representative of each classroom). The purpose of the talanoa sessions were to present the aims and proposed procedures of the research, address community fears and concerns, allow for modification in the research procedure to incorporate community recommendations, and gain community consent for conducting the study.

**Questionnaires**
Caregiver questionnaires (*n* = 75) collated information on the language use behaviours of four groups: students (*n* = 75), mothers (*n* = 75), fathers (*n* = 75), and child-minders (*n* = 25). Teachers (*n* = 25) self-reported and also reported results for the same group of students (*n* = 75). Finally, a subgroup of participants, year 4 students (*n* = 40), self-reported language use behaviours.

*Student questionnaire.* Each year 4 student (*n* = 40) completed a written student questionnaire in the classroom during a classroom session that lasted for approximately 2-hours and included (in order of events): a whole class discussion on the languages and dialects spoken in Fiji; identification of the language/dialect groups within the class and discussion and brief role-play on the levels of language mixing (i.e. code-switching: *not at all*, *a little*, and *a lot*); individual completion of the language use grid on a question by question basis led by the primary author, and individualized checking of the completed grid by each student with the primary author.

*Caregiver questionnaire.* Caregivers were asked to complete the paper-based questionnaire once they had returned the study consent form.
Caregivers were given the option of completing the questionnaire in their home language. All caregivers chose to complete the English version. Caregivers were also offered appointment times with the primary researcher, and/or a research assistant fluent in their home language, should they wish to discuss the questionnaire, the study, or their student. Face-to-face interviews in English with the primary author were accepted by 21 caregivers (28%). Caregivers of the year 4 students were also offered the opportunity to attend an after-hours information session conducted by the first and second authors where they could receive support with questionnaire completion. Completed caregiver questionnaires were reviewed upon receipt and ambiguous or incomplete responses were clarified with the caregiver via phone call where possible.

Teacher questionnaire. On receipt of teacher consent forms, all teachers were asked to complete the teacher questionnaire detailing their personal background and teaching techniques. In addition, the teachers of the year 1 and year 4 students in the study provided information on each student’s communication and academic profile.

Data analysis
Participant responses for each questionnaire were checked and coded. Ambiguous or conflicting responses were cross-checked with responses to similar questions in other sections of the questionnaire and clarified where possible (e.g. Fijian noted as Standard Fijian or a Fijian dialect). When ambiguity remained these responses were clarified via phone call, and if information were unavailable, considered invalid (e.g. some caregivers listed the home language as Fijian without specifying the dialect). When calculating the number of languages spoken, response options for the language use and competence question, on either the caregiver or teacher questionnaire, were collapsed into a dichotomous category of whether the student communicated in this language or not. The number of languages spoken by the conversational partner was calculated by using the dichotomous category calculation across languages. To evaluate whether code-switching was correlated with gender, respondent type, the main language spoken, number of languages spoken, or proficiency a composite score for students’ code-switching was calculated. This was because,
despite using the same scale (not at all, a little, and a lot) students were asked to rate their frequency of code-switching with seven different conversational partners whilst caregivers were asked to provide an overall score.

Data were analyzed using SPSS® Statistics Version 23.0 (IBM®, 2015). Descriptive statistics were used to determine the frequency of responses for categorical variables (n and %) or for continuous variables (M and SD). Percentage of valid cases was reported. To determine associations between variables (e.g. gender and additional language use) the data were analyzed using non-parametric statistics. For nominal by nominal data, when cell size numbers permitted, proportion testing via Chi-squared analyses was used to identify relationships between variables. For ordinal and scale data, Kruskal–Wallis tests with post-hoc Mann–Whitney U tests using Bonferroni adjustment were used.

Results
The following section outlines the language use findings with regards to main language, additional language/s, language proficiency, and code-switching. Results are presented for five groups (students, mothers, fathers, child-minders, and teachers). As students were the primary focus of the study, student data is presented first. Results for other groups (mothers, fathers, child-minders, and teachers) are then discussed under a collective heading of Conversational Partners. Patterns of language use across the groups are then reported. Finally, where available, within each subheading, language use and competence are considered in the home environment, the school environment, and the community environment in keeping with the linguistic multi-competence paradigm. (Note, where n values are presented in tables they have not been reported in the main text.)

Main language use
Students’ main language
Caregivers reported the main language spoken at home by the student (n = 75) was Standard Fijian (42.7%), followed by English (21.3%), Fiji Hindi (20.0%), or a Fijian dialect (16.0%) (see Table 2). The three main languages reported by the year 4 students (n = 40, see Table 3) to be spoken at home
were Standard Fijian (spoken to fathers: 42.5%; siblings: 37.5%;
grandparents: 37.5%; and mothers: 32.0%) followed by Fiji Hindi (spoken
to mothers: 25.0%; fathers: 25.0%; siblings: 22.0%; and grandparents:
20.0%), and English (spoken to mothers: 25.0%; siblings: 20.0%;
grandparents: 20.0%; and fathers: 15.0%). Caregivers also reported some
differences in the student’s main language dependent on conversational partner (see Table 4).

In the school environment, caregivers noted high levels of English language use (80%) when students spoke to the teacher (see Table 4). Teachers reported that the main language spoken by the students (n = 75) to all conversational partners in the school environment (see Table 5) was English (spoken to class teacher: 97.3%; Indian Fijian friends: 92.0%; Indian Fijian teachers: 91.3%; Indian Fijian strangers: 76.0%; strangers of another ethnicity: 73.3%; iTaukei teachers: 69.3%; iTaukei friends: 62.7%; and, iTaukei strangers: 52.0%). Some students were reported by teachers to change their language use dependent on the ethnicity of the conversational partner (see Table 5). For example, if the conversational partner was an iTaukei teacher, friend, or stranger, 28.0% of students would speak Standard Fijian. Or, if the conversational partner was Indian Fijian, some students used Fiji Hindi (Indian Fijian strangers: 17.3%; Indian Fijian friends: 8.0%; and, Indian Fijian teachers: 8.7%), and others also used Standard Fijian with Indian Fijian strangers (6.7%). The main language students (n = 40) reported to speak at school was English (spoken to: teachers: 92.5%; friends: 52.5%; see Table 3). Students also reported speaking languages other than English at school with friends (Standard Fijian: 22.5%; Fiji Hindi: 17.5%; and, a Fijian dialect: 5.0%).

The main language spoken by students in the community as reported by caregivers (n = 75, see Table 4) and students (n = 40, see Table 3) was highly dependent on the conversational partner. According to caregivers, English was predominantly spoken by a student to a stranger with a background of Indian Fijian (69.2%) or ‘other’ (77.4%), whilst equal numbers of students spoke Standard Fijian or English as the main language to a stranger with iTaukei background (36.5%). According to students, when speaking with religious leaders students spoke as the main language either English (35.0%), Standard Fijian (25.0%), Fiji Hindi (17.5%), Fijian
When speaking with iTaukei strangers students reported to speak mainly Standard Fijian (47.5%), English (42.5%), or a Fijian dialect (5.0%). When speaking with Indian Fijian strangers students reported to speak English (57.5%), Standard Fijian (5.0%), Fiji Hindi (32.5%), or Standard Hindi (5.0%). When speaking with strangers of European background students reported to speak English (97.5%) or Standard Fijian (2.5%).

**Conversational partners’ main language**
Caregivers reported that the main language spoken by mothers (n = 72), at home was Standard Fijian (50.0%), English (18.1%), Fiji Hindi (18.1%), or a Fijian dialect (13.9%) (see Table 2). Caregivers reported that the main language spoken by the fathers (n = 71) at home was Standard Fijian (42.3%), English (21.1%), Fiji Hindi (19.7%), and Fijian dialect (16.9%) (see Table 2). Caregivers reported that the main language spoken by the childminders (n = 23) at home was Standard Fijian (34.8%), Fijian dialect (34.8%), Fiji Hindi (17.4%), and English (13.0%) (see Table 3). Teacher’s reported that the main language spoken by themselves (n = 22) at home was Standard Fijian (45.5%), Fiji Hindi (22.7%), English (18.2%), Fijian dialect (9.1%), or Rotuman (4.5%) (see Table 3).

**Patterns of main language use**
Cross tabulation of main language spoken was used to determine language use patterns across students, mothers, fathers, and child-minders. In 48 (69.6%) cases the student, mother and father shared the same language (Standard Fijian, n = 22, 45.8%; Fijian dialect, n = 4, 8.3%; Fiji Hindi, n = 12, 25%; English, n = 10, 20.8%). The remaining 21 cases (30.4%), where the student’s main language did not match both the mother and father it matched the mother’s main language (n = 9, 42.9%) more often than it matched the father’s (n = 5, 23.8%) or the child-minder’s (n = 1, 4.8%). English was more often the choice when the child’s language was matched with the father’s (n = 2, 40.0%) than the mother’s (n = 1, 11.0%). Finally, there were six cases (28.6%) where the student’s main language did not match any of their caregivers.
Additional language use

Students’ additional language use
Caregivers reported that students spoke an average of 2.9 languages (range = 1–5). The majority of students \( (n = 74) \) spoke 3 languages (54.1%) (see Table 6). Of the additional languages spoken English was the most frequent \( (n = 72, 98.6\%) \), followed by Standard Fijian \( (n = 54, 81.8\%) \), a Fijian dialect \( (n = 42, 68.9\%) \), and Fiji Hindi \( (n = 31, 49.2\%) \). Other languages spoken by at least two students were Standard Hindi and Rotuman.

Caregivers reported that English was the most frequent additional language spoken by students to fathers \( (n = 18, 45.0\%) \), mothers \( (n = 14, 35.0\%) \), siblings \( (n = 14, 35.0\%) \), and grandparents \( (n = 8, 20.0\%) \). Students \( (n = 40) \) reported that Standard Fijian was also the most frequent additional language spoken to teachers \( (n = 10, 25.0\%) \) whilst English was spoken with friends \( (n = 8, 20.0\%) \). Conversational partners’ additional language use Caregivers reported the mothers \( (n = 72) \) to speak an average of 3.2 languages (range = 1–5), the fathers \( (n = 72) \) to speak an average of 3.7 languages (range = 1–6), and the child-minders \( (n = 24) \) to speak an average of 3.4 languages (range = 2–5). Teachers \( (n = 25) \) self reported to speak an average of 3.3 languages (range = 2–6). Of those additional languages spoken English was the most frequent (spoken by: mother, 100.0%; father, 98.6%; child-minder, 100%; and teacher, 100%), followed by Standard Fijian (spoken by mother, 81.8%; father, 93.9%; child-minder, 90.9%; and teacher, 86.4%), a Fijian dialect (spoken by: mother 75.0%; father, 83.9%; child-minder 85.7%; and teacher, 78.9%), and Fiji Hindi (spoken by: mother, 62.7%; father, 81.3%; child-minder, 61.9%; and teacher, 92.9%) (see Table 6). Other languages spoken by at least two mothers were Standard Hindi and Rotuman. At least two fathers and child-minders spoke Standard Hindi, whilst eight teachers also spoken Standard Hindi.

Patterns of additional language use
Gender, group type (student, mother, father, child-minder, and teacher), and main language spoken significantly influenced the number of languages spoken. Males \( (Md = 3, n = 129) \) spoke significantly more languages than females \( (Md = 3, n = 114) \), \( U = 6291.00, z = −2.049, p = 0.041, r = 0.13 \).
Kruskal–Wallis Test revealed a statistically significant difference in total number of languages spoken across the five groups (students, \(n = 74\), mothers, \(n = 72\), fathers, \(n = 72\), child-minders, \(n = 24\), teachers, \(n = 25\), \(\chi^2(4, n = 267) = 24.33, p = 0.000\)). Follow-up Mann–Whitney U tests between groups with Bonferroni adjustment revealed a small to medium effect size for number of languages spoken by the fathers (\(Md = 4, n = 72\)) being significantly greater than both students (\(Md = 3, n = 74, U = 1531.00, z = -4.642, p = 0.000, r = 0.38\)) and the mothers (\(Md = 3, n = 72, U = 1871.00, z = -3.003, p = .003, r = 0.25\)). Differences between other groups did not reach significance. For the majority of groups, when main language and number of languages spoken was compared there was no significant difference. The only difference was for Fijian dialect speakers (\(Md = 3.5, n = 44\)) who used more languages than English main language speakers (\(Md = 3, n = 49\), \(U = 713.500, z = -2.888, p = 0.004, r = 0.30\)).

**Language proficiency**

**Students’ language proficiency**

Caregivers reported (see Table 7) that the majority of students (\(n = 75\)) communicated in English *very well* (34.2%) or *somewhat well* (43.8%); Standard Fijian *very well* (43.9%) or *somewhat well* (18.2%), *not very well* (19.7%); a Fijian dialect *not very well* (27.4%) or *not at all* (32.3%); and, Fiji Hindi *not very well* (23.8%) or *not at all* (50.8%). For other languages listed, the students spoke Standard Hindi *very well* (\(n = 4\)), *somewhat well* (\(n = 4\)), or *not very well* (\(n = 8\)), and Rotuman *not very well* (\(n = 1\)).

**Conversational partners’ proficiency**

The majority of the conversational partners (see Table 7) spoke English *very well* (spoken by: mothers, 78.9%; fathers, 63.9%; child-minders, 47.8%; and, teachers, 72.0%), Standard Fijian *very well* (spoken by: mothers, 66.7%; fathers, 65.2%; child-minders, 68.2%; and, teachers, 59.1%), and a Fijian dialect *very well* (spoken by: mothers, 62.5%; fathers, 59.7%; child-minders, 57.1%; and, teachers, 36.8%). In contrast, only fathers (*very well*, 35.9%) and teachers (*very well*, 50.0%) had high proficiency in Fiji Hindi.
When other languages were listed, the mothers were reported to speak Standard Hindi very well \((n = 10)\), somewhat well \((n = 8)\), or not very well \((n = 1)\), Rotuman very well \((n = 2)\), and Pidgeon Vanuatu English very well \((n = 1)\). Fathers were also reported to speak Standard Hindi very well \((n = 15)\), somewhat well \((n = 9)\), or not very well \((n = 5)\), and in addition Japanese not very well \((n = 1)\). Other languages listed for the child-minders included speaking Standard Hindi very well \((n = 2)\) or somewhat well \((n = 3)\). Finally, when other languages were listed, the teachers self-reported speaking Standard Hindi very well \((n = 3)\), somewhat well \((n = 4)\), or not very well \((n = 1)\), Rotuman very well \((n = 1)\), Samoan not very well \((n = 1)\), and Cook Island Maori not very well \((n = 1)\).

**Language proficiency patterns**

Proficiency results revealed varying patterns across gender, group, main language spoken, and number of languages spoken. A small gender difference was found for English only with females \((n = 112, \text{Md} = 4)\) having greater proficiency than males \((n = 129, \text{Md} = 3)\), \(U = 5214.00, z = -4.28, p = 0.000, r = 0.28\). Also a small to medium difference was found between students and other groups. For English, students \((n = 73, \text{Md} = 3)\) were less proficient than mothers \((n = 71, \text{Md} = 4; U = 1385.50, z = -5.42, p = 0.000, r = 0.45)\), fathers \((n = 72, \text{Md} = 4; U = 1813.50, z = -3.52, p = 0.000, r = 0.29)\), and teachers \((n = 25, \text{Md} = 4; U = 512.00, z = -3.54, p = 0.000, r = 0.36)\). For Standard Fijian, students \((n = 66, \text{Md} = 3)\) were less proficient than fathers \((n = 66, \text{Md} = 4; U = 1641.00, z = -2.69, p = 0.007, r = 0.23)\). For Fijian dialects, students \((n = 62, \text{Md} = 2)\) had less proficiency than mothers \((n = 64, \text{Md} = 4; U = 1478.00, z = -2.67, p = 0.008, r = 0.24)\) and fathers \((n = 62, \text{Md} = 4; U = 1316.50, z = -3.23, p = 0.001, r = 0.29)\). For Fiji Hindi, students \((n = 63, \text{Md} = 1)\) were less proficient than fathers \((n = 64, \text{Md} = 3; U = 1306.00, z = -3.58, p = 0.000, r = 0.32)\) and teachers \((n = 14, \text{Md} = 3.5; U = 224.50, z = -3.043, p = 0.002, r = 0.35)\).

**Code-switching**

Year 4 students (see Table 8) were more likely to code-switch in conversations with their father \((a lot/a little: 52.5\%)\), siblings \((a lot/a little: 47.4\%)\), and mother \((a lot/a little: 36.9\%)\) than their grandparents \((a lot/a little: \ldots)\).
little: 21.6%). Students also reported that they were more likely to code-switch in the school environment in conversations with their friends (a lot/a little: 48.6%) than the class teacher (a lot/a little: 17.5%). In contrast, year 4 students self-reported code-switching in the community (with strangers or religious leaders) was rare (see Table 8).

Caregivers reported code-switching between students and their mothers (a lot/a little: n = 58, 80.6%), fathers (a lot/a little: n = 50, 72.5%), and child-minders (a lot/a little: n = 21, 91.3%).

Fiji dialect speakers were more likely to code-switch compared to Fiji Hindi speakers (U = 483.00, n = 76, z = −2.97, p = 0.003). In addition, respondents who mixed their languages a lot (Md = 4, n = 32) spoke more languages than those that did not mix at all (Md = 3, n = 38; U = 318.00, n = 70, z = −3.551, p = 0.000) or only a little (Md = 3, n = 129; U = 1456.50, n = 161, z = −3.551, p = 0.000).

Discussion

This urban group of Fijian students and their conversational partners have rich linguistic environments and use their multilingualism in novel ways dependent on the interaction, communication partner, and context.

Main and additional language use

Societal multilingualism

Multilingualism is a defining feature of this community. Participants within each group spoke an average of three languages, ranging between one and six languages including: English (99.2%), Standard Fijian (86.4%), a Fijian dialect (76.8%), Fiji Hindi (66.1%), and additional languages (41.7%, including Standard Hindi, Rotuman, Samoan, Cook Island Maori, Bislama, and Japanese). The main language reported to be spoken across all groups (students, mothers, fathers, child-minders, teachers) was Standard Fijian (44.1%), followed by Fiji Hindi (19.4%) and English (19.4%), then a Fijian dialect (16.7%), and Rotuman (0.4%). The levels of English as a main language in our urban sample (19.4%) were considerably higher than the 6.2% recorded in the 1993 Suva questionnaire (Mugler & Tent, 1998, p.
117) although our methods were different and were from a different area in Fiji. Given that indigenous language loss in Fiji has been raised as a concern (Mugler & Tent, 1998; Schmidt, 1991) this finding warrants further investigation. In our study, three students chose English as their main language in preference to their parents’ language: two who chose English over Standard Fijian, and another who chose English over a Fijian dialect. The reasons behind these language choices were not requested from participants.

**Individual multilingualism**

Individual multilingualism amongst the participants was common regardless of the speaker’s age or main language spoken. Group members, aged from 5 to over 70 years, spoke three languages on average. Only a gender difference was noted for number of languages spoken (males, especially fathers, would speak more languages than females) which may indicate males may work and socialize more across racial and linguistic boundaries. Individual multilingualism results reveal the extensive linguistic capability and capacity of this Fiji population.

**Language proficiency**

Linguistic multi-competence does not assume equal proficiency across languages (Cook, 1995). This was certainly the case in this multilingual community. Language proficiency analysis revealed varying patterns of results. Standard Fijian and Fijian dialect main language speakers both reported to speak Standard Fijian and Fijian dialects better than English or Fiji Hindi main language speakers. Only when Fiji Hindi was listed as the main language did speakers have significantly higher proficiency than those who were reported to speak the same language as an additional language. In contrast, Standard Fijian, Fijian dialect, and English main language speakers all reported to speak Fiji Hindi as an additional language with somewhat equal proficiency. Standard Fijian, Fiji Hindi, and English main language speakers all reported similar proficiency in English. Only Fijian dialect main language speakers reported less proficiency at speaking English than English main language speakers. The fact that Fijian dialect main language speakers are not reporting similar levels of English language proficiency
when compared to their peers may impact their participation in Fijian schooling and business, since it is often conducted in English. Mangubhai (2002) noted that when one or more languages are chosen over others as the language of instruction (e.g. English, Standard Fijian, and Shudh Hindi in Fiji), by necessity all other language speakers (e.g. Fijian dialects and Fiji Hindi in Fiji) are placed at a disadvantage. However, there is always the possibility that self-reported proficiency may be influenced by factors not measured. Consequently, these self-reported proficiency findings need to be validated with formal language testing.

Finally there were gender and age differences noted with regards to proficiency. The gender difference that females were more proficient than males in spoken English may be consistent with White (2002) who stated that adolescent iTaukei females tend to use English more than males. The age difference in proficiency for all languages (students’ lower proficiency across languages compared to adult respondent categories) is consistent with developmental expectations and increasing language proficiency with age for Indian Fijian students previously recorded by Shameem (2002a, 2002b).

**Code-switching**
Linguistic multi-competence acknowledges that a speaker will use all of the linguistic resources at their disposal in unique and variable ways dependent on conversational partner and environmental context (Murahata, 2011). Code-switching may thus be considered a typical behaviour of the linguistically multi-competent individual. In this study, the majority of participants used code-switching and gender, respondent type, nor proficiency was found to influence code-switching. In contrast Mugler and Tent (1998) reported that code-switching was more prevalent in younger than older groups. Fiji dialect main language speakers were more likely to code-switch compared to Fiji Hindi speakers even though speakers typically spoke a similar number of languages. This finding is contradictory to the 1993 Suva finding that Indian Fijians tend to code-switch more than other ethnicities (Mugler & Tent, 1998). The finding that respondents who mixed their languages a lot spoke more languages than those that did not mix at all was consistent with Mugler and Tent (1998) who proposed that speakers
with more languages have more resources at hand and are thus more likely to code-switch. Direct observation of code-switching behaviour is required to validate these self-reported measures.

**Linguistic multi-competence in Fiji**

In this urban Fiji school, community-wide multilingualism supports a paradigm of linguistic multi-competence (Cook, 2016a) and its underlying three premises (Murahata, 2011). In support of premise 1, we have evidence of repertoire, code-switching, and varying proficiency levels across speakers. In support of premise 2, Fijians, from a young age are speaking at least 3 languages. Rarely are Fijians monolingual and in this study language proficiency was often similar across additional language groups regardless of main language use. In support of premise 3, language use is not simply based on the perceived partners’ language. Rather students and their conversational partners appear to be making language use choices that facilitate communication cognizant of ethnic differences but also influenced by the speaker’s age, gender, and relationship to the conversational partner (i.e. family member, community member, stranger).

**Limitations**

The study has a number of limitations. Purposive sampling means that the results of this study can not be extrapolated to the broader Fijian context in which previous authors have noted differences in language use (e.g. rural versus urban, Mugler & Tent, 1998). A clear definition, or training session such as that used with the year 4 students, in the caregiver and teacher questionnaires of what constituted each language and dialect may have assisted participants in their language description. An in-depth analysis of what (phonemes, words, phrases, etc.) nor how (in what context) languages are mixed was not possible because the direct observation of language use was not possible. Similarly, the participants’ methods or reason for mixing languages was not defined or explored in further detail in additional questions. However, given the high rate of mixing described in this study, further exploration of this phenomenon is warranted. Finally, correlation of age of acquisition with language proficiency was also unable to be completed due to missing data.
Application

Linguistic multi-competence assumes that the multilingual speaker is unique, and as such, their abilities should not be compared to a monolingual exemplar (Cook, 2013). In Fiji, language teaching in schools should aim to create linguistically multi-competent students rather than monolingual speaker equivalents within interactions, communication partners, and contexts they are likely to encounter into adulthood. Such an aim, will allow ‘students [to] preserve their own identities as being from their own culture but gain valuable skills at talking to people from other cultures’ (Cook, 2013, p. 49), a worthwhile aim in our increasingly global world. Conclusion

Consistent with the definition of multi-competence provided by Cook (2016a), Franceschini (2016, p. 107) states that ‘a multi-competent person is a speaker who makes flexible use of his or her entire language capabilities by connecting the varieties dynamically and in a manner that is adjusted to the demands created by the given communicative situation, both in reception and production’. The Fijians in this study were ‘flexible speakers’ (Franceschini, 2016, p. 106) because they demonstrated linguistic multi-competence. Theses Fijians had variable levels of proficiency in multiple languages and code-switched between languages to facilitate communicative exchange in their ever-changing social and cultural context. In conclusion, one may argue that multilingualism, such as this, that supports inter-ethnic communication and mutual linguistic respect, may create positive conditions for ‘increased equity in social relations, both locally and globally’ (Burnett, 2009, p. 18). In a country where ethnicity has often divided the community (e.g. Prasad, 2008) the multilingualism observed may be seen as a positive step in Fiji’s history.

Acknowledgements

First and foremost we thank the students, and their families, and teachers of the Fiji school where this data was collected: vinaka vakalevu. Many thanks to Dr Fiona Willans, of the University of the South Pacific, for her thoughtful comments on an early draft of the paper. We would also like to acknowledge the translation services and research assistant support of Mrs Sala Sauqaqa.
Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

Both an Australian Linguistic Society Gerhardt Laves Scholarship (awarded July 2015) and an Australian government Endeavour Awards Postgraduate Scholarship (awarded December 2014) have funded the first author’s PhD project ‘Supporting Fijian children’s speech, language, and literacy’ from which this article is drawn.

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References


Table 1. Participant Demographics \((n = 140)\).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Gender n (%)</td>
</tr>
<tr>
<td></td>
<td>Male (4%)</td>
</tr>
<tr>
<td></td>
<td>iTaukei (23.1%)</td>
</tr>
<tr>
<td>Year 4 students</td>
<td>40</td>
</tr>
<tr>
<td>Caregivers</td>
<td>75</td>
</tr>
<tr>
<td>Teachers</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 2. Main Language Spoken at Home by Different Conversational Partners \((n = 263)\).

<table>
<thead>
<tr>
<th></th>
<th>Standard Fijian</th>
<th>Fijian dialect</th>
<th>Fiji Hindi</th>
<th>English</th>
<th>Other</th>
<th>Valid Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Students a</td>
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<td>12 16.0</td>
<td>15 20.0</td>
<td>16 21.3</td>
<td>0 0.0</td>
<td>75</td>
</tr>
<tr>
<td>Mothers a</td>
<td>36 50.0</td>
<td>10 13.9</td>
<td>13 18.1</td>
<td>13 18.1</td>
<td>0 0.0</td>
<td>72</td>
</tr>
<tr>
<td>Fathers a</td>
<td>30 42.3</td>
<td>12 16.9</td>
<td>14 19.7</td>
<td>15 21.1</td>
<td>0 0.0</td>
<td>71</td>
</tr>
<tr>
<td>Child-minders a</td>
<td>8 34.8</td>
<td>8 34.8</td>
<td>4 17.4</td>
<td>3 13.0</td>
<td>0 0.0</td>
<td>23</td>
</tr>
<tr>
<td>Teachers b</td>
<td>10 45.5</td>
<td>2 9.1</td>
<td>5 22.7</td>
<td>4 18.2</td>
<td>1 4.5</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>116 44.1</td>
<td>44 16.7</td>
<td>51 19.4</td>
<td>51 19.4</td>
<td>1 0.4</td>
<td>263</td>
</tr>
</tbody>
</table>

Note. a Reported by caregiver. b Reported by teacher.
Table 3. Main and Additional Languages Reported by Year 4 Students to be Spoken with Different Conversational partners \((n = 40)\)

<table>
<thead>
<tr>
<th>Language</th>
<th>Home environment</th>
<th>School environment</th>
<th>Community environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Father</td>
<td>Mother</td>
<td>Siblings</td>
</tr>
<tr>
<td>Standard Fijian</td>
<td>Main</td>
<td>17</td>
<td>42.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Fijian Dialect</td>
<td>Main</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>6</td>
<td>15.0</td>
</tr>
<tr>
<td>Standard Hindi/Urdu</td>
<td>Main</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fiji Hindi</td>
<td>Main</td>
<td>10</td>
<td>25.0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>English</td>
<td>Main</td>
<td>6</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>18</td>
<td>45.0</td>
</tr>
<tr>
<td>Other</td>
<td>Main</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
<td>5.0</td>
</tr>
</tbody>
</table>
Table 4. Main Language Reported by Caregivers to be Spoken to Different Conversational Partners by Students (n = 75).

<table>
<thead>
<tr>
<th></th>
<th>Standard Fijian</th>
<th>Fijian dialect</th>
<th>Fiji Hindi</th>
<th>English</th>
<th>Other</th>
<th>Valid Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Mother</td>
<td>22</td>
<td>32.8</td>
<td>14</td>
<td>20.9</td>
<td>13</td>
<td>19.4</td>
</tr>
<tr>
<td>Father</td>
<td>22</td>
<td>31.0</td>
<td>20</td>
<td>28.2</td>
<td>15</td>
<td>21.1</td>
</tr>
<tr>
<td>Child-minder</td>
<td>15</td>
<td>30.6</td>
<td>13</td>
<td>26.5</td>
<td>6</td>
<td>12.2</td>
</tr>
<tr>
<td>Sibling/s</td>
<td>23</td>
<td>35.9</td>
<td>12</td>
<td>18.8</td>
<td>13</td>
<td>17.3</td>
</tr>
<tr>
<td>Friends</td>
<td>24</td>
<td>35.8</td>
<td>10</td>
<td>14.9</td>
<td>8</td>
<td>11.9</td>
</tr>
<tr>
<td><strong>Home Total</strong></td>
<td>106</td>
<td>33.3</td>
<td>69</td>
<td>21.7</td>
<td>55</td>
<td>17.3</td>
</tr>
<tr>
<td>Class teacher</td>
<td>6</td>
<td>9.2</td>
<td>5</td>
<td>7.7</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>School Total</strong></td>
<td>6</td>
<td>9.2</td>
<td>5</td>
<td>7.7</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>iTaukei Fijian strangers</td>
<td>23</td>
<td>36.5</td>
<td>14</td>
<td>22.2</td>
<td>3</td>
<td>4.8</td>
</tr>
<tr>
<td>Indian Fijian strangers</td>
<td>4</td>
<td>6.2</td>
<td>3</td>
<td>4.6</td>
<td>12</td>
<td>18.5</td>
</tr>
<tr>
<td>Other strangers</td>
<td>5</td>
<td>8.1</td>
<td>3</td>
<td>4.8</td>
<td>4</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Community Total</strong></td>
<td>32</td>
<td>16.8</td>
<td>20</td>
<td>10.5</td>
<td>19</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>All Environments Total</strong></td>
<td>288</td>
<td>26.8</td>
<td>188</td>
<td>17.6</td>
<td>150</td>
<td>13.7</td>
</tr>
</tbody>
</table>
### Table 5. Main Language Reported by Teachers to be Spoken in the School Environment to Conversational Partners by Students ($n = 75$).

<table>
<thead>
<tr>
<th></th>
<th>Standard Fijian</th>
<th>Fijian dialect</th>
<th>Fiji Hindi</th>
<th>English</th>
<th>Other</th>
<th>Valid Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
</tr>
<tr>
<td>Class teacher</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.3</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>iTaukei Fijian friends</td>
<td>21</td>
<td>28.0</td>
<td>7</td>
<td>9.3</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Indian Fijian friends</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>8.0</td>
</tr>
<tr>
<td>iTaukei Fijian teachers</td>
<td>21</td>
<td>28.0</td>
<td>2</td>
<td>2.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Indian Fijian teachers</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>8.7</td>
</tr>
<tr>
<td>iTaukei Fijian strangers</td>
<td>21</td>
<td>28.0</td>
<td>15</td>
<td>20.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Indian Fijian strangers</td>
<td>5</td>
<td>6.7</td>
<td>0</td>
<td>0.0</td>
<td>13</td>
<td>17.3</td>
</tr>
<tr>
<td>Other strangers</td>
<td>11</td>
<td>15.9</td>
<td>1</td>
<td>1.4</td>
<td>2</td>
<td>2.9</td>
</tr>
</tbody>
</table>

|                        | 79   | 13.4 | 26   | 4.4  | 28   | 4.8  | 455  | 77.4 | 0    | 0.0  | 588  | 13.4 |
Table 6. Number of Languages Spoken by the Student and their Conversational Partners $^a$.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 or more</th>
<th>Valid Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Students $^b$</td>
<td>2.9</td>
<td>1-5</td>
<td>4</td>
<td>5.4</td>
<td>17</td>
<td>23.0</td>
<td>40</td>
<td>54.1</td>
</tr>
<tr>
<td>Mothers $^b$</td>
<td>3.2</td>
<td>1-5</td>
<td>3</td>
<td>4.2</td>
<td>11</td>
<td>15.3</td>
<td>33</td>
<td>45.8</td>
</tr>
<tr>
<td>Fathers $^b$</td>
<td>3.7</td>
<td>1-6</td>
<td>2</td>
<td>2.8</td>
<td>7</td>
<td>9.7</td>
<td>20</td>
<td>27.8</td>
</tr>
<tr>
<td>Child-minders $^b$</td>
<td>3.4</td>
<td>2-5</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>12.5</td>
<td>12</td>
<td>50.0</td>
</tr>
<tr>
<td>Teachers $^c$</td>
<td>3.3</td>
<td>2-6</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>16.0</td>
<td>14</td>
<td>56.0</td>
</tr>
<tr>
<td>Total</td>
<td>3.3</td>
<td>1-6</td>
<td>9</td>
<td>3.4</td>
<td>42</td>
<td>15.7</td>
<td>119</td>
<td>44.6</td>
</tr>
</tbody>
</table>

Note. $^a$The number of languages spoken very well, somewhat well, and not very well (excludes not at all). $^b$Reported by caregiver. $^c$Reported by teacher.
Table 7. Language Proficiency of the Student and their Conversational Partners.

