A photograph of a classroom scene. A teacher, a Black woman with her hair in braids, stands on the right, looking towards two young students seated at a wooden desk. The students, a boy and a girl, are looking at a worksheet on the desk. The boy is on the left, wearing a yellow and blue striped shirt, and the girl is in the middle, wearing a green and white jacket. The desk has a blue pencil case, a pencil, and some papers. The background shows a window and a chalkboard. The overall lighting is soft and natural.

Investigating Pre-Service Teachers' Linguistic Funds of Knowledge

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Contents

Introduction	2
Project overview	4
Research questions	4
The Current Research and Policy Context	5
Recent research	5
Current Policy	7
Research Design and Analysis	8
Setting	8
Methodological approach, recruitment and data collection	8
Project Data	9
Interviews	11
Maps	11
Descriptive Data and Analysis	12
Survey data	12
Interview data: Demographic Information	21
Language Map	26
Final Analysis	34
What are Pre-Service Teachers' views of their own linguistic 'Funds of Knowledge'?	34
How might your linguistic strengths, knowledge and experience translate into teaching with culturally and linguistically diverse young people?	37
What is the relationship between the university's institutional practices and Pre-Service Teachers' views of their own linguistic 'Funds of Knowledge'?	39
Discussion	40
Recommendations	42
Explicit recognition of the attributes and benefits of multilingualism	42
Review of ITE courses to include recognition of the attributes of multilingualism	42
Further research on translanguaging and plurilingual practices in supporting English language learning	42
References	43
Appendix	46
Appendix A	46
Appendix B	48

Introduction

In predominantly English-speaking countries in the global north, Australia was once considered a progressive innovator in language-in-education policy (Djite, 2011). Australia's 1987 National Policy on Languages was considered to be one of the first multilingual language policies in an English speaking country (Lo Bianco & Slaughter, 2009). Unfortunately, from the 1980's onwards collaborative language policy processes across sectors, states and territories increasingly diminished. Australian educational policy has predominantly been characterized by a relentless move towards monocultural and monolingual conceptualizations of language and literacy in curriculum, pedagogy and assessment, across Australian education systems (Coleman, 2012; Eisenclas, Schalley and Guillemin, 2015). These conceptualizations actively ignore Australia's 120 surviving Indigenous languages (AIATSIS, 2018) and the more than 200 primary home languages, spoken by over 20 percent of Australians (ABS, 2016) using a language other than English at home.

Although unevenly distributed, many Australian classrooms are increasingly super-diverse (Vertovec, 2007), comprising young people who are bidialectal/bilingual and plurilingual, and include speakers of languages other than English, monolingual speakers of English, and young people who are first language speakers of Aboriginal Englishes (AE). In NSW, from 2015-2018, 64.4 % of all public schools saw their proportion of Language Background Other Than English students increase (CESE, 2019). Over the last 10 years the proportion of students who speak languages other than English has grown steadily from 29.4% in 2010, to more than a third in 2020. In 2020, 36.9% of students came from homes where languages other than English were spoken by either the students themselves and/or at least one parent or carer (CESE, 2020). The diversity in the language backgrounds of students in NSW government schools has also increased by 12% from 217 languages in 2010 to 243 languages in 2020.

Like Australia, dynamic linguistic and cultural diversity characterises much of the educational landscape in the global north and south. These conditions have promoted considerable language learning research, most particularly in educational settings. Recent research has moved us away from viewing languages in a linear first language or second language relationship (Ellis, 1994). We have come to view meaning-making as relying on a continuum of multiple linguistic repertoires, these repertoires facilitate all social practices, working together to promote thinking and cognition and directing our social emotional life. What is key in educational contexts is a movement away from identifying what young people "lack", to instead identifying and productively mobilising the full range of linguistic resources and communicative repertoires they bring to learning (García, 2014). Current research suggests multilingual students thrive in contexts that acknowledge their multilingual competence (Cummins, 2014; Goodman, Goodman, & Flores, 1979; Rymes, 2014) and increasing attention is being given to developing strategies that scaffold students' own capacities to better recognise and use their existing language and literacy skills (Leung & Valdes, 2019).

It is in this context, that we turn to pre-service teacher education. It is pertinent to remember that the multilingualism present across our student community is also present across our teaching community. This prompts a consideration of pre-service teacher education and how initial teacher education programs, identify and productively mobilise the full range of linguistic resources and communicative repertoires of pre-service teacher education students. Recent research in Initial Teacher Education (ITE), purports that while teacher education programs are tasked with stressing the understanding and skills necessary for teaching in diverse classrooms, little attention has been paid to the cultural and linguistic diversity within pre-service teacher cohorts. Ellis suggests that education policies have led to multilingual teachers being positioned as "silenced plurilinguals, whose skills go to waste" (Ellis, 2016, p. 268). A considerable body of research suggests that Pre-Service Teachers' (PSTs) achievements are most often ignored in teacher education programs (Coleman, 2016; Moloney & Giles, 2015).

This report details a study that was motivated by a desire to explore the cultural and linguistic diversity within pre-service teacher cohorts, in four metropolitan Australian universities with large teacher education programs. In this document, we report on findings from a study of predominately primary and early childhood Pre-Service Teachers' funds of knowledge, funded by an Education grant from the Collier Charitable Foundation. While we sought to investigate PSTs across four urban university sites in Sydney, interruptions resulting from the COVID 19 pandemic, restricted access to participants across the four university sites. This report centres on the analysis of data collected from PSTs at predominantly two universities, Western Sydney University and the University of Sydney.

Project overview

Initially the study was situated in four universities with large teacher education programs, Western Sydney University, Macquarie University, Sydney University and University of Technology Sydney. Rarely are the voices of our education students heard, and in this study, our goal was to hear from multilingual pre-service teacher education students. Our primary aim was to learn about the linguistic funds of knowledge of our multilingual Pre-Service Teachers (PSTs). We asked PSTs, to share their knowledge and experiences and reflect on their linguistic lives. We asked them to consider their teacher education experiences and their future work as teachers in culturally and linguistically diverse classrooms. Unfortunately, interruptions resulting from the COVID 19 pandemic, restricted access to PST participants and significantly limited our collection of data from two of the four universities.

This comparative study draws on data from online surveys, individual interviews and an individual language mapping task. The study considered how institutional practices and PSTs' own attitudes and beliefs about their 'linguistic funds of knowledge' intersect. The Australian Professional Standards for Teachers (APST) requires teachers to "Know their students and how they learn" (Standard 1) including "Students with diverse linguistic, cultural, religious and socioeconomic backgrounds" (Focus area 1.3) (AITSL, 2011, p. 10). In this study, we considered these standards and sought to apply them in the context of Initial Teacher Education (ITE). The findings presented here are predominately collected from teacher education students at Western Sydney and the University of Sydney.

Research questions

This study was underpinned by the following three research questions:

1. What are Pre-Service Teachers' views of their own linguistic 'Funds of Knowledge'?
2. How do Pre-Service Teachers' see their linguistic strengths, knowledge and experience translating into teaching with culturally and linguistically diverse young people?
3. What is the relationship between the university's institutional practices and Pre-Service Teachers' views of their own linguistic 'Funds of Knowledge'?

Asking PSTs, to reflect on their linguistic knowledge and skill can be potentially transformative, not only for their own teaching and learning but also for teacher education programs. Identifying and harnessing the full range of linguistic resources of our Pre-Service Teachers education students can improve teaching and learning and go some way to addressing pathologies that define individuals and families from diverse communities as an educational problem. We offer a set of practical recommendations to support educators and policy makers to harness PSTs' knowledge in consideration of improving teaching and learning for culturally and linguistically diverse students. Our primary goal in this study, is to enhance Initial Teacher Education and support all Pre-Service Teacher education students to improve teaching and learning for all Australian students.

The Current Research and Policy Context

Current research reveals that at least one third of Australian university students training to be primary or secondary teachers speak one or more non-English languages (Moloney & Giles, 2019). Australian Professional Standards for Teachers for example, require Pre-Service Teachers to: Demonstrate knowledge of teaching strategies for diverse students (APST, p. 4). However, research across contexts suggests the current research and policy context fails to acknowledge the dynamic linguistic diversity of pre-service teacher cohorts.

Recent studies of multilingual PSTs, (Moloney & Giles, 2015; Moloney & Saltmarsh, 2019), have reported that PSTs stated that their plurilingual ability had either received no recognition at all within their education degree or that there had been some very minimal recognition in an isolated tutorial or lecture. Studies by Coleman (2015) found that PSTs saw no role for their first language in their Initial Teacher Education courses. While it is increasingly evident that PSTs have rich cultural and linguistic 'funds of knowledge' (Athanases, Baner & Wong, 2015; Moll et al. 1992), most importantly, these skills and students' full linguistic repertoires are rarely acknowledged nor leveraged to advance our understanding of effective teaching, particularly for students with diverse language backgrounds (Anderson & Stillman, 2013; Anderson et al, 2019; Coleman, 2014, 2015, 2019).

Recent research

Pre-Service Teachers' views of their linguistic funds of knowledge

Studies have revealed that PSTs show active realisations of language as part of their identity (Lew & Siffrinn, 2019). A number of studies document PSTs self-reported evidence of linguistic expertise and affiliation (Coleman, 2014; Coleman, 2015; Safford & Kelley, 2010). However, there is evidence that most often PSTs see the academic bonuses of being bilingual coming from deploying biculturalism, rather than the bilingual language skills they possess (Coleman, 2016). Weekly's (2019), study of British multilinguals shows attitudes towards language differ between first- and second-generation migrant participants. Second-generation migrants often positioned their use of English as deficient in relation to British English, with initial teacher education consolidating their existing beliefs. In contrast, first-generation migrants

described Indian English (IE) from a different perspective, suggesting attitudes of greater flexibility towards the use of language. Important here is the assertion that attitudes related to "correct" language are ingrained in childhood experiences.

Research continues to purport that PSTs have difficulty making links between their linguistic knowledge and their skills as young teachers (Pavlenko, 2013). A small pilot study of bilingual teacher education students at Western Sydney University (D'warte & Zammit, 2018) found that PSTs, rarely acknowledged their multilingual capacity and instead expressed concern about their English skills. An American (USA) study of 76 PSTs, found that participants reported judgment and discrimination related to their English vocabulary and accents, and to their racial/ethnic appearances and socio-histories (Athanases et al., 2015). These participants also reflected on assumptions that English language proficiency and accented English can be equated with intelligence. A considerable body of research suggests that pre-service and practicing teachers who do not have English as a first language, lack confidence and feel anxious because they are non-native speakers of English (Coleman, 2016; Cruickshank & Wright, 2016; Santos, Cenoz & Gorter, 2017).

Multilingual PST's reflections within Initial Teacher Education (ITE) programs

In an Australian study by Moloney & Saltmarsh (2016), PSTs indicated that they believed they had adequate pedagogical knowledge of what constitutes inclusive teaching strategies, to meet the demand to 'know your students', as per the AITSL standard. However, when asked about their confidence to teach in a CALD classroom, 62% expressed anxiety about being prepared while only 30% expressed confidence in their ability to teach CALD classroom students. This is not surprising when, as Coleman's PST study (2015) reported, participants did not express the confidence nor have the opportunity to draw on, or 'showcase' their linguistic skills during their university study. Consequently, their language skills and understandings did not inform their developing identities as teachers (Coleman, 2015).

PSTs stated that they had not been presented with any understanding of how to activate their linguistic, cultural and community expertise as part of the development of their professional knowledge (Safford & Kelly, 2010; Stillman et al, 2019). As young teachers, it was also found that these PSTs had difficulty making links between their linguistic knowledge and their skills. These and other studies reported that it had not been suggested to the PSTs that they had an opportunity to use their linguistic cultural and community expertise. Moloney and Giles (2015) found that Australian PSTs' views were impacted by their experiences and shaped by the school region in which they were placed. Plurilingual PSTs placed in the diverse southwest region reported different experiences and understandings to those placed in the north of Sydney, alongside largely monolingual staff and students.

Institutional Recognition of Pre-Service Teachers' linguistic funds of knowledge in ITE programs

That there is limited institutional recognition of PSTs' cultural and linguistic funds of knowledge has been confirmed by many studies. Evidence suggests that a monocultural, monolingual orientation underpins most mainstream teacher education programs (Stillman, Ahmed, Beltramo, Catañeda-Flores, Garza, & Pyo, 2019; Van der Walt, 2013; Villegas, Saiz de La Mora, Martin, & Mills, 2018). Assessment of university documentation and teacher education program curricula reveal that while teacher education programs emphasise how to teach children with diverse backgrounds, little to no attention is given on how to leverage support for PSTs with ethnically, linguistically, and culturally diverse backgrounds (McDevitt & Kurihara, 2017; Nuttall & Ortlipp, 2012). Safford & Kelly, (2010) suggest university institutional practices position linguistic and ethnic minority PSTs in ways which present particular barriers to their professional development and limit their opportunities to call upon their 'funds of knowledge'. Others suggest a clearly deficit view of non-native English-speaking teachers' cultural and linguistic repertoires (Kubota & Lin, 2006). Correspondingly, not all supervising teachers view diverse cultural heritages as a potential resource (Nuttall & Ortlipp, 2012).

Racial and linguistic ideologies in teacher preparation programs and professional experiences can powerfully convey a message for multilingual, multicultural teachers about who should and can be a "good teacher" (Maddamsetti, Flenbaugh, & Rosaen, 2017). Despite institutional claims to support diversity, participants in both local and global contexts have reported that their linguistic and cultural knowledge and understandings were rarely taken up by their institution and most often ignored within their teacher education program. In the Australian context, a number of researchers suggest PSTs comply with institutional practices in universities which marginalise their linguistic funds of knowledge (Coleman, 2015; Cruickshank & Wright, 2016; Moloney & Giles, 2015; Moloney & Saltmarsh, 2019). This consolidates a view of higher education institutions as *bound nation states* (Van der Walt (2013, p.19) maintaining a standard that excludes changes in language policies and practices.

Evident gaps in research

Rarely are the voices of pre-service teachers heard. A review of the literature reveals an absence of studies on how PSTs view their own linguistic strengths and how these continue to develop across ITE programs. Most available studies on PSTs are predominantly related to language teaching (e.g. Ellis, 2004, 2013; Weekly, 2019) or to teachers gaining specialist knowledge as teachers of English as an Additional Language or Dialect (EAL/D) rather than mainstream teachers.

Many international studies address PST's views on their linguistic skills in bi/multi/pluri-lingual settings. The attention of these studies has centred on how students' views change in contexts where teachers actively engage in practices such as translanguaging in the classroom (Barbosa, 2020; Hinojosa Pareja & López López, 2018; Iversen, 2020; Nuñez & Espinoza, 2019). The exploration of language ideologies and the relationship to professional practice (Nuñez & Espinoza, 2019; Van Viegan & Zappa-Hollman, 2019) is an emerging area of research. Findings reveal that when supportive practices and policies are implemented in the classroom, PSTs adopt similar practices. However, when language policies and practices are negative, PSTs become language arbiters who make decisions that challenge normative practices. In this study, we placed mainstream PSTs at the centre and examined their views about applications to practice as they participated in ITE programs.

Current Policy

Globally, scholars have argued that teacher education has continued to move towards increased accountability. Equity and social justice discourses are marshalled to argue for more restrictions and control over curriculum, teachers and teacher education (Riddle, 2016). Evident in this environment is a renewed focus on practice (Ball & Forzani, 2009). This focus on practice attempts to reduce teacher education to the enactment of sanctioned, predetermined practices. This approach fails to acknowledge the complexity of teacher education (Philip et al., 2018) and the importance of context, identity and positionality. It has been argued by many scholars that Australian educational policy continues to move towards monocultural and monolingual conceptualizations of language and literacy in curriculum, pedagogy and assessment (Coleman, 2012; Eisenclas, Schalley and Guillemin, 2015).

In all states and territories in Australia, the Australian Professional Standards for Teachers (APST) have been accepted as the framework for accrediting and assessing the professional competence of teachers. The APST have seven standards in three domains, Professional Knowledge, Practice and Engagement. Teachers are accredited as graduate, proficient, highly accomplished and lead using these standards and when undertaking mandatory professional experiences during their degrees, Pre-Service Teachers are also assessed using these standards.

Potential learners of English as an additional language or dialect (EAL/D) are only mentioned in two focus areas of one standard in the Knowledge domain. The two focus areas relate to knowledge of strategies that are responsive to the learning needs of students from '*diverse, linguistic cultural, religious and socioeconomic backgrounds.*' In the case of Aboriginal and Torres Strait Islander students there is also a requirement that graduate teachers '*demonstrate broad knowledge and understanding of the impact of culture, cultural identity and linguistic background.*' While this brief acknowledgement of the needs of EAL/D learners is welcome it is not extended across the Knowledge domain or across the domains of Practice and Engagement and is considered by intercultural language and literacy educators as inadequate as either descriptive or prescriptive for their work.

In response to the introduction of the APST the Australian Council of TESOL Associations (ACTA) therefore redesigned their nine standards which reflected the dispositions, understandings and skills of TESOL teachers and of all teachers who are working with diverse groups of students. These elaborations of the APST were developed with the acknowledgement and support of the Australian Institute for Teaching and School Leadership Ltd. (AITSL). The detail provided in the elaborations recognises the importance of understanding the cultural and linguistic needs and strengths of students and their communities across all domains but as they are mapped to the APST there is no place to explicitly describe the attributes of a bilingual or multilingual teacher, although they are inferred.

There is no recognition of the attributes of a multilingual or bilingual preservice teacher in the current context other than in the teaching of a language other than English. The experiences inherent in learning and communicating in more than one language are not recognised, described or evaluated and certainly not in the context of what attributes bilingual teachers might bring to a classroom. There is currently no recognition or space to describe the value of bilingualism or multilingualism in either Initial teacher education (ITE) programs or the national framework for teacher professional accreditation, the APST, or the EAL/D elaborations of the APST.

Research Design and Analysis

Setting

This study was planned for four urban university sites located in the Sydney metropolitan region (Western Sydney University, Macquarie University, University of Sydney, University of Technology Sydney). Due to the interruptions that resulted from the COVID 19 pandemic, data was not collected across the four universities. Students were not on campus and all correspondence with students was conducted in online environments, a number of students took leave or returned to family homes in other parts of Australia or abroad and were out of contact. Hence the COVID 19 environment made recruiting participants for this research increasingly difficult. Analysis for this report, predominately centres on the data from two university sites Western Sydney University and the University of Sydney.

Methodological approach, recruitment and data collection

Survey data

Surveys were used to provide a snapshot of the attitudes and behaviour of Pre-Service Teachers across a broad range of topics. Survey data was selected as it offered an opportunity to collect a large, comprehensive data set in a relatively short period of time. Surveys offered privacy and were perceived to be less intimidating than face-to-face or telephone interviews.

Survey links were made available to participants at each institution through individual announcements made by university academics in digital forums and the home pages of units of study. The Chief Investigators did not recruit or interview PSTs they were currently teaching. The online survey was hosted via Google forms and comprised of 30 questions (Appendix A). Participants identified the languages they spoke including heritage languages and languages learned in both formal and informal contexts. Participants were also asked to reflect on the application of this knowledge within their everyday lives, at the university and in their future teaching. Participants were given the option to consent to an interview at the conclusion of the survey.

Online interviews (Zoom)

Interviews provided an opportunity for Pre-Service Teachers to think historically, reflect on how they used language and literacies to navigate their local and global contexts and to consider their university experience and future teaching. Interviews provided the opportunity to deepen the data emanating from the survey responses.

Participants consenting to an interview were sent to a separate site and then contacted directly to arrange an interview. Following an interview protocol (Appendix B), individual 30-45-minute semi-structured interviews were conducted online and recorded via Zoom, at a time negotiated with each individual participant. PSTs' perspectives of their linguistic strengths, knowledge and experience were revealed through interviews. How these attributes may have contributed to their journey in an ITE program; how they were addressed by the University and what their impact might be on teaching students in diverse cultural and linguistic classrooms were all explored. During, or at the conclusion of the interview participants were also asked to complete a visual representation of their language practices and experience. This information could only be obtained from individual participants; probing and follow up questions were used to build on the survey and textual data. De-identified interview recordings were transcribed for analysis.

Language maps

Language maps offered participants an opportunity to visually represent their everyday language and literacy practices and experiences. Language maps have been used as an analytical tool to reveal out of school cultures and capabilities (D'warte 2014; 2018) that have otherwise been silenced or unexplored, this method complemented participants' interview data offering an innovative, alternative form of expression.

Mapping and its previous use, was discussed with participants before the commencement of the interview. Participants were asked to reflect on their linguistic and sociocultural lives, and visually represent where, how, when and with whom they used one or more languages in their everyday worlds. During, or on completion of the interviews, participants used a range of materials or digital drawing applications to create maps. This visual methodology offered an alternative way to represent and explore participants' experiences and meaning making (Barkhuizen et al., 2014). Restraints caused by COVID 19 required some changes to the protocol for the language mapping task. Maps were originally to be created during the interview, in past pilot projects this method has proved effective in enlivening participants thinking and reflectivity and facilitated opportunities for researchers to ask questions related to the images. This process and

has been found to generate rich discussion and further reflection. Due to the constraints of conducting interviews online, only some students were able to complete their maps during the online interviews, with whatever materials they had to hand or by using a drawing application provided. Others completed their maps after the interview and the maps were emailed to researchers and if required follow up questions about the maps were sent to participants.

Project Data

A total of 66 survey responses were recorded across all university institutions (see Table 1 for total survey responses per institution and teacher education program).

Survey data for each respondent included, gender, citizenship, enrolment classification, and country of origin, languages spoken, including heritage languages and language acquired in formal and informal settings, views on language learning, bi/multi-lingualism, university uptake of languages, application of languages to teaching and preparedness for teaching CALD students. The largest data set came from Western Sydney University's Early childhood education program's PSTs (preparation for working with students Birth to 5/Birth-12), closely followed by PSTs in the primary program.

Table 1: Survey response totals in data set

University	Number of student respondents			
	Respondent teaching area			All teaching areas (total)
	Primary education	Early childhood education	Secondary education	
The University of Sydney	5	11	3	19
University of Technology Sydney	4	0	0	4
Western Sydney University	16	23	2	41
Macquarie University	0	2	0	2
All universities (total)	25	36	5	66

Table 2: Interview data totals in data set

University	Number of interviews conducted			
	Interviewee teaching area			All teaching areas (total)
	Primary education	Early childhood education	Secondary education	
The University of Sydney	0	7	3	10
University of Technology Sydney	0	0	1	1
Western Sydney University	9	8	1	18
Macquarie University	0	5	0	5
All universities (total)	9	20	5	34

Interviews

A total of 34 interviews were conducted, recorded, and transcribed across all university institutions (see Table 2 for total interviews per institution and teacher education program).

All data were coded and de-identified. Audio recorded transcriptions of student interviews included data about how participants used language and literacies to navigate their local and global contexts. Concepts included linguistic diversity and language learning experiences, students' perceptions of linguistic strengths and needs, identified strategies for supporting language learning, barriers to language learning, acknowledgment of linguistic capacity by the university and the application of bi/multi-lingualism to future teaching. The largest data sets emanated from Western Sydney University and the University of Sydney with the largest number of interviews, 20, being conducted with Early childhood PSTs.

Maps

A total of 26 language maps were collected across university institutions (see Table 3 for total maps collected per institution and teacher education program).

Language maps include visual data of students' language and literacy practices and experiences, these maps were hand drawn using a range of materials or constructed in online drawing applications. All data were coded and de-identified. The largest data sets emanated from Western Sydney University and the University of Sydney, with 16 maps created by Early childhood PSTs.

Table 3: Total language maps in data set

University	Number of language maps			
	Interviewee teaching area			All teaching areas (total)
	Primary education	Early childhood education	Secondary education	
The University of Sydney	0	6	3	9
University of Technology Sydney	0	0	1	1
Western Sydney University	6	5	0	11
Macquarie University	0	5	0	5
All universities (total)	6	16	4	26

Descriptive Data and Analysis

Survey data

All data was de-identified after collection and codes were applied for individual and comparative analysis across the research team. The survey results were analysed using descriptive statistical methods to determine the languages spoken by Pre-Service Teachers including heritage languages and language acquired in formal and informal settings. A total of 66 survey responses were recorded across all four universities. 41 responses were collected from Western Sydney University, 19 from The University of Sydney, 4 from the University of Technology Sydney and 2 from Macquarie University.

Due to the low sample sizes from the University of Technology and Macquarie University survey data, these responses were excluded to maintain statistical power when analysing any interactions between variables and institutions.

Demographic data

Across both Western Sydney University and The University of Sydney, 56.67% of respondents ($n = 34$) were enrolled in an Early Childhood Education teaching degree, 35.00% ($n = 21$) were enrolled in a Primary Education teaching degree, and 8.33% ($n = 5$) were enrolled in a Secondary Education teaching degree (Figure 1).

Among respondents from The University of Sydney, 57.89% ($n = 11$) were enrolled in an Early Childhood Education teaching degree, 26.32% ($n = 5$) were enrolled in a Primary Education teaching degree, and 15.79% ($n = 3$) were enrolled in a Secondary Education teaching degree (Figure 2).

Among respondents from Western Sydney University, 56.10% ($n = 23$) were enrolled in an Early Childhood Education teaching degree, 39.02% ($n = 16$) were enrolled in a Primary Education teaching degree, and 4.88% ($n = 2$) were enrolled in a Secondary Education teaching degree (Figure 2).