<table>
<thead>
<tr>
<th>Language/dialect</th>
<th>Group</th>
<th>Very well</th>
<th>%</th>
<th>Somewhat well</th>
<th>%</th>
<th>Not very well</th>
<th>%</th>
<th>Not at all</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td></td>
<td>n</td>
<td></td>
<td>n</td>
<td></td>
<td>n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>Students a</td>
<td>25</td>
<td>34.2</td>
<td>32</td>
<td>43.8</td>
<td>15</td>
<td>20.5</td>
<td>1</td>
<td>1.4</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Mothers a</td>
<td>56</td>
<td>78.9</td>
<td>12</td>
<td>16.9</td>
<td>3</td>
<td>4.2</td>
<td>0</td>
<td>0.0</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>Fathers a</td>
<td>46</td>
<td>63.9</td>
<td>19</td>
<td>26.4</td>
<td>6</td>
<td>8.3</td>
<td>1</td>
<td>1.4</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>Child-minders a</td>
<td>11</td>
<td>47.8</td>
<td>7</td>
<td>30.4</td>
<td>5</td>
<td>21.7</td>
<td>0</td>
<td>0.0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Teachers b</td>
<td>18</td>
<td>72.0</td>
<td>7</td>
<td>28.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>25</td>
</tr>
<tr>
<td>Standard Fijian</td>
<td>Students a</td>
<td>29</td>
<td>43.9</td>
<td>12</td>
<td>18.2</td>
<td>13</td>
<td>19.7</td>
<td>12</td>
<td>18.2</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Mothers a</td>
<td>44</td>
<td>66.7</td>
<td>7</td>
<td>10.6</td>
<td>3</td>
<td>4.5</td>
<td>12</td>
<td>18.2</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Fathers a</td>
<td>43</td>
<td>65.2</td>
<td>10</td>
<td>15.2</td>
<td>9</td>
<td>13.6</td>
<td>4</td>
<td>6.1</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Child-minders a</td>
<td>15</td>
<td>68.2</td>
<td>5</td>
<td>22.7</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>9.1</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Teachers b</td>
<td>13</td>
<td>59.1</td>
<td>2</td>
<td>9.1</td>
<td>4</td>
<td>18.2</td>
<td>3</td>
<td>13.6</td>
<td>22</td>
</tr>
<tr>
<td>Fijian dialect</td>
<td>Students a</td>
<td>21</td>
<td>33.9</td>
<td>4</td>
<td>6.5</td>
<td>17</td>
<td>27.4</td>
<td>20</td>
<td>32.3</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Mothers a</td>
<td>40</td>
<td>62.5</td>
<td>4</td>
<td>6.3</td>
<td>4</td>
<td>6.3</td>
<td>16</td>
<td>25.0</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Fathers a</td>
<td>37</td>
<td>59.7</td>
<td>9</td>
<td>14.5</td>
<td>6</td>
<td>9.7</td>
<td>10</td>
<td>16.1</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Child-minders a</td>
<td>12</td>
<td>57.1</td>
<td>5</td>
<td>23.8</td>
<td>1</td>
<td>4.8</td>
<td>3</td>
<td>14.3</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Teachers b</td>
<td>7</td>
<td>36.8</td>
<td>5</td>
<td>26.3</td>
<td>3</td>
<td>15.8</td>
<td>4</td>
<td>21.1</td>
<td>19</td>
</tr>
<tr>
<td>Fiji Hindi</td>
<td>Students a</td>
<td>15</td>
<td>23.8</td>
<td>1</td>
<td>1.6</td>
<td>15</td>
<td>23.8</td>
<td>32</td>
<td>50.8</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Mothers a</td>
<td>18</td>
<td>30.5</td>
<td>4</td>
<td>6.8</td>
<td>15</td>
<td>25.4</td>
<td>22</td>
<td>37.3</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Fathers a</td>
<td>23</td>
<td>35.9</td>
<td>14</td>
<td>21.9</td>
<td>15</td>
<td>23.4</td>
<td>12</td>
<td>18.8</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Child-minders a</td>
<td>5</td>
<td>23.8</td>
<td>4</td>
<td>19.0</td>
<td>4</td>
<td>19.0</td>
<td>8</td>
<td>38.1</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Teachers b</td>
<td>7</td>
<td>50.0</td>
<td>2</td>
<td>14.3</td>
<td>4</td>
<td>28.6</td>
<td>1</td>
<td>7.1</td>
<td>14</td>
</tr>
</tbody>
</table>

Note. a Reported by caregiver. b Reported by teacher.
Table 8. Frequency of Code-Switching by Year 4 Students when Speaking to Different Conversational Partners ($n = 40$).

<table>
<thead>
<tr>
<th>Conversation Partner</th>
<th>A lot</th>
<th>A little</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td>6</td>
<td>15.0</td>
<td>19</td>
</tr>
<tr>
<td>Mother</td>
<td>5</td>
<td>13.2</td>
<td>24</td>
</tr>
<tr>
<td>Siblings</td>
<td>8</td>
<td>21.1</td>
<td>20</td>
</tr>
<tr>
<td>Grandparents</td>
<td>3</td>
<td>8.1</td>
<td>21</td>
</tr>
<tr>
<td>Friends</td>
<td>4</td>
<td>10.8</td>
<td>29</td>
</tr>
<tr>
<td>Teacher</td>
<td>4</td>
<td>10.0</td>
<td>33</td>
</tr>
<tr>
<td>Religious leader</td>
<td>2</td>
<td>5.3</td>
<td>34</td>
</tr>
<tr>
<td>iTaukei Strangers</td>
<td>0</td>
<td>0.0</td>
<td>35</td>
</tr>
<tr>
<td>Indian Fijian Strangers</td>
<td>2</td>
<td>5.3</td>
<td>34</td>
</tr>
<tr>
<td>European Strangers</td>
<td>2</td>
<td>5.3</td>
<td>35</td>
</tr>
</tbody>
</table>

$n$ and $\%$ refer to the number and percentage of students code-switching frequently, respectively.
Fiji school students' multilingual language choices when talking with friends

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Abstract

Purpose. Fiji is a multicultural and linguistically multi-competent country. Historical ethnic divisions have socialised students into language friendships based around common languages. Recent changes to educational policy, specifically the mandating of students learning all three of the standard languages of Fiji (Fijian, Hindi, and English), have been introduced in the hope that cross-linguistic understanding will encourage a greater sense of national identity amongst all Fijians regardless of ethnicity. This study explores one multilingual school environment considering students’ language use, attitudes, and friendships in light of these policies.

Methodology. A convergent mixed-methods research design using surveying, artefact collection, students’ drawing, and observation was employed.

Findings. The majority of students reported some proficiency in the language of their inter-ethnic peers; however, students’ inter-ethnic friendships predominantly relied on English language use. It was observed that most friendships amongst these Fijian primary school students were still established according to main language use at home; however, inter-ethnic peer interaction in English was observed to be friendly and respectful. These language use patterns and friendship behaviours were potentially reinforced by individual and societal multilingualism, in addition to the school environment.

Originality. The paper presents the first research linking Fijian primary school students’ language choices and friendship development.

Keywords: Fiji; friendship; multilingualism; Fijian; Fiji Hindi; Fiji English
Introduction

In a world where globalisation sees the smallest of nations engaging in dialogue with a multiplicity of international partners, a community's language status is an important topic of interest for policy makers. Social structures (e.g., government policies on the languages to be used in education and media contexts) can "reinforce or reconfigure" (Ahearn, 2001, p. 117) the language profile of a community because "language is a social, dynamic activity in which people engage through their everyday lives" (Byrd Clark, 2012, p. 133). Linguistic multi-competence, a term coined by Cook (1995, 2016 acknowledges that communities and the individuals living in those communities can have heterogeneous language profiles even in seemingly monolingual contexts as "we are all to a greater or lesser degree multilingual" due to our ever changing use of different dialects, "registers, styles, and accents" (Weber & Horner 2012, p. 3). What languages (or dialects) people know, with whom they use these languages, what mode of communication is used during an interaction, and how the environment influences these choices, create an infinite number of potential individual language profiles within any single community. Thus, defining individual or societal multilingualism is often a difficult endeavour. A central influential force in the development of an individual's language profile during childhood is their peer group (Cekaite & Bjork-Willen, 2013). In the present study, conducted in an urban primary school setting in Fiji, we examine how societal multilingualism (e.g., educational policy, school environment) and individual multilingualism interact to influence the language choices of linguistically multi-competent Fijian students when speaking with friends. As cultural and linguistic outsiders, the authors take an etic viewpoint informed by concepts of language use as a mode of social action.

Fiji Multilingualism

Fiji is a small island nation in the Western Pacific Ocean with a population of 837,271 people (Fiji Bureau of Statistics, FBoS, 2007). It is home to a diverse group of people including the indigenous Fijian community (hereafter referred to as iTaukei Fijian) who number 475, 739, and Indian Fijians, who number 313, 798 people, many of whom are ancestors of the indentured workers who were brought to Fiji during the British colonial rule of the late 19th and early 20th centuries. There are also significant numbers of immigrant groups that originate from other Pacific Island
nations (e.g., Rotuma, Tonga, Samoa), China, Korea, Australia, and New Zealand (FBoS, 2007).

Shared languages, as an avenue towards peaceful coexistence and economic advantage, have been endorsed by the Fiji government (Fiji Islands Education Commission, 2000), and discussed as reasons for promoting multilingualism in international (Comanaru & Dewaele, 2015; Hambye & Richards, 2012) and local literature (Chand, 2011; Chand, 2015). However, ethnic diversity in Fiji has fuelled political and social conflict in the past (Prasad, 2008). Political parties have historically been formed along ethnic divides so that the incumbent government was perceived to favour one community over another. Such beliefs may have been a factor in a number of military coups since Fiji became independent from British administration in 1970. The current incumbent government won parliament on a platform promoting ethnic equality (Brison, 2014) and rewrote the national Constitution to recognize the four peoples of Fiji as indigenous iTaukei, indigenous Rotuman (originally from the island of Rotuma), descendants of indentured workers from British India and Pacific Islands, and immigrant visitors and settlers. The 2013 Constitution declares that “all Fijians [are] united by common and equal citizenry” (p. 1) and recognizes the diversity of languages spoken by each ethnic group.

The vision of the Fiji Ministry of Education, Heritage, and Arts (MoEHA) is to create "quality education for change, peace and progress" (MoEHA, 2015, p. preamble). Fiji’s educational curriculum recognises the diversity of languages in Fiji and encourages maintenance and learning of indigenous languages across racial boundaries to encourage Fijians to break down historical divisions and develop friendships based on a common knowledge of one another’s languages. Current curriculum guidelines recommend a system of transitional bilingual education (Mangubhai & Mugler, 2003) that encourages additive multilingualism. Such that, from school entry until the third year of formal schooling, the language of classroom instruction is recommended to be one of the vernaculars (Standard Fijian or Standard Hindi) and English is taught as a second language. Then from year 4, the language of classroom instruction is prescribed as English with the selected vernacular taught as a separate subject and used to supplement English instruction.

From as early as 1926 vernacular language classes were recommended for all Fijian students (Mangubhai & Mugler, 2003). In 2000 The Education Commission
recommended that students should attend conversational language classes in the language of a cultural group to which they do not belong (e.g., iTaukei Fijian students to attend Fiji Hindi classes, Indian Fijian students to attend Standard Fijian classes) (Mangubhai & Mugler, 2003). This additive approach to language education respects the cultural and linguistic diversity in Fiji. Students are encouraged to develop conversational skills in additional languages with the view that inter-ethnic and inter-linguistic friendships may develop. Development of such friendships “offers social opportunities to become skilled at understanding the standpoints of others” (Theobald, Danby, Thompson, & Thorpe, 2014, p. 116) and is a tool in the peace-building process for many multilingual communities. Teachers are similarly encouraged to learn the languages of their school community via compulsory conversational language classes in their non-main language at university (Chand, 2015). Educational policy such as that described is a genuine attempt at “social engineering ” defined as a “deliberate mixing of pupils from different national and linguistic backgrounds” (Housen, 2002, p. 51). When cultures and linguistic knowledge is shared there are benefits for individual learning, school attitudes, and social harmony (Rymes & Anderson, 2004).

Studies describing the linguistic environment in Fiji schools confirm the extensive multilingualism of Fiji’s children from a young age (Brison, 2014; Hopf, McLeod, & McDonagh, 2016; Shameem, 2002a, 2002b; White, 2002). In their cross-sectional study of two urban Fiji classrooms, Hopf et al. (2016) reported that the majority of students, aged 5 to 11 years, reported speaking three languages (on average) at a rudimentary level or better. Similarly, previous studies with urban and rural Indian Fijian primary school students (Shameem, 2002a, 2002b), and rural iTaukei Fijian high-school students (White, 2002) reported that participants often knew more than two languages. Even in kindergarten, Fijian students were reported to regularly mix languages suggesting emerging multilingualism in this environment (Brison, 2014). However, current educational research in Fiji suggests that students are not speaking the vernaculars (Fijian or Fiji Hindi) with each other; rather, the English language dominates inter-ethnic communication on school grounds (Chand, 2015; Lotherington, 2008; Shameem, 2002a). However, these studies do not report on the interaction of multilingualism and friendship in Fiji. What are not known are the facilitators and barriers to Fijian students speaking shared languages. Consequently,
this chapter examines one school in Fiji to assess the effects of the school context and student's language choices on friendships.

**Multilingual Students’ Friendships**

Friendship in multilingual settings has been studied in various contexts around the world (e.g., Aboud & Sankar, 2007; Brison, 2014; Cekaite & Björk-Willén, 2013; Feng, Fan Foo, Kretschmer, Prendeville, & Elgas, 2004; Goldstein, 2003; Housen, 2002; McLeod, Verdon, & Theobald, 2015). However, friendship as a concept is difficult to define, as it is generally agreed that no one set of attributes can “capture the spirit of the many forms that friendship can take” (Rybak & McAndrew, 2006, p. 147). Typically though, “friendship is characterized by high levels of prosocial behaviour, intimacy, and other positive features, and low levels of conflicts, rivalry, and other negative features” (Berndt, 2002, p. 7). There is evidence to suggest a positive effect on students' academic outcomes and experiences (particularly friendship development) when linguistic and cultural diversity activities are conducted in an inclusive, sensitive manner in the multilingual classroom (Aboud & Sankar, 2007; Rymes & Anderson, 2004). This is particularly so when schools give equal status to all linguistic groups through a mixed student body and linguistically diverse classroom materials (Aboud & Sankar, 2007). There is some evidence to suggest, however, that inter-linguistic friendships may be easier for older students as they are more likely to make efforts to cross into a peer's linguistic space (Goldstein, 2003; Housen, 2002). For example, Goldstein (2003) reported that multilingual high school students chose to speak a given language based on social and cultural capital afforded to the language in any situation. In situations where both students were proficient in the same main language (in this case Cantonese) and English (the additional language) the students were more likely to speak Cantonese acknowledging foremost their mutual cultural background. However, if they were in the presence of an English as main language speaker, they were more likely to use a mix of Cantonese and English, especially if the English-speaking student made an effort to learn and use some Cantonese. Mixing of one’s languages was seen to be an effective method of maintaining cultural identity whilst extending opportunities for cross-linguistic friendships, thereby building social capital without losing cultural capital.

Sociolinguistic studies of language mixing may distinguish between code-switching and crossing. Code-switching tends to involve people who identify as...
coming from the same main language-group mixing their main language with one or more common additional language either within or between sentences (Chen & Rubinstein-Avila, 2015). A study of code-switching behaviour between students in a South African classroom revealed that code-switching was effective for teaching and learning and also improved intercultural communication (Rose, 2006). Crossing occurs when a person, who speaks a different main language to their conversational partner but still shares language knowledge by virtue of their additional languages, chooses to cross to the conversational partner's language or a common additional language (Chen & Rubinstein-Avila, 2015). In uncertain linguistic situations interlocutors frequently cross to a common additional language that is seen as neutral ground, rather than speaking in one or the other's main languages (even if these main languages were shared) (Scotton, 1976; Björk-Willén, 2007). In Fiji, Tamata (1996) and Shameem (2002a) both reported on student and teacher code-switching in Fiji classrooms; however, neither of these studies differentiated between code-switching and crossing, nor linked their findings with friendship development. More recently a study of friendship development in Fiji kindergartens revealed that whilst commonality of culture and language has traditionally determined friendships, social status is now playing an increasingly important role (Brison, 2014). However, Brison's study did not examine directly the role of language on friendship development. This chapter will explore language use with respect to friendship connections amongst Fijian primary school students and within the policy context that mandates the instruction of students in three of the main languages in Fiji. Therefore, the current study aims to:

- Describe how a Fiji school promotes linguistic diversity in peer interactions.
- Describe the languages students report they use with friends.
- Describe how students feel about speaking English and their main language in contexts where their friends are present.

**Method**

Mixed methods research within an ethnographic design was chosen as the best method to capture the linguistic and cultural complexity of the context. Mixed methods are recognised as a natural outlet for research that seeks to view the multiple viewpoints in everyday life (Creswell & Plano Clark, 2011). Complementarily,
ethnography is useful in “understanding how culture sharing groups work” (Creswell & Plano Clark, 2011, p. 24). Conducted over a period of 2 school terms (approximately 26 weeks), this study combined quantitative data collection (e.g., use of a survey tool) and subsequent statistical analysis of language use and attitudes information, complemented with qualitative methods (e.g., direct observation, field notes, artefact collection). This convergent mixed-methods research design (Creswell & Plano Clark, 2011) enabled triangulation of quantitative and qualitative methods of inquiry to create a snapshot of the complex picture within a Fiji school.

**Reflexivity Statement**

This research arose out of the primary author’s observations of her own children and other children growing up in the multi-ethnic and linguistically multi-competent country of Fiji. As a monolingual English-speaking Australian speech-language pathologist and PhD researcher living in Fiji for more than seven years, she was intrigued by the diversity of languages spoken in Fiji. Of particular interest was how children navigated the apparent ethnic and cultural differences to develop friendships. Joined by PhD supervisors from the fields of speech-language pathology and special education, the research team investigated how the children of Fiji were helping to build a national identity built on commonality of experience rather than the historically dividing line of ethnicity.

**The Study Site: A Multilingual Multiracial School**

The study school was located in an urban centre of Fiji. The school enrolment was multi-ethnic from predominantly low-socio economic backgrounds. Historically, community groups have privately run schools in Fiji and consequently there are few government-owned schools. However, the Ministry of Education, Heritage, and Arts (MoEHA) continues to coordinate the national education agenda. The school was selected as a research site by a representative of MoEHA as an example of a multilingual school. An independent school run by public committee, the school had 26 teaching staff and an enrolment of over 1000 students ranging in age from five to 15 years spread over 8 school grades. The school had expansive grounds with four multi-classroom blocks including a computer laboratory, large sports field, and a grassed multi-purpose field where students would congregate for assemblies and performances. Classroom sizes reached more than 40 students per teacher. The
computer laboratory contained basic equipment but no internet access. The school did not have a library.

**Participants**

Two classes, one each from year 1 and year 4, were allocated to the researchers by the school head master. These year levels were requested as the researchers wished to compare the linguistic behaviour of children as they initially entered the school system and were instructed in their vernacular (year 1) with students who were entering a period of education when the language of instruction formally changed to English (year 4). One particular class within each year level was selected based on the class that contained the highest percentage of mixed-ethnic enrolment. Student assent and caregiver consent was obtained for 35 out of 36 year 1 students (97.2%) and 40 out of 41 year 4 students (97.6%). Students in both classes came from low income homes (annual income <FJD20,000: year 1, 88.0%; year 4, 92.9%), were predominantly male (year 1, 71.4%; year 4, 57.5%), and predominantly from households with iTaukei Fijian ethnicity (year 1, iTaukei=69.7%, Indian=12.1%, Other=18.2%; year 4, iTaukei=64.1%, Indian=23.1%, Other=12.8%). The 35 student participants in year 1 ranged in age from 63.0 to 87.0 months (5;3 – 7;3 years) ($M = 71.8; SD = 4.1$). The 40 student participants in year 4 ranged in age from 108 to 125 months (9;0 – 10;5 years) ($M = 115.3; SD = 4.3$). A full description of the students’ linguistic profile is provided in Hopf et al. (2016).

**Data Collection**

In addition to seeking ethical approval from the required government bodies, the school community (teachers and administrators) and caregivers of the students were invited to information sessions known locally as *talanoa* sessions (Otsuka, 2005). Within these sessions the primary researcher shared information, sought advice on how to make the research successful, and answered community questions. In addition, a research assistant was employed who was fluent in Fijian and with basic proficiency in Fiji Hindi. The following data collection methods and analysis occurred simultaneously, over two school terms, with the primary purpose of triangulation:

**Observation.**

The first school term data collection period involved year 4 students. The second school term data collection period involved year 1 students.
observations and conversations of interest with students, staff, and other persons on site of the school took place throughout the full data collection period. Formal observations, in which language use behaviour was recorded in a time use diary over three separate 1-hour sessions, took place at the commencement of each term. The language used, by whom, and for what purpose was noted.

**Artefact collection.**

Artefact collection included collating photographs, work samples, school reports, and school policy documents (e.g., year 1 and year 4 school curriculum), throughout the 2 school terms of data collection.

**Surveying.**

Surveying included researcher-developed surveys for all caregivers, teachers, and year 4 students to complete, and the children's likert questions on the Speech Participation and Activity Assessment of Children (SPAA-C, McLeod, 2004) survey for the year 1 and year 4 students to complete. The surveys included questions about language competence and use in different contexts.

**Caregiver survey.**

The students’ caregivers \( n = 75 \) completed the 68-question caregiver survey at home and were offered opportunities for discussion of the survey via interviewing with the primary researcher in English or the research assistant who spoke the same home language(s). Twenty-one caregivers (28%) chose to have a face-to-face interview with the primary researcher in English. Of relevance to the current study, caregivers were asked two closed response questions. The first asked caregivers to rate (very well, somewhat well, not very well, not at all) their child’s ability to communicate in up to 9 languages (English, Standard Fijian, Fijian dialect, Fiji Hindi, Standard Hindi, Urdu, Arabic, and space was provided for two Other language categories). The second asked "What language/dialect does your child speak mostly to friends?" Caregivers were then required to make a selection from the following options: Standard Fijian, Fijian dialect, Fiji Hindi, English, and Other.

**Teacher survey.**

Both the year 1 and year 4 teachers independently completed the teacher survey. Interviews with the class teachers were held throughout the study period. Teachers were asked to answer the question, "At school, what language/dialect does the child mostly speak to..." with respect to both "iTaukei Fijian friends" and "Indian
Fijian friends”. Teachers were then required to make a selection from the following options: Standard Fijian, Fijian dialect, Fiji Hindi, English, and Other.

Year 4 student survey.

Year 4 students completed a student survey that asked three separate questions about language use with 10 communication partners (see Appendix A). Only survey item (e) Your friends is considered in this study. The first two questions asked about language choice. Specifically, "What language do you mostly speak with your friends?", and "What language do you also speak with your friends?". For each question students were required to make a selection from the following options: Standard Fijian, Fijian dialect, Fiji Hindi, English, and Other. The third question asked about code-switching: "How much do you mix languages when you speak with your friends?". Students responded with not at all, a little, or a lot. Completion of the survey was undertaken during a 2-hour whole class activity led by the primary researcher and supported by the year 4 classroom teacher. Completion of the class activity was aimed at ensuring consistency with interpretation and support for students with variable spoken and written English proficiency. The class activity involved (in order of events): a whole class discussion on the languages and dialects spoken in Fiji; identification of the language/dialect groups within the class; a discussion and role-play on levels of language mixing (not at all, a little, a lot) that may happen during multilingual conversations; individual completion of the language use grid on a question by question basis led by the primary author; and individualized checking of the completed grid by each student in an interview with the primary researcher. Year 1 students were not asked to complete this survey due to the oral and written English proficiency required.

Speech Participation and Activity Assessment of Children Checklist (SPAA-C; McLeod, 2004).

Ten questions from the SPAA-C were completed individually with the research assistant, with each year 1 and 4 student in a quiet space away from the classroom. The SPAA-C is aligned with the International Classification of Functioning, Disability and Health (ICF; World Health Organization, 2001) and the 10 closed response questions are designed to probe children’s attitudes to communication with different conversational partners in different settings (McLeod, 2004). Students were asked to complete the SPAA-C firstly with reference to their use
of English. Then, if English was not the student's main language they were asked to complete the SPAA-C a second time with reference to their main language (see Table 3).

**Drawing.**

Year 4 students completed a drawing task after undertaking the student survey. Students were provided with a sheet of paper on which they provided demographic information and a drawing in response to the primary author's request to "Draw a picture of you speaking English". There was no time limit, but most students spent approximately 10 minutes undertaking the task.

**Data analysis**

One method of categorizing friendship, suggested by Rybak and McAndrew (2006), is defining friendship in three distinct categories: 1) a best friend, 2) a friend, and 3) an acquaintance. The intensity and intimacy assigned to these friendship categories is influenced by an individual’s cultural background as evidenced in Rybak and McAndrew’s (2006) comparative study of American and Polish friendships. However, the trend that a best friend is closer than friends, and friends are closer than acquaintances, appears to hold across cultures. At present, Fiji friendships have not been studied in detail; however, differences in the terminology of the instruments used in this study require an explanation of our interpretation of friendship. Thus, quantitative data methods in this study differentiated the terms *best friend* and *friend*. Applying Rybak and McAndrew’s (2006) system of categorization we assume *best friend* (used in the language attitudes survey described above) relates to a closer relationship than that experienced with a *friend* (used in the language use surveys described above). Determination of closeness in the relationship during qualitative data collection (e.g., observations) was not made as at the time of data collection since the focus of the larger study from which this paper is drawn was language use. Consequently, when discussing qualitative data we use the term *peer*, a term that does not suggest a level of closeness.

Similar issues with terminology abound in defining language primacy in multilingual contexts (Cenoz, 2013; Weber & Horner, 2012). In this study we take a holistic perspective of multilingualism and use the term *main language* to identify the language that is predominantly used by the student in the home environment, as reported by the caregiver. Main language is thus loosely equated with terms used in...
other publications such as home language, first language (L1), or vernacular. When discussing other languages in which the student has basic or better proficiency, then we use the term *additional language/s* without defining the acquisition manner (simultaneous or sequential) or sequence (e.g., second, L2, third, L3, etc.).

Observation and artifact collection data were analyzed using inductive thematic analysis guided by the “five phased analytic cycle” as describe by Yin (2016, p. 177): compiling the data, disassembling, reassembling, interpreting, and concluding to move beyond a descriptive analysis of the data to identify the meanings behind these experiences. The responses from caregiver, teacher, and year 4 student surveys, and SPAA-C (McLeod, 2004) were codified and analysed using SPSS® Statistics Version 23.0 (IBM®, 2015). Descriptive statistics were used to determine the frequency of responses for categorical variables (n and %) or for continuous variables (M and SD). Percentage of valid cases was reported. To determine associations between variables the data were analysed using non-parametric statistics with an alpha level set at 0.05.

**Results**

In addition, to findings on language proficiency in main and additional languages, two major themes emerged from qualitative and quantitative data analyses. The first major theme, describes how the school environment supports multilingual peer interactions. This theme contains three sub-themes: (1) physical resources, (2) classroom organisation, and (3) language of classroom instruction. The second major theme describes students’ language choices with friends.

**Main and Additional Language Proficiency**

The students spoke between one and five languages with varying proficiency. Caregivers reported the main language spoken at home by the students (n = 75) was Standard Fijian (n = 32, 42.7%), followed by English (n = 16, 21.3%), Fiji Hindi (n = 15, 20.0%), or a Fijian dialect (n = 12, 16.0%). Table 1 details the students' reported proficiency in their main and additional languages as reported by caregivers. The majority of students spoke English as an additional language with high proficiency (*somewhat well* or *very well*) and other additional languages with basic (*not very well*) or no (*not at all*) proficiency. A general trend was observed of improved proficiency from year 1 to year 4 across all additional languages (see Table 1). In addition, most year 1 Fiji Hindi speakers did not speak Standard Fijian or a Fijian dialect on school
entry, but more than a third of the year 4 students had basic proficiency in both of these languages. In contrast, most Fijian (Standard Fijian and Fijian dialect) speakers did not speak or had basic proficiency in Fiji Hindi on school entry and this remained similar in year 4. However, as this is a cross-sectional study these cross-year comparisons cannot be ascribed to the individual students but rather may reflect an inherent difference in the composition of the two study groups.

**Supporting Multilingual Peer Interactions in the School Environment**

The school mission and vision statements were displayed prominently at the entrance to the school. The mission statement outlined a goal in English for developing “skills and qualities required to be successful in a diverse society”. The vision statement clearly recognised their “multicultural institution” as “contributing to improved quality of life and building a peaceful and prosperous society”. These sentiments were carried into the classroom goals where inclusiveness is seen as paramount. For example, in the year 1 class the goal was “to provide a classroom where all children are learning” (emphasis added, see Figure 1). These statements set the scene for creating an environment where students are encouraged to learn and play together regardless of language or racial background.

**Physical resources.**

Availability of literacy materials (e.g., text books, class readers, signage) in different languages offers an opportunity for a school to show they value the language diversity of their students (Schwinge, 2003). All signage outside of the classroom was in English. In both year 1 and year 4, non-English texts were limited to workbooks for second language subjects (vernacular language teaching of Standard Fijian and Standard Hindi). Other classroom learning resources and project displays were predominantly in English. Previous research has highlighted the lack of materials in Fijian or Fiji Hindi available for teachers and students alike (e.g., Shameem, 2002b). For multicultural education to succeed, schools need high quality multicultural learning materials to be readily available for student and teacher use in classrooms. The limited supplemental (non textbook) reading materials in any language, and recent implementation of a British-developed English phonics reading program, does suggest a prioritisation of English for academic purposes despite the managements’ and teachers’ positive comments regarding multilingualism with the researcher.

**Classroom organisation.**

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Classroom organisation and pupil grouping can influence student friendships and learners’ school performance (Gest & Rodkin, 2011; Thompson, 1996; van den Berg, Segers, & Cillessen, 2012). Classrooms had mixed ethnicity enrolments and despite limitations to the resources available (e.g., tables and chairs), teachers structured the physical space to promote peer communication and interaction. For example, Figure 2 demonstrates a diverse group of students who identified as either iTaukei Fijian or Indian Fijian engaged in group work. The teachers employed collaborative approaches and group work as a pedagogical strategy to maximise student-learning outcomes and potentially develop inter-ethnic friendships. Available physical resources allowed mixed-ethnic groups of students to be seated in small table groupings to enable eye contact, better opportunities to communicate with one another, and share ideas.

In the year 1 classroom, students moved between whole group activities (all on a mat, see Figure 3, or at desks), split group activities (some on mat some on desks, see Figure 4), and independent lessons at desks. In year 1, split group activities provided opportunities for more able students to work independently whilst others received more instruction from the teacher. There was no evidence of group work in the year 1 classroom. This is likely due to the observations taking place at the beginning of the school year when students where unfamiliar with each other.

In the year 4 classroom, group project work was displayed around the room and revealed that the teacher had made opportunities for collaboration and small group interaction despite limited available space. In year 4, two table clusters (out of five possible) were grouped according to students’ ability and it was noted that students with different main languages were seated together (see Figure 2 demonstrating students who reported their main languages to be Standard Fijian, a Fijian dialect, and Fiji Hindi). On other tables, students who had limited English competence were seated beside more proficient English-speaking students who could assist with interpreting the teacher’s instructions that were always delivered initially in English. During desk time in both classrooms, the teachers allowed collaboration in any language and students were seen to turn to each other for assistance.
Language of classroom instruction.

Modelling usage of different classroom languages may provide an opportunity for the teacher to encourage linguistic diversity among students, thereby increasing acceptance of linguistic differences and encouraging friendships across linguistic boundaries (Chen & Rubinstein-Avila, 2015). All whole school information (e.g., during morning, afternoon, and formal assemblies) was transmitted in English via staff talking into a loudspeaker. In addition, the dominant method of instruction observed in both year 1 and year 4 classrooms was triadic dialogue in English: one that involved the teacher asking a question, the student answering, then the teacher evaluating the response (Chick & McKay, 2001). Teacher-led activities required students to be quiet and listen to English instructions before responding (if called upon) in English. In year 1 observation of the literacy sessions revealed that song and drill rehearsal were also frequently used to engage students' interest. In both classes, group oral language sessions were frequently followed by individual writing/drawing tasks. In year 4, much of the observed learning involved completion of printed booklets or copied sheets that were in English for all subjects except the vernacular language classes. In both the year 1 and year 4 classrooms, the number of students, lack of textbooks, and overcrowding of the physical space, may have precluded more frequent use of varied teaching methods. In both classes, vernacular languages were observed and reported by teachers to redirect students to task as a "classroom management function" (Chen & Rubinstein-Avila, 2015, p. 9).

Vernacular education in Standard Fijian and Standard Hindi was noted to occur regularly as an external topic of instruction for the students in both year 1 and year 4. In this school, Fiji Hindi-speaking students attended Standard Hindi-speaking classes, and Fijian-speaking students attended Standard Fijian speaking classes. Most of the students who spoke neither of these languages as their main language (e.g., the 16 students with English as main language in this study) were observed to wait in their classroom during vernacular language periods. The vernacular language class was rarely in the dialect of the students in these classrooms. The Standard Fijian vernacular class only truly served the 32 students with Standard Fijian as their main language. Thus, the twelve students (16%) who spoke a Fijian dialect attended Standard Fijian classes as additional dialect learners. For the 15 Fiji Hindi speakers, they also did not receive instruction in their vernacular. The Hindi vernacular
curriculum is based on Standard Hindi, a distantly related but distinctly different language to Fiji Hindi. Thus, Fiji Hindi-speaking students were also learning an additional language. Thus, some students were learning two new languages upon entering school (English and the standard vernacular).

**Language Use with Peers and Friends**

**Observation of peer networks inside the classroom.**

Observations of interactions among peers revealed a mixed picture dependent on the age of the student and the context of interaction. During independent seat work, students spoke whatever language they liked. In year 1, students who spoke the same language were seated together and more often observed to work together. In mixed ethnic groups most classroom conversations were in English and the written product of individual or collaborative efforts was also in English. In years 1 and 4, iTaukei Fijian peers, when the same Fijian dialect was known, would use the shared dialect between themselves. In contrast, Indian Fijian peers in year 1 would use Fiji Hindi, but in year 4 they mainly used English between themselves. In both classes, during teacher instruction, the students used their main language between peers predominantly for translation purposes. For example, during administration of the year 4 student survey, an iTaukei student explained that he was interpreting the researcher’s English instructions into a Fijian dialect because his peer didn’t speak English very well. Similar behaviour amongst other same language peers was noted in all formal classroom observations.

**Observation of peer networks outside the classroom.**

Students’ peer networks and language use were also observed outside the classroom during recess, lunchtime, and assemblies. Recess and lunchtime were unstructured except that students were restricted to certain areas of the school dependant on their age. Students chased one another, sat, or walked around the grounds during this time. Generally, year 1 and 4 students were observed to play with peers who spoke the same main language. Assemblies also revealed peers clustering in linguistic groups. Students who spoke English as their main language were observed to predominantly have friends from one of the dominant language groups (Fijian or Fiji Hindi) rather than coming together into their own English language group.
Contrary to these observations, year 4 students from different linguistic backgrounds interacted together during a 2-week visit of speech-language pathology students who created semi-structured play at break times using balls, skipping ropes, and frisbees (see Figure 5). The students in Figure 5 had self-reported that they spoke Fiji Hindi, Fijian, Rotuman, and English as their main languages. On this occasion the students were observed to speak in English occasionally code-switching into their own and crossing into the other student’s language as they played with the donated equipment.

**Surveys of language use with friends.**

Three surveys (year 4 student, caregiver, teacher) were analysed, using descriptive statistics, to record the students’ language use patterns with friends (see Table 2). English was the most frequent language used by year 4 students with their friends. Teachers reported high levels of student crossing from main language to English when students speak with Indian Fijian friends (92.0%) and iTaukei Fijian friends (62.7%). In contrast, caregivers reported that 35.8% of the students crossed to English with friends. This finding suggests that students cross to English with friends far more in the school than home environment.

Analysis of teacher-reported student language use with friends from different ethnicities revealed that where students were noted to speak a language other than English with friends this always involved students speaking to friends with the same main language group. For example, teachers reported six cases (five of which were in year 1) where students spoke Fiji Hindi with Indian Fijian friends; however, all six cases involved students who spoke Fiji Hindi as their main language. Similarly, all 28 teacher-reported cases of students using Fijian (Standard or other dialect) when speaking to an iTaukei friend were by students who spoke Fijian as the main language in the home. Once again, these students were predominantly from year 1. Of interest from this analysis is that use of main language at school appears to be influenced by the age of the student. Thus, most year 1 students spoke to friends in a shared main language when possible. In contrast, the year 4 students showed a preference for English use when speaking to friends from the same main language group. In both year 1 and 4, when students did not share a main language then they crossed to speaking English. This finding is consistent with Shameem (2002b) who also reported increased English use with age.
Fijian- or Fiji Hindi- speaking students crossing to a main language other than English (e.g., Standard Fijian, a Fijian dialect, or Fiji Hindi) was not reported by the participants. Two year 1 Fiji English-speaking students were reported to cross: one was reported to cross to Standard Fijian when speaking to an iTaukei Fijian friend and the second, a Fiji English-speaking student, crossed to Fiji Hindi when speaking with an Indian Fijian friend. No year 4 Fiji English speakers crossed to another language when speaking with friends.