Figure 1 Teaching Degrees Total

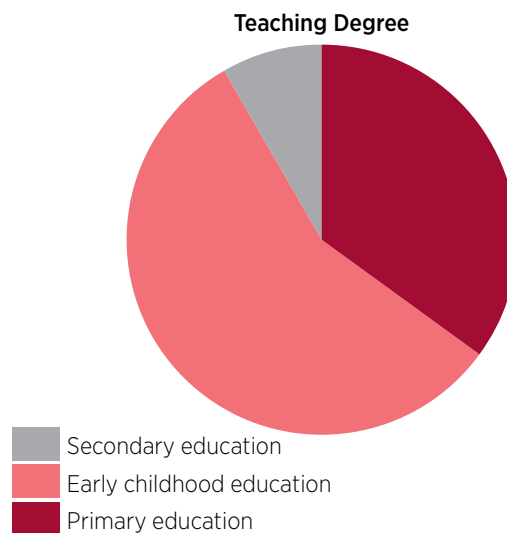
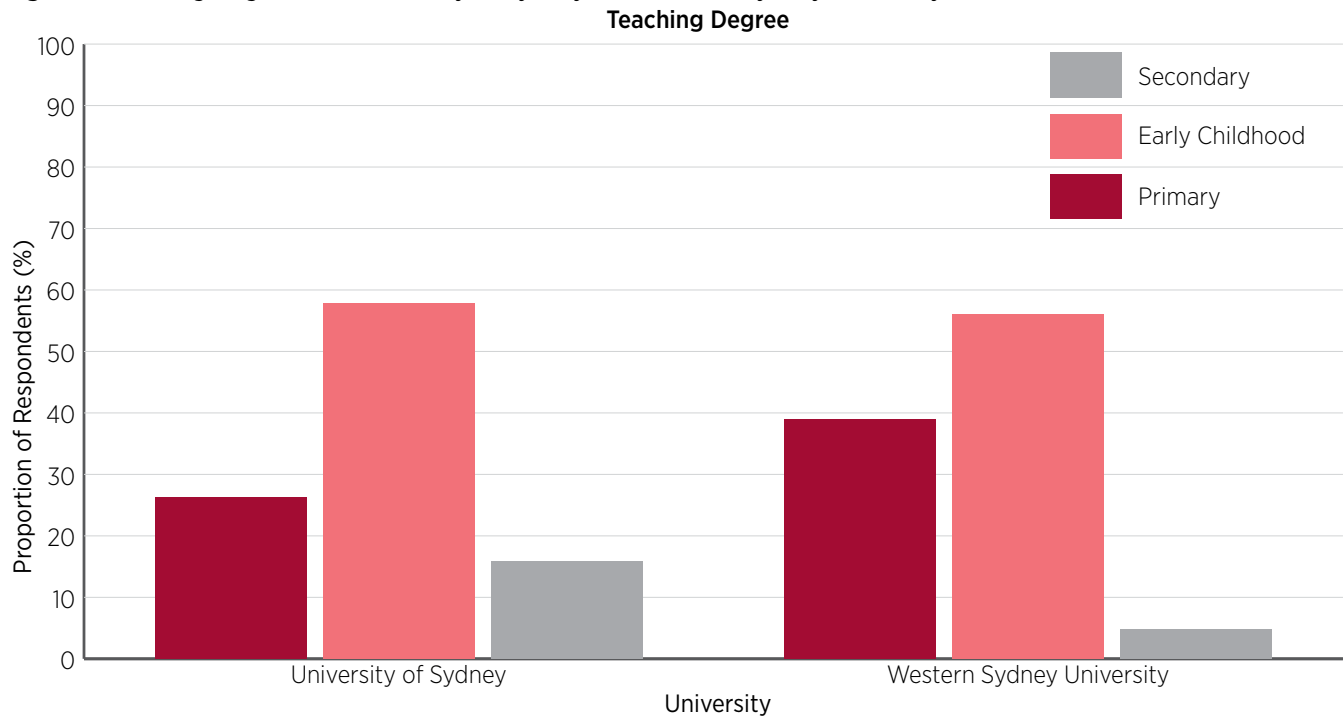
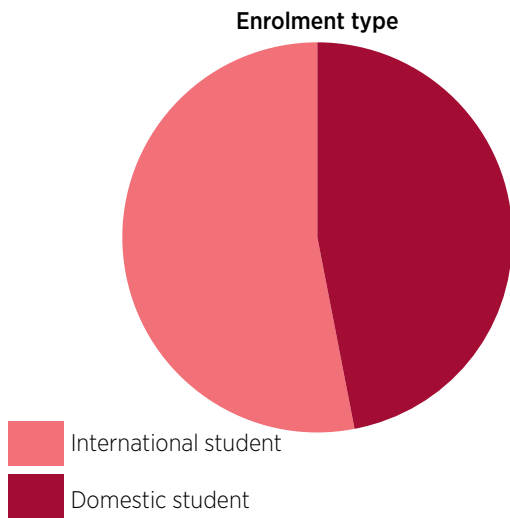


Figure 2 Teaching Degrees the University of Sydney and Western Sydney University



Although the project had initially targeted only those enrolled in Primary and Early Childhood Education teaching degrees, responses from those enrolled in Secondary Education teaching degrees were collected and included in analysis as current processes for teacher education programs include both primary and secondary teacher education students within the same units from and as a result some secondary students were interested in participating in this survey.

Figure 3 Student Enrolment Type



Across both universities, 58.33% of respondents ($n = 35$) were international students and 41.67% ($n = 25$) were domestic students (Figure 3). Among respondents from The University of Sydney, 68.42% ($n = 13$) were international students whilst 31.58% ($n = 6$) were domestic students; whilst among respondents from Western Sydney University, many fewer 53.66% ($n = 22$) were international students while 46.34% ($n = 19$) were domestic students (Figure 4).

Of all survey respondents, 91.67% ($n = 55$) were female and 8.33% ($n = 5$) were male (Figure 5). Among The University of Sydney respondents, 78.95% ($n = 15$) were female while 21.05% ($n = 4$) were male. 97.56% ($n = 40$) of Western Sydney University respondents were female and 2.44% ($n = 1$) were male.

Survey data revealed that 20.00% ($n = 12$) of all survey respondents were born in Australia (Figure 6). Among the 80.00% of respondents ($n = 48$) born outside of Australia, a diversity of 17 countries of birth were recorded. Among respondents from The University of Sydney, 78.95% ($n = 15$) were born outside Australia and 21.05% ($n = 4$) were born in Australia; whilst among respondents from Western Sydney University, 80.49% ($n = 33$) were born outside Australia and 19.51% ($n = 8$) were born in Australia (Figure 7).