Crossing may occur rarely in this group of students but the year 4 students reported frequent code-switching when speaking with friends. In fact, all Fiji Hindi- and Fiji English-speaking students code-switched either a lot (Fiji Hindi, n=5, 50%; Fiji English, n=1, 14.3%) or a little (Fiji Hindi, n=5, 50%; Fiji English, n=6, 85.7%) in their conversations. Whilst year 4 Standard Fijian and Fijian dialect speakers reported code-switching a lot (Standard Fijian, n=5, 38.5%; Fijian dialect, n=3, 42.9%), a little (Standard Fijian, n=5, 38.5%; Fijian dialect, n=3, 42.9%), or not at all (Standard Fijian, n=3, 23.1%; Fijian dialect, n=1, 14.3%).

**Attitudes to Language Use with Friends**

Students reported on the SPAA-C (McLeod, 2004) that they are the happiest when talking to their best friend or playing with other friends at school (see Table 3) regardless of whether they are speaking English or their main language. In contrast they are less likely to be happy when put in situations where they are singled out (e.g., when answering a teacher’s question or speaking to the whole class). Despite minor differences noted for total scores and individual items on the English versus main language scales, these differences did not reach statistical significance.

Year 4 students’ attitudes to English use with friends were also considered through an analysis of drawings of them speaking English (for examples see Figure 6). Of 40 drawings, five depicted two-way communication (e.g., Figures 6a and 6b), 31 had one-way communication (e.g., Figures 6c and 6d), and four had no words (e.g., Figures 6e and 6f). Comparison with teacher-reported English proficiency levels revealed that those students who used no words in their picture had English proficiency levels below the average for the group, whilst those who used 2-way communication in their picture had English proficiency levels slightly above the group average.
Discussion

The present study describes the languages spoken with friends by multilingual Fijian students from an urban, secular, multi-ethnic school, and how these language choices are potentially influenced by individual and social factors, particularly the school environment. Results reveal that student proficiency in their main language and English is better than proficiency in other additional languages. In addition, students in year 4 recorded higher levels of proficiency across all languages than students in year 1. Survey results revealed that language choice (English or main language) does not appear to influence the students' attitude to communication with friends. It was observed and reported that language choice with friends and peers was context dependent. Specifically, peer interaction in the classroom was observed to be predominantly English, whilst interaction with friends and peers in the playground, or at home, was observed and reported to occur predominantly in the students' shared main languages. Students’ language choice and the school environment potentially reinforced these language use patterns and friendship behaviour.

Individual and Societal Multilingualism Influencing Peer Interaction and Friendships

The students' individual multilingual profiles revealed good proficiency in the students' main languages and English but poor proficiency in other additional languages. The reported lack of crossing to languages (other than English) is likely due to a lack of proficiency in additional languages but may also be reflective of each ethnic group wishing to maintain a distinct linguistic identity. This has significant implications for students' language choice when speaking to a peer/friend from a different linguistic group. Stell and Dragojevic (2016) state that "language choice in multilingual contexts is determined by a complex interplay of many factors, including cognitive and affective motivations, ethnolinguistic vitality, language proficiency, and sociocultural norms" (p. 17). For students in this study, language proficiency and sociocultural norms appeared to be most influential.

Students who only know a little of a language are potentially placed at a social disadvantage in any conversation with a more competent peer. In this study, where English is spoken with greater proficiency than other additional languages, students who crossed to English may level the linguistic playing field, and thus reduce any perceived social disadvantage. However, whilst English is the language of choice for
crossing in inter-linguistic communication, students were also reported to be learning each other's languages. Goldstein (2003) suggests that knowledge of the other's language (even without active use), alleviates fear, by allowing the opportunity to surreptitiously check that conversations taking place in the other language are not targeted, or derogatory, towards the non-dominant language speaker. It also allows the person who does not belong by birth right to the linguistic group, another entry point opportunity to create social links with this group for purposes of friendship.

Socio-cultural norms also appear to influence the language choices of students when speaking with friends. Year 1 students tended to have friends who spoke the same main language. Thompson (1996) found that students as young as three years of age understand ethnic differences, and thus have a propensity to develop friendships with students of the same ethnicity, ultimately influencing social and language behaviour in the school setting. In contrast, year 4 students, with greater proficiency than year 1 students in English and their additional languages, were noted to cross to a non-main language (usually English) more frequently than their younger peers. For example, teachers reported that year 1 Standard Fijian main language students would not cross to a different language when speaking with friends; however, 60% of the year 4 Standard Fijian-speaking students crossed to English. Similarly, Fijian dialect speakers in year 1 did not cross at all, but the year 4 Fijian dialect students crossed 100% of the time to English. This pattern of increased crossing from year 1 to year 4 may suggest that students are broadening their friendships to include students from different linguistic groups as they progress through school. The reported change in language use behaviour with age, as reported in Housen (2002), and observed in this study, may be accounted for by increased motivation of older students as they become more aware of the need to diversify friendship for greater social purposes (e.g., access to education and employment opportunities). Alternatively it may display older students' preference for English due to its high status as a lingua franca in education and business in Fiji (Mangubhai & Mugler, 2003). It is also possible that the dominance of English in the school environment reinforces English's high linguistic status in this context and students are merely conforming to expected social norms as they progress through school.

The greater use of English with friends in the school environment, compared to the home environment suggests that societal multilingualism may be influencing
language choice in the different contexts. Higher student levels of crossing to a non-main language, especially English, when speaking with friends, were reported by teachers when compared to caregivers. Ethnic clustering in living arrangements may partially explain this result. The participants were predominantly iTaukei Fijian and many lived in iTaukei villages where the local Fijian dialect or Standard Fijian is the dominant community language. Whilst English is present in iTaukei homes through television exposure, there is little exposure to Fiji Hindi. Standard Hindi is more likely to be heard due to the popularity of Bollywood soap operas and movies amongst all ethnic groups in Fiji. Similarly, Indian Fijian homes are often collocated. Thus, exposure to Fijian dialects in Indian Fijian communities is likely to be rare compared to English. Unfortunately, as the data is cross-sectional we cannot tell why students choose one language over another to use with friends in different contexts, nor can we determine if the observed patterns across school years are actually born out over time. A longitudinal study of Fijian students language choices with friends is required.

**Fostering Friendships in a Linguistically Multi-Competent Environment**

Classroom organisation, language of classroom instruction, and physical resources in this school were found to both support and potentially hinder inter-linguistic friendships. Teachers embraced opportunities for teaching moments that encouraged inter-and intra-linguistic friendships. In the year 4 classroom, small group work was observed to be an effective method used by the teacher to use the limited physical resources of their classrooms to structure inter-linguistic learning spaces and opportunities for inter-linguistic friendships to develop. In line with curricular recommendations for vernacular education in years 1 through 3 of schooling, and the limited inter-linguistic knowledge of the students in year 1, the year 1 teacher effectively scaffolded opportunities for supporting children’s main language knowledge and English language learning, in whole class and small group work. Importantly, the historically-reported practice of banning main language use in school classrooms and playgrounds in preference to English use (see Mangubhai & Mugler, 2003; White, 2007) appeared to be a practice of the past. Frequent use of main languages on school grounds was observed between teachers, teachers and students, and between students. In the classroom, both students and teachers used their main and additional language knowledge to support the learning of students with less
competence in English, and manage classroom dynamics. In an English language classroom, Chen and Rubinstein-Avila (2015) suggest incorporation of student main languages for purposes of explanation, annotation, comment, or to convey instructions, to help students "make sense of the instruction in English" (p. 7). These authors stated that main language use in the classroom can also serve an important "socialising function, which helps to create a learner-friendly environment" (p.8). Teachers who use the main languages to praise students' efforts effectively reduce classroom anxiety and create a sense of solidarity within the class. In this school, main language use was observed for classroom management purposes; however, it is possible that main language use was used for other purposes during non-observation periods.

Main (vernacular) language classes also show a commitment to promoting language equality in the school. A significant amount of time was allocated to vernacular language classes. The diverse number of languages/dialects spoken by the participants may have resulted in the observed Standard Fijian vernacular classes for Fijian speaking students, and Standard Hindi speaking classes for Fiji Hindi speaking students. It is possible that the vernacular language program also includes conversational skills across languages for students from different ethnic backgrounds as per the 2000 Education commission recommendations; however, this was not observed. Similarly, equality in language status in the school may be enhanced through greater use of Standard Fijian and Fiji Hindi in official school functions. For example, signage and important notices during assemblies could be delivered in all three languages. In addition, provision of a library with student access to literature in all three languages may support the development of citizens who are multi-literate in addition to multilingual.

The presence of competing individual, societal, and school forces on the students' linguistic choices with friends did not appear to influence the students’ attitudes to developing inter-linguistic friendships. The students indicated on the SPAA-C survey that they are happiest when talking with or playing with friends compared with other conversational partners, whether they are using English or their main language. Whether talking with a best friend or playing with friends, students were equally happy talking in their main language or English. Lower scores for SPAA-C items in other contexts where friends are also present but for different
purposes (e.g., involving answering teacher’s questions and speaking in front of the class), may reflect the demands of English in the classroom, and students’ attitude towards these tasks; however, this was not reflected in an expected higher score for doing the same tasks in the main language.

**Limitations**

Triangulation of our quantitative and qualitative results has revealed a complex picture of language use and attitudes and how these influence friendships in this Fiji school. This picture would have been enhanced had the primary researcher spoken all of the languages observed with a high level of proficiency or been able to video record students outside the classroom to allow for crosschecking with a native speaker. Extending the SPAA-C record to ask students how they felt speaking in the language of their inter-ethnic peers may have answered our question as to why students aren’t using languages in peer interactions that they claim they know. A longitudinal, rather than cross-sectional design, would have enhanced understanding of students' language use with friends over time.

**Conclusion**

In this Fiji school, the school environment and students' multilingual language profiles (particularly proficiency in additional languages) appeared to influence students' language choices with friends and peers. The school environment used available resources to support students' use of main languages through acceptance of main language use in classrooms and common spaces, and an active vernacular language program. Teaching and classroom organisation practices, such as mixed ethnic groups, and use of vernaculars to supplement understanding of academic content, created opportunities for students to interact with peers from a different main language group in a supportive learning environment. Greater additional language proficiency in the year 4 group, compared to the year 1 group, suggested that indirect exposure to additional languages in the context of school (e.g., during playground interactions) facilitated acquisition of these additional languages (although this would need to be corroborated in a longitudinal study). Activities that similarly recognise the equal status of Fiji's languages (e.g., use of Fijian and Fiji Hindi in formal oral and written contexts, and expansion of the vernacular language program to include students from different main language groups) may also support additional language acquisition. In conclusion, active use of another groups' main language (e.g., a...
Standard Fijian-speaker speaking Fiji Hindi) did not appear to be a prerequisite for respectful and friendly interaction in this school. The students' preference to cross to English in inter-linguistic communication offered a neutral linguistic space in which interlocuters from different main language groups could share information and learn together. Importantly, students displayed positive attitudes to developing inter-linguistic friendships. Positive attitudes such as those recorded bode well for development of a future generation committed to a unified Fiji.

Acknowledgements
First and foremost we would like to say vinaka vakalevu (thank you) to the students, their families, teachers, and head-master of the Fiji school where this data was collected. We would also like to acknowledge the translation services and research assistant support of Mrs Sala Sauqaqa. Thanks to Dr Paul Geraghty, of The University of the South Pacific, for his guidance with this manuscript. Finally, thanks to an Australian Linguistic Society Gerhardt Laves Scholarship (awarded July, 2015) and Australian government Endeavour Awards Postgraduate Scholarship (awarded December, 2014) that have funded the first author’s PhD project “Supporting Fijian children’s speech, language, and literacy” from which this article is drawn.

References


TABLE 1

Caregiver-Reported Students' Proficiency in Additional Languages as Defined by Students' Main Language and School Year (n = 75)

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<th>Year 4</th>
<th>Year 1</th>
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<th>Year 4</th>
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<td></td>
<td>Fijian dialect (FD)</td>
<td>25.0</td>
<td>0.0</td>
<td>0.0</td>
<td>5.0</td>
<td>12.0</td>
<td>0.0</td>
<td>23.0</td>
<td>0.0</td>
<td>0.0</td>
<td>75.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Fiji Hindi (FH)</td>
<td>80.0</td>
<td>20.0</td>
<td>0.0</td>
<td>0.0</td>
<td>57.1</td>
<td>42.9</td>
<td>0.0</td>
<td>0.0</td>
<td>62.0</td>
<td>0.0</td>
<td>20.0</td>
<td>60.0</td>
</tr>
<tr>
<td></td>
<td>Fiji English (FE)</td>
<td>37.5</td>
<td>50.0</td>
<td>12.5</td>
<td>0.0</td>
<td>60.0</td>
<td>40.0</td>
<td>0.0</td>
<td>20.0</td>
<td>62.0</td>
<td>25.0</td>
<td>0.0</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Key. Numbers 1 to 4 indicate students' proficiency level as reported by caregivers: 1=not at all, 2=not very well, 3=somewhat well, 4=very well.
## TABLE 2

Languages Spoken by Students to Friends as reported by Year 4 Students (Main and Additional), Caregivers (Main only), and Teachers (Main only)

<table>
<thead>
<tr>
<th>Main Language</th>
<th>Additional language</th>
<th>Standard Fijian (SF)</th>
<th>Fijian dialect (FD)</th>
<th>Fiji Hindi (FH)</th>
<th>Fiji English (FE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Year 1</td>
<td>Year 4</td>
<td>Year 1</td>
<td>Year 4</td>
</tr>
<tr>
<td>SF</td>
<td></td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75.0</td>
<td>100.0</td>
<td>0.0</td>
<td>46.7</td>
</tr>
<tr>
<td>FD</td>
<td></td>
<td>50.0</td>
<td>75.0</td>
<td>0.0</td>
<td>42.9</td>
</tr>
<tr>
<td>FH</td>
<td></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>10.0</td>
</tr>
<tr>
<td>FE</td>
<td></td>
<td>0.0</td>
<td>11.1</td>
<td>0.0</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Key: A= Year 4 student reported (all ethnicities) \((n = 40)\); B= Caregiver reported (all ethnicities) \((n = 75)\); C= Teacher reported (iTaukei Fijian friends) \((n = 75)\); D= Teacher reported (Indian Fijian friends) \((n = 75)\).
### TABLE 3

**How Students Feel about Talking with Different Conversational Partners and Contexts in English (n=75) and their Main Language (n=52)**

<table>
<thead>
<tr>
<th></th>
<th>Happy 😊</th>
<th>In the middle 😐</th>
<th>Sad 😞</th>
<th>Another feeling ☪</th>
<th>Don’t know ?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English Main Lang</td>
<td>English Main Lang</td>
<td>English Main Lang</td>
<td>English Main Lang</td>
<td>English Main Lang</td>
</tr>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>1. How do you feel about the way you talk?</td>
<td>71 95.9</td>
<td>54 88.5</td>
<td>2 2.7</td>
<td>5 8.2</td>
<td>0 0.0</td>
</tr>
<tr>
<td>2. How do you feel when you talk to your best friend?</td>
<td>70 94.6</td>
<td>61 100.0</td>
<td>2 2.7</td>
<td>0 0.0</td>
<td>1 1.4</td>
</tr>
<tr>
<td>3. How do you feel when you talk to your [brothers and sisters]?</td>
<td>61 83.6</td>
<td>52 85.2</td>
<td>6 8.2</td>
<td>5 8.2</td>
<td>2 2.7</td>
</tr>
<tr>
<td>4. How do you feel when you talk to your [mum and dad]?</td>
<td>68 93.2</td>
<td>57 93.4</td>
<td>3 4.1</td>
<td>2 3.3</td>
<td>1 1.4</td>
</tr>
<tr>
<td>5. How do you feel when you talk to your school teachers?</td>
<td>63 85.1</td>
<td>53 88.3</td>
<td>3 4.4</td>
<td>3 5.0</td>
<td>3 4.1</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>59</td>
<td>79.7</td>
<td>44</td>
<td>74.6</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------</td>
<td>----</td>
<td>------</td>
<td>----</td>
<td>------</td>
</tr>
<tr>
<td>6</td>
<td>How do you feel when your teachers ask you a question?</td>
<td>48</td>
<td>64.9</td>
<td>37</td>
<td>60.7</td>
</tr>
<tr>
<td>7</td>
<td>How do you feel when you talk to the whole class?</td>
<td>68</td>
<td>93.2</td>
<td>58</td>
<td>95.1</td>
</tr>
<tr>
<td>8</td>
<td>How do you feel when you play with the children at school?</td>
<td>27</td>
<td>37.0</td>
<td>19</td>
<td>31.7</td>
</tr>
<tr>
<td>9</td>
<td>How do you feel when you play on your own?</td>
<td>5</td>
<td>6.8</td>
<td>2</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Note. Questions are from SPAA-C (McLeod, 2004).
Figure 1. Year 1 mission statement

Figure 2. Year 4 students
Figure 3. Year 1 whole class literacy activity

Figure 4. Year 1 Split group activity. Students on the floor are receiving supplementary literacy instruction whilst students at desks work independently on literacy tasks.
Figure 5. Year 4 students from different ethnicities play together with donated equipment during structured play sessions run by volunteer visiting speech-language pathology students.
Figure 6. Students' drawings of speaking English showing (a, b) 2-way communication, (c, d) 1-way communication, and (e, f) no communicative partner.
Appendix A. Year 4 Student Survey

<table>
<thead>
<tr>
<th>MOSTLY speak</th>
<th>English</th>
<th>Standard Fijian (Bauan dialect)</th>
<th>Fijian dialect</th>
<th>Hindi/Urdu</th>
<th>Fiji Hindi</th>
<th>Other</th>
<th>Mixing it up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Also speak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X = not at all</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>= A little</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>= A lot</td>
</tr>
</tbody>
</table>

1. a) Your father
2. b) Your mother
3. c) Your brothers/sisters
4. d) Your grandparents
5. e) Your friends
6. f) Your teacher
7. g) Your religious leader
8. h) Strangers of iTaukei Fijian background
9. i) Strangers of Fijian Indian background
10. j) Strangers of European background

*Manuscript in submission.*
English language and literacy proficiency of multilingual urban Fijian primary school students

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Abstract
Fiji is a multicultural and multilingual community and English is taught in Fiji schools. This study aimed to describe the English language proficiency of Fijian primary school students. Reports of language (listening and speaking) and literacy (reading and writing) skills were collected from two groups of participants (75 caregivers, two teachers) and direct assessment measures of 75 students’ English language and literacy skills were obtained (Year 1: n=35; Year 4: n=40). These were examined in relation to students’ academic performance and demographic characteristics (main language spoken at home and socioeconomic status). English home language status was correlated with better English language proficiency and academic performance for students in Year 1, but not for students in Year 4. Instead, use of Fiji Hindi at home in Year 4 was related to higher proficiency on English language tasks than for Standard Fijian speakers. Socioeconomic factors, specifically fathers’ education level, was correlated with English proficiency. The importance of obtaining information about home languages and caregivers’ educational levels in culturally and linguistically diverse contexts is emphasised. The findings of this study have implications for assessing the English proficiency of linguistically multi-competent children learning in immersion education settings.

Key words: communication, proficiency, subjective report, direct assessment, Fiji, school-aged
Fiji is a group of islands located in the South Pacific Ocean. Approximately 110 islands are inhabited; however, the majority of the multicultural and multilingual population reside on the main island of Viti Levu, and most of them in coastal urban centres. Fijians include those with indigenous (iTaukei Fijian) and immigrant heritage. The later includes a large population of Indian Fijians whose ancestors were brought to Fiji from India in the 19th century as indentured labourers. There are also significant communities with Rotuman, Chinese, and Polynesian heritage. With this ethnic diversity comes linguistic diversity. Fiji is a linguistically multicompetent community in which there are three official languages: iTaukei (hereafter referred to as Standard Fijian), Fiji Hindi and English (The Fijian Government, 2013). The local variety of English, known as Fiji English, is the language of education, commerce and government (Mangubhai & Mugler, 2006). Fiji English is spoken by almost all Fijians alongside the dominant indigenous (e.g., Fijian, Western Fijian, Lauan), exogenous (e.g., Fiji Hindi) and immigrant languages (e.g., Chinese, Samoan, Tongan) (Simons, & Fennig, 2017). Literacy in the Fiji education system is also dominated by Fiji English; however, the following additional scripts are also taught in the primary and secondary years: a codified version of Fijian called Standard Fijian, and the Devanagari script for Hindi or Perso-Arabic scripts for Urdu (Mangubhai & Mugler, 2006).

Due to the diversity of languages in Fiji, and the recognised importance of students learning in their home language (The Fijian Government Ministry for Education, 2007), a system of transitional bilingual education is promoted. Therefore, in Fiji schools the language of classroom instruction in Years 1 to 3 is a community language (usually either Standard Fijian or Fiji Hindi) and English is taught as a second language subject. In Year 4 the system reverses and English becomes the language of instruction and the community languages are taught as second language subjects (Geraghty, 2017; Mangubhai & Mugler, 2006). Implementation of this transitional bilingual education policy is reportedly more frequent in rural areas, compared to urban areas, due to the greater
linguistic diversity in urban schools. Linguistic diversity often results in urban teachers using English as the medium of instruction from Year 1 (Hopf, McLeod, & McDonagh, 2017a, 2017b; Mangubhai, 2002).

In Fiji, English proficiency is essential for academic performance and personal advancement as well as for national socioeconomic development (Maharaj, 2016). In urban primary and high schools this reality is evident in the chosen language of school assessments; all of which are conducted in written English except for language-specific subjects (e.g., Standard Fijian, Standard Hindi). Assessment occurs via formative classroom based assessments (CBAs) and periodic national testing (Fiji Ministry of Education, Sciences and Technology, MoEST, 2008). CBAs are developed by teachers within a given school and are designed to reflect the national curriculum learning requirements for any given stage of students’ education. In addition to CBAs, Fijian Year 4, 6 and 8 primary school students also undertake the national Literacy and Numeracy Assessment (LANA). As the title suggests, the LANA is a nationally administered assessment conducted in English of students’ literacy and numeracy skills. The LANA is also conducted in English. All assessments are designed to inform teaching and learning practices and provide feedback to students, caregivers, teachers, and policy makers (MoEST, 2008).

In countries where English is the medium of instruction for school-age children, the assessment benchmark for proficiency is often Standard English in the local variety. In Fiji significant work has been undertaken to document the unique linguistic profile of adults who speak standard Fiji English (Biewer, 2015; Hopf, McLeod, & Geraghty, 2016; Zipp, 2014). Whilst there are many differences between basilectal (most influenced by the substrate language) and acrolectal (least influenced or standard) varieties of Fiji English, one aim of the education system is to ensure that student participation in society is not limited by a poor command of English.

English language proficiency may be influenced by personal factors (e.g., ethnicity and main language status) and environmental factors (e.g., total household occupants, parenting style, parental education level). For example, in Fiji, Otsuka (2006) and Paumau (1999) have associated students’ ethnicity with higher performance on English language tests of academic performance; specifically, Indian Fijian students on average
performed better on high school national assessments compared to iTaukei Fijian students. A review by Perkins, Finegood, and Swain (2013) reported that low socioeconomic status was negatively associated with children’s development of language processing; particularly, the development of vocabulary, phonological awareness, and syntax. In the US, children’s language development status has been associated with maternal education level (Hoff, 2003; Howard, Páez, August, Barr, Kenyon & Malabonga, 2014), crowded homes with less verbally responsive parents (Evans, Maxwell, & Hart, 1999), and negative-intrusive parenting style (Pungello, Iruka, Dotterer, Mills-Koonce, & Reznick, 2009).

Three studies from Fiji have reported on language and literacy proficiency in primary school-age children; however, these studies did not report direct assessment measures and did not analyse the potential influence of personal and environmental factors on results (Elly & Mangubhai, 1979 cited in Mangubhai & Elly, 2006; Hopf, McLeod, & McDonagh, 2017a; Shameem, 2002). Shameem (2002) reported the English language and literacy proficiency of 48 primary school students who spoke Fiji Hindi as their main language. English proficiency ratings for students in Years 1, 3 and 6 were obtained using student self-report and teacher report. Two-thirds of the participants had “extremely high” English reading proficiency whilst three-fifths had similar ratings for English writing proficiency (Shameem, 2002, p. 398). These findings are in contrast to an earlier 1977 survey of Fijian Year 6 students’ English reading proficiency where it was found that over 25% of students were “unable to read simple English prose with understanding” (Elly & Mangubhai, 1979 cited in Mangubhai & Elly, 2006, p. 19).

In a more recent study, Hopf et al. (2017a) reported English language use and proficiency data for up to 268 conversational partners in an urban primary school community (35 Year 1 students, 40 Year 4 student, 75 mothers, 75 fathers, 23 child-minders, and 25 teachers). All conversational partners spoke on average three languages with at least rudimentary proficiency. Teachers reported that the main language used by students in the school environment was English. Even if the student and teacher shared a common main language (e.g., Fiji Hindi, a Fijian dialect) the student-teacher interaction occurred more often in English than the main
language. Subjectively, students’ reported English proficiency was most often described by caregivers as “somewhat well” and “very well” for all other conversational partners (mothers, fathers, child-minders, teachers) on a 4 point scale (not at all, not very well, somewhat well, or very well).

Gender differences in reported English language proficiency were reported: female students had greater English proficiency than male students (Hopf et al., 2017a).

The Present Study

Language proficiency is an important factor that affects the difference in the outcomes of educational achievement for students who speak the language of the classroom from birth versus those who learn that language in school (Levin & Shohamy, 2012). An aim of educating students in Fiji is to listen, speak, read, and write in Standard Fiji English despite the potential for disadvantaging students whose main (home/mother-tongue) language is not one of these educational standards (Mangubhai, 2002).

Previously reported studies using subjective report alone provide valuable information about English language proficiency in Fiji; however, authors have recognised the need to validate results obtained via subjective report with direct assessment measures (Hopf et al., 2017a; Shameem, 2002).

Given the need for high proficiency in English for academic performance in Fiji this study focuses on English proficiency. This study contributes to the limited literature about Fijian students’ language and literacy proficiency and provides new insights about the influence of social demographics on attainment of English proficiency in Fiji. Consequently the aims of this study are as follows:

1. To describe the English language (listening and speaking) and literacy (reading and writing) proficiency of Fijian primary school students.
2. To determine if English language and literacy proficiency is correlated with academic performance.
3. To determine if English language and literacy proficiency and academic proficiency are associated with main language spoken at home or socioeconomic status.

Method

Ethical approval was obtained from the Fiji Ministry of Education, National Heritage, Culture and Arts (MoENHCA, RA 29/14) and the first author’s
university human ethics committee. Prior to the commencement of data collection community assent was sought via *talanoa* (community) meetings with key stakeholders including teachers and caregivers.

**Participants**

Participants included students (*n* = 75), their caregivers (*n* = 75) and teachers (*n* = 2). A MoENHCA representative selected the urban primary school in the western region of Fiji’s main island, Viti Levu. The researcher made a request to the head teacher to identify two classrooms: Year 1 and Year 4. Year 1 students (first year of school) were requested as the authors wanted to describe the skills that children bring to school before they are exposed to a full year of formal language and literacy instruction. Year 4 students were requested as according to the national curriculum framework the language of classroom instruction changes from the vernacular (Standard Fijian, Standard Hindi, or Urdu) to English during this school year. In response to our request, the school head teacher allocated one Year 1 class (*n* = 36) and one Year 4 class (*n* = 41) as potentially containing participants in the study. Caregiver consent and student assent were subsequently obtained for 35 Year 1 students and 40 Year 4 students (response rate = 97.2% and 97.5% respectively). Consent was also obtained from the two classroom teachers to participate.

**Student participants.**

Demographics of the student participants in each year are provided in Table 1. There were more males than females in both school year levels (Year 1: *n* = 25, 71.4%; Year 4: *n* = 23, 57.5%). The Year 1 students were between 63 and 87 months of age (*M* = 71.8, *SD* = 4.1) and the Year 4 students between 108 and 125 months of age (*M* = 115.28, *SD* = 4.3). The majority of students had Standard Fijian as their main language (Year 1: *n* = 17, 48.6%; Year 4: *n* = 15, 37.5%). Smaller student numbers had a different Fijian dialect, Fiji Hindi, or English as their main language. The majority of students could speak three or more languages (Year 1: *n* = 21, 60.0%; Year 4: *n* = 32, 82.1%).

**Caregiver participants.**

The relationship of caregiver to student was as mother (*n* = 51, 68.0%), father (*n* = 18, 24.0%), aunt/uncle (*n* = 3, 4.0%), grandparent (*n* = 2, 2.7%), or unreported (*n* = 1, 1.3%). Caregivers were predominantly aged
between 30 and 49 (n=61, 81.3%), with smaller numbers aged below 29 (n=10, 13.3%), or over 50 (n=4, 5.3%). The majority of caregiver reported annual household incomes (<FJD10,000: n=24, 45.3%; FJD10,000-FJD20,000: n=24, 45.3%; >FJD20,000: n=5, 9.4%) were below the FJD23,036 expected average household income for urban households (HIES, Fiji Bureau of Statistics, 2016).

**Teacher participants.**

Both participating teachers were female. The Year 1 teacher was aged in her late 20s and reported Standard Fijian as her main language. The Year 4 teacher was in her early 40s and reported English as her main language. Both teachers held certificate level teaching qualifications. In the classroom both teachers used predominantly spoken English and occasional Standard Fijian for the purposes of classroom management (Hopf et al., 2017b).

**Instruments**

Where possible multiple measures were administered to corroborate findings; however, the measures available for this study do not assess all aspects of language and literacy proficiency.

**Caregiver and teacher report.**

The two researcher-developed paper-based questionnaires were informed by previous research exploring language and/or literacy skills of Fijian children (e.g., Mugler & Tent, 1998; Shameem, 2002; White, 2002) or multilingual children elsewhere in the world (e.g., McLeod, Baker, McCormack, Wren, & Roulstone, 2013-2015). Questionnaires were offered in Standard Fijian, Hindi, or English; however, all participants chose to complete the questionnaire in English. The 10-page caregiver questionnaire contained 68 questions whilst the 2-page teacher questionnaire contained 16 questions. The caregiver questionnaire requested information about student demographics (age, gender), language use (main and total number of languages), and socioeconomic status (total household income (THI), total household occupants (THO), mothers’ and fathers’ education level). Language proficiency information was drawn from both the caregiver and teacher questionnaires. Both contained an identical question on language proficiency that was based on a similar question posed by Paradis, Emmerzael and Sorenson Duncan (2010) in the Alberta Language
and Development Questionnaire (ALDeQ). Specifically we maintained the proficiency comparison to age in the ALDeQ by using the following question: “Compared with other students of the same age how do you think this student [understand/speaks/reads/writes] English”? To simplify this task for caregivers (and teachers), a response grid was created that limited the permissible responses to: don’t know, a lot behind, a little behind, the same, or better than.

**Direct assessment measures of language and literacy.**

Direct assessment of English language and literacy was undertaken. For listening and speaking more than one measure was required to ensure a reasonable assessment of sub-skills within each communication domain. Seven direct assessments were administered. Listening was assessed with the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-IV, Dunn & Dunn, 2007) Form A and two subtests of the Clinical Evaluation of Language Fundamentals, Fourth Edition, Australian Standardised Edition (CELF-4AUS; Semel, Wiig, & Secord, 2006): Concepts and Following Directions (CELF-4AUS C&FD) and Sentence structure (CELF-4AUS SS). Speaking was assessed with three subtests of the CELF-4AUS: Word Structure (CELF-4AUS WS), Recalling sentences (CELF-4AUS RS), and Formulated sentences (CELF-4AUS FS). Reading was assessed using the Dynamic Indicators of Basic Early Literacy Skills, Next edition (DIBELS Next: Good, Kaminski, & Dynamic Measurement Group Inc., 2011), a measure of early literacy and reading skills for students from Kindergarten through to Year 6. The year 1 were assessed with three subtests of the DIBELS Next: Letter Naming Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency. The year 4 students were assessed with two subtests: DIBELS Next Oral Reading Fluency and DIBELS Next DAZE. A DIBELS Next composite score was calculated for each student based on the procedures outlined in the Examiners’ Manual. Writing samples for Year 1 and 4 were assessed according to the complexity of the text. Year 1 writing samples (attempted name writing) were analysed using the six levels described within Lanter, Watson, Erickson, & Freeman (2012). Year 4 writing samples (descriptive paragraph) were analysed using the 12 levels described in the Early Writing Analysis Tool (EWAT: Mackenzie, Scull, & Munsie, 2013).
Classroom-based measures of academic performance.

The Year 1 classroom based assessment (CBA) measure was comprised of two school-developed, paper-based, whole-group administered, teacher-scored assessments in English. The Year 1 students had to apply the alphabetic principle and phonological awareness skills in their written English responses on the assessments. Collation by the class teacher of results for the two assessments resulted in an English language, literacy and communication score out of 50 for each student that was reported on the students’ end of term 1 report.

Two measures of academic performance for Year 4 were used: a CBA English assessment and the National Literacy and Numeracy Assessment (LANA). The Year 4 CBA consisted of the combined results of two school-developed, paper-based, whole-group administered, teacher-scored assessments in English. The Year 4 CBAs evaluated the students’ inductive reasoning, reading comprehension, and knowledge of English vocabulary and grammar principles. A total CBA English score out of 100 was reported on the students’ end of term 3 report. The LANA, administered as a whole class activity in term 2 of the school year, consisted of two sections: one for literacy and one for numeracy. In 2014 the LANA assessed 55 learning outcomes of increasing difficulty in the literacy and numeracy achievement sections. Individual student data was compared to 2014 national (LANA-Literacy: $M=33$; LANA-Numeracy: $M=7$) and school (LANA-Literacy: $M=41$; LANA-Numeracy: $M=9$) averages.

Procedure

This Fiji school operated three school terms from January to December each year. Questionnaire, direct assessment, and academic performance measures were collected for Year 4 in school term 3 (October to December) in one year, and for Year 1 in school term 1 (January to April) of the following year.

Caregiver and teacher report.

Distribution of caregiver and teacher questionnaires occurred at the beginning of each classrooms’ study period. The students’ caregivers completed questionnaire at home; however, 21 caregivers (28%) also chose to have a face-to-face interview with the primary researcher in English. Caregivers of the Year 4 students were also offered the opportunity to attend
an after-hours information session, conducted by the primary and fourth authors, where they could receive support to complete the questionnaire. The researcher was available to discuss the teacher questionnaire with the two teachers during the study periods in each classroom. The two teachers completed a teacher questionnaire for every student participant (Year 1: \( n=35 \); Year 4: \( n=40 \)). All questionnaires were returned to the primary author by the end of the school term in which the study took place.

**Direct assessment measures of language and literacy**

The primary author individually administered to each student the PPVT-IV, CELF-4AUS and DIBELS Next. The primary author also administered the Year 1 writing test. All primary author-administered direct assessments occurred in a multi-purpose room at the school during school hours. Background noise levels in the room were variable dependent on time of day and external activities. The total individual assessment time was approximately 1.5 hrs spread across two to five assessment sessions. All administered direct assessments are well-established measures with sound psychometric properties that have been used with multilingual populations elsewhere in the world. All assessments were administered in accordance with the standard guidelines in their respective manuals, but were scored using raw scores and not scored using the normative data, since norms are not available for Fiji.

The Year 4 writing assessment was conducted as part of the Year 4 end of term 3 English CBA. This task was administered by the Year 4 teacher as a whole class activity under school test conditions (e.g., no talking).