Figure 4 Enrolment Type the University of Sydney and Western Sydney University

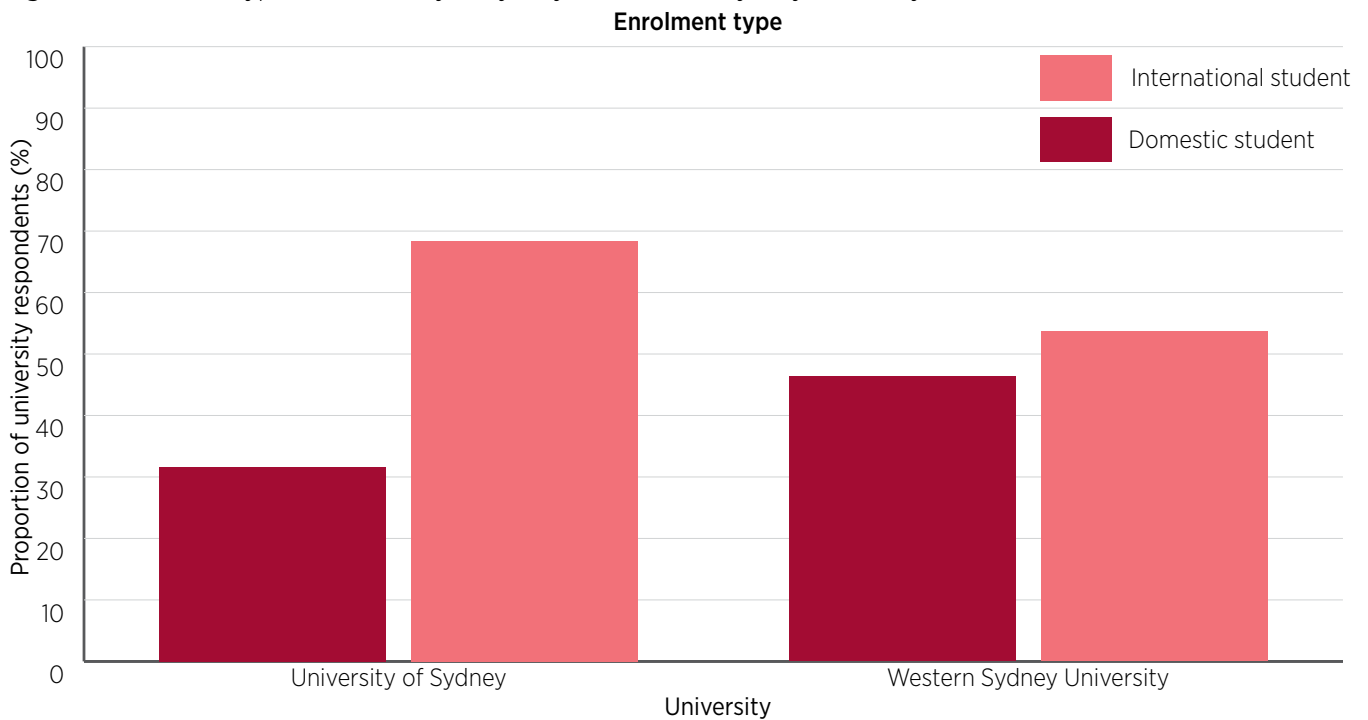


Figure 5 Identified Gender Categories

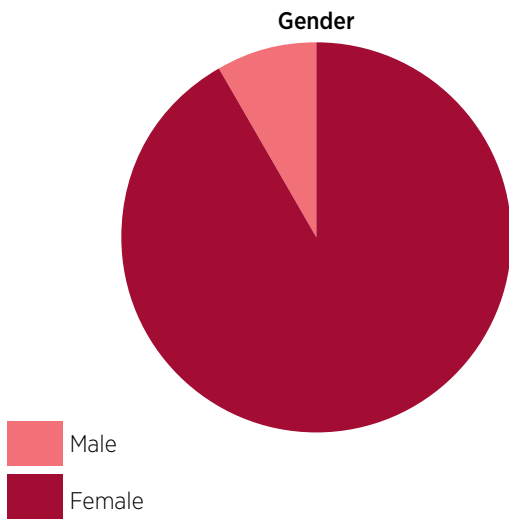


Figure 6 Country of Birth

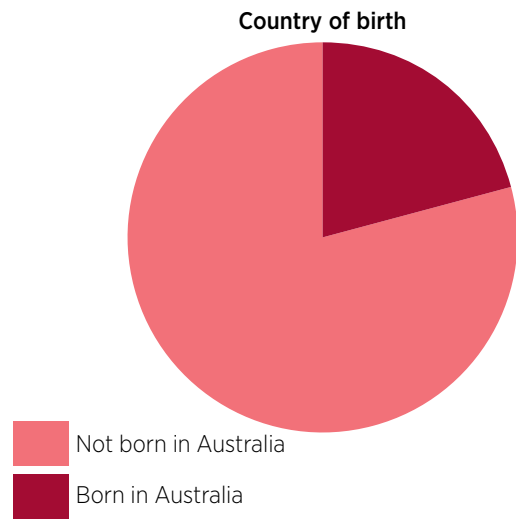


Figure 7 Country of Birth the University of Sydney and Western Sydney University

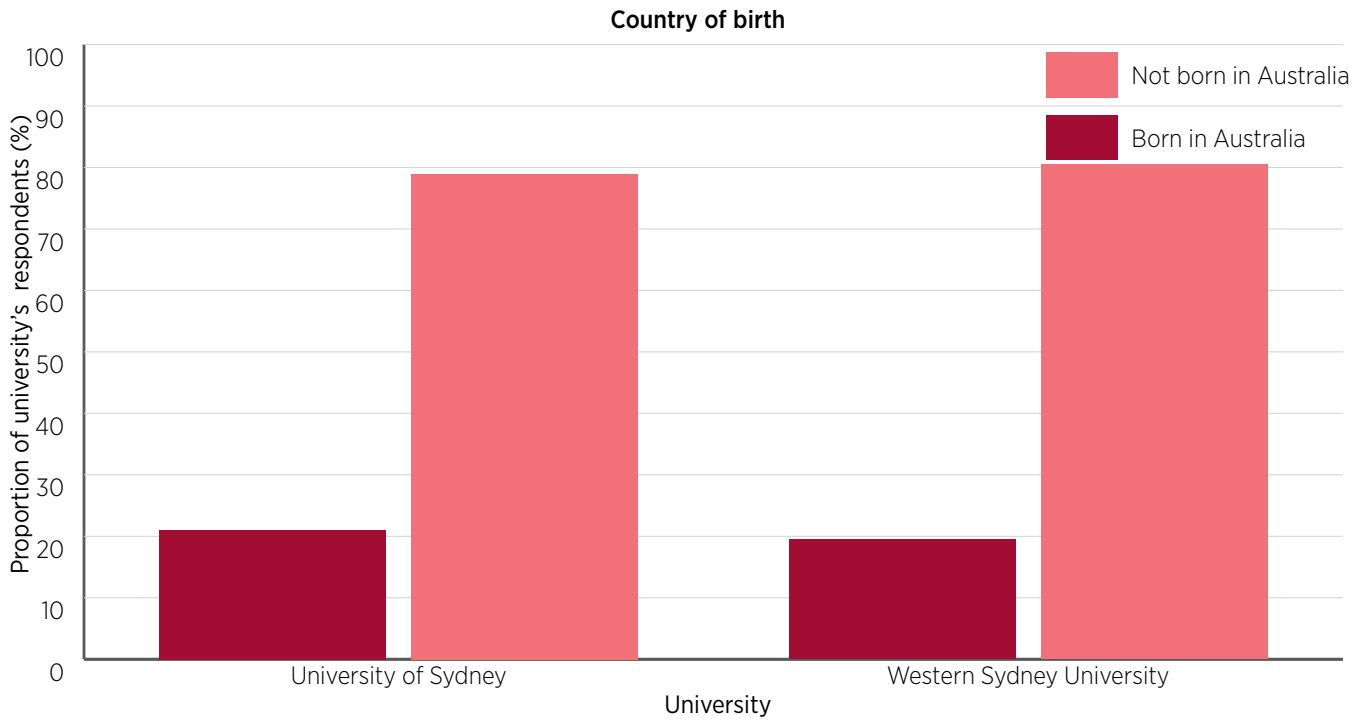


Table 4 Identified Countries of Birth

University	Students' countries of birth other than Australia	Total countries
The University of Sydney	China, Hong Kong, Philippines, Singapore, Taiwan, Vietnam	6
Western Sydney University	China, Colombia, Greece, Hong Kong, India, Indonesia, Japan, Jordan, Lebanon, Malaysia, Philippines, South Korea, Sudan, Turkey	14
All countries of birth other than Australia	China, Colombia, Greece, Hong Kong, India, Indonesia, Japan, Jordan, Lebanon, Malaysia, Philippines, Singapore, South Korea, Sudan, Taiwan, Turkey, Vietnam	17

A diversity of languages and dialects were spoken by students with 81.67% ($n = 49$) of all survey respondents speaking a language other than English as their first language, while only 16.67% ($n = 10$) spoke English as their first language and 1.67% ($n = 1$) identified English and another language as their first language. A total of 22 first languages – including regional dialects of national languages were recorded. Across the University sites, 89.47% ($n = 17$) of the University of Sydney students spoke a first language(s) or dialect(s) other than English and 10.53% ($n = 2$) spoke English as their first language. Almost as many 78.05% ($n = 32$) of Western Sydney University students spoke a first language(s) or dialect(s) other than English, 19.51% ($n = 8$) spoke English as their first language, and 2.44% ($n = 1$) identified English and another language as their first language

Language spoken at home data revealed 53.33% of all respondents ($n = 32$) spoke more than one language at home and only 5.00% ($n = 3$) of respondents spoke English only at home. Of the remaining survey respondents that spoke a language or languages other than English at home, 40.00% ($n = 24$) spoke English and other language(s) at home, and 55.00% ($n = 33$) did not speak English at home.

Across both universities, the majority of students did not speak English at home, (52.63% [$n = 10$] of The University of Sydney respondents and 56.10% [$n = 23$] of Western Sydney University respondents). The diversity of languages spoken at home, included national languages as well as regional dialects. A total of 28 home languages were recorded among all survey respondents, with 9 spoken by The University of Sydney students and 24 spoken by Western Sydney University students. Included in this diversity were regional dialects like the Sichuan Chinese dialect, as well as informal languages like 'Taglish', a combination of Tagalog and English.

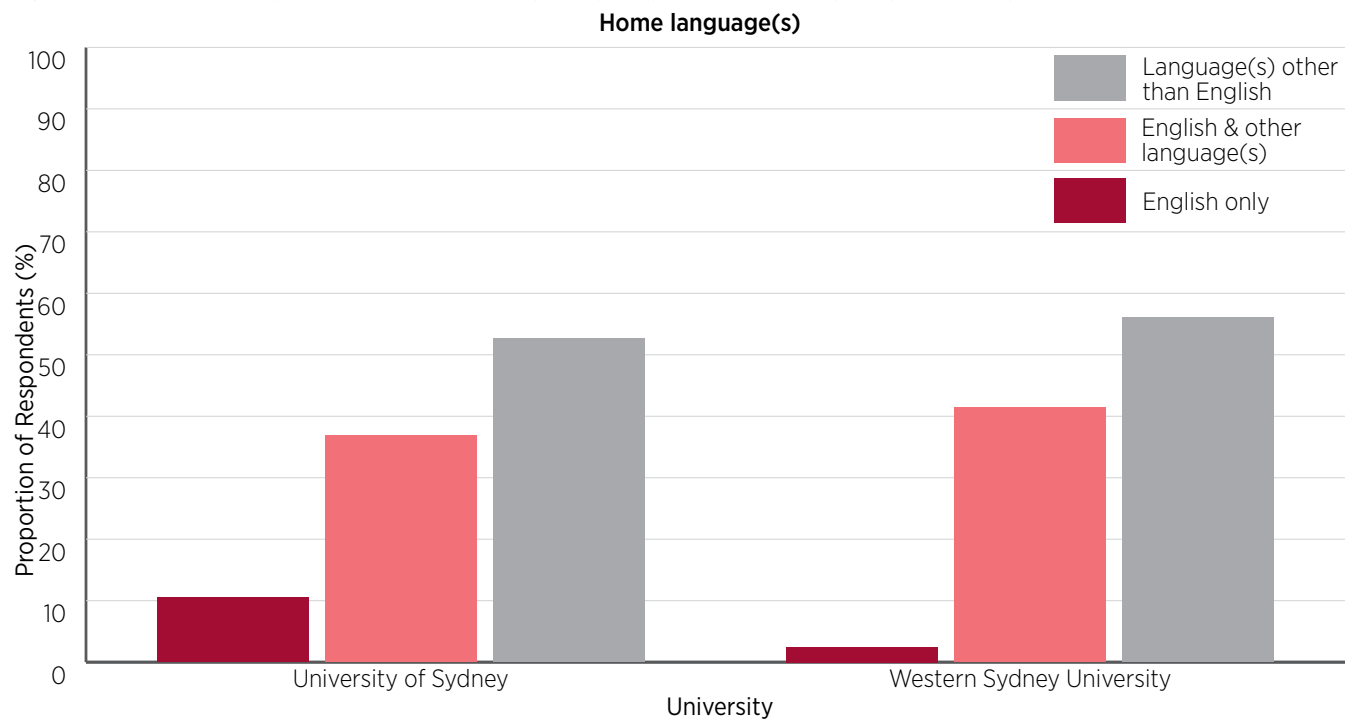
Table 5 Identified first language/dialects spoken

University	First languages/dialects	Total first languages/dialects
The University of Sydney	English, Bangla, Cantonese, Filipino (Tagalog), Mandarin, Shanghai-dialect Chinese, Taiwanese Hokkien, Vietnamese	8
Western Sydney University	English, Arabic, Bahasa, Cantonese, Filipino (Tagalog), Greek, Gujarati, Hindi, Japanese, Khmer, Korean, Macedonian, Mandarin, Punjabi, Spanish, Telugu, Tamil, Turkish	18
All first languages/dialects	English, Arabic, Bahasa, Bangla, Cantonese, Filipino (Tagalog), Greek, Gujarati, Hindi, Japanese, Khmer, Korean, Macedonian, Mandarin, Punjabi, Shanghai-dialect Chinese, Spanish, Taiwanese Hokkien, Telugu, Tamil, Turkish, Vietnamese	22

Table 6 Identified language/dialects spoken at home

University	Home languages/dialects	Total home languages spoken
The University of Sydney	Cantonese, English, Filipino (Tagalog), 'Taglish', Dalian dialect Chinese, Mandarin, Shanghai dialect Chinese, Sichuan dialect Chinese, Vietnamese	9
Western Sydney University	Arabic, Bahasa, Cantonese, Croatian, English, Filipino (Tagalog), Greek, Gujarati, Haryanvi, Hindi, Japanese, Khmer, Korean, Macedonian, Malay, Mandarin, Marathi, Punjabi, Spanish, Tamil, Telugu, Teo Chew dialect Chinese, Turkish, Vietnamese	24
All Home languages/dialects	Arabic, Bahasa, Cantonese, Croatian, Dalian dialect English, Filipino (Tagalog), 'Taglish', Greek, Gujarati, Haryanvi, Hindi, Japanese, Khmer, Korean, Macedonian, Malay, Mandarin, Marathi, Punjabi, Shanghai dialect Chinese, Sichuan dialect Chinese, Spanish, Tamil, Telugu, Teo Chew dialect Chinese, Turkish, Vietnamese	28

Figure 8 Home Language spoken the University of Sydney and Western Sydney University



Across universities 96.67% ($n = 58$) of all survey respondents learnt additional languages other than their home languages, with a diversity of 18 languages and dialects learnt among these students.

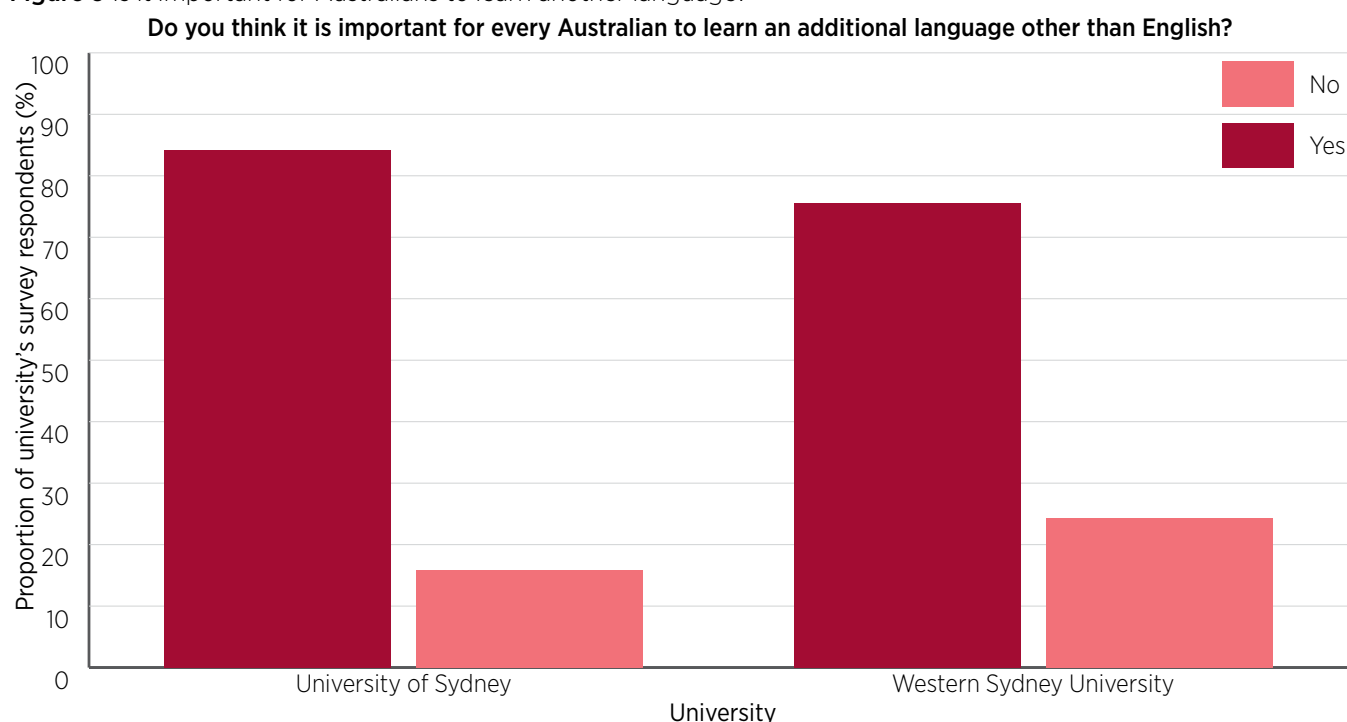
Table 7 Other languages learned

University	Other languages spoken	Total languages
The University of Sydney	Arabic, Bahasa Indonesia, Cantonese, English, French, German, Japanese, Korean, Mandarin, Putonghua dialect Chinese, Spanish, Turkish	12
Western Sydney University	Arabic, Cantonese, English, French, German, Greek, Hindi, Japanese, Korean, Malay, Mandarin, Marathi, Serbian, Spanish, Turkish, Urdu	16
All other languages spoken	Arabic, Bahasa Indonesia, Bahasa Melayu, Cantonese, French, German, Greek, Hindi, Japanese, Korean, Mandarin, Marathi, Putonghua dialect, Chinese, Serbian, Spanish, Turkish, Urdu	18

In sharing views on language learning, 78.33% of all survey respondents ($n = 47$) thought it important for every Australian to learn an additional language other than English while 21.67% ($n = 13$) disagreed. This trend is consistent across both universities, with 84.21% of The University of Sydney respondents ($n = 16$) and 75.61% of Western Sydney University respondents ($n = 31$) agreeing with the statement.