**Academic performance measures.**

Student end of term school reports were used to provide the CBA scores for each student. The Year 1 CBA (\( n=35 \)) was retrieved for each student from the English Language, Literacy and Communication section of the Year 1 term 1, 2015 school report. The Year 4 CBA (\( n=40 \)) was retrieved for each student from the English section of the Year 4 term 3, 2014 school report. Year 4 LANA-Literacy (\( n=38 \)) and LANA-Numeracy (\( n=38 \)) scores were provided by the school administration team, after retrieval from the online national database, at the conclusion of the year 4 data collection period.

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Analysis

Caregiver- and teacher-reported language proficiency measures (better/same/a little behind/a lot behind) were collapsed into two categories (proficient/not of concern and not proficient/of concern) prior to statistical analysis due to small participant numbers within categories. Not proficient/of concern indicated the caregiver/teacher reported the student to be a little behind or a lot behind their same age peers.

Statistical analysis followed the example of international studies (e.g., Dixon, Zhao, Quiroz, & Shin, 2012; Ebert & Pham, 2017) where raw scores were deemed appropriate for statistical analysis as the study population were not part of the normative sample for the described assessment measures. In the case of the current study raw scores, as well as the students’ age, were used to examine the relationships within the sample and to account for any developmental differences. Statistical analysis was conducted using SPSS® Statistics version 23.0 (IBM®, 2015). Descriptive statistics were used to describe results on each measure (aim 1). For continuous variables mean ($M$) and standard deviations ($SD$) are reported. For nominal variables frequency counts ($N$) and percentages (%) are reported. Where there has been missing data (e.g., incomplete questionnaire sections) only valid results are reported. The $p$-value for this study was set at 0.05. Partial correlational analysis controlling for age was used to determine the association between nominal language proficiency measures, demographics and language use data (aims 2 & 3). Kruskal-Wallis Tests were used to compare the scores on continuous measures (e.g., assessment measures, academic performance). When significant differences were found between groups using the Kruskal-Wallis analyses, post-hoc analyses with Mann-Whitney U-Tests and a Bonferroni correction of the $p$-value were undertaken (0.05/number of post-hoc tests).

Results

The Year 1 and Year 4 students had significant differences in age (Year 1: $n=35$, $M=71.83$ months, $SD=4.11$; Year 4: $n=40$, $M=115.28$ months, $SD=4.31$), non-verbal intelligence scores as measured on the Primary Test of Nonverbal Intelligence (PTONI; Ehrler & McGhee, 2008; Year 1: $n=35$, $M=87.80$, $SD=14.51$; Year 4: $n=40$, $M=62.87$, $SD=15.05$) and direct assessment results (see below). Given these differences, and their
potential impact on interpreting the findings collectively, the results for each year are described separately.

Language and Literacy Outcomes

Listening.

**Direct assessment.** Year 1 \((n=35)\) and Year 4 \((n=40)\) participants’ language listening skills were screened using three measures: the PPVT-IV (receptive semantics, CELF-4AUS C&FD (receptive syntax/metalinguistics), and CELF-4AUS SS (receptive semantics and syntax). The Year 4 students achieved a higher mean raw score on all listening subtests (PPVT-IV, Year 1: \(M=50.4\), Year 4: \(M=90.1\); CELF-4AUS C&FD, Year 1: \(M=6.6\), Year 4: \(M=37.9\); CELF-4AUS SS, Year 1: \(M=10.9\), Year 4: \(M=20.8\) (Table 2).

**Caregiver and teacher reports.** Caregiver and teacher questionnaires differed in their ratings of student listening proficiency (Table 2). The majority of caregivers of Year 1 \((n=30, 88.2\%)\) and Year 4 students \((n=37, 97.4\%)\) reported that they were not concerned about the students’ ability to understand English compared with the same age peers. The caregivers who judged their child’s English listening proficiency below that of peers had a child whose main language was Standard Fijian (Year 1: \(n=3\)) or a Fijian dialect (Year 1: \(n=1\); Year 4: \(n=1\)). The Year 1 teacher was concerned about the English understanding of almost half of the Year 1 class \((n=17, 48.6\%)\) whilst the Year 4 teacher was concerned about the English listening of eight students \((20.0\%)\).

Speaking.

**Direct assessment.** Year 1 \((n=35)\) and Year 4 \((n=40)\) participants’ speaking skills were screened using three measures: CELF-4AUS WS (expressive morphology), CELF-4AUS RS (expressive syntax), and CELF-4AUS FS (expressive semantics and syntax). On all three English speaking subtests Year 4 scores were consistently higher than Year 1 scores (CELF-4AUS WS, Year 1: \(M=3.9\), Year 4: \(M=18.7\); CELF-4AUS RS, Year 1: \(M=10.1\), Year 4: \(M=31.9\); CELF-4AUS FS, Year 1: \(M=3.9\), Year 4: \(M=31.6\) (Table 3).

**Caregiver and teacher reports.** The majority of caregivers (Year 1: \(n=27, 79.4\%\); Year 4: \(n=35, 92.1\%)\) and the Year 4 teacher \((n=32, 80.0\%)\) reported that the students’ ability to speak English was proficient compared
to same age peers. The caregivers who judged their child’s English speaking proficiency below that of peers reported that they had a main language that was Standard Fijian (Year 1: \(n=5\); Year 4: \(n=2\)), a Fijian dialect (Year 1: \(n=1\); Year 4: \(n=1\)), or Fiji Hindi (Year 1: \(n=1\)). The Year 1 teacher thought 18 students (51.4%) and the Year 4 teacher eight students (20.0%) were less proficient English speakers than their peers.

**Reading.**

**Direct assessment.** Participants’ English reading skills were screened using the DIBELS Next. The Year 1 students DIBELS Next mean composite score of 14.2 had a large standard deviation of 16.2. The Year 4 DIBELS Next mean composite score was higher (\(M=183.7\)) and there was a large standard deviation of 114.4. The large standard deviations in both Year 1 and Year 4 suggest that there is a broad range of abilities in each classroom (Table 4).

**Caregiver and teacher reports.** The majority of caregivers (Year 1: \(n=21, 65.6\%\); Year 4: \(n=33, 86.8\%\)) reported that they were not concerned about their child’s English reading proficiency compared to same age peers. The caregivers who judged their child’s English reading proficiency below that of peers had a child whose main language was Standard Fijian (Year 1: \(n=6\); Year 4: \(n=4\)), a Fijian dialect (Year 1: \(n=1\); Year 4: \(n=1\)), Fiji Hindi (Year 1: \(n=2\)) or English (Year 1: \(n=2\)). In contrast the Year 1 teacher was concerned about the English reading skills of 26 Year 1 students (74.3%) and the Year 4 teacher was concerned about the reading proficiency of nine Year 4 students (22.5%).

**Writing.**

**Direct assessment.** Year 1 participants’ (\(n=35\)) English writing skills were screened using the procedure described by Lanter et al. (2012). The majority of students achieved a score of 5 (\(n=24, 68.6\%\)), which equates with the ability to legibly write their name with minimal letter reversal or omission errors (Table 4). Five students (14.3%) could only write 70% or less of the letters in their name.

Year 4 participants’ English writing skills were screened using the EWAT (Mackenzie, Skull & Munsie, 2013; \(n=40, M=9.2, SD=1.8\)). For the text score component of the EWAT the majority of Year 4 students (\(n=26, 65.0\%\)) achieved 4 or below. Thus, most students could connect up to four
or more sequenced ideas/events but did not show evidence of the ability to structure the text as per the genre requirements or consider the audience. For the handwriting/legibility score component of the EWAT the majority of Year 4 students achieved a score of 5 or above \(n=29, 72.5\%\) with the remaining \(27.5\% \ (n=11)\) not yet able to achieve regularity of letter size, shape, placement, orientation and spacing in their writing.

**Caregiver and teacher reports.** The majority of caregivers (Year 1: \(n=26, 78.8\%\); Year 4: \(n=33, 86.8\%\)) reported that they were not concerned about the students’ ability to write English compared to their same age peers. The caregivers who judged a student’s English writing proficiency below that of peers had students whose main language was Standard Fijian (Year 1: \(n=3\); Year 4: \(n=4\)), a Fijian dialect (Year 1: \(n=1\); Year 4: \(n=1\)), Fiji Hindi (Year 1: \(n=1\)), or English (Year 1: \(n=2\)). The Year 1 teacher was concerned about the English writing ability of 19 students (54.3\%) and the Year 4 teacher was concerned about the English writing ability of 8 students (20.0\%).

**Direct Assessment and Caregiver and Teacher Report Correlations with Academic Performance**

Table 3 contains the results of the partial correlation, controlling for age, of caregiver and teacher listening, speaking, reading and writing reports and direct assessment measures with academic performance results for Year 1 \(n=35\) and Year 4 \(n=40\).

**Year 1.**

Year 1 CBA scores \(n=35\) ranged from 38 to 50 \((M=46.2, \ Median=47.0, \ SD=3.2)\).

**Direct assessment.** There were moderate to strong correlations between the Year 1 CBA result and all language and literacy assessment measures (Table 3). Higher scores on the Year 1 CBA result were associated with significantly higher scores on all assessment measures.

**Caregiver and teacher reports.** Caregiver rating of students’ English listening, speaking, reading and writing proficiency were not correlated with the Year 1 CBA result (Table 3). In contrast there were medium to strong negative correlations between the teacher rating of students’ English proficiency across all communication domains and the Year 1 CBA result (listening: \(r=-0.45, \ n=32, \ p=0.007\); speaking: \(r=-0.46, \ n=32, \ p=0.006\);
reading: $r=-0.35, n=32, p=0.041$; writing: $r=-0.45, n=32, p=0.008$). Students identified by the teacher as having difficulty in any given communication domain had significantly lower CBA results.

**Year 4**

Year 4 ($n=40$) CBA results ranged from 52 to 98 ($M=81.7$, Median=83.5, $SD=11.3$). Year 4 ($n=38$) LANA-Literacy achievement scores ($M=37.3$, Median=44.0, $SD=17.4$) and LANA-Numeracy achievement scores ($M=15.2$, Median=9.0, $SD=12.7$) were above averages obtained for the nation (LANA-Literacy: $M=33$; LANA-Numeracy: $M=7$) and school (LANA-Literacy: $M=41$; LANA-Numeracy: $M=9$).

**Direct assessment.** The Year 4 CBA was not correlated with the CELF-4AUS C&FD and CELF-4AUS SS (both listening subtests); however, all other direct assessment measures had moderate to strong correlations with the Year 4 CBA (Table 3). Moderate to strong correlations were found between the LANA-Literacy and all direct assessment measures except for the CELF-4AUS SS (Tables 3). The LANA-Numeracy was moderately correlated with the CELF-4AUS WS ($r=0.46, n=38, p=0.005$) and DIBELS Next ($r=0.40, n=38, p=0.014$) but not with any other direct assessment. In all cases were a correlation is indicated, higher scores on an academic performance result were correlated with significantly higher scores on the direct assessment measure.

**Caregiver and teacher reports.** There were moderate to large correlations across communication domains between teachers’ ratings and all academic measures (Table 3). Caregiver ratings of listening and speaking proficiency were not correlated with Year 4 CBA or LANA-Literacy results; however, caregiver ratings of reading and writing proficiency did correlate with medium-large effect with the Year 4 CBA (reading: $r=-0.54, n=38, p=0.001$; writing: $r=-0.42, n=38, p=0.009$) and LANA-Literacy (reading: $r=-0.54, n=36, p=0.001$; writing: $r=-0.44, n=36, p=0.008$) results. Caregiver ratings across all communication domains did not correlate with the LANA-Numeracy.
Direct Assessment, Caregiver and Teacher Report, and Academic Performance Correlations with Main Language Spoken at Home

Year 1.

Direct assessment. Kruskal-Wallis tests compared students’ main language spoken with Year 1 results on all direct assessment measures. Significant differences on speaking assessment measures, but not listening or literacy assessment measures, were found (Table 4). Post-hoc Mann-Whitney U tests with a Bonferroni adjusted $p$-value of 0.008 revealed that English main language speakers had significantly higher scores on: all speaking assessment measures compared to Standard Fijian speakers (CELF-4AUS WS: $U=22.50, z=-2.94, p=0.003, r=0.58$; CELF-4AUS RS: $U=24.00, z=-2.84, p=0.005, r=0.56$; CELF-4AUS FS: $U=24.00, z=-2.90, p=0.004, r=0.57$). All other cross-language comparisons with assessment measures were not significant.

Caregiver and teacher reports. There was no difference across main language groups for caregivers’ ratings of English language and literacy proficiency (Table 4). In contrast, students’ main language significantly influenced teachers’ ratings of language proficiency (listening: $\chi^2(3, n=35)=9.41, p=0.015$; speaking: teacher: $\chi^2(3, n=35)=9.86, p=0.011$) but not literacy proficiency (Table 4). Post-hoc Mann-Whitney U tests, with a Bonferroni adjusted $p$-value of 0.008, revealed that Year 1 students with English as their main language were more likely to be rated as performing above their peers on listening and speaking tasks when compared to students whose main language was a Fijian dialect (listening: $U=2.00, z=-2.92, p=0.007, r=0.81$; speaking: $U=2.00, z=-2.92, p=0.007, r=0.81$). All other cross-language comparisons were non-significant.

Academic performance results. When Year 1 students’ main language was compared with the Year 1 CBA all language group comparisons were not significant.

Year 4.

Direct assessment. Main language spoken was associated with PPVT-IV, CELF-4AUS C&FD, CELF-4AUS RS, DIBELS Next, and Year 4 writing direct assessment measures (Table 4). A Kruskal-Wallis Test indicated that Year 4 students’ main language was associated with PPVT-IV results ($\chi^2(3, n=40)=7.80, p=0.50$); however, Mann-Whitney U Test post-
hoc analysis with a Bonferroni adjusted $p$-value of 0.008 failed to reveal any significant cross-language comparisons. A possible trend was noted with Year 4 main language speakers of Fiji Hindi ($U=30.0$, $z=-2.50$, $p=0.01$, $r=0.50$) and English ($U=23.50$, $z=-2.05$, $p=0.04$, $r=0.44$) having higher PPVT-IV scores than Standard Fijian speakers. For the CELF-4AUS C&FD there was a significant difference for main language speaking groups ($\chi^2(3, n=40)=12.98$, $p=0.005$): Fiji Hindi speakers ($n=10$) had significantly higher CELF-4AUS C&FD scores than Fijian dialect speakers ($n=8$; $U=7.00$, $z=-2.94$, $p=0.003$, $r=0.69$). There was also a significant difference across language groups for the CELF-4AUS WS ($\chi^2(3, n=40)=16.33$, $p=0.001$): Standard Fijian speakers had significantly lower CELF-4AUS WS scores than speakers of Fiji Hindi ($U=14.00$, $z=-3.39$, $p<0.001$, $r=0.68$) or English ($U=12.50$, $z=-2.83$, $p=0.005$, $r=0.60$). For the CELF-4AUS RS a significant Kruskal-Wallis Test ($\chi^2(3, n=40)=11.77$, $p=0.008$) revealed that Fiji Hindi speakers had significantly higher CELF-4AUS RS scores than Standard Fijian speakers ($U=17.50$, $z=-3.19$, $p=0.001$, $r=0.64$). Finally, a significant EWAT writing score difference for main language groups ($\chi^2(3, n=40)=11.16$, $p=0.011$) revealed that Fiji Hindi speakers had significantly higher EWAT writing scores than Standard Fijian speakers ($U=16.50$, $z=-3.30$, $p=0.001$, $r=0.66$). Main language spoken was not associated with CELF-4AUS FS, CELF-4AUS SS, or DIBELS Next measures.

Caregiver and teacher reports. For Year 4 students there was no significant difference for main language on either caregiver or teachers’ ratings of English language or literacy (Table 4).

Academic performance results. Main language spoken at home was associated with results on two of the three Year 4 academic performance measures (Year 4 CBA: $\chi^2(3, n=40)=12.12$, $p=0.007$; LANA-Literacy: $\chi^2(3, n=38)=13.33$, $p=0.004$; LANA-Numeracy: $\chi^2(3, n=40)=7.46$, $p=0.059$). Fiji Hindi speakers had significantly higher scores than Standard Fijian speakers on the Year 4 CBA ($U=16.00$, $z=-3.28$, $p=0.001$, $r=0.66$) whilst Fiji Hindi speakers ($U=19.50$, $z=-2.97$, $p=0.003$, $r=0.61$) and Fijian dialect ($U=11.00$, $z=-2.85$, $p=0.004$, $r=0.62$) speakers had higher LANA-Literacy scores than Standard Fijian speakers.

Direct Assessment, Caregiver and Teacher Report, and Academic Performance Correlations with Socioeconomic Status
Socioeconomic status (SES) was measured via total household income (THI), total household occupants (THO), and fathers’ and mothers’ education level. All four SES variables were correlated with direct assessment results, caregiver and teacher reports and academic performance (Table 4).

**Year 1.**

**Direct assessment.** There were no significant differences for THI or THO groups on any Year 1 direct assessment score. Fathers’ education level influenced the scores on all direct assessments except CELF-4AUS C&FD and the Year 1 Writing score (Table 4). In all cases where direct assessment scores were significantly different, Mann-Whitney U Tests with a Bonferroni corrected $p$-value of 0.017 revealed that Year 1 students’ fathers who had attended tertiary education had significantly higher scores on direct assessments than Year 1 students with fathers who had attended up to high-school (PPVT: $U=36.00, z=-3.16, p=0.002, r=0.58$; CELF4AUS SS: $U=54.00, z=-2.44, p=0.015, r=0.44$; CELF4AUS RS: $U=54.00, z=-2.42, p=0.016, r=0.44$; DIBELS Next: $U=48.50, z=-2.64, p=0.008, r=0.48$). Note also that significant Kruskal Wallis Test findings for the CELF-4AUS WS ($\chi^2(2, n=31)=7.41, p=0.025$) and CELF-4AUS FS ($\chi^2(2, n=31)=6.64, p=0.036$) did not reach significance on post-hoc Mann-Whitney U Testing; however, there were borderline results consistent with above where Year 1 students’ fathers who had attended tertiary education had higher scores than Year 1 students’ fathers who had attended up to high-school on the CELF4AUS WS ($U=56.50, z=-2.32, p=0.020$) and CELF4AUS FS ($U=57.50, z=-2.35, p=0.019$). Mothers’ education level only significantly influenced scores on the PPVT-IV ($U=70.00, z=-2.17, p=0.030$): the students of mothers with tertiary education achieved higher scores on the PPVT-IV than the students of mothers with a high-school education.

**Caregiver and teacher reports.** There were no significant differences for THI or mothers’ education level groups for either caregiver or teacher report across all communication domains. There were no significant differences for THO groups for teacher report across all communication domains. There was a significant difference in the caregivers’ ratings of writing ability across different THO groups $\chi^2(2, n=33)=7.65, p=0.022$. Mann-Whitney U Test post-hoc analysis with a
Bonferroni adjusted $p$-value of 0.017 revealed that students who came from homes with more than eight occupants were more likely to be rated by caregivers as performing below same age peers from homes with five to seven occupants on a writing task performing ($U=52.50$, $z=-2.78$, $p=0.005$, $r=0.52$). Fathers’ education level did not influence caregivers’ report on any communication domain. Whereas fathers’ education level influenced teachers’ ratings for listening ($\chi^2(2, n=31)=13.95$, $p=0.001$) and speaking ($\chi^2(2, n=31)=11.42$, $p=0.003$), but not for reading or writing. Mann-Whitney U Test post-hoc analysis with a Bonferroni adjusted $p$-value of 0.017 revealed that fathers who had attended tertiary education were less likely than fathers who had attended up to high-school, to have a Year 1 student for whom the teacher had concerns for listening ($U=38.00$, $z=-3.58$, $p=0.000$, $r=0.65$) or speaking ($U=45.00$, $z=-3.22$, $p=0.001$, $r=0.59$).

**Academic performance results.** A Kruskal-Wallis test revealed a significant difference between THI level groups and the Year 1 CBA, $\chi^2(2, n=31)=7.13$, $p=0.028$. Mann-Whitney U Test post-hoc analysis with a Bonferroni adjusted $p$-value of 0.017 revealed that homes with a THI of more than FJD20000 had higher scores on the Year 1 CBA than homes with a THI of less than FJD10000 ($U=1.50$, $z=-2.46$, $p=0.014$, $r=0.62$) or between FJD10000 and 20000 ($U=0.00$, $z=-2.54$, $p=0.011$, $r=0.73$). There were no significant differences for THO, fathers’ education level, or mothers’ education level groups on any academic performance result.

**Year 4.**

**Direct assessment.** There were no significant differences for THI, fathers’ education level, or mothers’ education level groups on any direct assessment score. Only one direct assessment, CELF-4AUS C&FD, had significantly different scores for different THO groups, $\chi^2(2, n=39)=10.76$, $p=0.005$). Mann-Whitney U Test post-hoc analysis with a Bonferroni adjusted $p$-value of 0.017 revealed that students who came from homes with eight or more occupants had lower CELF-4AUS C&FD scores than students who came from homes with two to four occupants ($U=15.00$, $z=-2.82$, $p=0.005$, $r=0.62$) or five to seven occupants ($U=38.00$, $z=-2.50$, $p=0.012$, $r=0.47$).

**Caregiver and teacher reports.** There were no significant differences for THI, THO, fathers’ education level, or mothers’ education
level groups for either caregiver or teacher report across all communication domains.

**Academic performance results.** There were no significant differences for THI, THO, fathers’ education level, or mothers’ education level groups on any academic performance result.

**Discussion**

Like many other countries in which a foreign language acts a *lingua franca* and language of education, Fiji’s linguistic landscape is evolving in response to local and international needs for multilingual speakers. Fijian school students require high levels of English language proficiency to succeed at school and members of the Fijian community have raised concerns about English proficiency and the teaching of English in schools (Maharaj, 2016). Thus, it is important to regularly and systematically evaluate the English language and literacy proficiency of Fijian school students to ensure that standards meet the community’s needs.

This study sought to extend the finding of previous studies evaluating the language proficiency of Fijian primary school students by triangulating subjective reports, assessment measures, and/or academic performance measures to investigate current levels of English language proficiency in two groups of urban Fijian primary school children. The findings may be used to inform future pedagogical decisions for Fijian children from all language backgrounds. Fijian findings may also have application to similar contexts where multilingual students are immersed in school settings where English is the language of instruction.

**Urban Fijian Students’ Language and Literacy Proficiency**

In Year 4 compared to Year 1 there were higher average raw scores suggesting that the English instruction in this Fijian school may be effective in teaching the language and literacy skills required of students. Year 1 students who do not speak English at home come to school with very little English knowledge. Mangubhai and Mugler (2006) suggested that the English knowledge of urban Fijian children may be better than their rural counterparts. Our results suggest that even if this is the case, most of the urban Year 1 students in this study are being immersed into a foreign (English) language-learning environment on entering school in Year 1. Thus, one may expect that they will require intensive English language
support in order to access a curriculum that is being delivered predominantly in English. The Year 4 group appeared to perform better overall on the listening subtests compared to the speaking. Given the high occurrence of didactic teaching methods observed in both the Year 1 and 4 classrooms (Hopf et al., 2017b) stronger listening skills in this group are not surprising. With large student numbers in Fijian classrooms there may be fewer opportunities for students to formally practice speaking English.

This study has demonstrated that the Year 4 students appear to be still gaining proficiency in English whilst trying to meet academic performance objectives. The results support previous researchers’ claims that most English language learners can learn basic interpersonal communication skills within three years, whilst it takes approximately five to seven years of instruction to achieve English cognitive academic language proficiency (Ardasheva, Tretter, & Kinny, 2012; Cummins, 2008; Thomas & Collier, 2002). The Fijian students who achieved high direct assessment scores may be on their way to achieving that aim; however, this cannot be assumed as these students may need to receive adequate English language support within the classroom otherwise they may fall further behind more proficient peers (Thomas & Collier, 2002).

**English Proficiency and Academic Performance**

Correlation of the English proficiency direct assessment measures with academic performance results revealed moderate to strong correlations on all tasks for Year 1 and most for Year 4. The Year 4 CBA and LANA-Literacy had moderate to strong correlations with speaking, reading and writing results. In contrast the LANA-Numeracy was only correlated with Year 4 results on the CELF-4AUS WS and the reading task (DIBELS Next). The CELF-4AUS WS was the one measure of morphology in the assessment battery. Sharma (2016) noted that development of mathematical literacy in Fijian children required strong linguistic and metalinguistic skill in English. It is possible that morphemes marking numerical concepts of quantity and tense were important to interpreting numerical word problems in the LANA-Numeracy test. On Year 4 listening assessment measures, the CELF-4AUS C&FD and CELF-4AUS SS were not correlated with the Year 4 CBA, and the CELF-4AUS SS was also not correlated with the LANA-Literacy. Both the CELF-4AUS C&FD and CELF-4AUS SS were listening
assessment measures assessing receptive syntax. It seems unusual that receptive syntax would not be associated with written academic performance tasks. It may be that there was not sufficient syntactical complexity implicit in the academic performance tasks to differentiate student ability in this sub-skill.

Correlation of caregiver and teacher reports with academic performance revealed a mixed picture for caregiver and teacher raters. The Year 1 CBA and Year 1 caregivers’ ratings across all communication domains were not correlated. Year 4 caregivers’ ratings for listening and speaking were not correlated with any of the Year 4 academic performance measures; however, the Year 4 caregivers’ ratings of reading and writing proficiency were correlated with one or more of the Year 4 CBA results. In contrast the Year 1 and Year 4 teachers’ ratings for all communication domains were correlated with all academic performance measures possibly indicating that teachers in this school associate English proficiency across all communication domains as critical to academic performance in both Year 1 and Year 4. However, Year 1 and 4 caregivers were not reaching the same conclusion. Given the difference across caregiver and teacher raters, educators may need to advise caregivers that sound English language skills are important to literacy development and academic performance (Prevoo, Malda, Mesman, & van IJzendoorn, 2016) and vice versa (Saletta, Goffman & Bretari, 2016).

**English Proficiency, Academic Performance and Main Language Status**

Large-scale studies elsewhere in the world have stressed the importance of maintenance of community languages for cognitive development (Hoff & Core, 2016; Winsler et al., 2014), academic and social skills (McLeod, Harrison, Whiteford & Walker, 2016) and connection with community (Oh & Fuligni, 2010). Given the significant concern about indigenous language loss in Fiji (Goundar, 2016; Lotherington, 1998) and the acknowledged benefits of multilingualism (Hoff & Core, 2015), Fijian caregivers’ language choices need to be informed by sound research about the local context.

The family’s choice of language to speak in the home had a significant impact on English proficiency and academic performance (Table 3). In the Year 1 group students whose main language was English were
advantaged on all direct assessment measures of speaking compared to students whose main language was Standard Fijian but not compared to those whose main language was a different Fijian dialect or Fiji Hindi. This advantage of speaking English as a main language was not as apparent in the Year 4 group. Instead Year 4 English as main language speakers performed similarly to all English as additional language learners. This may suggest that by Year 4 additional language speakers of English in this Fijian class are potentially eliminating any proficiency advantage afforded to those children who enter school speaking English at home. This is consistent with international studies of young English language learners (McLeod et al., 2016; Thomas & Collier, 2002). Thus, foregoing one’s community language in favour of English at home appears to provide only short-term academic advantage.

The picture of English language proficiency and academic performance of students who speak English as an additional language was different in Year 1 and Year 4. In Year 1, Standard Fijian, Fijian dialect and Fiji Hindi speakers had similar scores across all language and literacy assessment measures. In Year 4, Fiji Hindi speakers had higher scores on four out of five language direct assessments compared to Standard Fijian speakers, and one direct assessment compared to Fijian dialect speakers. This is despite all language groups having similar socioeconomic backgrounds (total household income, mother/father education level) and non-verbal IQ scores being similar across language groups within each school year (see Table 1). Given that the data presented is not longitudinal it is not possible to discern whether findings for the Year 1 and 4 groups are a trend or unique to each group. Differences in English proficiency may be linked with main language proficiency (Thomas & Coller, 2002). A future longitudinal study that simultaneously evaluates main language and English proficiency is required.

Main language did not influence results on literacy direct assessment measures. It is possible that the phonological awareness tasks performed by the Year 1 students readily crossed main language boundaries. For Year 4 students it is possible that the calculation of a composite measure for the DIBELS Next may have reduced the sensitivity to main language differences evident on any single subtest. Validation of a literacy
assessment tool for the Fijian context is required.

A longitudinal study that explores language and literacy proficiency in Fijian primary-school-aged children is warranted to elucidate what other personal (e.g., number of languages spoken) or environmental (e.g., home-literacy environment) factors may be creating the proficiency difference in English seen in the Year 4 group. If we understand these factors then it may be that we can promote parental practices and develop teaching methods that mediate their effects before high school.

**English Proficiency, Academic Performance, and Socioeconomic Status**

Nabuka (1984) asked the research community whether a mismatch or match between home and school language influenced academic performance of younger children. Fujioka-Kern (1994) subsequently found that proficiency in home language literacy skill was associated with academic achievement for Fijish and Fijian speaking high-school students. In this urban Fijian primary school, with students of mixed linguistic backgrounds, English proficiency was critical to academic performance from Year 1. However, English first language status did not result in better academic performance in Year 4. Fijian students learning English appeared to take a similar length of time as other international multilingual primary-school students learning English to ‘catch-up’ to their monolingual peers (at least four years) (Thomas & Collier, 2002). Whilst English first language status does not suppose better English proficiency or academic performance in Year 4, some English as additional language students (i.e., those with Fijish as their first language) outperformed others (i.e. Standard Fijian and Fijian dialect speakers) on a number of language tests. The reasons for this are possibly related to household sizes and available income per occupant. In this study, Fijish speaking students tended to come from homes with fewer occupants than Standard Fijian speaking students. Household size may influence the amount of income available per occupant; however, our results are far from clear and require further investigation.

The pattern of how SES was associated with proficiency reports, direct assessment, and/or academic performance results differed for Year 1 and Year 4 (Table 4). Year 4 students from larger families (THO> 8 people) had lower scores on the CELF-4AUS C&FD than students from smaller
families. This finding is consistent with Evans, Maxwell and Hart (1999) who reported that crowding in the home predicted less language diversity. Thus it is possible that the receptive syntax development of these Year 4 students is being adversely effected by the large households in which they live.

Most of the families in this study were living below the national average wage and some may be considered to be living in relative poverty. Consistent with Perkins, Finegood and Swain (2013), the experience of poverty in these Fijian households may also result in increased chronic stress in families and a focus on providing basic necessities, ultimately influencing parenting style, home language choices, and home literacy environment. In this study we did not investigate parenting style or home literacy environment but home language choice had an influence on results, although the patterns of influence were different for Year 1 and Year 4. It is likely that parenting style and/or home literacy environment may also be influencing our results as older Fijian students’ English language use and academic outcomes have been found to be influenced by: cultural factors (Hoar, 2004; Otsuka, 2006), attitudes (Lotherington, 1998; Shameem, 2004; White, 2002) and access to literacy materials (Elley & Mangubhai, 1983; Ricketts, 1982).

Finally, when investigating the impact of SES in complex culturally and linguistically diverse contexts such as Fiji it is important to consider the role that all family members may play. A number of other studies of the influence of SES on language and/or literacy skills have focused on maternal education levels (e.g., Howard et al., 2014). In this study, as in Nabuka (1984) it was fathers rather than mothers whose educational status was associated with Year 1 students’ English proficiency and academic performance. This may be a reflection of the traditional patriarchal structure of families (iTaukei and Indian) in this community despite many working mothers in urban areas. Fathers’ education level influenced the Year 1 teacher’s language reports and all assessment measures except the CELF-4AUS C&FD (a measure of syntactical listening skill) and the writing score. The potential influence of paternal education was not apparent in the Year 4 group. Teacher report correlations with fathers’ educational level may reflect a rating bias but it is also possible that fathers’ background reflected
an essential difference in the household structure in this urban area of Fiji (e.g., both caregivers working or mother working only) compared to other international contexts. Given these findings, researchers investigating the influence of demographics of language proficiency and educational outcomes in Fiji or similar Pacific Island countries are advised to broaden their data collection scope beyond mothers and father to all significant caregivers in the family.

Limitations

This study only presented English language proficiency data. Our understanding of why some children have better English language proficiency than others would be enhanced by also knowing the students’ proficiency in their other languages, particularly their main language spoken at home. Such knowledge may also help to distinguish between students who present with a language/literacy difference versus a language/literacy disorder.

Due to an absence of direct assessment tools designed and validated for the Fijian population, the direct assessment conducted in this study relied on tools developed for other cultural and linguistic contexts. The potential impact of cultural and linguistic (e.g., dialectical variants of English) differences between the population in this study and that upon which the tests were normed may have inadvertently introduced a test bias. Future direct assessment should endeavor to use locally developed tools and/or dynamic assessment.

The reported associations between main language group and English language proficiency must acknowledge that main language spoken at home was self-reported. It is unlikely that Fiji Hindi main language speakers would have identified themselves as Fijian dialect speakers, but the distinction between Standard Fijian and Fijian dialect main language speakers may have been less clear for some participants. Similarly, testing may have been influenced by how the student felt about being tested in English as some language groups in Fiji have been found to have more/less positive attitudes to English (Hundt, Zipp, & Huber, 2015; Shameem, 2004).

This study was cross-sectional and thus definitive claims cannot be made regarding English language proficiency progression between Year 1
and Year 4. We also acknowledge that the large number of variables and small numbers of participants within some variable categories may have influenced statistical results. Consequently we have used nonasymptomatic exact \( p \)-values with Bonferroni adjustment where required to strengthen our findings where possible. Additionally, the reliability and validity of the measures used has not been tested. Evaluation of the reliability and validity of subjective report and adapted direct assessment measures used in this study is warranted.

**Future Directions**

Future studies of children’s language proficiency in Fiji can build on the findings reported here. Understanding why children who speak one main language perform better than others will inform future planning of educational services in Fiji that meet the needs of all children. A longitudinal study that evaluates main language and English language proficiency amongst urban, rural and remote Fijian students is warranted.

**Conclusion**

The Fijian experience of learning English is unique; however, it is evident that there are also similarities to English language learners in other countries. The variability in Year 1 and Year 4 students’ language and literacy proficiency, along with Year 4 students’ higher proficiency compared to Year 1 suggest that these urban Fijian students come to school with very different linguistic profiles. It is apparent that these Fijian students, who are still learning to communicate in English up to and likely beyond Year 4, are likely to require ongoing intensive English language support to access an English only curriculum, and thus should not be expected to perform similarly to children of the same age in countries where English is the dominant community language. Results indicate that policy makers should develop curriculum materials that support learning in all community languages beyond Year 4 and allow teachers to differentiate their pedagogical practice to the variable needs of the diverse cultural and linguistic profiles of the students in their classrooms.

**Acknowledgements**

Our utmost gratitude to the students, caregivers, head master, teachers, and broader community of the Fijian school where this study took place: *vinaka vakalevu and dhanyavad* (thank you). Thanks also to Mrs Sala
Sauqaqa for her assistance with data collection and Ms Akata Naleledawa and Mr Epenisa N. Rakanace for help with data preparation and analysis. Finally, thanks to Dr Fiona Willans for her advice on interpretation of the findings of this study.

**Funding details**

This research was supported in part by an Australian Government Endeavour Post-graduate Research Scholarship, an Australian Government Research Training Program Scholarship, and an Australian Linguistic Society Gerhardt Laves scholarship.

**Disclosure statement**

The authors report that there is no potential conflict of interest with regards to this manuscript.

**References**


Table 1.  