In reflecting on their university experiences 56.67% of all survey respondents ($n = 34$) did not feel that their university acknowledged their linguistic strengths, while 43.33% ($n = 26$) suggested the reverse. While this trend is seen among Western Sydney University respondents (60.98% [$n = 25$] also disagree with the statement; the inverse was found among The University of Sydney respondents (56.67% [$n = 10$] agreed with the statement.

Figure 9 Is it important for Australians to learn another language?



In reflecting on their teacher education course 53.33% of all survey respondents ($n = 32$) felt their languages (linguistic strengths) were recognised, built on or utilised in their teacher education course, whilst 46.67% ($n = 28$) did not. This trend is consistent across both universities, with 57.89% of The University of Sydney respondents ($n = 11$) and 51.22% of Western Sydney University respondents ($n = 21$) agreeing with the statement.

Responding to preparedness to teach culturally and linguistically diverse students, 80.00% of all survey respondents ($n = 48$) felt prepared to teach students from culturally and linguistically diverse backgrounds, while 20.00% ($n = 12$) do not. This trend is consistent across both universities, with 80.49% of The University of Sydney respondents ($n = 15$) and 78.95% of Western Sydney University respondents ($n = 33$) agreeing with the statement.

Figure 10 University recognition of linguistic strength

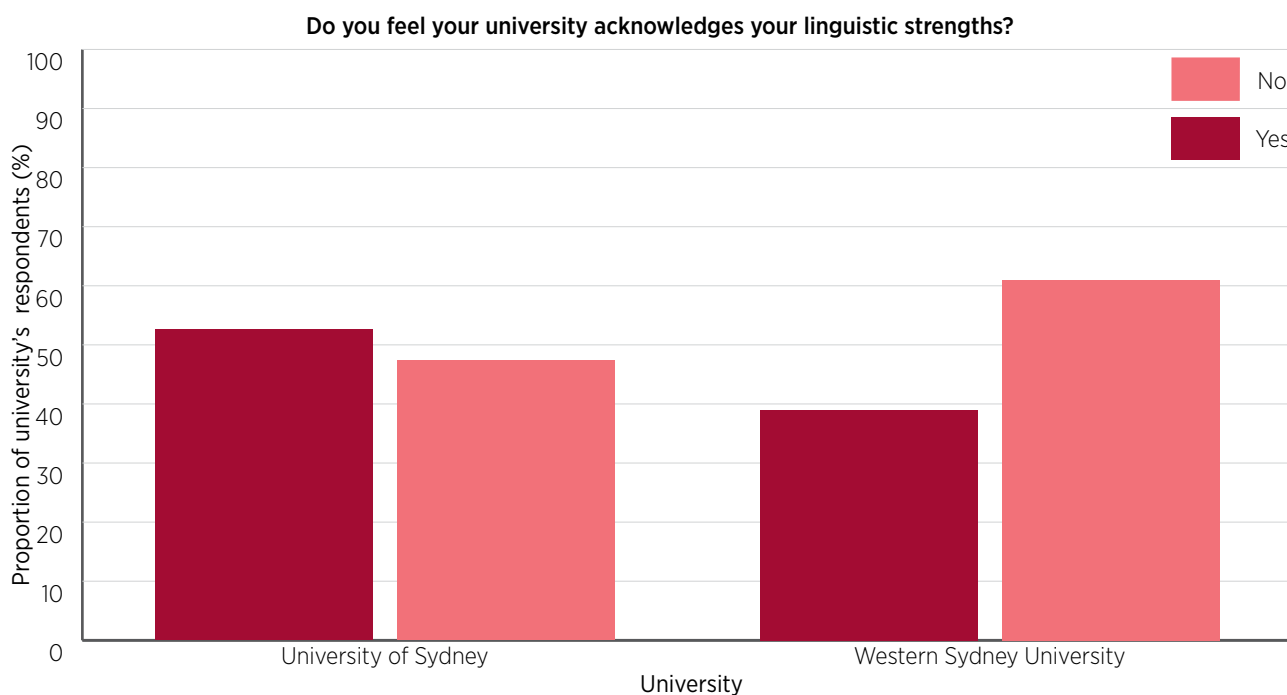


Figure 11 University recognition of linguistic strength within teacher education course

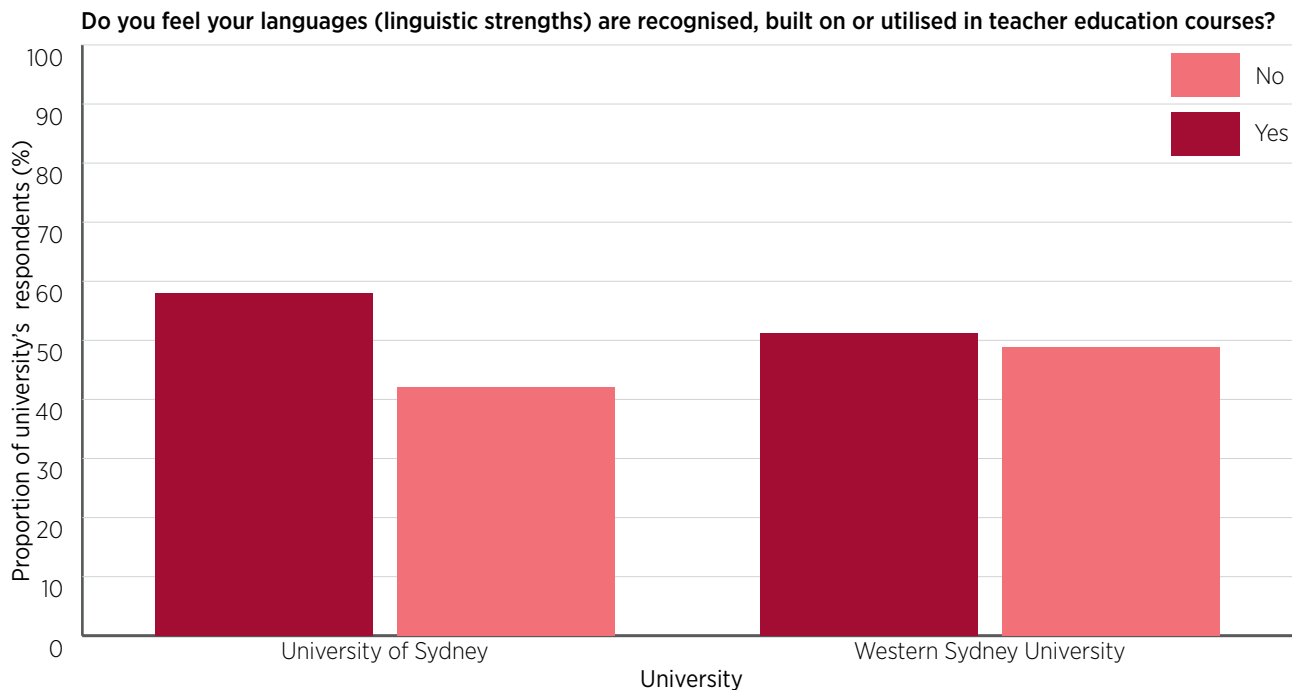
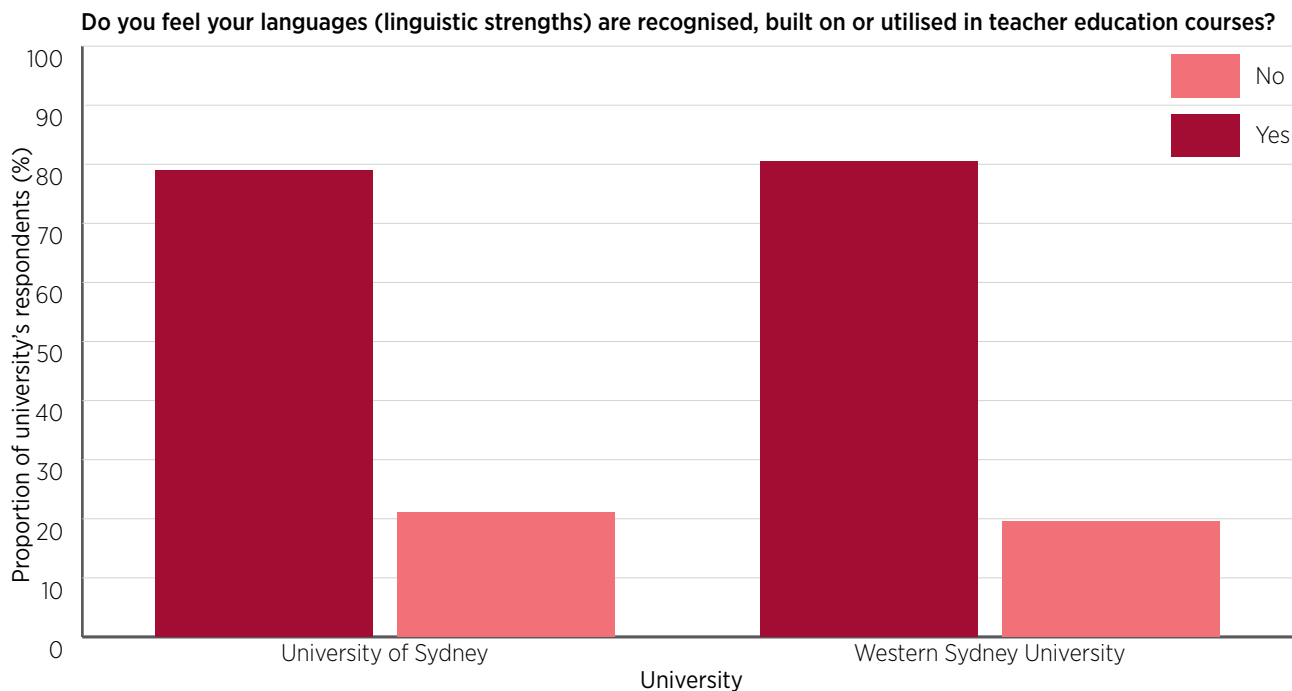


Figure 12 Preparedness to teach culturally and linguistically diverse students education course



The survey data indicated that pre-service teachers enrolled in two of the two largest teacher education programs in metropolitan Sydney bring rich linguistic and cultural funds of knowledge, coming from 17 countries across the world they spoke between 22-28 languages and dialects and incredibly were learning or had learned an additional 18 languages.

Survey data also indicated that 78.33% of all survey respondents thought it important for every Australian to learn an additional language other than English. Across universities 56.67% of respondents did not agree that their university acknowledged their linguistic strengths. For Western Sydney University respondents, 60.98% indicated no recognition of their linguistic skills and 56.67% of University of Sydney students agreed. Conversely in teacher education course 53.33% of all survey respondents felt their languages (linguistic strengths) were recognised, built on or utilised in their teacher education course. Western Sydney University students indicated that recognition of their linguistic strengths in their teacher education programs courses was marginally better than the University recognition. However, 80.00% of all survey respondents indicated a preparedness to teach culturally and linguistically diverse students. While the survey also included short answers, few responses were entered for these prompts. Responses to this data and subsequent analysis of interview data will follow.

Interview data: Demographic Information

Analysis of the interviews employed a thematic content analysis guided by the three research questions. Consolidation of codes into themes and concepts were decided through an iterative approach (Saldana, 2016). This approach involved analysing the data to elicit patterns and themes around Pre-Service Teachers' expressed views on their linguistic repertoires and how they saw these in the context of the university program and their future teaching. Theoretical categories were developed and integrated into a framework supporting understanding of the data.

Interviews were conducted with 10 students from the University of Sydney and 18 from Western Sydney University. Of the 28 interviewees, 10 were enrolled in a Primary Education degree (all at Western Sydney University), 15 in an Early Childhood Education degree (seven students at the University of Sydney; eight students at Western Sydney University) and three in a Secondary Education degree (all from the University of Sydney). All the students were female except two males, undertaking a Secondary Education degree at the University of Sydney.