*Student Demographics by Year*

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of participants</strong></td>
<td>35 (28.6%)</td>
<td>40 (42.5%)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>10 (28.6%)</td>
<td>17 (42.5%)</td>
</tr>
<tr>
<td>Male</td>
<td>25 (71.4%)</td>
<td>23 (57.5%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (months)</td>
<td>71.8 (SD=4.1)</td>
<td>115.28 (SD=4.3)</td>
</tr>
<tr>
<td>Range (months)</td>
<td>63.0 - 87.0</td>
<td>108.0 - 125.0</td>
</tr>
<tr>
<td><strong>Main language spoken at home</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Fijian</td>
<td>17 (48.6%)</td>
<td>15 (37.5%)</td>
</tr>
<tr>
<td>Fijian dialect</td>
<td>4 (11.4%)</td>
<td>8 (20.0%)</td>
</tr>
<tr>
<td>Fiji Hindi</td>
<td>5 (14.3%)</td>
<td>10 (25.0%)</td>
</tr>
<tr>
<td>English</td>
<td>9 (25.7%)</td>
<td>7 (17.5%)</td>
</tr>
<tr>
<td><strong>Number of languages spoken</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3 (8.6%)</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td>2</td>
<td>11 (31.4%)</td>
<td>6 (15.4%)</td>
</tr>
<tr>
<td>3</td>
<td>16 (45.7%)</td>
<td>24 (61.5%)</td>
</tr>
<tr>
<td>4 or more</td>
<td>5 (14.3%)</td>
<td>8 (20.6%)</td>
</tr>
<tr>
<td><strong>Non-verbal intelligence (PTONI)(^1)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>26.8 (SD=7.5)</td>
<td>40.0 (SD=9.7)</td>
</tr>
<tr>
<td><strong>Total household income (THI)(^2)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;FJD10,000</td>
<td>13 (37.1%)</td>
<td>11 (27.5%)</td>
</tr>
<tr>
<td>FJD10,000 - FJD19,999</td>
<td>9 (25.7%)</td>
<td>15 (37.5%)</td>
</tr>
<tr>
<td>&gt;FJD20,000</td>
<td>3 (8.6%)</td>
<td>2 (5.0%)</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>10 (28.6%)</td>
<td>12 (30.0%)</td>
</tr>
<tr>
<td><strong>Total household occupants (THO)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>6.3 (SD=1.6)</td>
<td>6.0 (SD=1.8)</td>
</tr>
<tr>
<td><strong>Fathers’ education level(^3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary or not at all</td>
<td>1 (3.2%)</td>
<td>1 (3.4%)</td>
</tr>
<tr>
<td>High school</td>
<td>14 (45.2%)</td>
<td>15 (51.7%)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>16 (51.6%)</td>
<td>13 (44.8%)</td>
</tr>
<tr>
<td><strong>Mothers’ education level(^3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary or not at all</td>
<td>0 (0.0%)</td>
<td>2 (6.7%)</td>
</tr>
<tr>
<td>High school</td>
<td>15 (46.9%)</td>
<td>12 (40.0%)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>17 (53.1%)</td>
<td>16 (53.3%)</td>
</tr>
</tbody>
</table>

*Note.* \(^1\) Primary Test of Nonverbal Intelligence (PTONI; Ehrler & McGhee, 2008); \(^2\) FJD, Fiji dollar. 1 FJD=approximately 0.48 USD (Jan 2017); \(^3\) Education level—“tertiary” education included studies completed at a technical college or university that resulted in a certificate level or greater qualification.
Table 2.

**Listening, Speaking, Reading, and Writing Caregiver and Teacher Reports and Direct Assessment Measure Results for Year 1 and Year 4 (n=40)**

**Students**

<table>
<thead>
<tr>
<th>Communication domain</th>
<th>Variable</th>
<th>Category/Statistic</th>
<th>Year 1 n/M</th>
<th>Year 4 n/M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PROFICIENT (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(SD)</td>
<td></td>
<td>(SD)</td>
</tr>
<tr>
<td>Listening</td>
<td>Caregiver report</td>
<td></td>
<td>30/88.2%</td>
<td>37/97.4%</td>
</tr>
<tr>
<td></td>
<td>Not proficient</td>
<td></td>
<td>4/11.8%</td>
<td>1/2.6%</td>
</tr>
<tr>
<td></td>
<td>Teacher report</td>
<td>Proficient</td>
<td>18/51.4%</td>
<td>32/80.0%</td>
</tr>
<tr>
<td></td>
<td>Not proficient</td>
<td></td>
<td>17/48.6%</td>
<td>8/20.0%</td>
</tr>
<tr>
<td></td>
<td>PPVT-IV</td>
<td>Mean (SD)</td>
<td>35/50.4% (14.5)</td>
<td>40/90.1% (18.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Median</td>
<td>49.0</td>
<td>89.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>25.0-79.0</td>
<td>53.0-129.0</td>
</tr>
<tr>
<td></td>
<td>CELF-4AUS2</td>
<td>Mean (SD)</td>
<td>35/6.6% (4.4)</td>
<td>40/37.9% (8.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Median</td>
<td>5.0</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>1.0-18.0</td>
<td>14.0-50.0</td>
</tr>
<tr>
<td></td>
<td>CELF-4AUS</td>
<td>Mean (SD)</td>
<td>35/10.9% (3.4)</td>
<td>14/20.8% (3.0)</td>
</tr>
<tr>
<td></td>
<td>SS5</td>
<td>Median</td>
<td>10.0</td>
<td>20.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>5.0-20.0</td>
<td>14.0-26.0</td>
</tr>
<tr>
<td>Speaking</td>
<td>Caregiver report</td>
<td>Proficient</td>
<td>27/79.4%</td>
<td>35/92.1%</td>
</tr>
<tr>
<td></td>
<td>Not proficient</td>
<td></td>
<td>7/20.6%</td>
<td>3/7.9%</td>
</tr>
<tr>
<td></td>
<td>Teacher report</td>
<td>Proficient</td>
<td>17/48.6%</td>
<td>32/80.0%</td>
</tr>
<tr>
<td></td>
<td>Not proficient</td>
<td></td>
<td>18/51.4%</td>
<td>8/20.0%</td>
</tr>
<tr>
<td></td>
<td>CELF-4AUS</td>
<td>Mean (SD)</td>
<td>35/3.9% (3.7)</td>
<td>40/18.7% (6.1)</td>
</tr>
<tr>
<td></td>
<td>WS5</td>
<td>Median</td>
<td>3.0</td>
<td>20.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>0.0-11.0</td>
<td>5.0-26.0</td>
</tr>
<tr>
<td></td>
<td>CELF-4AUS</td>
<td>Mean (SD)</td>
<td>35/10.1% (8.3)</td>
<td>40/31.9% (10.8)</td>
</tr>
<tr>
<td></td>
<td>RS6</td>
<td>Median</td>
<td>7.0</td>
<td>33.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>0.0-35.0</td>
<td>10.0-62.0</td>
</tr>
<tr>
<td></td>
<td>CELF-4AUS</td>
<td>Mean (SD)</td>
<td>35/3.9% (5.7)</td>
<td>14/31.6% (10.9)</td>
</tr>
<tr>
<td></td>
<td>FS7</td>
<td>Median</td>
<td>1.0</td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>0.0-19.0</td>
<td>11.0-47.0</td>
</tr>
<tr>
<td>Reading</td>
<td>Caregiver report</td>
<td>Proficient</td>
<td>21/65.6%</td>
<td>33/86.8%</td>
</tr>
<tr>
<td></td>
<td>Not proficient</td>
<td></td>
<td>11/34.4%</td>
<td>5/13.2%</td>
</tr>
<tr>
<td></td>
<td>Teacher report</td>
<td>Proficient</td>
<td>9/25.7%</td>
<td>31/77.5%</td>
</tr>
<tr>
<td></td>
<td>Not proficient</td>
<td></td>
<td>26/74.3%</td>
<td>9/22.5%</td>
</tr>
<tr>
<td></td>
<td>DIBELS Next</td>
<td>Mean (SD)</td>
<td>35/14.2% (16.2)</td>
<td>40/183.7% (114.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Median</td>
<td>7.0</td>
<td>166.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>0.0-59.0</td>
<td>8.0-399.0</td>
</tr>
</tbody>
</table>
Table 3.

Correlation between Listening, Speaking, Reading and Writing Caregiver and Teacher Reports and Direct Assessment Measures with Academic Performance Results for Year 1 (n=35) and Year 4 (n=40)

<table>
<thead>
<tr>
<th></th>
<th>CBA Year 1</th>
<th>CBA Year 4</th>
<th>LANA Literacy Year 4</th>
<th>LANA Numeracy Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Listening</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caregiver report</td>
<td>-0.31</td>
<td>-0.14</td>
<td>0.15</td>
<td>-0.10</td>
</tr>
<tr>
<td>Teacher report</td>
<td>-0.45**</td>
<td>-0.50**</td>
<td>-0.56**</td>
<td>-0.41*</td>
</tr>
<tr>
<td>PPVT-IV</td>
<td>0.52**</td>
<td>0.60**</td>
<td>0.38*</td>
<td>0.21</td>
</tr>
<tr>
<td>CELF-4AUS C&amp;FD</td>
<td>0.41*</td>
<td>0.26</td>
<td>0.36*</td>
<td>0.25</td>
</tr>
<tr>
<td>CELF-4AUS SS</td>
<td>0.49**</td>
<td>0.37</td>
<td>0.42</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Speaking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caregiver report</td>
<td>-0.27</td>
<td>-0.18</td>
<td>-0.07</td>
<td>-0.07</td>
</tr>
<tr>
<td>Teacher report</td>
<td>-0.46**</td>
<td>-0.50**</td>
<td>-0.56**</td>
<td>-0.41*</td>
</tr>
<tr>
<td>CELF-4AUS WS</td>
<td>0.47**</td>
<td>0.76**</td>
<td>0.72**</td>
<td>0.46**</td>
</tr>
<tr>
<td>CELF-4AUS RS</td>
<td>0.43*</td>
<td>0.61**</td>
<td>0.44**</td>
<td>0.25</td>
</tr>
<tr>
<td>CELF-4AUS FS</td>
<td>0.36*</td>
<td>0.66*</td>
<td>0.82**</td>
<td>0.32</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caregiver report</td>
<td>-0.21</td>
<td>-0.54**</td>
<td>-0.54**</td>
<td>-0.20</td>
</tr>
<tr>
<td>Teacher report</td>
<td>-0.35*</td>
<td>-0.49**</td>
<td>-0.62**</td>
<td>-0.46**</td>
</tr>
<tr>
<td>DIBELS Next</td>
<td>0.55**</td>
<td>0.67**</td>
<td>0.82**</td>
<td>0.40*</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caregiver report</td>
<td>-0.07</td>
<td>-0.42**</td>
<td>-0.44**</td>
<td>-0.19</td>
</tr>
<tr>
<td>Teacher</td>
<td>-0.45**</td>
<td>-0.51**</td>
<td>-0.60**</td>
<td>-0.43**</td>
</tr>
</tbody>
</table>

Note. 1 Peabody Picture Vocabulary Test, Fourth Edition (PPVT-IV, Dunn & Dunn, 2007); 2 Clinical Evaluation of Language Fundamentals, Fourth Edition, Australian Standardised Edition (CELF-4AUS; Semel et al., 2006); 3 Concepts and Following Directions (CELF-4AUS C&FD); 4 Word Structure (CELF-4AUS WS); 5 Recalling sentences (CELF-4AUS RS); 6 Formulated sentences (CELF-4AUS FS); 7 Sentence structure (CELF-4AUS SS); 8 Dynamic Indicators of Basic Early Literacy Skills, Next edition (DIBELS Next; Good et al., 2011). 9 Year 1: Lanter et al., (2012). Year 4: Early Writing Analysis Tool (EWAT; Mackenzie et al., 2013).
| Writing score | 0.38* | 0.51** | 0.65** | 0.32 |

**Note.** *p < 0.05. **p < 0.01.*
1 Peabody Picture Vocabulary Test, Fourth Edition (PPVT-IV, Dunn & Dunn, 2007); 2 Clinical Evaluation of Language Fundamentals, Fourth Edition, Australian Standardised Edition (CELF-4AUS; Semel et al., 2006); 3 Concepts and Following Directions (CELF-4AUS C&FD); 4 Word Structure (CELF-4AUS WS); 5 Recalling sentences (CELF-4AUS RS); 6 Formulated sentences (CELF-4AUS FS); 7 Sentence structure (CELF-4AUS SS); 8 Dynamic Indicators of Basic Early Literacy Skills, Next edition (DIBELS Next; Good et al., 2011). 9 Year 1: Lanter et al., (2012). Year 4: Early Writing Analysis Tool (EWAT; Mackenzie et al., 2013). 10 Classroom based assessment (CBA); 11 Fiji Ministry of Education National Literacy and Numeracy Assessment (LANA).
Table 4.

Influence of Main Language and Socioeconomic Status on Caregiver and Teacher Reports, Direct Assessment Measures and Academic Performance Results for Year 1 (n=35) and year 4 (n=40).

<table>
<thead>
<tr>
<th></th>
<th>Student’s main language</th>
<th>Total household income (THI)</th>
<th>Total household occupants (THO)</th>
<th>Fathers' education level</th>
<th>Mothers' education level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
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Note: *p<0.05; **p<0.01. 1 Peabody Picture Vocabulary Test, Fourth Edition (PPVT-IV, Dunn & Dunn, 2007); 2 Clinical Evaluation of Language Fundamentals, Fourth Edition, Australian Standardised Edition (CELF-4AUS, Semiel et al., 2006); 3 Concepts and Following Directions (CELF-4AUS C&FD); 4 Word Structure (CELF-4AUS WS); 5 Dynamic Indicators of Basic Early Literacy Skills, Next edition (DIBELS Next; Good et al., 2011); 6 Year 1: Lanter et al., (2012). Year 4: Early Writing Analysis Tool (EWAT; Mackenzie et al., 2013); 7 Classroom based assessment (CBA); 8 Fiji Ministry of Education National Literacy and Numeracy Assessment (LANA).
A contrastive analysis of the phonologies of two Fiji English dialects: A diagnostic guide for speech-language pathologists

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Abstract
Speech-language pathologists (SLPs) are increasingly aware of the need to minimise the impact of cultural and linguistic mismatch when working with culturally and linguistically diverse clients. Consequently, there is a growing body of literature designed for the SLP to obtain an understanding of the characteristics of languages and dialects that may be outside the SLPs’ previous experience. This paper provides a review of the phonological features of two Fiji English (FE) dialects (Fijian Fiji English and Fiji Hindi Fiji English). This information is provided to assist English-speaking SLPs’ diagnostic decision-making when working with people from Fiji who wish to improve their speech intelligibility and to differentiate between speech difference and speech sound disorder in young Fiji children. The Fiji languages influence the phonetics and phonology of FE dialects. Consequently basilectal (heavily accented) speakers have many differences when compared to acrolectal (lightly accented) speakers. Acknowledging the diversity in FE speech production, this paper provides a review of phonetic and phonemic variants for basilectal and acrolectal speakers of Fijian Fiji English and Fiji Hindi Fiji English.

Keywords:
Speech-language pathology, assessment, multilingual, Fiji, Fiji English, Fiji Hindi, Fijian, phonology, Pacific
A contrastive analysis of the phonologies of two Fiji English dialects: A diagnostic guide for speech-language pathologists

Introduction

Fiji is located in the South Pacific Ocean, east-north-east of Australia and north of New Zealand. It is a small island nation made up of over 300 islands spread over 18 000 square kilometres. The people of Fiji are culturally diverse. Of the 837 271 people at the last published census 57% are iTaukei (indigenous Fijian), 37% are Indian Fijian (Fiji-born persons with Indian ancestry), and the remaining 6% are of either Pacific islander, European, or East Asian ancestry (Fiji Islands Bureau of Statistics, 2008). Fiji is a multilingual nation, with multilingualism existing ‘at both societal and individual levels’ (Mangubahi and Mugler, 2003, pp. 385). There are three de-facto official languages: Standard Fijian (also known as iTaukei language, or Vosa Vakaviti), Hindi, and English (Constitution of the Republic of Fiji, 2013). In addition, there are significant numbers of speakers of: other indigenous Fijian languages (e.g. Lauan and other East Fijian communalects, Serua and other West Fijian communalects); Rotuman spoken by the inhabitants of Rotuma on their island and in other parts of Fiji; immigrant languages (e.g. Kiribati, Chinese, Eastern Punjabi, Gujarati, Malayalam, Samoan, Tamil, Telugu, Tongan, Tuvaluan, Urdu, and Wallisian); and Fiji Sign language (Mangubhai and Mugler, 2003; Paul, Simons and Fennig, 2013).

At an individual level, multilingualism abounds in Fiji. The first language of the iTaukei is one of the indigenous Fijian languages, which may be a different language from Standard Fijian. Nearly all of the Indian Fijian population speak Fiji Hindi (also known as Fiji Baat or Fiji Hindustani), which is a koiné (mix) of a number of languages of north-east India, with many loanwords from Fijian and English (Arms, 1998; Mugler, 2004; Siegel, 1998). Very few of the Indian Fijian population speak Hindi as a first language. Finally, two contact languages are recognised, along with Fiji English, as lingua franca amongst different ethnic groups: Pidgin Fijian and Pidgin Hindi (Mangubhai and Mugler, 2003). However, in urban areas and in the domains of education, politics, and industry, Fiji English is the language that dominates and is used most across the different linguistic
groups (Mangubhai and Mugler, 2003).

It is widely acknowledged that for a speech-language pathologist (SLP) to best meet the needs of their multilingual clients, an understanding of the clients’ home languages and cultures is required (Kohnert, Yim, Nett, Kan and Duran, 2005). Historical contrastive analysis of dialects of English has highlighted the importance of considering the influence of a person’s first language on their English pronunciation to ensure the correct identification of speech delay, disorder, or difference. For example, previous analyses of African-American children (Bland-Stewart, 2003) and Indigenous Australian children (Toohill, McLeod, and McCormack, 2012) has shown that children can be misidentified with a speech sound disorder if their home dialect is not considered. When Fijians travel abroad or emigrate they take their languages and unique variety of English with them. The majority of permanent departures from Fiji are to English-speaking countries such as Australia, Canada, New Zealand, or the USA (Mangubhai and Mugler, 2003). According to the 2010 Australian Census there were 62 778 people born in Fiji living permanently in Australia (Australian Bureau of Statistics, 2011). In the US, people born in Fiji account for almost 40 000 residents (United States Census Bureau, 2012). In New Zealand, the 2006 census records 9 861 persons as Fijian (Statistics New Zealand, 2006). With significant numbers of Fijians living outside of Fiji, it is possible that a Fiji Islander, or their child, could develop a communication difficulty that requires the services of a speech-language pathologist who does not speak their language or English dialect.

There are no formal speech-language pathology services in Fiji, no published studies on Fiji children’s speech acquisition (Hopf, 2014), and only one known paper on language acquisition patterns of Fiji children (morphology: Griffiths, 2000). Consequently, there is a paucity of information available on the acquisition of Fiji languages designed for clinical purposes. When encountering a client from a language group different to that of the clinician, McGregor, Williams, Hearst and Johnson (1997) suggest using a four-step procedure of contrastive analysis to distinguish speech and language difference from disorder:

1. Become familiar with the linguistic variety of interest;
2. Collect speech sample data for the contrastive analysis;
3. Identify true errors; and,
4. Interpret the results of contrastive analysis.

In this paper we undertake the first step in this procedure for the phonology of two Fiji languages and their dialects of Fiji English: Fijian Fiji English and Fiji Hindi Fiji English.

Method

A comprehensive review of Fiji English phonology was undertaken. The review revealed a paucity of information on the phonology of Fiji English, despite a growing body of data on other linguistic aspects of Fiji English (see, for example, Biewer, 2012, Zipp, 2014). Sources detailing Fiji English phonology included a dictionary (Geraghty, Mugler and Tent, 2006), book chapter (Tent and Mugler, 2008), two theses (Tent, 2000; Fox, 2003), and two articles on yod-deletion/insertion (Tent, 2001a; Mugler, 2007). Additionally, contact was made with linguists considered experts on the phonology of Fiji English and the two substrate Fiji languages of interest. From these sources phonemic inventories for both substrate languages and their respective Fiji English dialects were collated. Phonemes were only included in the language and dialect phoneme inventories when authors had used terms of ‘certainty’ (e.g. “often”, “usually”, “in most instances”, etc.). Phonemes mentioned by authors using less certain terms (e.g. “sometimes”, “occasionally”, “rarely”, “in a couple of instances”, etc.) were excluded from the language and dialect phoneme inventories and included in the phonetic variability analysis. The main standard varieties of English (e.g. General British English, General American English, Standard Australian English, and New Zealand English) were contrasted with the collated consonant and vowel inventories for both Fiji English dialects. However, because the consonant inventories of the four standard varieties of English mentioned are comparable at a phonemic level, we only present contrastive examples with Standard Australian English (SAusE) pronunciation (Cox, 2008; 2012; Harrington, Cox & Evans, 1997).

Results

English became the working language of the Fiji government after Fijian chiefs ceded the country to Britain in 1874 (Siegel, 1989). With national independence in 1970 the use of English continued to grow as a consequence of the multi-ethnic state and a government policy of universal
English instruction in schools (Mangubhai and Mugler, 2003). Fiji English has been described as an umbrella term for a number of dialects of English spoken in Fiji (Tent, 2001b). Fiji English dialects can be represented on a spectrum from the basilect to the acrolect, that is, from ‘strongly accented L2 [second language] and basilectal L1 [first language] varieties to almost unaccented L2 [second language] and acrolectal L1 [first language] varieties’ (Tent, 2001b, p. 213).

The labelling of Fiji English dialects has undergone significant change over time (see Tent and Mugler, 2008, for a discussion of these transitions). The most widely quoted terms for Fiji English dialects come from Tent (2001b). Tent described five main ethnolects, or dialects based on the speaker’s ethnicity: Fijian Fiji English, Indo-Fijian English, Part-European Fiji English, Chinese Fiji English, and Rotuman Fiji English (see Table 1). Tent (2001b) stated that these five Fiji English ethnolects have significant variability between and within speakers. This variability was ascribed to age, gender, education, differences amongst first languages, geographical location of the speaker, and social factors (e.g. peer group influence, exposure to media). The five main Fiji English dialects described by Tent (2001b) reflect labels for Fiji ethnicity (e.g. Indo-Fijian, Chinese).

Current work in the field of sociolinguistics reflects a shift from ethnic labels. Recently, the International Corpus of English (ICE-Project) enlisted researchers of Fiji English (e.g. Tent and Mugler, 1996; Biewer, Hundt and Zipp, 2010; Zipp, 2014) who described their observations without reference to speaker ethnicity. Instead they used a basilectal-acrolectal spectrum (e.g. basilectal Fiji English). Zipp (2014), in her extensive corpus-based review of prepositional constructions in acrolectal speakers of Fiji English, took this departure further, and replaced acrolectal with the term ‘educated’ (p. 1) (i.e. ‘Educated Fiji English’). Other authors have preferred the term ‘Pure Fiji English’ over ‘basilectal Fiji English’ (e.g. Fox, 2003; Tent and Mugler, 2008). It appears that the issue of how to label the variability in Fiji English remains unresolved.

For the purposes of the following contrastive analysis, we propose a labelling system that respects Fiji cultural and linguistic diversity, facilitates continuity in the discussion of Fiji’s languages, and acknowledges the influence of first and other languages on subsequent English language
acquisition. We suggest that Fiji English should be described in terms of the speaker’s first and dominant language; and secondly by distance from the external standard (e.g. basilectal, mesolectal and acrolectal). The revised dialect labels are summarised in Table 1. For example, the term Fijian Fiji English (FFE) is used and replaces the Fijian English/Part-European English labels of Tent and colleagues. Also in this paper, the Indo-Fijian English speakers described by Tent (2001b), and Tent and Mugler (2008) were acknowledged as having Fiji Hindi as their first language. Thus, in this paper the term Fiji Hindi Fiji English (FHFE) is used instead of Indo-Fijian English. Such classification of Fiji English speakers may also facilitate future research analysis, particularly of children’s phonology in Fiji, which is as yet largely unstudied (Hopf, 2014). Using the first language status of the speaker will also allow for further description and sub-classification of Fiji English speakers from different first dialects of the main language group (e.g. West Fijian Fiji English speaker versus East Fijian Fiji English) and future description and feature analysis of other smaller first language groups in Fiji (e.g. Gujarati Fiji English, Korean Fiji English).

Insert Table 1 about here

**Fijian Fiji English (FFE)**

The substrate of Fijian English is Fijian. The term ‘Fijian’ refers to a group of languages that are members of the Austronesian language family brought from East Asia over 3000 years ago (Paul et al., 2013). These Fijian languages are split into two geographical sub-groups: East and West Fijian. These subgroups are further divided into minimal geographical variants called ‘communalects’ (Geraghty, 1983, p. 17). The West Fijian subgroup comprises some 100 communalects (divided into 10 communalect groupings); and the East Fijian subgroup comprises approximately 200 communalects (divided into 20 communalect groupings). In about 1845, European missionaries decided to promote what they called the dialect of Bauan so they would not have to translate the Bible into over 300 communalects (Geraghty, 1983, 2005; Pawley and Sayaba, 1971). However, the written form they used in their translations was distinct from Bauan, an East Fijian dialect. This literary standard was in fact based on a type of
‘foreigner talk’ now referred to as ‘Old High Fijian’ (Geraghty, 2005). ‘Standard Fijian’ has evolved over the last 180 years under the influence of immigrant languages (e.g. English, Fiji Hindi). More recently official documents refer to the iTaukei language (e.g. Constitution of the Republic of Fiji, 2013). For the purposes of this paper we will maintain current academic convention and use the title Fijian to incorporate communalects, Fijian dialects and Standard Fijian. However, only the phonology of Standard Fijian, a spoken and written dialect of Fijian used among Fijian speakers who do not know each others’ communalect, will be described in detail.

A review of the phonology of Standard Fijian reveals significant variation in the presence or absence of certain phonemes and syllable structures (see Table 2). Standard Fijian is historically reported as presenting with an open-ended syllable structure: vowel (V) or consonant plus vowel (CV) (Schütz, 2004). Syllables may be joined together to create multisyllabic words without consonant clusters. Final vowel placement is restricted by rules concerning vowel length and word stress (Geraghty, 1983; Schütz, 1999). However, Geraghty (pers. comm., Aug 28, 2014) states that English and Hindi loan words nativised in Standard Fijian have changed the phonemic inventory, and altered the phonotactic constraints of Standard Fijian. Geraghty’s observations contradict earlier reports and identify the influence English is having in Fiji. Geraghty’s changes to phonotactic constraints include:

- The presence of CVC words. However, the following consonants do NOT occur in syllable final position: /mb, nd,ŋɖ,ŋɡ, v, z, ʒ/
- Allowance of (CCC)V(CC) structures but ONLY the following are in syllable final position: -ps, -ts, -ks, -lp, -lt, -lk, -lf, -ls, -lθ.

*Insert Table 2 about here*

**FFE consonants.**

FFE has 24 consonants: /p, b, t, d, k, ɡ, m, n, ŋ, f, v, θ, s, z, ʃ, ʒ, ʧ, ʤ, h, l, j, w, r/. The phonemic profile of FFE is similar to that of Standard Australian English with the exception of the approximant /ɹ/ being produced as a trilled
At a phonemic level FFE speakers modify 5 of the 6 additional consonants that do not naturally occur in Standard Fijian (/v, θ, z, ʒ, h/). Only the trilled /r/ remains typically Standard Fijian. However, a phonetic level analysis reveals that the 18 Standard Fijian consonants that are shared with Standard Australian English and the six phonemes unique to Standard Australian English are expressed with significant variability in their realisation in FFE (as illustrated in Table 3). For example, while the shared voiceless plosives /p, t, k/, are present in both Standard Fijian and Standard Australian English, in FFE these sounds are not aspirated in any position and are unreleased in syllable final position. In contrast, for consonants that are found in Standard Australian English, but not Standard Fijian, the most common adaptation in FFE is devoicing in syllable final position (e.g. raise: SAusE = /ræz/, FFE = /rəz/).

**FFE vowels.**

The FFE phonemic vowel inventory has five vowels: /i, e, u, ɔ, a/. However, Tent and Mugler (2008) describe considerable phonetic variation in the realisation of these vowels with 23 acceptable phonetic variations (see Table 5; for a complete description see Tent and Mugler, 2008, pp. 246-247). FFE speakers tend to neutralise the length and quality distinctions of monophthongs found in English standard varieties (Tent and Mugler, 2008). For example, the monophthongs shared between Standard Fijian and Standard Australian English tend to be shorter in FFE (e.g. shared: SAusE = /ʃeːd/, FFE = /ʃed/; taught: SAusE = /toːt/, FFE = /tɔt/); the centralised monophthongs of Standard Australian English which do not occur in Standard Fijian (e.g. /uː, ɜː, ɐː/) tend to be produced with lower placement (e.g. hard: SAusE = /hæd/, FFE = /hæd/), or lengthened (e.g. winner: SAusE = /wɪnə/, FFE = /wɪnə/); and finally, some phonemes that are diphthongs in Standard Australian English are shortened and/or realised as monophthongs in FFE (e.g. know: SAusE = /nəʊ/, FFE = /noʊ/).

**FFE phonotactics.**

/ə/.
To accommodate production of consonant clusters in FFE, Tent and Mugler (2008) state that the basilectal speaker will often delete a consonant (e.g. bank: SAusE = /bæŋk/, FFE = /bæŋ/) and on the rare occasions, for some consonant clusters containing a liquid may insert an epenthetic vowel (e.g. class: SAusE = /klæs/, FFE = /kəlas/).

Insert Table 3 about here

Fiji Hindi Fiji English (FHFE)
The substrate of FHFE is Fiji Hindi, also known as Fiji Baat or Fiji Hindustani. Fiji Hindi developed between 1879 and 1916 when Indian indentured labourers were brought to Fiji by the British. Fiji Hindi is based on ‘various forms of Hindi’ with English and Fijian loan words (Siegel, 1998, p. 189). Whilst there has been significant debate on the legitimacy of Fiji Hindi as a language (see Siegel, 1998), ongoing attempts to standardise Fiji Hindi, and increasing media and Fiji government recognition of Fiji Hindi as a vernacular language of Fiji, suggest that there is a growing acceptance of Fiji Hindi, at least among the younger generation of Indian Fijians.

There is very little published material detailing the phonological profile of Fiji Hindi (see Arms, 1998; Tent and Mugler, 2008). Kumar (2010) suggests that ‘the phonological patterns of individual words in Fiji Hindi are determined by whichever regional language from India has had the greatest impact on the speech community in Fiji’ (Kumar, 2010, p. 193). For example, descendants of southern India immigrants who spoke Dravidian languages (e.g. Tamil, Telugu, Malayalam) typically do not use aspirated consonants in Fiji Hindi. An analysis by Siegel (2014) also found evidence of multiple Indian language influences on Fiji Hindi. A “total grammar sketch” (Prasad, 2011), and a study of the Dreketi sublect of Fiji Hindi (Rajendra Prasad, 2014, pers. comm., 5 Aug, 2014), are presently underway at the University of the South Pacific. Preliminary results and observations of previous authors (Mangubhai and Mugler, 2003; Siegel, 1998) suggest that there is internal language diversity for regional groups of Fiji Hindi speakers within Fiji, particularly in lexical and morphological variation (e.g. northern versus southern island groups). In addition, a pidgin
Hindustani is reported as existing in rural regions (Mangubhai and Mugler, 2003; Siegel, 1998) and to a lesser extent in urban areas.

Tent and Mugler (2008) state that Fiji Hindi has 35 consonants /p, pʰ, b, bʰ, t̪, t̪ʰ, d ̪ , d ̪ ʰ, ʈ, ʈʰ, ɖ, ɖʰ, k, kʰ, ɡ, ɡʰ, m, n ̪ , ŋ, r, ɽ, ɽʰ, f, s, h, ʧ, ʧʰ, ʤ, ʤʰ, w, z, j, ʃ, l/ (see Figure 2), eight vowels /i, iː, u, uː, eː, oː, ə, aː/ and five diphthongs /ɔɪ, æ, ɪə, ɛɐ, uɐ/. However a more recent consonant inventory compiled by Kumar (2012) omits /pʰ, z, w, ʒ, ʃ/ and provides a dental position for /s/. Kumar (2012) also provides an alternative vowel set: /i, i, u, o, e, d, ə, a, æ, a/.

It is possible that the variations in vowel inventories may reflect a difference in symbol choice on the part of the linguists. Kumar (2012) lists permissible syllable shapes for Fiji Hindi as V, VC, VV, CV, CVC, CCV, CCVC, CVVC. Unlike English, Fiji Hindi has phonemic aspiration and dental/retroflex contrasts. Whilst Fiji Hindi is similar to Standard Hindi, the long and short vowels of Fiji Hindi do not always contrast, and in a number of speakers some Standard Hindi consonants are not used or may be used interchangeably without changing meaning (e.g. [ʃ] and [s], [dʒ] and [z], [pʰ] and [f], and in some words [l] and [r]) (Tent and Mugler, 2008, p. 249). This has implications for FHFE pronunciation.

**FHFE consonants.**

FHFE has 24 consonants: /p, b, t, d, k, g, m, n, ŋ, f, v, θ, s, z, j, ʒ, ʧ, ʤ, h, l, j, w, r/. Fiji Hindi shares 15 of the 24 consonants of Standard Australian English: /p, b, k, g, m, n, ŋ, f, s, z, h, l, j, w, ʧ, ʤ/ (see the overlapping sections of the circles in Figure 2). At a phonemic level the FHFE speaker incorporates into the phonemic inventory of FHFE eight of the nine additional consonants found in English that do not occur in Fiji Hindi (/t, d, n, v, θ, s, j, ʒ/); only the trilled /r/ remains typically Fiji Hindi.

Insert Figure 2 about here

When considering common FHFE phonetic realisations of each English consonant, there are a number of significant differences (Tent and Mugler, 2008). From the analysis presented in Table 4, it is apparent that the FHFE speaker produces 12 of the 24 Standard Australian English
consonants. For example, the unshared phonemes /θ/ and /ð/ are stopped (e.g. *thirst*: SAusE = /θɜːst/, FHFE = /tɛs/); /ʃ/ is depalatalised (e.g. *push*: SAusE = /pʊʃ/, FHFE = /pʊs/); and, /ʒ/ may be realised as [z], [s], or [ʃ].

**FHFE vowels.**

There are five phonemic vowels in basilectal FHFE: /i, e, u, ə, a/. However, Tent and Mugler (2008) describe considerable phonetic variation in the realisation of these vowels with 28 acceptable phonetic variations (see Table 5; for a complete description see Tent and Mugler, 2008, p. 257). English diphthongs may be realised in FHFE as: short elements lengthened to create two vowels side by side instead of a diphthong (e.g. *wise*: SAusE = /wɛez/, FHFE = /we.es/); or, be converted to monophthongs (e.g. *face*: SAusE = /fɛns/, FHFE = /feːs/). Finally, FHFE speakers sometimes insert the /i/ vowel in front of /ʃ/ when it occurs in word initial position (e.g. *yes*: SAusE = /jɛs/, FHFE = /iʃes/).

**FHFE phonotactics.**

There are few consonant clusters in the phonotactic repertoire of Fiji Hindi (the allowed syllable shapes are CCV and CCVC) (Kumar, 2012). As a consequence of this restricted inventory, FHFE speakers’ English consonant clusters may be realised in FHFE with variability. For example, cluster reduction in syllable final position (e.g. *fast*: SAusE = /fæːst/, FHFE = /fas/); vowel epenthesis (e.g. *train*: SAusE = /træɪn/, FHFE = /tireːn/); and vowel prothetic /i/ for /s/ clusters (e.g. *scare*: SAusE = /skær/, FHFE = /iskɛɐ/).