There were 13 domestic students (two from the University of Sydney and 11 from Western Sydney University) and 15 international students (eight from the University of Sydney and seven from Western Sydney University). Only five students were born in Australia (one from the University of Sydney and four from Western Sydney University) and 23 students were born outside of Australia (nine from the University of Sydney and 14 students from Western Sydney University). A total of 14 countries of origin were recorded among interviewees – five of these among students at the University of Sydney and 9 among students at Western Sydney University. Only seven interviewees spoke English as their first language (two from the University of Sydney and five from Western Sydney University), with the remaining 21 interviewees speaking languages other than English. A total of 10 first languages other than English were spoken among the 21 interviewees. Four of these languages were spoken by the University of Sydney students and nine were spoken among Western Sydney University students.

Figure 13 Teaching degrees

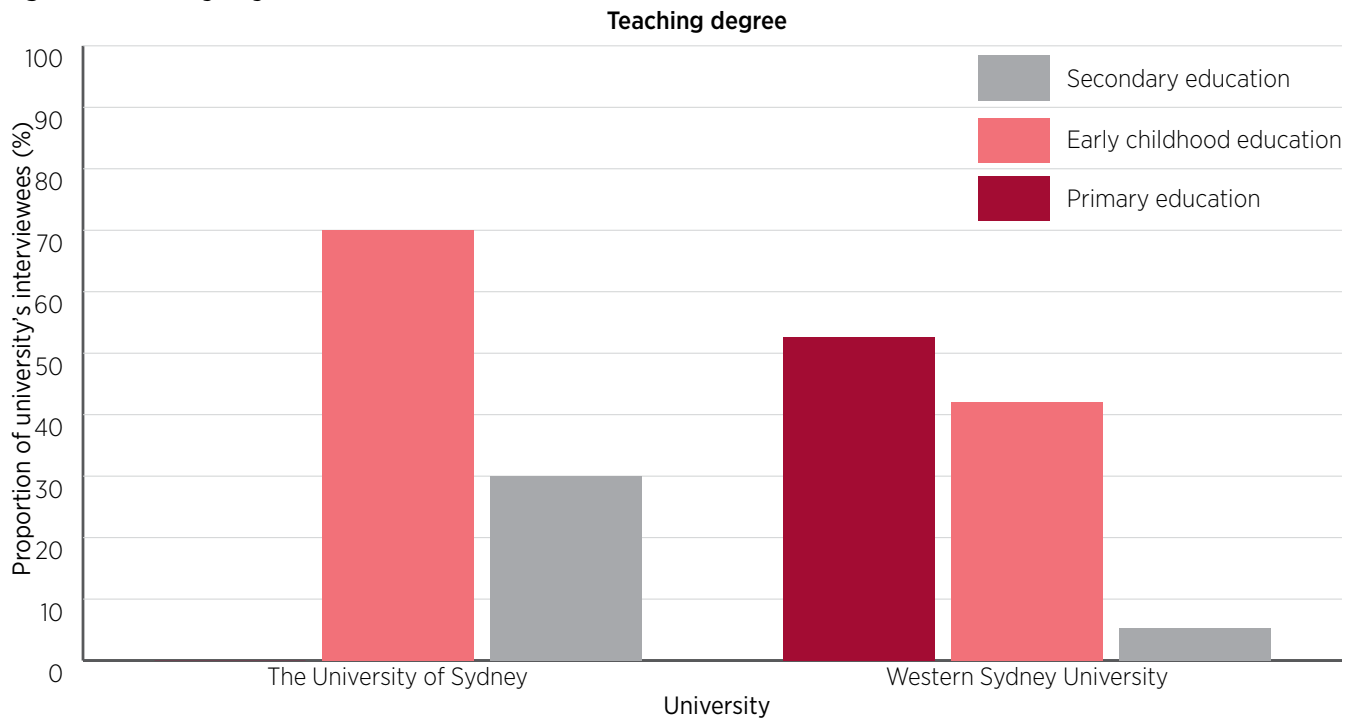


Figure 14 Enrolment

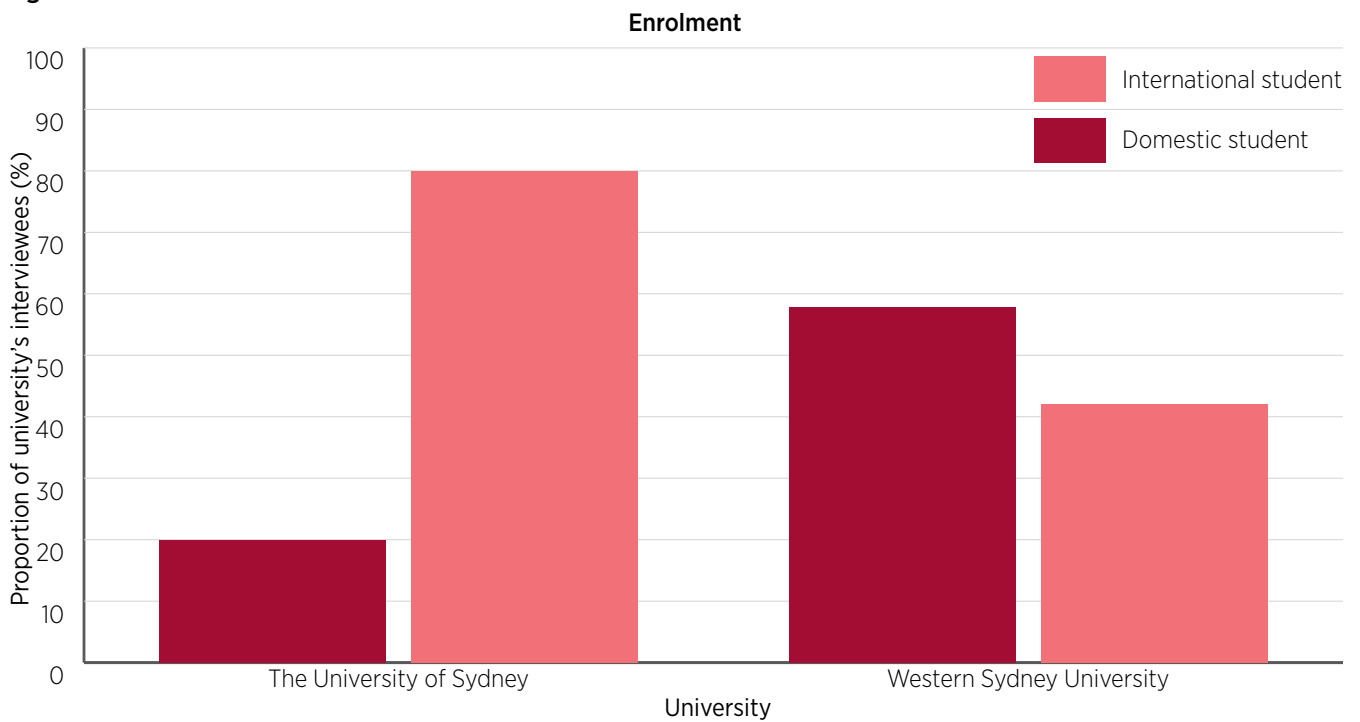


Figure 15 Country of Birth

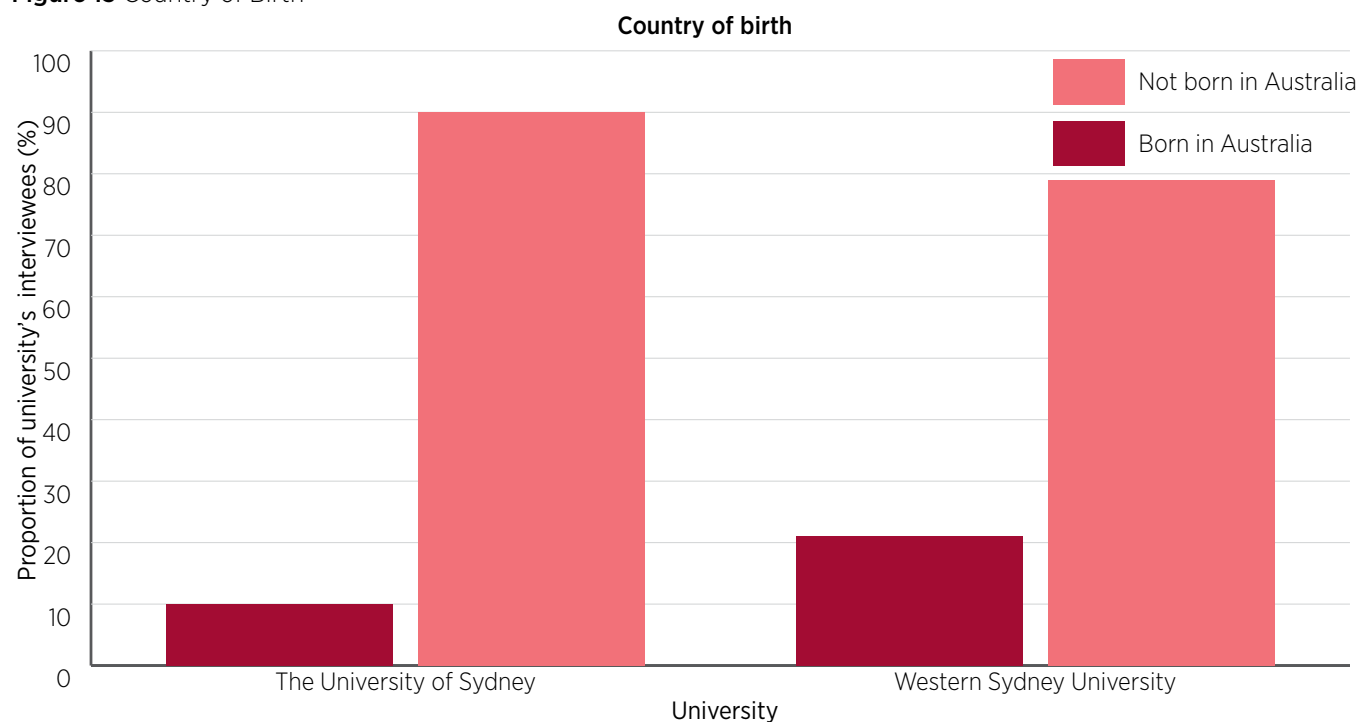


Table 8 Countries of Birth

University	Students' countries of birth other than Australia	Total countries
The University of Sydney	China, Hong Kong, Philippines, Singapore, Taiwan	5
Western Sydney University	China, Colombia, Hong Kong, India, Indonesia, Japan, Jordan, Lebanon, Malaysia, Sudan, Turkey	11
Total number of birth countries other than Australia	China, Colombia, Hong Kong, India, Indonesia, Japan, Jordan, Lebanon, Malaysia, Philippines, Singapore, Sudan, Taiwan, Turkey	14

Table 9 First Languages Spoken

University	First languages spoken	Total first languages
The University of Sydney	Cantonese, Hokkien, Mandarin, Tagalog	4
Western Sydney University	Arabic, Cantonese, Croatian, Hindi, Japanese, Mandarin, Punjabi, Telugu	8
Total number of first languages spoken	Arabic, Cantonese, Croatian, Hindi, Hokkien, Japanese, Mandarin, Punjabi, Tagalog, Telugu	10

Only two interviewees spoke only English as their home language (one from each university), while 14 spoke a combination of English and other language(s) (four from the University of Sydney; 10 from Western Sydney University), and 13 spoken language(s) other than English (five from the University of Sydney; eight from Western Sydney University). A total of 21 home languages other than English were spoken among interviewees (six of these spoken among the University of Sydney students and 17 spoken among Western Sydney University students). Included in this diversity are regional dialects – e.g. Sichuan dialect Chinese; as well as informal languages – e.g. ‘Taglish’, a combination of Tagalog and English.

27 interviewees had learnt additional languages other than their home languages, with a diversity of 15 languages and dialects learnt among these students (nine among students from the University of Sydney and 12 among students from Western Sydney University).