*Insert Table 4 about here*

*Insert Table 5 about here*

**Discussion**

Identification of speech difference amongst English dialect speakers is a matter of necessity for SLPs in order to ensure that perceived difference is not misinterpreted as speech delay or disorder (Goldstein and McLeod, 2012). Conducting an informed contrastive analysis is important to ensure
that variability in English pronunciation may be accounted for during assessment of speech accuracy and intelligibility. The time and financial resources to conduct a contrastive analysis on lesser-known languages may preclude the busy SLP from undertaking such a task in everyday practice. Hence, this review describing the phonology of two dialects of Fiji English (FFE and FHFE) will assist the SLP to complete the first phase of the McGregor, Williams, Hearst and Johnson (1997) four-step procedure of contrastive analysis. This review highlights the:

- Influence of the substrate language (Fijian or Fiji Hindi) upon Fiji English phonology.
- Importance of considering phonemic and phonetic information when conducting an assessment of Fiji English speakers.

In addition to supporting SLPs in their clinical practice, this review draws attention to the need for development of valid speech assessments in Fiji languages and further research into other sub-dialects of Fiji English not considered in this review (e.g. Rotuman Fiji English, Mandarin Fiji English).

**Limitations**

The information for this analysis relied solely on secondary sources (e.g., Fox, 2003; Tent, 2000; Tent and Mugler, 2008) and personal correspondence. Using such sources may reproduce any unintended errors in the original documents. In addition, the inclusion or exclusion of information from sources into the inventories of this review was based on evaluation of ‘certainty’ in the original authors’ claims. Other reviewers may have classified these terms differently. SLPs working with Fijian clients are advised to seek the original works quoted for detailed information. Readers are also encouraged to access sound files of Fiji English speakers reading the standard script *Comma gets a Cure* (online at http://www.dialectsarchive.com/fiji) to gain a greater appreciation of Fiji English variability.

**Conclusion**

In this paper, we have provided a summary for SLPs who wish to become familiar with two dominant Fiji English dialects: Fijian Fiji English (FFE) and Fiji Hindi Fiji English (FHFE). It is evident that these dialects of Fiji English are significantly different. Therefore, it is important for SLPs to
thoroughly review the Fijian client’s case history information and ask about the substrate language that informs that family’s Fiji English pronunciation. SLPs may use this information to complete McGregor and colleagues’ (1997) three further stages of contrastive analysis for their own clients: collecting data for the contrastive analysis; identifying true errors, and interpreting the results of contrastive analysis, to determine if a client’s speech represents difference, delay, or disorder.

Acknowledgements

The authors would like to acknowledge Mr Rajendra Prasad, Dr Jan Tent, and Prof. Jeff Siegel, for their early assistance in collating information for this manuscript. The first author acknowledges support from a Charles Sturt University Postgraduate Research Scholarship (CSUPRS).

Declaration of interests

There are no real or potential conflicts of interest related to the manuscript.

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and housing, viewed 1 May 2015.


Mugler, F. 2007 ‘... and the blue bird /flju/ away’: Yod insertion in Fiji English’, in J. Siegel, J. Lynch and D. Eades (eds) Language description, history and development: Linguistic indulgence in...


Table 1

Fiji English Dialect Classifications

<table>
<thead>
<tr>
<th>New dialect classification (acronym) (current paper)</th>
<th>Fiji English ethnolect (acronym) (Tent, 2001a)</th>
<th>First language of speaker</th>
<th>Ethnicity of speaker (Tent, 2001a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fijian Fiji English (FFE)</td>
<td>Fijian English (FJE)</td>
<td>Standard Fijian (iTaukei Language, Vosa Vakaviti, Bauan Fijian)</td>
<td>iTaukei Fijian Part-European Fijian</td>
</tr>
<tr>
<td></td>
<td>Part-European English (PE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji Hindi Fiji English (FHFE)</td>
<td>Indo-Fijian English (IFE)</td>
<td>Hindi (Fiji Baat, Fiji Hindustani)</td>
<td>Indian Fijian (also known as Fiji Indian or Indo-Fijian)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandarin Fiji English (MFE)</td>
<td>Chinese Fiji English (CFE)</td>
<td>Mandarin</td>
<td>Chinese</td>
</tr>
<tr>
<td>Cantonese Fiji English (CFE)</td>
<td>Cantonese</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotuman Fiji English (RFE)</td>
<td>Rotuman English (RE)</td>
<td>Rotuman</td>
<td>Rotuman</td>
</tr>
</tbody>
</table>

Table 2

Summary of Standard Fijian Phonology

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consonants</td>
<td>p, t, k, mb, nd, nj, ng, g, m, n, r, f, s, δ, l, j, w, jf, dz</td>
<td>Omits: ndz, njj, Adds: r</td>
<td>Adds: b, d, g, f, dz</td>
</tr>
<tr>
<td>Vowels</td>
<td>i, iː, e, eː, u, uː, a, aː, o, oː</td>
<td>In agreement with Schütz (2004)</td>
<td>Adds: a</td>
</tr>
<tr>
<td>Diphthongs</td>
<td>iu, ei, eu, oi, ou, ao, ai, au, ae</td>
<td>Omits: ae Adds: eu</td>
<td>Omits: ao, ae</td>
</tr>
</tbody>
</table>

Note. Geraghty (pers.comm., Aug 28, 2014) states that English and Hindi loan words nativised in Standard Fijian have changed the Standard Fijian phonemic inventory. However, significant phonotactic constraints coincide with these changes. For example, in CVC words the following do NOT occur in syllable final position: mb, nd, ndj, ng, v, z, j; and, for (CCC)V(CC) ONLY the following occur in syllable final position: -ps, -ts, -ks, -lp, -lt, -lk, -lf, -ls, -lθ
### Table 3
Contrastive analysis of Standard Fijian (SF), Standard Australian English (SAusE) and Fijian Fiji English (FFE) including acceptable variants in Fijian Fiji English (FFE)

<table>
<thead>
<tr>
<th>Phoneme inventory</th>
<th>Acceptable variants in FFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF</td>
<td>SAusE</td>
</tr>
<tr>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>η</td>
<td>η</td>
</tr>
<tr>
<td>f</td>
<td>f</td>
</tr>
<tr>
<td>ð</td>
<td>ð</td>
</tr>
<tr>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>j</td>
<td>j</td>
</tr>
<tr>
<td>w</td>
<td>w</td>
</tr>
<tr>
<td>ŋ</td>
<td>ŋ</td>
</tr>
<tr>
<td>ʒ</td>
<td>ʒ</td>
</tr>
<tr>
<td>h</td>
<td>h</td>
</tr>
<tr>
<td>ŋ</td>
<td>ŋ</td>
</tr>
<tr>
<td>r</td>
<td>r</td>
</tr>
</tbody>
</table>

Note. Permissible variations in pronunciation based on Tent (2000), Fox (2003), Tent and Mugler (2008), and Geraghty (pers. comm., Aug 28, 2014). *WI = word initial; WW = within word; WF = word final

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### Table 4

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Contrastive analysis of Fiji Hindi (FH), Standard Australian English (SAusE), and Fiji Hindi Fiji English (FHFE) including acceptable variants in Fiji Hindi Fiji English (FHFE)

<table>
<thead>
<tr>
<th>Phoneme inventory</th>
<th>Acceptable variants in FHFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FH</td>
<td>SAusE</td>
</tr>
<tr>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td>b</td>
<td>b</td>
</tr>
<tr>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>ŋ</td>
<td>ŋ</td>
</tr>
<tr>
<td>f</td>
<td>f</td>
</tr>
<tr>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>z</td>
<td>z</td>
</tr>
<tr>
<td>h</td>
<td>h</td>
</tr>
<tr>
<td>j</td>
<td>j</td>
</tr>
<tr>
<td>l</td>
<td>l</td>
</tr>
<tr>
<td>w</td>
<td>w</td>
</tr>
<tr>
<td>ŋ</td>
<td>ŋ</td>
</tr>
<tr>
<td>dʒ</td>
<td>dʒ</td>
</tr>
<tr>
<td>ʧ</td>
<td>ʧ</td>
</tr>
<tr>
<td>ʤ</td>
<td>ʤ</td>
</tr>
<tr>
<td>t̪</td>
<td>t̪</td>
</tr>
<tr>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>θ</td>
<td>θ</td>
</tr>
<tr>
<td>ð</td>
<td>ð</td>
</tr>
<tr>
<td>f</td>
<td>f</td>
</tr>
<tr>
<td>ʒ</td>
<td>ʒ</td>
</tr>
<tr>
<td>r̪</td>
<td>r̪</td>
</tr>
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<td>pʰ</td>
<td>bʰ</td>
</tr>
<tr>
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<td>dʰ</td>
<td>dʰ</td>
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<tr>
<td>gʰ</td>
<td>gʰ</td>
</tr>
<tr>
<td>kʰ</td>
<td>kʰ</td>
</tr>
<tr>
<td>r̪</td>
<td>r̪</td>
</tr>
</tbody>
</table>
Table 5

Vowels for Fijian Fiji English (FFE), Fiji Hindi Fiji English (FHFE), Standard Australian English (SAusE), New Zealand English (NZE), General British (GB), and General American English (GAE)

<table>
<thead>
<tr>
<th>Examples including Wells' KEY WORDS</th>
<th>Fijian Fiji English</th>
<th>Fiji Hindi Fiji English</th>
<th>Standard Australian English</th>
<th>New Zealand English</th>
<th>General British</th>
<th>General American English</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEECE, bear</td>
<td>i</td>
<td>i</td>
<td>i:</td>
<td>i:</td>
<td>i:</td>
<td>i:</td>
</tr>
<tr>
<td>KIT, bit</td>
<td>i ~ i</td>
<td>i</td>
<td>i</td>
<td>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>DRESS, bed</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>TRAP, bat, run</td>
<td>e</td>
<td>e</td>
<td>æ</td>
<td>e</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td>GOOSE, boot, soon</td>
<td>u</td>
<td>u or U:</td>
<td>U:</td>
<td>U:</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>FOOT, put, wood</td>
<td>o ~ u</td>
<td>u</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>LOT, not, wasp, bother</td>
<td>a ~ c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>THOUGHT, bought</td>
<td>a ~ e</td>
<td>e</td>
<td>o:</td>
<td>o:</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>NURSE, bird</td>
<td>e</td>
<td>e, e, æ, a, æ, or a</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td>STRUT, run, enough</td>
<td>a</td>
<td>a or æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td>START, father</td>
<td>a</td>
<td>a</td>
<td>æ:</td>
<td>æ:</td>
<td>æ:</td>
<td>æ:</td>
</tr>
<tr>
<td>COMMA, about</td>
<td>æ</td>
<td>a or æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td>letter</td>
<td>æ ~ a</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td>FACE, day, pain</td>
<td>e, e:, eɪ or eɪ</td>
<td>e:</td>
<td>æɪ</td>
<td>æɪ</td>
<td>æɪ</td>
<td>æɪ</td>
</tr>
<tr>
<td>Vowel Cluster</td>
<td>Vowel Targets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRICE, my, wise</strong></td>
<td>ai</td>
<td>e, e</td>
<td>æ</td>
<td>a</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td><strong>CHOICE, boy</strong></td>
<td>o, oː or oː</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td><strong>GOAT, no, tow</strong></td>
<td>o, oː or oː</td>
<td>o</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td><strong>MOUTH, cow</strong></td>
<td>ao or ao</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td><strong>NEAR</strong></td>
<td>i (closed syllables), ie (open syllables)</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td><strong>SQUARE, there</strong></td>
<td>e (closed syllables), ee (open syllables)</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
<tr>
<td><strong>CURE, tour</strong></td>
<td>u (closed syllables), uː (open syllables)</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
<td>æ</td>
</tr>
</tbody>
</table>

Figure 1. Comparison of Standard Fijian, Standard Australian English, and Fijian Fiji English consonant phonemic inventories. Adapted from Fox (2003), Tent (2000), Tent and Mugler (2008), and Geraghty (personal communication, 28 August 2014).
Figure 2. Comparison of Fiji Hindi, Standard Australian English, and Fiji Hindi Fiji English consonant phonemic inventories. Adapted from Kumar (2012) and Tent and Mugler (2008).
doi:10.1080/02699206.2016.1268208
Validation of the Intelligibility in Context Scale for School Students in Fiji

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Abstract
Fiji is a multilingual nation with few assessment tools addressing children’s communication. This paper describes the validation of the Intelligibility in Context Scale for Fiji English, Standard Fijian, and Fiji Hindi. Informants were caregivers of 65 typically-developing multilingual children (aged 5;3-10;5) attending a Fiji primary school. The students spoke an average of 2.9 languages (range=1-5). Their main language was Standard Fijian (41.5%), Fiji Hindi (23.1%), Fiji English (20.0%), or Fijian dialect (15.4%). An ICS mean score of 4.6 was obtained for main language (ICS-ML) and 4.4 for Fiji English (ICS-FE) indicating that students were usually to always intelligible. There were no significant differences between main language, number of languages spoken, gender, age, or socio-economic status. Both scales had good internal consistency but were not correlated with speech accuracy measures possibly due to ceiling effects. Further validation with younger children is recommended. The ICS may be a useful tool for Fiji with comparative results to other international studies.

Key words: Fiji, intelligibility, speech, assessment, Intelligibility in Context Scale
Introduction

When we choose to communicate with others we ideally want our message to be interpreted by the listener in the manner intended. However, numerous factors can lead to the breakdown of communication including: speaker characteristics (e.g. age, voice quality, accent, pragmatics, vocabulary), listener characteristics (e.g. familiarity with the speaker and/or accent, hearing acuity, age, prejudice), nature of the communication task (e.g. natural speech, reading aloud, single word versus sentence versus extended dialogue), and environmental context (e.g. background noise levels, face-to-face versus virtual) (Levis, 2005; Nelson, 2011). These factors influence how intelligible someone’s speech is to listeners.

Intelligibility, defined by Weismer (2009: 569) as ‘a relative measure of the degree to which a speaker’s speech signal is understood, the relativity depending at a minimum on the identities of the speaker and listener, what is spoken, and where it is spoken’, has been described with respect to monolingual (Miller, 2013) and multilingual (Munro & Derwing, 2015) populations. Miller (2013: 602) divides intelligibility into two constructs in monolingual contexts: (1) signal dependent intelligibility is defined as ‘the listener being able to retrieve the spoken message based solely on the sound signal’, and (2) signal independent intelligibility is defined as the listener’s ability to retrieve the message ‘based on not just the immediate acoustic signal but on cues and clues from any other verbal (e.g. syntax, semantics) or non-verbal sources (e.g. facial expression, gesture, broader contextual setting)’. Ideally any measure of monolingual intelligibility would seek to incorporate both types of intelligibility. In multilingual populations, Munro and Derwing (2015) argue that intelligibility is related to but independent of signal independent constructs and propose a framework for additional language (L2) speech assessment that considers intelligibility, comprehensibility (a subjective measure of how difficult to understand the listener finds a speaker’s speech commensurate with Miller’s signal dependent intelligibility), and accentedness (the difference between one speaker’s variety of a language and another’s) as complementary constructs required in the development of any speech assessment tool.

Intelligibility assessment should be a routine component of any speech-language pathology communication assessment for children or
One measure of intelligibility, from the field of speech-language pathology practice, is the Intelligibility in Context Scale (ICS, McLeod, Harrison & McCormack, 2012) developed to measure intelligibility in preschool children. The ICS is aligned with the International Classification of Functioning, Disability, and Health (ICF, World Health Organization, 2001). The ICS is applied to consider both production (speaker characteristics) and contextual (specifically listener familiarity with the speaker) factors in measurement of children’s speech intelligibility. In evaluating numerous measures of intelligibility, Miller (2013) suggests that the ICS is one tool that provides a measure of both signal dependent intelligibility (through perceptual ratings ranging from never to always intelligible) and signal independent intelligibility (by rating across seven conversational partners who have variable familiarity with the child). Thus, the ICS satisfies Miller’s requirements for evaluation of monolingual intelligibility. With regards to assessment of intelligibility with multilingual populations, Munro and Derwing (2015: 382) state that ‘intelligibility can only be reliably measured if the speaker’s intended utterance is known to the researcher and compared with the interpretation that the listener attributes to that same utterance’. However, speech-language pathologists (SLPs), especially when working with multilingual children, rarely can apply such a principle. However, the ICS, by virtue of the overlap between the Miller (2013) and Munro and Derwing (2015) definitions, appears to evaluate two areas of speech production important in multilingual speech (intelligibility and comprehensibility). Only accentedness is not considered. Given that intelligibility and comprehensibility are possible even when a speaker has a strong accent it is possible that use of the ICS as a measure of speech intelligibility in multilingual speakers may provide a simpler solution than the authors’ alternative suggestions for intelligibility measurement with multilingual populations (e.g. ‘word count, sentence verification, cloze and dictation, content summaries, and comprehension questions’) (Munro & Derwing, 2015: 382).

The ICS has been translated into over 60 languages and is freely available online (http://www.csu.edu.au/research/multilingual-speech/ics). Testing of the reliability and validity of the ICS predominantly has occurred
with preschool children, with monolingual speakers (e.g. Australian English - McLeod, Harrison & McCormack, 2012; Cantonese – Ng, To & McLeod, 2014; German – Neumann, Rietz, & Stenneken, 2016; Vietnamese - Pham, McLeod, & Harrison, 2016) and a growing number of multilingual populations (e.g. Australia, English + additional languages - McLeod, Crowe, & Shahaeian, 2015; Jamaica, Jamaican Creole+English - Washington, McDonald, McLeod, Crowe, & Devonish, 2016; New Zealand, English+Korean - Kim, Ballard, & McCann, 2016). Psychometric evaluation of the ICS in a number of these studies has revealed consistently good internal consistency, with Cronbach’s alpha scores above 0.80 (e.g. McLeod et al., 2015; Washington et al., 2016). Of interest to this study with multilingual children, the ICS total score does not appear to be influenced by the language spoken nor the number of languages spoken by a child (McLeod et al., 2015; Washington et al., 2016). In addition, internal consistency measures across languages, for the same participants, identified the ability to differentiate language use patterns across the conversational partners measured. For example, McLeod et al. (2015) found that caregiver ratings of their child’s intelligibility with teachers differed on English and main/home language scales; most likely due to teachers not speaking the child’s main language.

It is important to test the utility of the ICS across diverse types of multilingual communities. To date the ICS has been tested with multilingual speakers in predominantly English language environments (e.g. Kim et al., 2016; McLeod et al., 2015) or in contexts where two languages share equal status (e.g. Washington et al., 2016). Fiji is a multilingual nation where many languages are actively spoken in the home and community with somewhat equal status (e.g. Fijian, Fiji Hindi, Rotuman, Gujarati, Cantonese)(Hopf, McLeod, & McDonagh, 2016a). In addition, English is widely spoken as an additional language. Currently there are no permanent speech-language pathology services in Fiji and no locally developed tools for assessing children’s speech and language. McLeod and Verdon (2014) suggest that when SLPs are in a context where no validated tool is available for clinical use, they may choose to adapt a validated tool from another context. Given the successful adaptation internationally in monolingual and multilingual contexts, the ICS presents as a potential tool for assessing
Fijian children’s speech intelligibility. Consequently, the aim of this study is to validate the ICS with a group of Fijian school-aged children.

**Method**

The data reported in this paper are part of a larger study titled ‘Supporting Fiji children’s speech, language and literacy’.

**Participants**

Consent from The Fiji Islands Ministry of Education, Heritage and Arts (MoEHA) and community was obtained. At the researcher’s request for a multicultural and multilingual sample, two classrooms from an urban school were allocated by MoEHA representatives and included in the study: one in year 1 and one in year 4. Caregiver consent forms were distributed to all of the students in these classrooms (N=77). Seventy-five caregiver consent forms were returned (97.4% response rate). All 75 students recruited provided assent, however, using recommendations of McLeod et al. (2015), ten students were excluded from this study due to caregivers providing incomplete responses to one or more of the responses on the ICS. Consequently, we report the speech intelligibility and speech skills of 65 students.

**Students.**

Demographics of the student participants in each year are detailed in table 1. The 65 students were from year 1 (n=30) and year 4 (n=35) in an urban school in Fiji. There were 39 males and 26 females who ranged in age from 5;3 to 10;5. The year 4 group (M=9;7, SD=4;4) was significantly older than the year 1 group (M=5;11, SD=4;4) (U=0.00, Z=-6.92, p < 0.01); however, non-significant differences (p>0.05) were found between year 1 and year 4 groups across all other reported demographics (e.g. gender, total family income, main language spoken at home by the student, number of languages spoken by the student).

Caregivers reported that students spoke with at least rudimentary proficiency between one and five languages or dialects (year 1: M=2.7.
Caregivers reported the students’ main language (ML) as Standard Fijian (SF, year 1, n=15, 50.0%; year 4, n=12, 34.3%), Fiji Hindi (FH, year 1, n=5, 16.7%; year 4, n=10, 28.6%), Fiji English (FE, year 1, n=7, 23.3%; year 4, n=6, 17.1%), or a non-standard Fijian dialect (FD, year 1, n=3, 10.0%; year 4, n=7, 20.0%). FE was the most frequently spoken additional language for all students with a different main language (n=52). See Hopf et al. (2016a) for additional description of the students’ linguistic multi-competence.

Caregivers were asked about the proficiency of their student speaking the ML and FE. No students were judged by their caregiver to be less proficient than peers in their ML; however, eight students were identified as less proficient FE speakers than peers. In addition to caregiver report, pure tone audiometry (PTA) and oromusculature assessment (OMA) of the students was conducted prior to speech assessment to investigate whether any students had physical conditions that may impact on their speech development. PTA screening at 25dB for 1kHz, 2kHz and 4kHz revealed potential hearing loss in three year 1 and five year 4 students; however, background noise levels during testing often exceeded recommended levels and only one of these students had hearing concerns confirmed by their caregiver and teacher. OMA identified four year 1 students with poor dentition (e.g. severe decay), one year 4 student with post repaired bilateral cleft lip and palate with suspected submucosal cleft, and one year 4 student with ankyloglossia (tongue tie). All students were included in the study to provide a complete data set as per the recommendations of Peña, Spaulding, and Plante (2006: 252) who state that use of ‘a broad representative sample of children of all capabilities in a norm is likely to be appropriate...when the purpose is to determine the degree of difference from the mean of the general (rather than the normal) population’.

Caregivers.

The caregivers were female (n=47, 72.3%), male (n=16, 24.6%), or of unreported gender (n=2, 3.1%). The relationship of caregiver participants to the student was as mother (n=44, 67.7%), father (n=16, 24.6%), aunt/uncle (n=2, 3.1%), grandparent (n=2, 3.1%), or unreported (n=1, 1.5%). Most caregivers reported that they had completed high school (n=48, 73.9%). Others reported finishing primary school (n=1, 1.5%) or
undertaking at least some high school ($n=11$, 16.9%). Five caregivers (7.7%) did not report their schooling level.

**Instruments**

The Intelligibility in Context Scale (ICS, McLeod et al., 2012) and Diagnostic Evaluation of Articulation and Phonology (DEAP, Dodd, Hua, Crosbie, Holm, & Ozanne, 2002) were modified for the purposes of collecting information on the Fiji students’ speech intelligibility and speech production.

**Intelligibility in Context Scale (ICS).**

The Intelligibility in Context Scale (ICS, McLeod et al., 2012) asks caregivers to rate their child’s intelligibility on a five-point scale (always, usually, sometimes, rarely, never) across seven conversational partners (caregivers, immediate members of the family, extended members of the family, friends, acquaintances, teachers, strangers). The ICS was translated from the original English version into Standard Fijian (ICS-SF) and Fiji Hindi (ICS-FH) using back translation techniques as described in Brislin (1970). Two multilingual linguistics scholars from the University of the South Pacific undertook the translation: Dr Paul Geraghty for Standard Fijian and Salesh Kumar (MEd) for Fiji Hindi. The translated versions were then back translated by different native speakers and pilot tested with speakers of each language. Recommended changes to the original translations were discussed with the original translator and incorporated where required to improve comprehensibility. Final versions of the ICS-SF and ICS-FH are available online: http://www.csu.edu.au/research/multilingual-speech/ics.

**Diagnostic Evaluation of Articulation and Phonology (DEAP).**

Direct assessment of the students’ Fiji English speech was assessed using the Articulation and Phonology subtests from the DEAP (Dodd et al., 2002). Both subtests are single-word tasks that sample English consonants, vowels, and consonant clusters via presentation of a picture based stimulus. The Articulation subtest consists of 30 items whilst the Phonology subtest has 50 items. Scoring guidance for acceptable Fiji English productions for each word was provided by considering Hopf, McLeod and Geraghty (2016) with additional specific assistance from Dr Paul Geraghty. Consequently, a scoring protocol was established that offered guidance on
possible phonemic and phonetic changes to particular stimuli. For example, \textit{sheep} [ʃɪp], would be marked as correct if pronounced as \textit{sheep} [ʃɪp] or \textit{seep} [sɪp] which are acceptable Fiji English variants.

\textbf{Procedure}

The ICS (McLeod et al., 2012) and DEAP (Dodd et al., 2002) data were collected concurrently. The ICS was incorporated into a caregiver questionnaire that was distributed to, and returned by, all participating caregivers (\(n=65\)). Two versions of the ICS were included in the caregiver survey. The first version asked caregivers to respond to the items with regards to when the student spoke Fiji English (hereafter referred to as the ICS-FE scale), the second version asked caregivers to respond to the same items with regards to when the student spoke their main language if this was not English (hereafter referred to as the ICS-ML scale). Despite caregiver questionnaires being offered in Standard Fijian and Fiji Hindi translations, all participants chose to complete the ICS in English. Consequently the results reported hereafter refer only to the English translation.

The DEAP subtests (Dodd et al., 2002) were administered to the students during a face-to-face session in a room separate from the classroom but within the school grounds. Testing was video- and audio-recorded to allow for checking of transcription, and calculation of inter-judge reliability measures at a later time. The first author, an SLP, transcribed the students’ DEAP responses online by accessing the previously created scoring guidance for Fiji English. Review of transcription via the recordings took place concluding data collection. Consequently, three measures of speech production were calculated for each student from combined DEAP subtests using the acceptable production guidelines: percentage consonants correct (PCC), percentage vowels correct (PVC), and percentage phonemes correct (PPC).

\textbf{Reliability}

Inter-judge point-by-point reliability of transcription was calculated on a randomly selected eight (12\%) cases from the sample by a second SLP who listened to audio/video recordings of the DEAP assessment. Inter-judge phoneme agreement for broad phonetic transcription was based on 2,512 data points and achieved 87.7\%. Thus satisfying Shriberg and Lof (1991:
who state a reliability level reflects an ‘acceptable agreement’ of above 85%.

Data Analysis

Coding of the ICS (McLeod et al., 2012) and DEAP (Dodd et al., 2002) data, and subsequent non-parametric analysis was conducted using SPSS® Statistics Version 23.0 (IBM®, 2015). Ordinal data survey responses were converted to numbers (1=never, 2=rarely, 3=sometimes, 4=usually, 5=always). Ambiguous responses, for example on the ICS when two or more data points were indicated (e.g. between rarely [2] and sometimes [3]), were coded with the lowest value to reflect a potentially lower level of speech intelligibility. Non-parametric analysis of the data (e.g., Chi-square test for independence, Mann-Whitney U Test, Kruskal-Wallis Test, Friedman Test) was chosen due to the small sample size and frequent use of ordinal level data (Pallant, 2013). Initial descriptive statistics determined the frequency of responses for each item on each question of interest and mean scores (per item and total). Cronbach’s alpha coefficient was then calculated for both the ICS-FE and ICS-ML to determine the internal reliability of the scales. Spearman’s rho was used to explore the nonparametric correlation between test items within each scale.

Criterion validity, the degree to which two tools designed to measure similar abilities overlap (Pallant, 2013), was calculated by comparison of both signal-dependent and signal-independent measures. The use of PCC, PVC, and PPC scores as a measure of signal dependent intelligibility was consistent with previous ICS studies in other contexts (e.g., McLeod et al., 2015; McLeod et al., 2012; Neumann et al., 2016; Ng et al., 2014; Washington et al., 2016).

Results

Descriptive Statistics

Sixty-five caregivers completed the ICS-ML. Fifty-two of these caregivers also completed the ICS-FE for students who spoke FE as an additional language (ML: SF, n=27; FH, n=15; or a FD, n=10). The average mean scores for both the ICS-ML (M=4.6) and ICS-FE (M=4.4) were between usually (4) and always (5) for students in both year 1 (ICS-
ML: $M=4.6$, $SD=0.5$; ICS-FE: $M=4.4$, $SD=0.6$) and year 4 (ICS-ML: $M=4.5$, $SD=0.6$; ICS-FE: $M=4.5$, $SD=0.5$). These mean scores for students in year 1 and year 4 were not significantly different (ICS-ML: $U=484.5$, $Z=-0.56$, $p=0.57$; ICS-FE: $U=299.0$, $Z=-0.65$, $p=0.52$) and thus the subsequent analyses report the combined findings for both groups.

Caregivers' ratings of the students’ intelligibility with each of the seven communication partners for each language are presented in table 2 (ICS-ML) and table 3 (ICS-FE). There was a difference in the order in which communication partners found children’s speech most to least intelligible across the scales. The ICS-ML ($n=65$) showed caregivers ($M=4.9$), immediate family members ($M=4.8$), friends ($M=4.6$), and extended family members ($M=4.6$), more likely to be reported to understand the student than acquaintances ($M=4.4$), teachers ($M=4.4$), and strangers ($M=4.3$). Inspection of the mean values for the ICS-FE ($n=52$) showed a different pattern with caregivers ($M=4.9$), immediate family members ($M=4.6$), friends ($M=4.6$), and teachers ($M=4.5$) more likely to be reported to understand the student than extended family members ($M=4.3$), acquaintances ($M=4.1$), and strangers ($M=4.0$). Results of a Friedman Test indicated that there was a statistically significant difference between caregivers' ratings of intelligibility for different conversational partners on the ICS-ML ($\chi^2(6, n=65)=53.3$, $p<0.001$) and ICS-FE ($\chi^2(6, n=52)=69.5$, $p<0.001$). Post hoc pairwise comparison via Wilcoxon Signed Ranks test revealed a consistent pattern for caregivers. On both scales caregivers were more likely to be reported to understand the student than extended family ($z=-3.08$, $p<.008$, $r=.27$), child's friends ($z=-2.77$, $p<.008$, $r=.24$), acquaintances ($z=-4.09$, $p<.008$, $r=.36$), teachers ($z=-4.00$, $p<.008$, $r=.35$), and strangers ($z=-4.07$, $p<.008$, $r=.36$). There was also a statistically significant difference on the ICS-FE between caregivers and immediate family reported ability to understand the student when speaking English ($z=-3.58$, $p<.008$, $r=.31$). All other differences between conversational partners for both scales was variable (see tables 4 and 5).

*Insert tables 2-5 about here*
Robustness of ICS-FE and ICS-ML

Impact of demographic variables on ICS average mean scores.
ICS-ML and ICS-FE average mean scores were not influenced by students’ gender (ICS-ML, \(U=440.0, p=0.34\); ICS-FE, \(U=291.5, p=0.59\)) or school year (ICS-ML, \(U=484.5, p=0.57\); ICS-FE, \(U=299.0, p=0.52\)) or correlated with age (ICS-ML, \(r=0.01, p=0.92\); ICS-FE, \(r=0.17, p=0.24\)). Similarly socio-economic indicators, including educational level of fathers (ICS-ML, \(r=0.07, p=0.60\); ICS-FE, \(r=-0.03, p=0.87\)), mothers (ICS-ML, \(r=0.05, p=0.75\); ICS-FE, \(r=0.14, p=0.35\)), and carers (ICS-ML, \(r=0.12, p=0.74\); ICS-FE, \(r=0.08, p=0.83\)), and total home income (ICS-ML, \(r=-0.00, p=0.99\); ICS-FE, \(r=0.01, p=0.97\)) were not associated with either ICS-FE or ICS-ML average mean scores.

Impact of speech and language variables on ICS average mean scores.
A number of speech and language variables considered to potentially influence the students’ average mean score on both the ICS-FE and ICS-ML were reviewed as follows:

Students’ main language.
Figure 1a displays the variation in ICS-ML results for main language speakers of Standard Fijian (\(n=27, M=4.6, SD=0.6, \text{range: 3.0-5.0}\)), Fijian dialect (\(n=10, M=4.3, SD=0.6, \text{range: 3.3-5.0}\)), Fiji Hindi (\(n=15, M=4.7, SD=0.5, \text{range: 3.6-5.0}\)), and Fiji English (\(n=13, M=4.7, SD=0.5, \text{range: 3.3-5.0}\)). Subsequent Kruskal-Wallis Test did not reveal any significant difference on ICS-ML mean average score among the main languages spoken (\(\chi^2(3, n=65)=3.9, p=0.28\)). Figure 1b displays the variation in ICS-FE results for main language speakers of Standard Fijian (\(n=27, M=4.3, SD=0.6, \text{range: 3.0-5.0}\)), Fijian dialect (\(n=10, M=4.4, SD=0.4, \text{range: 3.9-5.0}\)), and Fiji Hindi (\(n=15, M=4.6, SD=0.5, \text{range: 3.7-5.0}\)). Kruskal-Wallis Tests revealed no significant difference among the main languages spoken (\(\chi^2(2, n=52)=3.0, p=0.22\)).

Number of additional languages spoken by the students.
Figures 1c and 1d illustrate the distributions of ICS scores for students who spoke one (ICS-ML, \(M=4.8\)), two (ICS-ML, \(M=4.7\); ICS-FE, \(M=4.3\)), three (ICS-ML, \(M=4.5\); ICS-FE, \(M=4.4\)), four (ICS-ML, \(M=4.3\); ICS-FE, \(M=4.6\)), or five (ICS-ML, \(M=4.7\); ICS-FE, \(M=4.8\)) languages.
Kruskal-Wallis tests were not significant for average mean scores on the ICS-ML ($\chi^2 (4, n=65)=1.7, p=0.79$) or the ICS-FE ($\chi^2 (3, n=52)=5.3, p=0.15$) across students who speak different number of languages.

*Insert figure 1 about here*

**Caregiver concern.**

For both the ICS-ML and ICS-FE there were no significant differences between mean scores for caregivers who had concerns about their students’ ability to speak English compared to peers (ICS-ML: $M=4.4$; ICS-FE: $M=4.4$) and those that did not have concerns (ICS-ML: $M=4.6$; ICS-FE: $M=4.4$) ($\text{ICS-ML: } U=176.50, p=0.38; \text{ICS-FE: } U=154.5, p=0.65$).

*Insert table 6 about here*

**Correlations Between the ICS-Fiji English and ICS-Main Language Scales**

Chi-square test for independence of ICS-ML and ICS-FE average mean scores revealed a large positive correlation ($r=0.56, p<0.001$). Correlations between the seven items and average mean scores for each scale are illustrated in table 6. There were moderate to high and significant correlations between five of the seven individual items and the ICS-ML average mean score (*extended family, friends, acquaintances, teachers, strangers*) and four of the seven individual items on the ICS-FE (*extended family, friends, teachers, and strangers*) average mean score (all $ps<0.5$). In addition the following correlations between corresponding individual items on the ICS-ML and ICS-FE scales were observed: *immediate family* ($r=.34$), *extended family* ($r=.34$), *child’s friends* ($r=.58$), *acquaintances* ($r=.66$), *teachers* ($r=.32$), and *strangers* ($r=.54$). The correlation of ICS-ML and ICS-FE average mean scores on the item related to caregivers’ was the only item that was not significant ($r=.19, p=0.18$).

**Psychometric Properties of the ICS-FE and ICS-ML**

**Internal consistency and correlations between items.**

Internal consistency for each scale was measured using Cronbach’s alpha. Both the ICS-ML ($\alpha=0.83$) and ICS-FE ($\alpha=0.79$) had good internal
consistency. Spearman’s rho correlational analysis was also conducted to
determine the relationship between individual items on each scale (see
tables 7 and 8). For the ICS-ML ($n=65$), caregiver ratings were correlated
with immediate family ($r=0.60, p<0.01$), extended family ($r=0.38, p<0.01$),
and teachers ($r=0.27, p<0.05$), with no significant correlation with all other
communication partners (friends, acquaintances, and strangers).
Correlations on the ICS-ML between all other communication partners
showed medium to large effect (ranging from $r=0.31$ to 0.78, all $p<0.05$).
For the ICS-FE ($n=52$), caregiver ratings of whether they understand their
child were only correlated with immediate family ($r=0.35, p < 0.05$).
Correlation of caregivers with all other communication partners (extended
family, friends, acquaintances, teachers, and strangers) was non-significant
(all $p>0.05$). Correlations between all other communication partners
indicated a small to large effect (ranging from $r=0.29$ to 0.68, all $p<0.05$).

Criterion validity.

Criterion validity was conducted by comparison of the ICS-FE and
DEAP (Dodd et al., 2002) outcomes: PCC, PVC, and PPC. Three Fiji
English main language participant ICS scores fell outside of the expected
minimum and maximum range for speakers. Consequently, these outliers
were removed before further calculation and criterion validity is thus only
calculated on 62 cases ($M=4.5, SD=0.5$). Table 9 provides a summary of the
revised ICS-FE statistics for each language group and correlations between
the ICS-FE and DEAP PCC, PVC, and PPC variables. Spearman's Rank
Order Correlation between all speakers ICS-FE score and PVC revealed a
small positive effect ($r=0.26, n=62, p=0.04$). Further analysis of each
language group revealed a medium, positive correlation between Standard
Fijian speakers ICS-FE score and PVC ($r=0.4, n=27, p=0.02$) with higher
levels of ICS-FE occurring with higher PVC scores; however there were no
significant correlations for other language groups (Fijian dialect, Fiji Hindi,
and English: all $p>0.05$) suggesting that this was a language specific
phenomenon.
Discussion

There are few validated instruments for SLPs assessing the intelligibility of multilingual children. This is partly due to complexity of undertaking comprehensive assessment of intelligibility in this population (Miller, 2013). In the case of Fiji, where speech-language pathology is not an established profession, it is also an issue of service availability. SLPs visiting Fiji, who are not culturally or linguistically matched to their clients, need to have a simple valid tool to describe Fijian children’s speech across the many languages spoken. Consequently, this study sought to validate the use of the ICS (McLeod et al., 2012) with multilingual Fijian students.

The Fijian students were rated by caregivers, mostly to always intelligible when speaking with different conversational partners. The average mean score for the students' main language in this study (M=4.6) is consistent with other international studies of typically developing children that have reported average mean scores between 4.19 and 4.69 (McLeod, 2016). Also consistent with other studies is the caregivers’ rating of himself or herself as the most able person to understand the student on both main language and English as an additional language scales (McLeod, 2016). In this study, ordering of the ability of other conversational partners to understand the student was consistent across scales with one exception: teachers were rated higher on the ICS-FE scale. This suggests that caregivers believe that teachers are better able to understand the student when the student is speaking English than when the student is speaking the student’s main language. This is not surprising given that English is the dominant language of the Fiji school environment (Hopf, McLeod, & McDonagh, 2016b). McLeod et al. (2015) also reported a similar finding for multilingual children's intelligibility with their English-speaking teachers in Australia.

To investigate the validity of the ICS bivariate correlations were undertaken. Comparison of ICS average mean scores and variables measuring demographic (e.g. students' age, gender, and year level), social (e.g. caregiver educational level, total household income), and language (e.g. main language spoken, number of languages spoken) constructs did not reveal any significant correlations. This finding suggests that the ICS is a robust measure across the diverse languages studied. However, bivariate
correlations for caregiver concern about speech production and speech accuracy (PCC, PVC, and PPC) were not correlated with the ICS scores. Miller (2013) argues that the articulatory precision measures, such as the DEAP, only partially explore intelligibility as they decontextualise the speech signal. Thus, it is possible that correlating the DEAP PCC, PVC, and PPC values with the ICS-FE measures may not be an appropriate measure of sensitivity for the ICS with school-aged children in Fiji. Additional considerations are listed below.

Factors Influencing the ICS Scores of Students in Fiji

Three factors may have influenced the ICS scores of students in Fiji: (1) older age of the students in our study compared to other ICS studies, (2) only assessing speech accuracy in the additional language, and (3) issues of terminology.

Age of the student.

The ICS is designed as a screening measure to identify preschool children at risk of speech sound disorders (McLeod et al., 2012). Results of this Fiji study of the application of the ICS with caregivers of typically developing school-aged children (5;3-10;11) revealed a similar, albeit slightly higher, mean average score on the ICS compared with other studies internationally. However, most of the students in this Fiji study were older than the preschool-age for which the ICS was originally designed, and outside the age at which most speech sound errors occur. Speech accuracy measures in this study revealed high PCC, PVC, and PPC results that are consistent with the older age of the Fijian students. The high ICS average mean score and high DEAP speech accuracy scores, all with relatively small standard deviations, suggest that the age of the students may have resulted in a ceiling effect influencing all results.

Need to assess speech accuracy in main language.

Assessing the student in their main language may have provided a better measure of speech accuracy than only assessing in Fiji English. Other studies exploring the application of the ICS in multilingual populations have assessed speech accuracy in both English and the participants’ main/additional language (Kim et al., 2016; Ng et al., 2014; Washington et al., 2016). In this study we were unable to directly assess the student’s speech skills in their main language, as there were no available assessments.
or assessors. Instead this study relied on an indirect measure of caregiver concern about how the student speaks their ML. However, no student was identified by caregivers as having difficulty with speaking their main language compared with peers. Consequently we could not undertake any statistical analysis comparing ICS-ML results with a measure of main language speech accuracy except for those students who spoke English as a main language. In that case, ICS-FE results were not correlated with English main language speakers PCC, PVC or PPC scores. Once again, high values across ICS-FE and DEAP variables suggest these typically developing students are demonstrating a ceiling effect. Expansion of the study to a larger population, with younger participants are needed to provide measures of sensitivity and specificity of the ICS in Fiji.

**Interpretation of intelligibility.**

The word *understand* is used in the ICS questions to equate with ‘find intelligible’ (e.g. Do you understand your child/find your child intelligible?); however, the ambiguity of the term 'understand' may be considered a potential threat to the validity of the ICS. Munro and Derwing (2013) indicate, the word *understand* can be used synonymously with intelligibility or as a separate concept. For example, Smith and Nelson (1985, cited in Munro & Derwing, 2015: 378) considered understanding to involve (1) intelligibility (word recognition), (2) comprehensibility (word meaning), and (3) interpretability (meaning behind word). Given ambiguity about what constitutes understanding/intelligibility, it is possible that the caregivers in this group interpreted the word understand with some variability. Some caregivers may have focused more on interpretability than intelligibility or comprehensibility (cf. Smith & Nelson, 1985). Or, if we apply Munro and Derwing (2015), then intelligibility, comprehensibility and accentedness may all have influenced caregivers’ ICS ratings with different effect. Certainly, the difference in order of the scores for different conversational partners across the ICS-ML and ICS-FE (teachers were rated higher on the ICS-FE), and the caregivers’ rating of themselves as significantly better at understanding the student than any other conversational partner, suggests that caregivers considered additional ‘nonlinguistic factors, such as degree of shared knowledge and social
context’ (Munro & Derwing, 2015: 379) of conversational partners when making the ICS judgements.

Moderate to high correlation between average mean scores across the ICS-ML and ICS-FE scales for most conversational partners, expect caregivers, suggests that caregiver ratings were not related to the language described. The lack of correlation between caregivers’ rating of the students’ intelligibility when speaking in different languages to the caregiver is difficult to explain. All but one caregiver reported proficiency in both the main language and English, thus a lack of knowledge of the students’ languages cannot be attributed as cause for a lack of correlation in this context. Therefore, caregivers may consider themselves as having a unique relationship with the student. Given that the ICS-FE measures intelligibility in English as an additional language, whereas the ICS-ML measures intelligibility of a main language, it is possible that aspects of accentedness influenced caregivers’ scores on this item. When using the ICS with a monolingual population it is possible that raters focus less on aspects of accent difference and more on comprehensibility and intelligibility. In a multilingual population, issues of accent potentially become more salient. Once again, caregivers’ ‘degree of shared knowledge and social context’ (Munro & Derwing, 2015: 379) may have influenced the results.

Conclusions

The ICS mean score of 4.6 for main language (ICS-ML) and 4.4 for Fiji English (ICS-FE) was comparable with other studies of the ICS with typically developing children indicating that students were usually to always intelligible. The scale was robust, since there were no significant differences between main language, number of languages spoken, gender, age, or socio-economic status. Both scales had good internal consistency but were not correlated with speech accuracy measures possibly due to ceiling effects. It is evident that further assessment of validity of the ICS with a younger population is required. The simplicity of administration of the ICS shows promise in terms of its clinical applicability in this Pacific nation that has limited access to services for people with communication disability.
Acknowledgements

We wish to thank the Fijian community, particularly Mrs Sala Sauqaqa, the Fiji Ministry of Education Heritage and Arts, and ICS translators Dr Paul Geraghty and Mr Salesh Kumar of The University of the South Pacific. Ms Nicole Limbrick for assistance with reliability. Our thanks also to Dr Cen Wang, of Charles Sturt University, for her helpful comments on a late draft of the manuscript.

Declaration of Interest

The authors report no declarations of interest.

Funding

This research was supported in part by an Australian government Endeavour Post-graduate Research Scholarship and an Australian Linguistic Society Gerhardt Laves scholarship.

References


Table 1.

*Student Demographics by Year.*

<table>
<thead>
<tr>
<th></th>
<th><strong>Year 1</strong></th>
<th><strong>Year 4</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>n (%)</em></td>
<td><em>n (%)</em></td>
</tr>
<tr>
<td><strong>Number of participants</strong></td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>10 (33.3)</td>
<td>16 (45.7)</td>
</tr>
<tr>
<td>Male</td>
<td>20 (66.7)</td>
<td>19 (54.3)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (months)</td>
<td>6;0</td>
<td>9;7</td>
</tr>
<tr>
<td>Range (months)</td>
<td>5;3 - 7;3</td>
<td>9;0 - 10;5</td>
</tr>
<tr>
<td><strong>Total family income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;FJD10,000</td>
<td>12 (40.0)</td>
<td>9 (25.7)</td>
</tr>
<tr>
<td>FJD10,000 - FJD19,999</td>
<td>7 (23.3)</td>
<td>15 (42.9)</td>
</tr>
<tr>
<td>&gt;FJD20,000</td>
<td>2 (6.7)</td>
<td>2 (5.7)</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>9 (30.0)</td>
<td>9 (25.7)</td>
</tr>
<tr>
<td><strong>Main language spoken at home</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Fijian</td>
<td>15 (50.0)</td>
<td>12 (34.3)</td>
</tr>
<tr>
<td>Fiji dialect</td>
<td>3 (10.0)</td>
<td>7 (20.0)</td>
</tr>
<tr>
<td>Fiji Hindi</td>
<td>5 (16.7)</td>
<td>10 (28.6)</td>
</tr>
<tr>
<td>English</td>
<td>7 (23.3)</td>
<td>6 (17.1)</td>
</tr>
<tr>
<td><strong>Number of languages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2 (6.7)</td>
<td>1 (2.9)</td>
</tr>
<tr>
<td>2</td>
<td>11 (36.7)</td>
<td>5 (14.3)</td>
</tr>
<tr>
<td>3</td>
<td>13 (43.3)</td>
<td>22 (62.9)</td>
</tr>
<tr>
<td>4 or more</td>
<td>4 (13.4)</td>
<td>7 (20.0)</td>
</tr>
</tbody>
</table>

*Note.* FJD, Fiji dollar. 1 FJD=approximately 0.48 USD (Sept 2016).
Table 2.

*Caregiver Ratings for the 7-item Intelligibility in Context Scale: Main Language (ICS-ML; n=65).*

<table>
<thead>
<tr>
<th>Question</th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1. Do <strong>you</strong> understand your child?</td>
<td>4.9</td>
<td>0.3</td>
<td>3-5</td>
<td>60</td>
<td>92.3</td>
<td>4</td>
<td>6.2</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>2. Do <strong>immediate members of your family</strong> understand your child?</td>
<td>4.8</td>
<td>0.5</td>
<td>3-5</td>
<td>53</td>
<td>81.5</td>
<td>9</td>
<td>13.8</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>3. Do <strong>extended members of your family</strong> understand your child?</td>
<td>4.6</td>
<td>0.8</td>
<td>1-5</td>
<td>49</td>
<td>75.4</td>
<td>9</td>
<td>13.8</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>4. Do your <strong>child's friends</strong> understand your child?</td>
<td>4.6</td>
<td>0.7</td>
<td>2-5</td>
<td>48</td>
<td>73.8</td>
<td>10</td>
<td>15.4</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>5. Do <strong>other acquaintances</strong> understand your child?</td>
<td>4.4</td>
<td>1.0</td>
<td>1-5</td>
<td>40</td>
<td>61.5</td>
<td>13</td>
<td>20.0</td>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td>6. Do your <strong>child's teachers</strong> understand your child?</td>
<td>4.4</td>
<td>0.8</td>
<td>2-5</td>
<td>41</td>
<td>63.1</td>
<td>15</td>
<td>23.1</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>7. Do <strong>strangers</strong> understand your child?</td>
<td>4.3</td>
<td>1.1</td>
<td>1-5</td>
<td>40</td>
<td>61.5</td>
<td>12</td>
<td>18.5</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>Average total score (maximum=35)</td>
<td>32.0</td>
<td>4.0</td>
<td>21-35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average total score (maximum=5)</td>
<td>4.6</td>
<td>0.6</td>
<td>3-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3.

*Caregiver Ratings for the 7-item Intelligibility in Context Scale: Fiji English (ICS-FE; n=65).*

<table>
<thead>
<tr>
<th>Question</th>
<th>Total</th>
<th>Always (5)</th>
<th>Usually (4)</th>
<th>Sometimes (3)</th>
<th>Rarely (2)</th>
<th>Never (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>1. Do you understand your child?</td>
<td>4.9</td>
<td>0.3</td>
<td>4-5</td>
<td>60</td>
<td>92.3</td>
<td>4</td>
</tr>
<tr>
<td>2. Do immediate members of your family understand your child?</td>
<td>4.6</td>
<td>0.6</td>
<td>3-5</td>
<td>45</td>
<td>69.2</td>
<td>15</td>
</tr>
<tr>
<td>3. Do extended members of your family understand your child?</td>
<td>4.3</td>
<td>0.9</td>
<td>1-5</td>
<td>37</td>
<td>56.9</td>
<td>15</td>
</tr>
<tr>
<td>4. Do your child’s friends understand your child?</td>
<td>4.6</td>
<td>0.7</td>
<td>3-5</td>
<td>47</td>
<td>72.3</td>
<td>13</td>
</tr>
<tr>
<td>5. Do other acquaintances understand your child?</td>
<td>4.1</td>
<td>1.1</td>
<td>1-5</td>
<td>32</td>
<td>49.2</td>
<td>18</td>
</tr>
<tr>
<td>6. Do your child’s teachers understand your child?</td>
<td>4.5</td>
<td>0.7</td>
<td>3-5</td>
<td>42</td>
<td>64.6</td>
<td>17</td>
</tr>
<tr>
<td>7. Do strangers understand your child?</td>
<td>4.0</td>
<td>1.1</td>
<td>1-5</td>
<td>32</td>
<td>49.2</td>
<td>12</td>
</tr>
<tr>
<td>Average total score (maximum=35)</td>
<td>30.9</td>
<td>3.8</td>
<td>21-35</td>
<td>32</td>
<td>49.2</td>
<td>12</td>
</tr>
<tr>
<td>Average total score (maximum=5)</td>
<td>4.4</td>
<td>0.5</td>
<td>3-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.

*Differences Between Individual Items on the ICS-Main Language (ICS-ML)*

*using Wilcoxon Signed Ranks Tests (n=65).*

<table>
<thead>
<tr>
<th>ICS-Main language</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caregiver</td>
<td>-2.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Immediate family</td>
<td>-3.08*</td>
<td>-2.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Extended family</td>
<td>-2.77*</td>
<td>-1.63</td>
<td>-0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acquaintances</td>
<td>-4.00*</td>
<td>-2.71*</td>
<td>-1.59</td>
<td>-1.49</td>
<td>-0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Teachers</td>
<td>-4.07*</td>
<td>-3.71*</td>
<td>-2.88*</td>
<td>-2.98*</td>
<td>-1.08</td>
<td>-1.61</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *Correlations are significant at a Bonferroni adjusted p value of < 0.008 (two-tailed).*
<table>
<thead>
<tr>
<th>ICS-Fiji English</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caregivers</td>
<td>-3.58*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Immediate family</td>
<td>-4.41*</td>
<td>-3.23*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Extended family</td>
<td>-2.66*</td>
<td>-0.38</td>
<td>-2.74*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Child’s friends</td>
<td>-4.70*</td>
<td>-3.55*</td>
<td>-1.81</td>
<td>-4.22*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acquaintances</td>
<td>-3.73*</td>
<td>-0.66</td>
<td>-1.87</td>
<td>-0.91</td>
<td>-2.97*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Teachers</td>
<td>-4.81*</td>
<td>-3.96*</td>
<td>-2.56</td>
<td>-3.92*</td>
<td>-1.40</td>
<td>-3.83*</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Correlations are significant at a Bonferroni adjusted p value of < 0.008 (two-tailed).
Table 6.

Spearman's Rank Order Correlations Between the Seven-items on ICS-Fiji English (ICS-FE) and ICS-Main Language (ICS-ML) (n=52).

<table>
<thead>
<tr>
<th>ICS-Main language</th>
<th>ICS-Fiji English</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Average mean score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caregiver</td>
<td></td>
<td>.19</td>
<td>.04</td>
<td>-.02</td>
<td>-.17</td>
<td>-.11</td>
<td>.01</td>
<td>-.02</td>
<td>-.07</td>
</tr>
<tr>
<td>2. Immediate family</td>
<td></td>
<td>-.07</td>
<td>.34*</td>
<td>.27</td>
<td>.24</td>
<td>.22</td>
<td>.14</td>
<td>.22</td>
<td>.23</td>
</tr>
<tr>
<td>3. Extended family</td>
<td></td>
<td>-.16</td>
<td>.17</td>
<td>.34*</td>
<td>.22</td>
<td>.43**</td>
<td>.21</td>
<td>.29*</td>
<td>.38**</td>
</tr>
<tr>
<td>4. Child's friends</td>
<td></td>
<td>-.18</td>
<td>.29*</td>
<td>.45**</td>
<td>.58**</td>
<td>.49**</td>
<td>.13</td>
<td>.36**</td>
<td>.41**</td>
</tr>
<tr>
<td>5. Acquaintances</td>
<td></td>
<td>-.19</td>
<td>.17</td>
<td>.47**</td>
<td>.42**</td>
<td>.66**</td>
<td>.34*</td>
<td>.53**</td>
<td>.61**</td>
</tr>
<tr>
<td>6. Teachers</td>
<td></td>
<td>.04</td>
<td>.05</td>
<td>-.02</td>
<td>.06</td>
<td>.21</td>
<td>.32*</td>
<td>.33*</td>
<td>.25</td>
</tr>
<tr>
<td>7. Strangers</td>
<td></td>
<td>-.22</td>
<td>.18</td>
<td>.16</td>
<td>.21</td>
<td>.41**</td>
<td>.32*</td>
<td>.54**</td>
<td>.44**</td>
</tr>
<tr>
<td>8. Average mean score</td>
<td></td>
<td>-.18</td>
<td>.22</td>
<td>.40**</td>
<td>.35*</td>
<td>.60**</td>
<td>.34*</td>
<td>.53**</td>
<td>.56**</td>
</tr>
</tbody>
</table>

*Note: *Correlations are significant at $p < 0.05$ (two-tailed). **Correlations are significant at $p < 0.01$ (two-tailed).
Table 7.

**Spearman’s Rank Order Correlations Between the Seven-items and Average Mean Score on ICS-Main Language (n=65).**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caregiver</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Immediate family</td>
<td>.60**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Extended family</td>
<td>.38**</td>
<td>.66**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Child’s friends</td>
<td>.09</td>
<td>.37**</td>
<td>.58**</td>
<td>.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acquaintances</td>
<td>.24</td>
<td>.47**</td>
<td>.67**</td>
<td>.63**</td>
<td>.60**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Teachers</td>
<td>.27*</td>
<td>.32*</td>
<td>.36**</td>
<td>.31*</td>
<td>.60**</td>
<td>.60**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Strangers</td>
<td>.21</td>
<td>.42**</td>
<td>.54**</td>
<td>.57**</td>
<td>.78**</td>
<td>.72**</td>
<td>.76**</td>
<td>.86**</td>
</tr>
<tr>
<td>8. Average mean score</td>
<td>.34*</td>
<td>.57**</td>
<td>.72**</td>
<td>.66**</td>
<td>.89**</td>
<td>.76**</td>
<td>.86**</td>
<td></td>
</tr>
</tbody>
</table>

*Note. *Correlations are significant at \( p < 0.05 \) (two-tailed). **Correlations are significant at \( p < 0.01 \) (two-tailed).
Table 8.

*Spearman's Rank Order Correlations Between the Seven-items and Average Mean Score on ICS-Fiji English (n=52).*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caregiver</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Immediate family</td>
<td>.35*</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Extended family</td>
<td>.22</td>
<td>.68**</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Child's friends</td>
<td>-.04</td>
<td>.46**</td>
<td>.47**</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acquaintances</td>
<td>-.09</td>
<td>.33**</td>
<td>.62**</td>
<td>.67**</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Teachers</td>
<td>.04</td>
<td>.29*</td>
<td>.37**</td>
<td>.30*</td>
<td>.41**</td>
<td>----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Strangers</td>
<td>.01</td>
<td>.35*</td>
<td>.58**</td>
<td>.42**</td>
<td>.57**</td>
<td>.48**</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>8. Average mean score</td>
<td>.14</td>
<td>.62**</td>
<td>.85**</td>
<td>.66**</td>
<td>.85**</td>
<td>.58**</td>
<td>.78**</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *Correlations are significant at p < 0.05 (two-tailed). **Correlations are significant at p < 0.01 (two-tailed).
Table 9.

Spearman’s Rank Order Correlation Coefficients between ICS-FE and DEAP Speech Accuracy Measures (PCC, PVC, and PPC) for Speakers of English as an Additional Language (n=52) or Main Language (n=10).

<table>
<thead>
<tr>
<th>Main language</th>
<th>N</th>
<th>ICS-FE</th>
<th>PCC</th>
<th>PVC</th>
<th>PPC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min</td>
<td>Max</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Standard Fijian</td>
<td>27</td>
<td>3.0</td>
<td>5.0</td>
<td>4.3 (0.6)</td>
<td>97.0 (4.2)</td>
</tr>
<tr>
<td>Fijian dialect</td>
<td>10</td>
<td>3.9</td>
<td>5.0</td>
<td>4.4 (0.4)</td>
<td>98.7 (2.5)</td>
</tr>
<tr>
<td>Fiji Hindi</td>
<td>15</td>
<td>3.7</td>
<td>5.0</td>
<td>4.6 (0.5)</td>
<td>98.4 (1.7)</td>
</tr>
<tr>
<td>Fiji English</td>
<td>10</td>
<td>4.7</td>
<td>5.0</td>
<td>4.9 (0.1)</td>
<td>97.0 (3.8)</td>
</tr>
<tr>
<td>ALL</td>
<td>62</td>
<td>3.0</td>
<td>5.0</td>
<td>4.5 (0.5)</td>
<td>97.6 (3.5)</td>
</tr>
</tbody>
</table>

Note. *Correlations are significant at p < 0.05 (two-tailed). **Correlations are significant at p < 0.01 (two-tailed).
(a) ICS-ML mean scores \((n=65)\)

(b) ICS-FE mean scores for students who speak Fiji English as an additional language \((n=52)\)
Figure 1. Box plots displaying distribution of ICS average mean scores for student's main language (a, b) and number of languages spoken (c, d).

(c) ICS-ML mean scores for students who speak 1 to 5 languages
(n=65)

(d) ICS-FE mean scores for students who speak 2 to 5 languages
(n=52)
Conclusion to Part Three

The studies in Part Three aimed to present a rich picture of Fijian children’s speech, language, and literacy use and proficiency in different communicative contexts. Child factors (e.g., age, gender, school year, ethnicity, main language, number of languages spoken) and contextual factors (e.g., household income, caregivers’ level of education, caregivers’ main language) were considered so that the author could begin to develop resources and approaches for visiting SLPs, and other communication specialists, that are culturally and linguistically appropriate for the Fijian context.

Papers 5, 6, and 7 took a community focus, exploring the language use and proficiency of the students, their mothers, fathers, child-minders, and teachers. Results presented in Paper 5 revealed that these Fijian students live in rich multilingual environments. Consequently, the majority of students, even those in Year 1, could speak an average of three languages. The adults within the students’ homes and schools had similar linguistic profiles. Uniquely, Paper 5 applied the linguistic multi-competence paradigm (Cook, 2016) and indicated that use and proficiency patterns in this community were highly variable so traditional descriptors of linguistic diversity (e.g., simultaneous or sequential bilingualism) may not capture the complex relationship between language use and proficiency. All participants used their languages with flexibility and creativity, code-switching with conversational partners presumed to have a different main language, and code-mixing with speakers with similar linguistic profiles.

Paper 6 considered more closely how Fijian languages are used in the school environment. The dominance of English in verbal and written classroom communication was evident; however, there was acceptance of all other community languages in and outside of the classroom. It is important to acknowledge that these students and their communication partners display linguistic multi-competence, and that different environments call for different expressions of this competence. To do so, effectively emphasizes the importance of considering the individuals’ and community’s total linguistic repertoire and competence when designing services to meet their communication needs.

Paper 7 provided results of the first study to directly assess Fijian students’ English language skills. The Year 4 students had significantly higher English proficiency than the Year 1 students. Students with English as their main language in Year 1 had higher English language proficiency compared to students with other main
languages but no difference was noted with literacy proficiency. In contrast, Year 4 students who spoke English as their main language had similar language and literacy proficiency to students who spoke Standard Fijian and other Fijian dialects as their main language and English as a second language. Year 4 students with Fiji Hindi as their main language performed better on most language tasks than other Year 4 students with English as an additional language or English main language speakers. No main language differences were noted on literacy assessment tasks. In addition to main language differences on language assessment tasks, there was evidence that some demographic variables (e.g., fathers’ education level, total household occupants) may influence English language and literacy proficiency. These findings require further investigation with a larger population sample.

In Papers 8 and 9 the attention turned to speech production and intelligibility skills. Paper 8 collated literature on adults’ English language phonology for Standard Fijian and Fiji Hindi speakers of English. This literature was then contrasted with four international dialects of English. Paper 8 included the unique speech profile of each Fiji English dialect and the need for SLPs to consider these dialectical differences when assessing Fijian children’s speech. Results from Paper 8 were thus applied in Paper 9.

Paper 9 presented the findings of the first study to directly assess the speech production and intelligibility of Fijian school students. Speech production measures (percentage of consonants, vowels, and phonemes produced correctly) were high for both Year 1 and Year 4 students, indicating that by school age most Fiji English speech sounds have been acquired. Future analyses include error analysis of these data, and collection of additional data with younger children to determine specific English sound acquisition patterns of Fijian children. Future research is also required for a better understanding of children’s speech acquisition patterns in their main language(s).

The main aim of Paper 9 was to commence the development of linguistically appropriate speech assessment tools for Fijian students. Paper 9 validated an international speech intelligibility tool, the Intelligibility in Context Scale (ICS, McLeod et al., 2012), for the Fijian context. ICS results for Fiji were consistent with other international studies (McLeod, 2016), and appeared to be robust against the potential influence of differences in students’ demographic variables (e.g., age, gender, socioeconomic status). Sensitivity was poor (i.e., comparison with speech production results and caregiver reported speech difficulties) but likely reflected students’ high rates of speech production proficiency and the small number of students that caregivers identified as having English speech production as a concern.
Collectively the five papers in Part Three provide new knowledge about Fijian students’ speech, language, and literacy use and proficiency. Communication profiles revealed that Year 1 and Year 4 contained heterogeneous groups of students that use their linguistic skills in unique and variable ways so that they can access and participate in different communication communities. The variability in the linguistic communities in which students interact may present as a challenge in the future for communication specialists wanting to develop standardised speech, language, and literacy proficiency assessment tools.

**Limitations of This Research**

The cross-sectional sampling methods within one school in Fiji that were applied in Papers 5, 6, 7, and 9 prevent generalisation of results to the broader Fijian community. The authors cannot make claims about progressive changes across Year 1 and Year 4 groups based on the results since longitudinal data were not collected. The small sample sizes in these studies allowed for greater in-depth analysis of Personal and Contextual Factors that may influence children’s linguistic profiles; however, this resulted in a reduction in power and reliability of the statistical analyses conducted. Finally, whilst every attempt was made to base the survey tools on methods of similar studies in other parts of the world, they have not been validated for the Fijian context.

**References**


Part Four

Conclusions and Contributions of this Doctoral Research
Fiji is a vibrant, progressive country that is multilingual, multi-ethnic, and multicultural. Effective support for children’s communication requires an understanding and involvement of children and their whole community (Hartley & Wirz, 2002). In many Majority World Countries western and traditional healthcare and education providers work with people with communication disability (PWCD). Fiji has fewer formalised services for people with special and additional needs than in Minority World countries; however, the Fijian Government, through enactment of human rights legislation, and establishment of inclusive education schools, has demonstrated a commitment to improving these services in the future. Within mainstream schools, adoption of a bilingual dual language learning programme displays an understanding of the importance of vernacular instruction in early speech, language and literacy acquisition (Geraghty, 2017; Mangubhai, 2002; Mangubhai & Mugler, 2006; Shameem, 2004). Governmental support of research endeavours in the field of education reveal a genuine desire to understand the factors influencing children’s participation in society and a willingness to embrace change to improve the possibilities and choices available for children with atypical communication development.

This doctoral research, undertaken in four stages sought to identify and create culturally and linguistically appropriate support for children’s communication in Fiji. In doing so, the research is consistent with PRECEED principles for developing culturally-relevant public health programmes as described in the PRECEED-PROCEED model by Green & Kreuter (2005). Whereby PRECEED refers to Predisposing, Reinforcing, and Enabling Constructs in Educational/ Environmental Diagnosis and Evaluation. Given the alignment with PRECEED, this communication capacity building doctoral research could be used to inform practices of SLPs, and other communication specialists working with underserved populations in Fiji and other Majority World countries”.

**Stage 1: Gathering Knowledge from Policy and Literature**

Stage 1 involved gathering knowledge from policy and literature regarding the historical supports available for PWCD in Fiji. A review of the literature and personal correspondence revealed six agents of delivery of intervention that were offering services to PWCD: (1) qualified-SLPs; (2) mid-tier workers; (3) disability care workers; (4) traditional healers; (5) other professionals trained by SLPs; and (6) family members trained by SLPs. All SLPs that had worked in Fiji were from other countries (Paper 2). A subsequent review of white and grey literature, including policy and practice documents, revealed five barriers and three drivers of change that are influencing the development of specialist services for PWCD in Fiji.
Barriers of change included: (1) structural barriers: population size; (2) geographical barriers: dispersed geography spread over 300 islands, low population-density, a rural-urban divide, risk of environmental disaster including cyclone and flood; (3) linguistic barriers: Linguistic diversity includes three official languages (Fijian, Fiji Hindi, English), Rotuman, over 300 Fijian dialect variations, and various immigrant languages (e.g., Hindi, Gujarati, Cantonese); (4) cultural barriers: historical political instability and social climate issues related to ethnicity; and (5) financial barriers: low gross-domestic product, poor financial security, and a low human-development index.

Drivers of change were identified at three levels: (1) macro-level drivers: local endorsement of international disability and human rights policies and increased participation in a global economy; (2) meso-level drivers: receipt of foreign aid and support from international non-government organisations to develop regional and local disability-inclusive legislation and policies for provision of local disabled peoples’ organizations (DPOs); and (3) micro-level drivers: establishment of DPOs by consumer representatives, adoption of disability-inclusive policy and procedures by service providers, changing perceptions of disability within the general community (Paper 1).

Stage 2: Gathering Knowledge from the Community

Stage 2 involved gathering knowledge about community beliefs, attitudes and practices for supporting people with communication disability via a survey of 144 Fiji-based participants. Participants’ beliefs about the cause of communication disability in children were analysed thematically revealing that beliefs clustered around three themes: (1) internal causes: impairment, disorder or disease states of the body; (2) external causes: environmental and personal factors; and (3) supernatural causes: fate or curse. Attitudes to PWCD were predominantly discriminatory and placed restrictions on PWCD’s participation in Fijian society. Beliefs and attitudes may also have influenced the stated type of help participants would seek if they needed to support a child with communication disability (Paper 3).

Participants stated they would engage in self-help (e.g., making a change to their own communication style or mode; trying to change their own and others behaviour; teaching new skills; praying; changing the physical environment; seeking information independently; assessing or observing; and, using traditional medicine, western medicine, or traditional belief practices) or seek-help from one of seven agents of intervention (e.g., other community members; education professionals; a professional in another country; spiritual leaders; traditional belief practitioners; traditional medicine
practitioners; western health care practitioners) or, alternative providers (e.g., home, orphanage, nursing home) (Paper 4).

**Stage 3: Understanding Speech, Language, and Literacy Use and Proficiency**

Stage 3 involved gathering context-specific knowledge about the communication environment, and the speech, language, and literacy use and proficiency of Fijian children. A study of 75 students (35 in year 1 and 40 in year 4) and their caregivers and teachers from a multi-racial, multilingual, urban primary school revealed that Fijian students and their conversational partners are linguistically multi-competent (Paper 5). The students used between one and five languages depending on the context of the communication and the communication partner. The main languages of the home were Standard Fijian, a non-standard Fijian dialect, Fiji Hindi, or English.

There was evidence that the language context (school, home, community) significantly influenced the students’ language choice and the amount of language mixing. Students mostly spoke English at school and reported being happiest when communicating with their friends (Paper 6). Language mixing was common amongst the students. Students were more likely to mix languages when speaking with caregivers, siblings, and friends than with grandparents, teachers, or strangers.

Proficiency in the students’ main language and English was comparatively high compared to proficiency in other additional languages. On measures of direct assessment of English language and literacy proficiency, raw scores were greater for year 4 students compared with year 1 and correlated with academic performance. English language proficiency scores were also correlated with the students’ main language status and their father’s education. While English first language status in year 1 offered some advantage for academic proficiency, this was not evident in the year 4 group (Paper 7).