Figure 16 Home Language Use

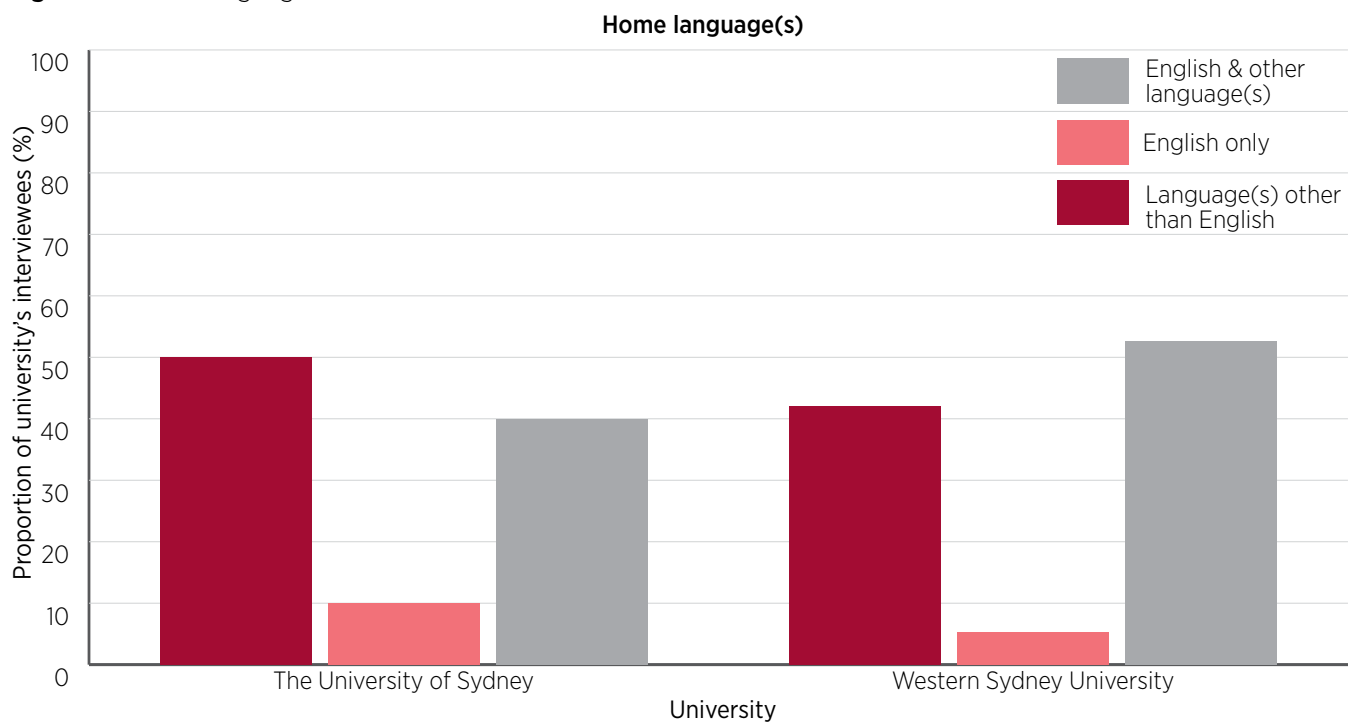


Table 10 Languages Spoken at Home

University	Home languages/dialects	Total languages
The University of Sydney	Cantonese, Hokkien dialect Chinese, Mandarin, Sichuan dialect Chinese, Tagalog (Filipino), 'Taglish'	6
Western Sydney University	Arabic, Bahasa Melayu, Cantonese, Croatian, Greek, Haryanvi, Hindi, Japanese, Korean, Telugu, Tamil, Mandarin, Marathi, Punjabi, Spanish, Turkish, Vietnamese	17
Total number of home languages/dialects	Arabic, Bahasa Melayu, Cantonese, Croatian, Greek, Haryanvi, Hindi, Hokkien dialect Chinese, Japanese, Korean, Telugu, Tamil, Mandarin, Marathi, Punjabi, Sichuan dialect Chinese, Spanish, Tagalog (Filipino), 'Taglish', Turkish, Vietnamese	21

Table 11 Additional languages learned

University	Other languages learnt	Total languages
The University of Sydney	Cantonese, English, French, German, Japanese, Mandarin, Putonghua dialect Chinese, Spanish, Turkish	9
Western Sydney University	Arabic, Bahasa Melayu, English, French, German, Greek, Hindi, Japanese, Korean, Mandarin, Marathi, Spanish	12
Total number of other languages learnt	Arabic, Bahasa Melayu, Cantonese, English, French, German, Greek, Hindi, Japanese, Korean, Mandarin, Marathi, Putonghua dialect Chinese, Spanish, Turkish	15

Language Map

Language mapping has been used as both a method and pedagogical tool for exploring languages and literacies with young people in super-diverse classrooms (D'warte, 2018; 2021). This, and other research employing visual methods (Fendler, 2013; Melo-Pfeifer, 2015), has revealed that offering young people cartographic methods to explore their learning can significantly 'intervene in the social imaginary of learning' (Fendler, 2013, p. 787). Language maps have offered analytical and pedagogical possibilities for both shifting the social organization of learning and examining what counts as valued knowledge (Gutiérrez, 2008) in super-diverse educational settings, reducing the demand made on a respondent's language skills, and offering an alternative way to view repertoires and bring language, identity and learning into sharp focus (Barkhuizen et al., 2014; Cummins, 2009; Melo-Pfeifer, 2015). In recent research, this visual methodology has been shown to support teachers in not only learning more about their students (D'warte, 2021) but using that learning to inform teaching and learning.

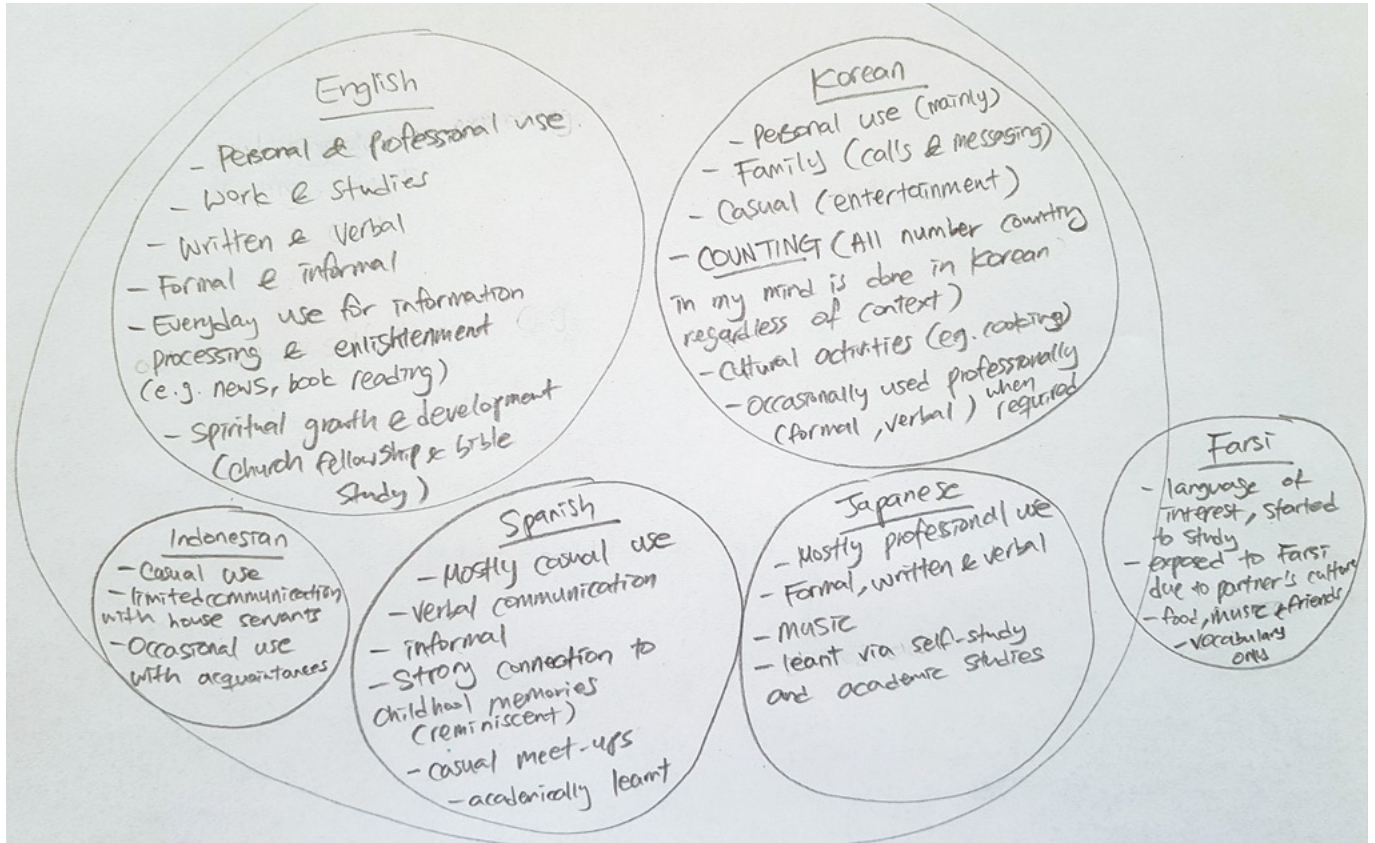
In this study, participants were asked to create language maps during their interviews prompted by the following suggestion: *Think about the ways you use language everyday where, when, with whom and in what context and what languages/s and please visually represent that with what you have had hand or the drawing application we have sent.* Previous research found that discussion immediately following the mapping exercise has been a vital part of the activity, and has functioned to give the participants an avenue to explain and reflect on their visual representations. However, in this study most of the participants chose to complete their maps after the interview and follow up questions were sent as needed. Limitations of the analysis, the way the context and subsequent analysis may have promoted the emergence of some linguistic features over others and worked to mire the inclusion and disregard of more relevant features, is considered. To add complexity to this analysis individual interview data was reviewed to deepen interpretations. Interview transcripts were analysed by identifying and applying descriptive codes to the expressed views of participants about their own repertoires and where possible to their reflections on completed maps.

Analysis of the visual data was done in several stages, beginning with general observation, noting feeling and impressions generated from a review of the full data set of 20 maps collected from Western Sydney and the University of Sydney. Guided by a previously developed spatial analysis (D'warte & Somerville, 2014) we asked: How are the images and text arranged and what spatial relationships are created between them? This was combined with a social semiotic approach using Kress & van Leeuwen's (2006) 'Grammar of Visual Design'. Analysis combined reading maps as a spatial arrangement of image-text assemblages that chart particular navigational pathways of linguistic practice and engagement with participants 'semiotic work' and identification of the maps' meaning making functions in relation to what was foregrounded in the maps: What was happening? (Representational) or conceptual (Symbolic); How was the relationship with the viewer being established? (Interactive) and How was the text composed? (Compositional). Analysis involved coding for patterns, relationships and themes across the data set. The process was to dwell on the maps as a body of data, (re)viewing them in their individual representations and in relation to the whole. The following thematic analysis includes maps that are representative of the mapping data collected across universities. Priority was given to the visual expression and analysis of what was privileged through the lens offered by individual maps.

Representational linguistic flexibility

A diverse range of semiotic resources were employed to showcase multilingual, multimodal practices, experiences and identities. Each map was different, complex and multilayered and this required researchers to employ ongoing iterative processing. Almost all maps were representational showcasing multilingual, multimodal worlds, creativity and linguistic flexibility, yet few maps included text written in languages other than English. Maps revealed one or more languages used in online environments, with friends and families, and in engagement in diverse social activities. In Map 1 Rewa, (all names are pseudonyms) reveals she is a speaker of six languages, learned as she attended schools around the world. While Rewa's first language is Korean her previous employment enabled her to continue to speak Japanese and Spanish and continue to study Spanish formally. Despite Rewa's well developed linguistic skill, Rewa expressed the view that this knowledge applied to her future teaching in relation to accepting difference; *I guess I'm more open towards differences.*