**Stage 4: Developing Culturally and Linguistically Appropriate Resources and Assessments**

Stage 4 began the work of developing culturally and linguistically appropriate resources and assessments for the children in Stage 3. A contrastive review of the phonological features of two Fiji English dialects (Fijian Fiji English and Fiji Hindi Fiji English) was conducted to assist SLPs in the assessment of the speech production of these speakers (Paper 8). Similarly, to provide a simple screening tool for SLPs and other agents of delivery of intervention for PWCD in Fiji, the Intelligibility in Context Scale (McLeod et al., 2012) was validated for the Fijian context (Paper 9, Appendix A, B, and C).
Recommendations from the study include: (1) the need to develop culturally appropriate assessment and intervention programmes and health promotion activities that acknowledge individuals’ belief systems, build on communities’ communication strengths, and involve partnership with the diverse agents of intervention present in Fiji; (2) the need to consider the whole linguistic environment and the purpose of communication when assessing multilingual children in Fiji; and (3) to understand the impact of demographic information from all significant caregivers when developing tools to assist speech-language pathology practice in Fiji.

**Key Contributions of this Doctoral Research**

The doctoral research presented in this thesis has made key contributions to the literature about children’s communication and communication disability in Fiji. The research has also contributed to development of theory by successfully applying the International Classification of Functioning, Disability, and Health (ICF, WHO, 2001) as a research framework and strengthening the evidence to support the linguistic multi-competence paradigm as described by Cook (2016).

**Key Contributions to the Literature**

This study contributed to the literature by conducting the first investigation of communication disability in Fiji. No other study has documented the Fijian community’s beliefs, attitudes, and practices regarding supporting Fijians with communication disability. Results presented in Paper 3 align with results about beliefs, attitudes, and actions for other disabilities and health conditions previously reported in Fiji (e.g., Aghanwa, 2004; Gill, 1988; Daveta, 2009; Groce, 1999; Tavola & Whippy, 2012) and internationally (e.g., Abdalla & St Louis, 2012; Marshall, 1997; Pachigar, Stansfield, & Goldbart, 2011).

Papers 3 and 4 also are unique because of the methodological approach taken in collecting the data. The use of a two-tiered question approach (“What would you/others do?”) designed by Wylie et al. (2017) appeared to allow participants to provide responses that would be socially acceptable in Fiji’s modern societies (e.g., seek assistance from Western medicine practitioner) and traditional societies (e.g., seek assistance from traditional or spiritual healer). Should we have only asked one question it is apparent we would have received a reduced picture of how the community supports PWCD in Fiji. The unique design of the survey, that included identical questions for both a child and adult with communication disability, allowed for direct comparison of
how Fijians view communication disability in these two groups. A common theme of wanting to create “a loving, nurturing, supportive environment for PWCD” in Fiji (Paper 4, p. 25) was evident across child and adult scenarios; however, the differences identified in the community’s preferences for seeking help for children with communication disability (community members consulted most frequently) versus adults with communication disability (western health practitioners consulted most frequently) have implications for future policy and practice development.

Part Three of this doctoral research answered the call of previous researchers (e.g., Pressman & Heah Lee, 1988; Shameem, 2002) to be the first investigation to use direct assessment of children’s speech, language and literacy proficiency. No other study has specifically focused on Fijian children’s communication in order to provide background knowledge for children with communication delays or disabilities. In Fiji no other study has described the linguistic multi-competence of Fijian children within their environment and described in depth the use and proficiency of children across the broad spectrum of languages present in Fiji (e.g., Standard Fijian, Fijian dialects, Fiji Hindi, English). In addition, no other study has explored the implications of variable proficiency and use for children’s daily interactions in different environments in Fiji (e.g., home, school, community).

This doctoral research provides new knowledge regarding the linguistic diversity of Fijian children and their communication partners required for development of assessment and intervention tools. In sum, this holistic doctoral research has taken a broad view of the complex multicultural and multilingual landscape of Fiji as a background to support children’s communication by the community, SLPs, and other communication specialists. As a result of the research the Fijian community now has a greater understanding of the historical and current context of services for PWCD in Fiji and factors that may be influencing future service development in this context (e.g., community beliefs and attitudes, the linguistic environment).

**Key Contributions to Theory**

The doctoral research crosses traditional academic silos of knowledge management and consequently different papers present different theoretical constructs despite being linked by the International Classification of Disability, Health, and Function (ICF, WHO, 2001). For example, Papers 1, 2, and 4 applied theoretical concepts derived from speech-language pathology service delivery (Hartley & Wirz, 2002; Wylie et al., 2013) and change management (Buell, 2013; Price, 2009) literature. Paper 3 relied on an understanding of disability studies literature. Paper 5 tested
applicability of the linguistic multicompetence paradigm (Cook, 2016) in Fiji, and consequently strengthened the evidence base for its use internationally. Paper 6 applied sociolinguistic theory related to code-switching and crossing and principles of ethnography to explore language use and proficiency in relation to friendship development. Papers 7, 8 and 9 applied analysis techniques grounded in speech-language pathology theory in order to interpret literature and direct assessment results.

Given the breadth of literature in this doctoral research, the ICF (WHO, 2001) proved an ideal framework to view Fijian children’s communication and communication disability from a population-based perspective (Vanleit, 2008). All nine papers in this doctoral research highlighted the relationship between dimensions of the ICF and how they may impede or enable the Activities and Participation of PWCD. Of particular interest was the ability of the ICF to identify aspects of Activities and Participation that are not typically associated with communication disability (e.g., the role of fathers and religious groups). Use of the ICF also allowed for the research findings to be readily translated to policy and practice. Consequently, each paper has made recommendations for how policy and/or practice affecting PWCD may be adapted or developed to ensure that future development projects and programmes in Fiji provide inclusive opportunities for PWCD. In addition, these recommendations have been collated and interpreted for two specific audiences: the Fijian Government Ministry of Education (Appendix D) and visiting SLPs (Appendix E).

Finally, previous models for developing services to support PWCD in underserved areas of the world (e.g., Communication Disability Model by Hartley & Wirz, 2002) provided detail of the stakeholders that should be consulted (who) and the theoretical dimension that needed to be considered (why) but they offered little information on how this information should be gathered. The four-stages of research described in this doctoral research may be part of the answer to filling that gap in our knowledge. It is possible that a comprehensive undertaking of the four stages of research described may assist other SLPs interested in improving service provision in underserved communities. At the least, the examples provided in the nine papers may assist visiting SLPs to develop culturally and linguistic appropriate assessment and intervention tools whilst simultaneously developing their own cultural competence and humility.

Implications for Policy and Practice

This doctoral research has policy and practice implications for both PWCD and children’s communication development in Fiji. Fijian Government ratification of the
United Nations (UN) Convention of the Rights for People with Disabilities (UNCRPD, UN, 2006) in March 2017 provided PWCD in Fiji with the human right to receive services that support their full access and participation in Fijian society. Already Fiji has recognised the communication support needs of some sub-groups of the community with communication disability. For example, Fijian health, education, or disability policy documents that make provision for alternative and/or augmentative communication (AAC) means for people with vision or hearing impairments (e.g., sign language, braille). As this doctoral research has illustrated, there is likely a significant number of PWCD in the Fijian community whom require different/other rehabilitation services than AAC.

Fijians are resourceful and adaptable. Identification in Papers 2 and 4 of a variety of potential service providers for PWCD may suggest PWCD in Fiji are differently served rather than underserved as initially hypothesised. Evaluation of self-help and help-seeking behaviours in the Fijian community revealed that Fijians respond to communication impairment in different ways. For example, participants preferred to access their community for supporting a child with communication disability, and preferred to access western health care practitioners for supporting an adult with communication disability. Research is required to understand what are the assessment and intervention methods of the identified service providers, and whether PWCD are satisfied with the quality, availability, and accessibility of the services they receive? Knowledge of these factors is required for measurement of PWCD’s active participation in Fijian society.

There is a strong willingness to help PWCD within the Fijian community that can be built upon in the future if policy developers recognise that different belief systems underpin the self-help and help-seeking choices of Fijians for PWCD. The mismatch between beliefs and attitudes in Paper 3 revealed that there is still considerable work to do to ensure that PWCD have access to the same opportunities as others in the Fijian community. Buell (2009), reporting on work conducted in Bolivia, suggested “increasing peoples’ competence reduces fear that in turn reduces negative attitudes” (p. 31). Future health promotion activities should (1) aim to raise awareness of the education, employment, and social capabilities of PWCD, (2) capitalise on the strong oral culture within Fiji by providing focused training on how to enrich the language environment for children and adults with communication disability, and (3) be built on the existing supportive community structures present in Fiji.

Fiji’s established and active network of disabled persons organisations (DPOs)
and national advocacy body, the Fiji National Council for Disabled Persons (FNCDP), have successfully lobbied government and raised public awareness of the rights and capabilities of people with disabilities in Fiji: effectively realizing the political mantra of *nothing about us, without us*. This doctoral research has sought to situate typical communication and the communication environment; however, the absence of the voice of PWCD in this work is a significant limitation to understanding the true extent of the impact of a communication disability in Fiji. Future policy development and service enhancement for PWCD in Fiji will require the collective involvement of PWCD, PWCD’s caregivers, those who help (i.e., the service providers identified in Papers 2 and 4), DPOs, the FNCDP, and the Fijian Government.

Fijian communication specialists, who have an appreciation of the multicultural and linguistically multi-competent landscape in Fiji, are the best people to support Fijians with communication disability. Public policy and previous literature has recognised the important role visiting SLPs play in supporting PWCD in Fiji; however, Paper 2 presents the work of visiting SLPs as piecemeal. Whilst the work of visiting SLPs has been successful in raising awareness of the capabilities of PWCD in the education sector in particular, the efficacy and long-term benefit of this work for PWCD in Fiji has not been evaluated. It is apparent that the visiting SLP’s role should not act as a replacement for sustainable, dedicated local academic programmes to train Fijian communication specialists.

Visiting SLPs can act as champions of change for their Fijian clients with communication disability. To create lasting positive changes for PWCD in Fiji the visiting SLP’s scope of practice must include alternative approaches to service delivery and expand the usual boundaries of interdisciplinary practice. As Paper 4 has shown, interdisciplinary practice for the visiting SLP in Fiji could consider customary inter-professional networks (e.g., health and education sectors) and reach out to alternative sectors within the Fijian community (e.g., traditional medicine practitioners, spiritual leaders, community leaders). Future local service development for Fijians with communication disability should endeavour to create linkages between the formal and informal sectors currently being utilised by Fijian community members to support PWCD. Understanding the practice methods of other practitioners may also support future health promotion and training activities that will need to be tailored for the age of the client and the belief systems of their community.

The papers presented in Part Three have illustrated the rich linguistic diversity of Fijian school children and their conversational partners. This linguistic diversity
brings with it positives (e.g., known cognitive benefits such as those described by Hoff and Core, 2015) and difficulties faced by (1) educators trying to support the learning needs of these children in diverse classrooms, and (2) communication specialists trying to develop culturally and linguistically appropriate tools to support children’s communication. The results of this doctoral research are particularly relevant to Fijian language policy development.

High levels of English language proficiency in Fiji make the population and country well placed to capitalise on the spread of the English language internationally and its growing role in international commerce. In paper 5 results revealed that there was a higher proportion of students speaking English as their first language compared to results reported in previous studies. It was suggested that caregivers may be choosing English as the main home language in the belief that this will advantage their children academically, thinking that the child will learn the vernacular at school. In Paper 6, children’s (1) main languages differed from that of the teacher and school environment, and (2) participation in vernacular language classes, was identified as potentially problematic for enactment of the Fijian Government vernacular and classroom language policies and students’ language acquisition. It was suggested that when teacher-student language match cannot occur, students from main language groups different to the teacher should have regular English language support provided by an accredited English as an additional language teacher. In Paper 7, significant correlations of main language and oral language direct assessment tasks and academic performance measures of literacy suggested that further investigation needs to be conducted to determine why there appears to be a linguistic advantage afforded to Fiji Hindi main language speakers. All of these findings must be viewed collectively as impetus for a larger, more representative, investigation of the effects of linguistic variability on students’ academic performance.

Early identification of children who are struggling with communication development is critical to minimising the impact of a communication difference, disorder, or delay (McCormack et al., 2009). Whilst we have begun the work of developing tools for communication specialists in Fiji in Papers 8 and 9, future research should be directed at obtaining a greater understanding of main and additional speech, language, and literacy acquisition patterns for Fijian children. Such an understanding will support the early identification of children who may be struggling compared to same age peers with similar linguistic profiles. Children with identified communication delays can then seek support services that are congruent with the families’ belief
systems.

Limitations

Additional limitations to those in Parts Two and Three of this thesis and within each paper need to be noted. Firstly, every effort was made to consult cultural brokers throughout the development, implementation, and interpretation of this doctoral research; however, the interpretation presented is predominantly that of the author and thus an etic perspective despite the authors’ long term residence in Fiji. In addition, issues of neocolonialism and the impact of the authors’ otherness (e.g., accent, expatriate status, female gender, socioeconomic status and educational background) may have been minimised by conducting the study in an area of Fiji with a large expatriate and tourist population; however, the authors’ perceived otherness to that of the participants must be acknowledged as potentially influencing the responses of participants in both the school and community settings.

Translation of written information into Fijian and Fiji Hindi was used throughout this doctoral research and interpreters were available for both school and community data collection; however, participants overwhelmingly preferred to use English for oral and written communication. This preference for English is possibly a consequence of (1) participants wanting to keep face and be perceived as adequate communicators in English given the high status that English holds in Fijian society (Mangubhai & Mugler, 2006), and (2) English reading and writing proficiency is reportedly much higher than proficiency in other vernaculars (Shameem, 2002). However, participants’ English language preference may have resulted in some participants having less understanding of the research material than if they had completed the task in their main language.

The main limitation of this research is the lack of a clear conclusion. In reality there is a great deal more work to do and questions to answer before the author can formulate a framework for how service delivery should look to ensure Fijian children’s communication development is adequately supported.

Future Directions

Atherton, Davidson, and McAllister (2016) advise that the best way for visiting SLPs to meet the unique needs of culture and context in Majority World contexts is to develop relationships with insiders that foster collaboration and support mutual development of knowledge. Thus, future research should ideally be participatory and (1) involve PWCD and their caregivers, (2) involve service providers and communication specialists from the broad range of traditional and western sectors identified in Paper 4.
and (3) capitalize on the expertise of academics working in the fields of disability, linguistics, health and education within the Fiji higher education sector.

This doctoral research focused mostly on children’s communication and recommends mapping of children’s acquisition of speech, language, and literacy in main and additional languages; however, a greater understanding of the experience of communication disability into adulthood is also required.

**Final Summary and Concluding Remarks**

The children of Fiji are a diverse group: linguistically multicompetent, multiethnic, and multicultural. This doctoral research presents new knowledge regarding the linguistic environments in which Fijian children live and how these children navigate the inherent cultural and linguistic diversity of Fiji. This knowledge is presented to support understand of how communication specialists in Fiji can best address the needs of children with communication disability in this context. The findings of this research will inform future research about Fijian children’s speech, language, and literacy skills and will inform practitioners and policy makers on the possible avenues for enhancing the support systems for Fijians’ oral and written communication.

**References**


Appendices
Appendix A: Intelligibility in Context Scale: English

Intelligibility in Context Scale (ICS)
(McLeod, Harrison, & McCormack, 2012)

Child’s name: ____________________________
Male/Female: ____________________________

Language(s) spoken: ____________________________

Current date: ____________________________Child’s age: ____________________________

Person completing the ICS: ____________________________
Relationship to child: ____________________________

The following questions are about how much of your child’s speech is understood by different people. Please think about your child’s speech over the past month when answering each question. Circle one number for each question.

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you understand your child’s speech?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Do immediate members of your family understand your child?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. Do extended members of your family understand your child?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Do your child’s friends understand your child?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Do other acquaintances understand your child?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. Do your child’s teachers understand your child?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. Do strangers’ speech understanding your child?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL SCORE = ____________________________/35
AVERAGE TOTAL SCORE = ____________________________/5

1 This measure may be able to be adapted for adults’ speech, by substituting child with spouse.
2 The term strangers may be changed to unfamiliar people

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Appendix B: Vakarau ni matata ni vosa: Vakaviti [Intelligibility in Context Scale: Fijian]

<table>
<thead>
<tr>
<th>veigauna</th>
<th>vakalevu</th>
<th>So na gauna</th>
<th>vakavudua</th>
<th>Sega sara</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. E matata vei liko na nona vosa?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2. E matata vei iratou na wekana voleka?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3. E matata vei iratou na wekana tale eso?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4. E matata vei iratou nona ilala?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5. E matata vei ira na veikilai tale eso?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>6. E matata vei iratou nona qasenivuli?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7. E matata vei ira na vulagi?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

SOQONI (TOTAL SCORE) = \(\frac{\text{VAVAKATUTULIPATA (AVERAGE TOTAL SCORE)}}{5}\)

Na vakadewa qo ni Intelligibility in Context Scale e rawa ni lavetaki (This version of the Intelligibility in Context Scale can be copied.)

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Appendix C: Paristhiti me samajh la skel: Fiji Hindi [Intelligibility in Context Scale: Fiji Hindi]

### Paristhiti me samajh la skel: Fiji Hindi

*Intelligibility in Context Scale (ICS): Fiji Hindi*

(McLeod, Harrison, & McCormack, 2012)

Translated by: Salesh Kumar, B.A., PGDETT, PGDUN, PGDEDUL, M.Ed., University of the South Pacific, Fiji, 2014

<table>
<thead>
<tr>
<th>Lar’ka/lar’ki ke naam:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lar’ka/lar’ki ke païda hoe ke taariik:</td>
<td>Lar’ka/lar’ki:</td>
</tr>
<tr>
<td>Bole la bhaasa:</td>
<td></td>
</tr>
<tr>
<td>Aaj ke taariik:</td>
<td>Lar’ka/lar’ki ke umar:</td>
</tr>
<tr>
<td>I fom ke bhare la admi ke naam:</td>
<td></td>
</tr>
<tr>
<td>Lar’ka/lar’ki ke sange rista:</td>
<td></td>
</tr>
</tbody>
</table>

I sab sawaal jiaane ke khaatir he ki alag-alag admi long tumaar lar’ka/lar’ki ke baat kitna samjhe he.
Ek-ek sawaal ke jawaab de ke taaim iske baare me soco ki pichle maysina tumaar lar’ka/lar’ki ke baat kaisan ra.
Ek jawaab ke khaatir khali ek namba sekal karo.

<table>
<thead>
<tr>
<th></th>
<th>Sab taaim</th>
<th>Jaada taaim</th>
<th>Kabhi-kabhi</th>
<th>Sait kabhi</th>
<th>Kabhi nai</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aap apan lar’ka/lar’ki ke samajh jaat?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Aapke apan palwaar ke admi long aapke lar’ka/lar’ki ke samajh jaae?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. Aapke duur ke palwaar long aapke lar’ka/lar’ki ke samajh jaae?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Aapke lar’ka/lar’ki ke fren long aapke lar’ka/lar’ki ke baat samajh jaae</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Aur koi jaanal la admi long aapke lar’ka/lar’ki ke samajh jaae?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. Aapke lar’ka/lar’ki ke tlica long aapke lar’ka/lar’ki ke samajh jaae?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. Anjaan long2 aapke lar’ka/lar’ki ke samajh jaae?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Puura maak = 35

Evraal puura maak = 5

---

1 Lar’ka/lar’ki ke jagah admi/suvarl likhna i fom bar’a admi long ke khaatir yuos sako karo.
2 Anjaan long ke jagah jin admi long ke nai jontu yuos saktu kare.

*Paristhiti me samajh la skel ke ila fom ke kopí sako karo.*

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Appendix D: Letter to the Fijian Government Minister of Education, Heritage and Arts, and National Archives of Fiji

Suzanne C. Hopf  
School of Teacher Education  
Charles Sturt University  
C/- Po Box 11046  
Nadi Airport, Fiji  
Ph: +679 9707247

1 June 2017

The Honorable Minister of Education, Heritage and Arts, and National Archives of Fiji  
Private Mail Bag  
Government Buildings  
Suva, Fiji.  
Ph: +679 3314477

Dear Sir

Re: Report on completion of "Supporting Fijian Children's Communication" study (RA 29/14)

Thank you for the opportunity to conduct the research study "Supporting Fijian Children's Communication". The study has now been completed and my PhD thesis is attached for your reference. The PhD thesis contains 9 papers (at the time of writing seven papers were published, one was in press, and one was in submission). In addition to these papers the study resulted in further research output detailed in an appendix. This letter provides you with a summary of this research output including the processes and outcomes of my PhD research.

Background

People with communication disability (PWCD) in Fiji have the human right to receive services that support their full access and participation in Fijian society; however, the cultural and linguistic environment in Fiji and a lack of locally trained specialists have limited PWCDs opportunities to achieve this aim. The "Supporting Fijian Children's Communication" study outlined a method for the creation of culturally and linguistically appropriate support for children's communication in Fiji via a four-stage research program:  
(1) gathering knowledge from policy and literature  
(2) gathering knowledge from the community  
(3) understanding speech, language and literacy use and proficiency, and  
(4) developing culturally and linguistically appropriate resources and assessments.

Each stage of this research programme and the findings are described below.

Research Stages and Findings

Stage 1: Gathering Knowledge from Policy and Literature  
Stage 1 involved gathering knowledge from policy and literature regarding the historical supports available for PWCD in Fiji. A review of the literature and personal correspondence revealed six agents of delivery of intervention that were offering services to PWCD:  
(1) qualified-speech-language pathologist (also known as speech pathologist, speech therapist, or speech-
language therapist)  
(2) mid-tier workers  
(3) disability care workers  
(4) traditional healers  
(5) other professionals trained by SLPs, and  
(6) family members.

All SLPs that had worked in Fiji were trained in other countries (Hopf, 2014).

A subsequent review of literature, including policy and practice documents, revealed five barriers and three drivers of change that are influencing the development of specialist services for PWCD in Fiji. Five barriers of change included:  
(1) Structural barriers: population size  
(2) Geographical barriers: dispersed geography over 300 islands, low population-density, rural-urban divide, risk of disaster (cyclone, flood)  
(3) Linguistic barriers: Linguistic diversity includes three official languages (Fijian, Fiji Hindi, English), Rotuman, over 300 Fijian dialects, and immigrant languages (e.g., Hindi, Gujarati, Cantonese)  
(4) Cultural barriers: historical political instability and social climate related to ethnicity, and  

Three levels of drivers of change included:  
(1) Macro-level drivers: international disability and human rights policies, global economy  
(2) Meso-level drivers: foreign aid from international non-government organisations to develop disability-inclusive  
(3) Micro-level drivers: establishment of disabled peoples' organisations (DPOs), adoption of disability-inclusive policy and procedures, changing perceptions of disability (Hopf & McLeod, 2015).

Stage 2: Gathering Knowledge From The Community
Stage 2 involved gathering knowledge about community beliefs, attitudes and practices for supporting people with communication disability via a survey of 144 Fiji-based participants. Participants' beliefs about the cause of communication disability in children were analysed thematically revealing that beliefs clustered around three themes:  
(1) internal causes: impairment, disorder or disease states of the body  
(2) external causes: environmental and personal factors, and  
(3) supernatural causes: fate or curse.

Attitudes to PWCD were predominantly discriminatory and placed restrictions on PWCDs' participation in Fijian society. Beliefs and attitudes may also have influenced the stated type of help participants would seek if they needed to support a child with communication disability (Hopf, McLeod, McDonagh, & Rakunace, 2017).

Participants stated they would engage in self-help (e.g., making a change to their own communication style or mode; trying to change their own and others behaviour; teaching new skills; praying; changing the physical environment; seeking information independently; assessing or observing; and, using traditional medicine, western medicine, or traditional belief practices) or seek help from one of seven agents of intervention (i.e., other community members; education professionals; a professional in another country; spiritual leaders; traditional belief practitioners; traditional medicine practitioners; western health care practitioners); or, an alternative provider (e.g., home, orphanage, nursing home) (Hopf, McLeod, McDonagh, Wang, & Rakunace, 2017).

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CRRRC Provider Numbers for Charles Sturt University are 00035F (NSW), 01647G (VIC) and 02960B (ACT). ABN: 83 878 708 551
Stage 3: Understanding Speech, Language and Literacy Use and Proficiency
Stage 3 involved gathering context-specific knowledge about the communication environment, and the speech, language and literacy use and proficiency of Fijian children. A study of 75 students (35 in year 1 and 40 in year 4) and their caregivers and teachers from a multi-racial, multilingual, urban primary school revealed that Fijian students and their conversational partners are linguistically multi-competent (Hopf, McLeod, & McDonagh, 2016a). The students used between one and five languages depending on the context of the communication and the communication partner. The main languages of the home were Standard Fijian, a non-standard Fijian dialect, Fiji Hindi, or English. There was evidence that the language context (school, home, community) significantly influenced the students’ language choice and the amount of language mixing. Students mostly spoke English at school (Hopf, McLeod, & McDonagh, 2017b). Language mixing was common amongst the students. Students were more likely to mix languages when speaking with caregivers, siblings, and friends than with grandparents, teachers, or strangers.

Proficiency in the students' main language and English was comparatively higher than that in other additional languages. On measures of direct assessment of English language and literacy proficiency, raw scores were greater for year 4 students compared with year 1 and correlated with academic performance. English language proficiency scores were also correlated with the students’ main language status and their father's education. Specifically, year 4 students who spoke Fiji Hindi as their main language had higher English proficiency on direct assessment measures than students who spoke Standard Fijian and year 1 students with fathers who had completed tertiary education had higher English proficiency than students whose fathers had only completed high school. Finally, while English first language status in year 1 offered some advantage for academic proficiency, this was not evident in the year 4 group (Hopf, McDonagh, Wang, & McLeod, 2017).

Stage 4: Developing Culturally And Linguistically Appropriate Resources And Assessments
Stage 4 began the work of developing culturally and linguistically appropriate resources and assessments for Fijian children. A descriptive review of the phonological features of two Fiji English dialects (Fijian Fijian English and Fiji Hindi Fiji English) was conducted to assist SLs in the assessment of the speech production of these speakers (Hopf, McLeod, & Geraghty, 2016). Similarly, to provide a simple screening tool for SLs and other agents of delivery of intervention for PWCD in Fiji, the Intelligibility in Context Scale (McLeod, Harrison, & McCormack, 2012) was validated for the Fijian context (Hopf, McLeod, & McDonagh, 2017c).

Recommendations Arising from the Research
Recommendations from the study include:

1. For current communication specialists working in Fiji (agents of intervention including visiting international speech-language pathologists):
   a. To develop culturally appropriate assessment and intervention programs and health promotion activities for PWCD in Fiji that acknowledge individuals’ belief systems, build on communities’ communication strengths, and involve partnership with the diverse agents of intervention present in Fiji.
   b. To consider the all of the languages spoken by children and the purpose of communication when assessing multilingual children in Fiji.
   c. To understand the impact of demographic information (e.g., age, gender, socio-economic status, parental education level) from all significant caregivers when developing tools to assist speech-language pathology practice in Fiji.

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2. Urgent future research in Fiji is required to enhance our understanding of:
   a. PWCDs' needs and preferences for service delivery options that will enhance their participation in Fijian society.
   b. Prevalence and variability in presentation of developmental and acquired communication disabilities in Fiji.
   c. Typical patterns of children's communication acquisition (speech, language, and literacy).

3. To develop a local speech-language pathology training course to ensure sustainability of a Fijian expert work-force.

Once again I thank you for the opportunity to begin the journey of understanding how to better support PWCD in Fiji. Should you wish to discuss the outcomes of this research further please do not hesitate to contact me. I look forward to working together in the future to enhance the lives of PWCD in Fiji.

Yours sincerely,

Suzanne C. Hopf
Appendix: Research Output

Peer reviewed journal articles


Invited peer-reviewed book chapter


Editorials


Conference Papers and Posters (peer reviewed, published abstracts)


**Invited Presentations (non-peer reviewed)**


Government Submissions

Appendix E: Letter to Speech-Language Pathologists Visiting Fiji

Supporting Fijians with Communication Disabilities: A Letter to Speech-Language Pathologists Visiting Fiji

Dear Speech-Language Pathologist,

First and foremost welcome to Fiji. I sincerely hope your time here fulfills all of the goals you have set for yourself. I write this letter to you to share my experiences of living, researching, and volunteering as a speech-language pathologist (SLP) in Fiji. Regardless of whether you are working for a short time or a long time in Fiji, I hope that this letter encourages you to build a collective body of evidence and resources that future communication specialists in Fiji can refine and build upon.

My background

I am an Australian trained SLP with almost 20 years of experience working as a SLP in education, health, and private practice settings with clients across the life-span. I moved to Fiji in early 2009 with my young family. Now I am proud to call Fiji home and soon to become a dual Australia-Fiji citizen. Living in Fiji fuelled my interest in how communication disability is diagnosed in multilingual communities. Subsequent difficulties with obtaining a working visa led me to channel this interest into starting my PhD through Charles Sturt University in 2013 titled “Supporting Fijian Children’s Communication”. Simultaneously I began, locally and internationally, advocating for the rights of people with communication and swallowing disabilities in the South Pacific to receive culturally and linguistically sustainable specialist services.

Like many other SLPS who advocate for better availability and accessibility of specialist services around the world, my advocacy work is multifaceted and includes: (1) collating new knowledge about communication disability in Fiji via ethical research practices; (2) providing an on-line space (via SLPinFiji on Facebook and Twitter) to be a contact point for people with communication disability (PWCD) and their caregivers from the South Pacific to ask questions and to disseminate information; (3) maintaining a network of professionals, including ex-visiting SLPS, who have experience working in the South Pacific and who understand the unique cultural and linguistic factors that impact on supporting PWCD in this region; (4) mentoring others who are interested in becoming communication specialists; (5) liaising with visiting inservice- and preservice-SLPS; and (6) lobbying South Pacific Island governments to commit to the development of local communication specialist training centres to end the region’s reliance on international aid funded visiting SLPS.

I didn’t arrive in Fiji culturally competent and I still don’t consider myself culturally competent after 8 years here; however, my life in Fiji and my PhD research has taught me many valuable lessons that are useful for everyday speech-language pathology practice as well as conducting research in this setting. All were critical to the ongoing development of my own cultural competence. I wish to share some of these lessons with you, not to alter the course of your own journey, but to ensure that you do not waste time covering ground that has already been well trod by those that have come before.

Lesson 1: Foster within yourself cultural humility

Fiji is sometimes considered an easy place for international professionals to come and educate willing learners on evidence based health and education practices developed in other contexts. This is likely because the multicultural and multilingual
PWCD in Fiji (Hopf, 2014). I found that there are various groups involved in supporting PWCD in Fiji (e.g., mid-tier workers, disability care workers, other professionals and caregivers) and many had received some basic training from visiting SLPs. Ideally the work you do in Fiji builds upon this background knowledge. To ensure you do not cover material that others have presented it is critical that you pre-survey your audience: ask about their previous experiences with SLPs, what training they have received, and what training they think they need to move forward.

Stage 2 of my doctoral research built on this background knowledge by surveying the general community and interviewing professionals working with PWCD. Through my research I discovered that Fijians are actively using the available resources in their community to support PWCD. Unsurprisingly, they are not sitting around waiting for a visiting SLP. The majority of Fijians engage in a myriad of self-help and help-seeking activities to support PWCD in their community (Hopf, 2014; Hopf, McLeod, McDonagh, & Rakamanoe, 2017). Self-help activities are rooted in the sound belief that children require a rich linguistic environment in which to learn communication. Therefore, children who need additional help are given more attention and resources from the community. Help-seeking activities focus predominantly on seeking specialist help from Western healthcare (e.g., doctors, nurses, physiotherapists) and education (e.g., teachers, tutors) sectors; however, Fijians also rely on the knowledge of those who practice traditional medicine (e.g., herbalists, massage therapists), spiritual leaders (e.g., priests, pastors, imans), and an extended network of elders, family and friends. Some of these groups have worked with visiting SLPs whilst others have not.

Future service development and health promotion activities in Fiji need to acknowledge the community’s current practices for supporting the participation of people with communication disability. Visiting SLPs working in Fiji should look beyond the customary inter-professional networks of Western SLPs (e.g., health and education sectors) and reach out to alternative sectors within the Fijian community (e.g., traditional medicine practitioners, spiritual leaders, community leaders). Future local service development for Fijians with communication disability should endeavour to create linkages between the formal and informal sectors currently being utilised by Fijian community members.

Sustainable service development will also rely on the engagement of PWCD and leaders within these service sectors working collectively to overcome barriers that are structural (e.g., small population size), geographical (e.g., dispersed geography over 300 islands, low population-density, rural-urban divide, and risk of natural disaster), linguistic (e.g., language diversity and poor proficiency in non-dominant languages), cultural (e.g., historical political instability, ethnic tensions, negative attitudes towards PWCD), and financial (e.g., low gross-domestic product, poor financial security, low human-development index) (Hopf & McLeod, 2015). A collective effort is required to design flexible, affordable culturally and linguistically appropriate specialist services in the future (Hopf, Carkeet, & Walker, 2016).

**Lesson 3: Plan for sustainability of services**

Sustainability needs to be achieved by planning ways to empower those Fijians working with PWCD beyond the time of a SLP visit. SLPs ‘sneaking’ in to Fiji to conduct quick training programs do not help PWCD or other service providers in the long run. All too often visiting SLPs are rarely in Fiji long enough to see the recipients of their training integrate new knowledge into existing belief and practice frameworks.
Consequently, when the new learner in Fiji finds they need to clarify something about their training to effectively implement a new concept, they find that there is no one to ask. With nowhere to go for clarification the Fijian service provider is likely to abandon their new knowledge. To ensure that this doesn’t happen, visiting SLPs need to be able to maintain professional links with the people they are training or effectively handover responsibility to an alternatively qualified person who can provide ongoing support for learning needs. For the latter, this means visiting SLPs can share when they are coming to Fiji by: (1) posting to the @SLPinFiji Facebook and Twitter pages or hash tagging #SLPinFiji on their own social media sites, or (2) emailing SLPinFiji@gmail.com with a brief account of your plans.

To develop culturally and linguistically appropriate tools, practices and protocols for future practitioners collaboration is required. There is a great deal of work to do to develop assessment and intervention tools that are valid and reliable for Fiji. In stages 3 and 4 of my PhD thesis I began this work through mapping the sociolinguistic environment of a group of 75 Fijian children and their conversational partners (Hopf, McLeod, & McDonagh, 2017a; Hopf, McLeod, & McDonagh, 2017b), conducting a contrastive analysis of the phonological and phonetic profiles of the three main languages (Hopf, McLeod, & Geraghty, 2016), and validating for the Fiji context an internationally validated parent-report tool for measuring speech intelligibility (Hopf, McLeod, & McDonagh, 2017c). Visiting SLPs and future researchers, including applied linguists, interested in filling the gaps in our knowledge about child speech, language and literacy acquisition have an open field in which to work. The success of this work though is reliant on dissemination of findings: we need to collate this information and share it widely. For that reason I will continue to manage the @SLPinFiji social media sites on Facebook and Twitter and SLPinFiji@gmail.com. As time goes by we can collaborate to create a repository of information and tools that can be accessed by anyone in the world working with a Fijian with communication disability. The beginnings of this repository are within the bibliography attached to this letter.

Thank you for the opportunity to share my experiences with you. I sincerely hope that your time in Fiji is personally and professionally rewarding and look forward to hearing about how your visit enhanced the lives of PWCD in Fiji.

Yours sincerely,

Suzanne C. Hopf
SLPinFiji@gmail.com
Facebook and Twitter: @SLPinFiji

June 2017

Bibliography

Resources


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CRICOS Provider Numbers for Charles Sturt University are 00005F (NSW), 01947G (MC) and 02900E (ACT). ABN: 83 878 798 551
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**Other useful references**