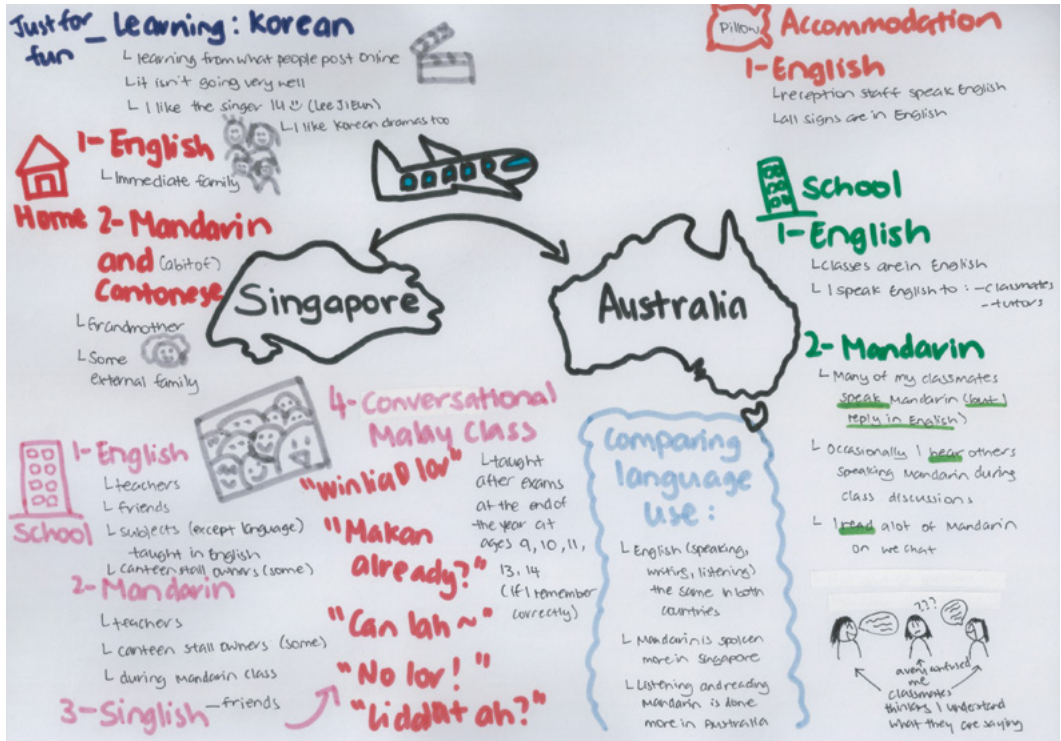
Map 1 Rewa



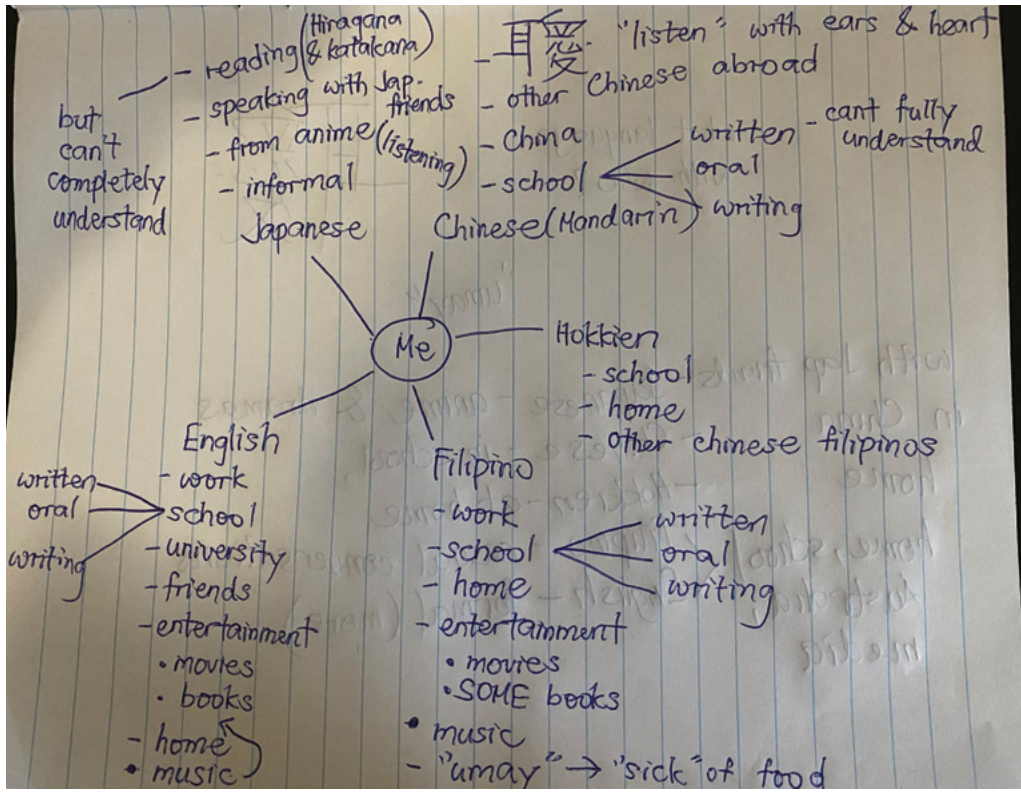
Maps highlighted the ways participants maintained and further developed their interests in a range of multilingual, multimodal environments. This can be seen in Map 2 by Lin Li and Map 3 by Cindy. Both Lin and Cindy showcase engagement with multiple languages across a range of environments. Lin Li learns Korean just for fun. Cindy, who is fluent in Mandarin, English, Tagalog, a speaker of Hokkien and a student of Japanese, expressed the view that in employing a multilingual linguistic repertoire, *you have to listen with your heart, like you use your ears and*

you use your heart to listen. Lin Li expressed her language use as social, emotional, multimodal and embodied (Block, 2014). The cultural and linguistic flexibility on display across maps is rarely placed at the centre of teaching and learning in mainstream classrooms, but acknowledgement and development of these knowledges can go some way to disrupting the monolingual, monocultural mindset across educational settings.

Map 2 Lin Li



Map 3 Cindy

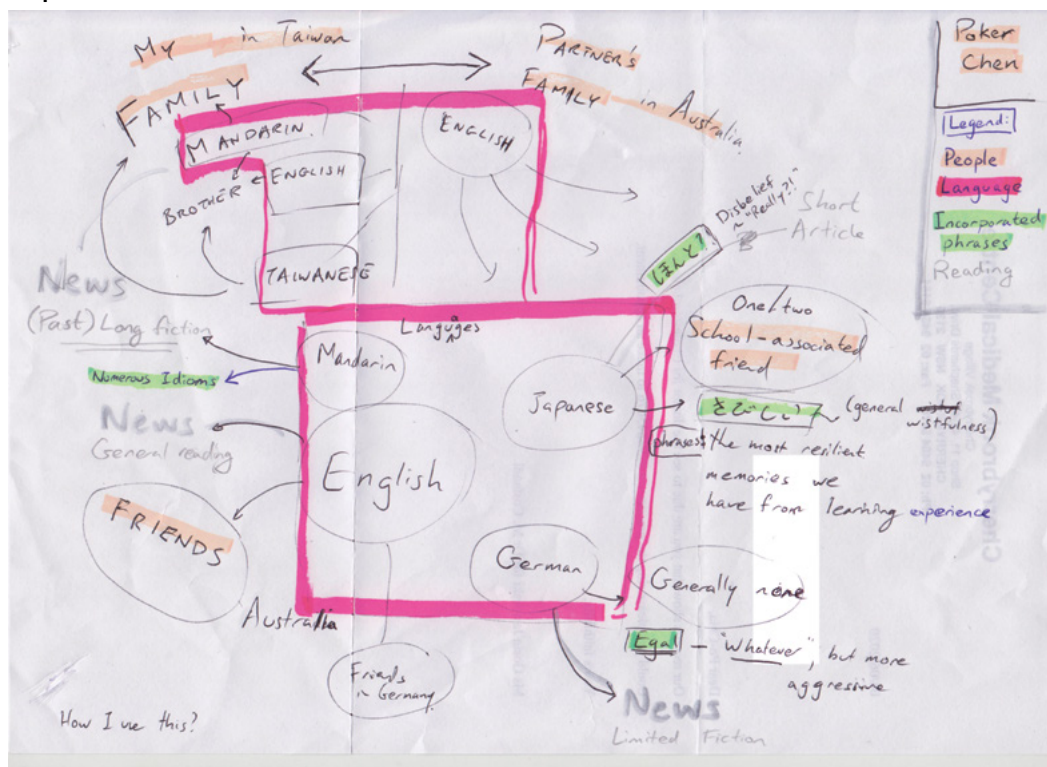


Dynamic, hybrid and transnational repertoires

Each map revealed the dynamic, hybrid and transnational repertoires of our multilingual participants. While analysis enabled a view of the diversity of paths and resources of our participants, unfortunately actively finding ways to draw on this diversity in order to improve language learning and teaching education is not a key educational priority. The breadth, depth and complexity of participants' knowledge and experience was overwhelming. Representations of the ways participants used different languages in formal and informal contexts, sometimes across different time spans was evident in maps and reinforced in interviews. Not surprisingly, English dominated in University contexts, despite participants often labelling this as a multicultural site; all agreed their rich linguistic repertoire was rarely a part of their university life.

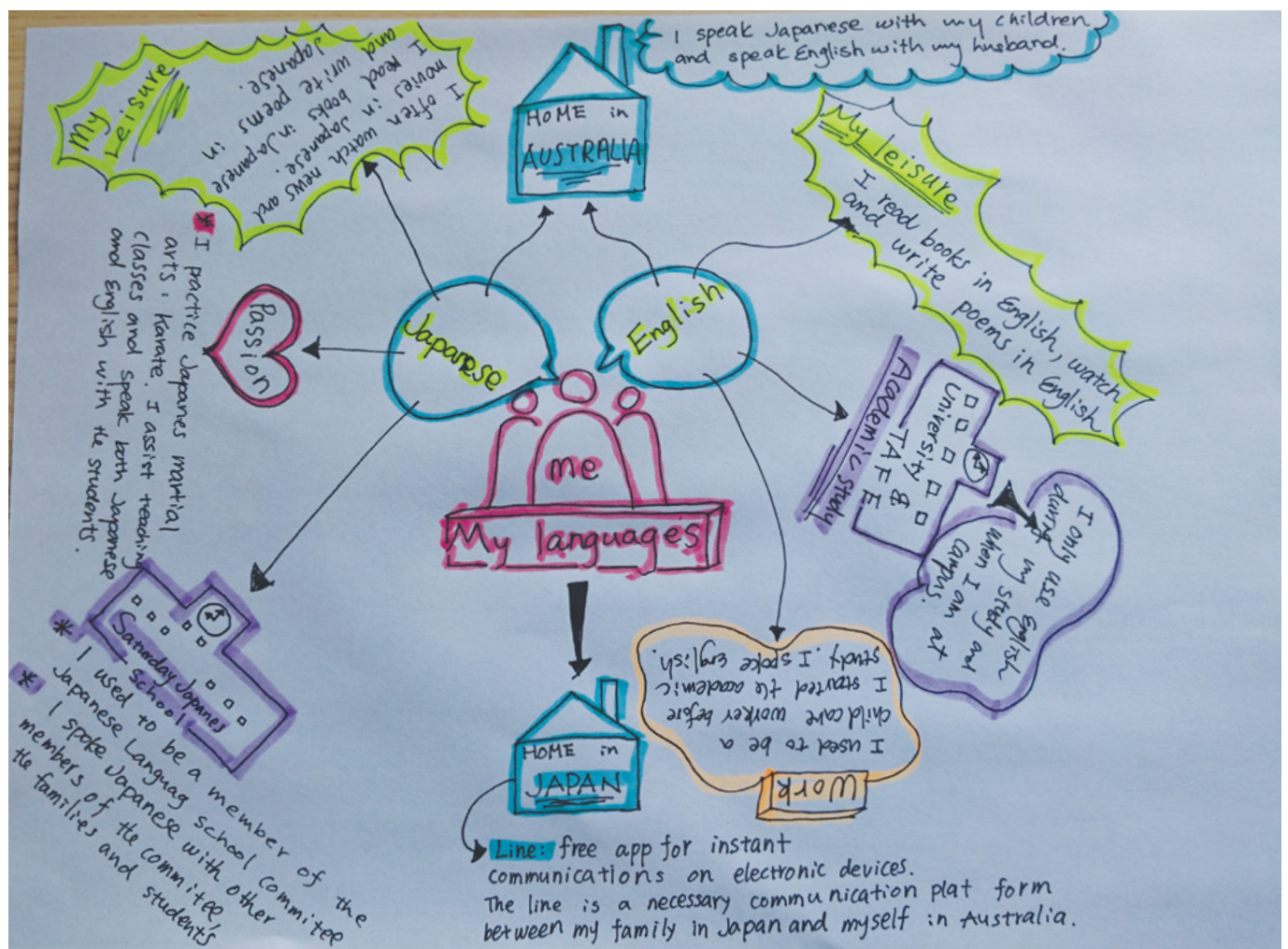
Much research argues that language learner identity is not only shaped by individual learners (Iversen, 2020), but is also influenced by the symbolic value of the language (Bucholtz & Hall, 2005) in relation to the broader social, cultural and community context in which it is situated. All maps expressed affiliations and complex representations of the relationship between language and identity. Exploring this relationship offers possibilities for not only enhancing engagement and participation for multilingual pre-service teachers, but can place cultural and linguistic flexibility at the centre of teaching and learning. While maps showed linguistic dynamism and flexibility, few if any participants saw this translating into their future career as a teacher, most particularly they did not express any understanding of the linguistic and cognitive potential their knowledge offered their future students. One student Piao a speaker of four languages with past experiences of learning German while living and working in Germany, identified a range of register dimensions in the inclusion of idiom in his map below (Map 3 Piao). Piao was one of the only participants that expressed the potential of translanguaging (Garcia, 2016), in enhancing the meaning making for his students.

Map 4 Piao



Emica's vivid map is divided by two distinct languages, despite revealing in her interview that she is learning Italian and German to converse with her parents in law, this is not represented in her map. Emica identified her passion as Japanese, her home language (Map 5) and expressed feeling, *more like Western people. I act more, behave more like Western... So language is changing the way I behave.* Like Rewa, Emica's language skills translated into classroom practice in her expressed ability to; *empathise... I can be compassionate.*

Map 5 Emica

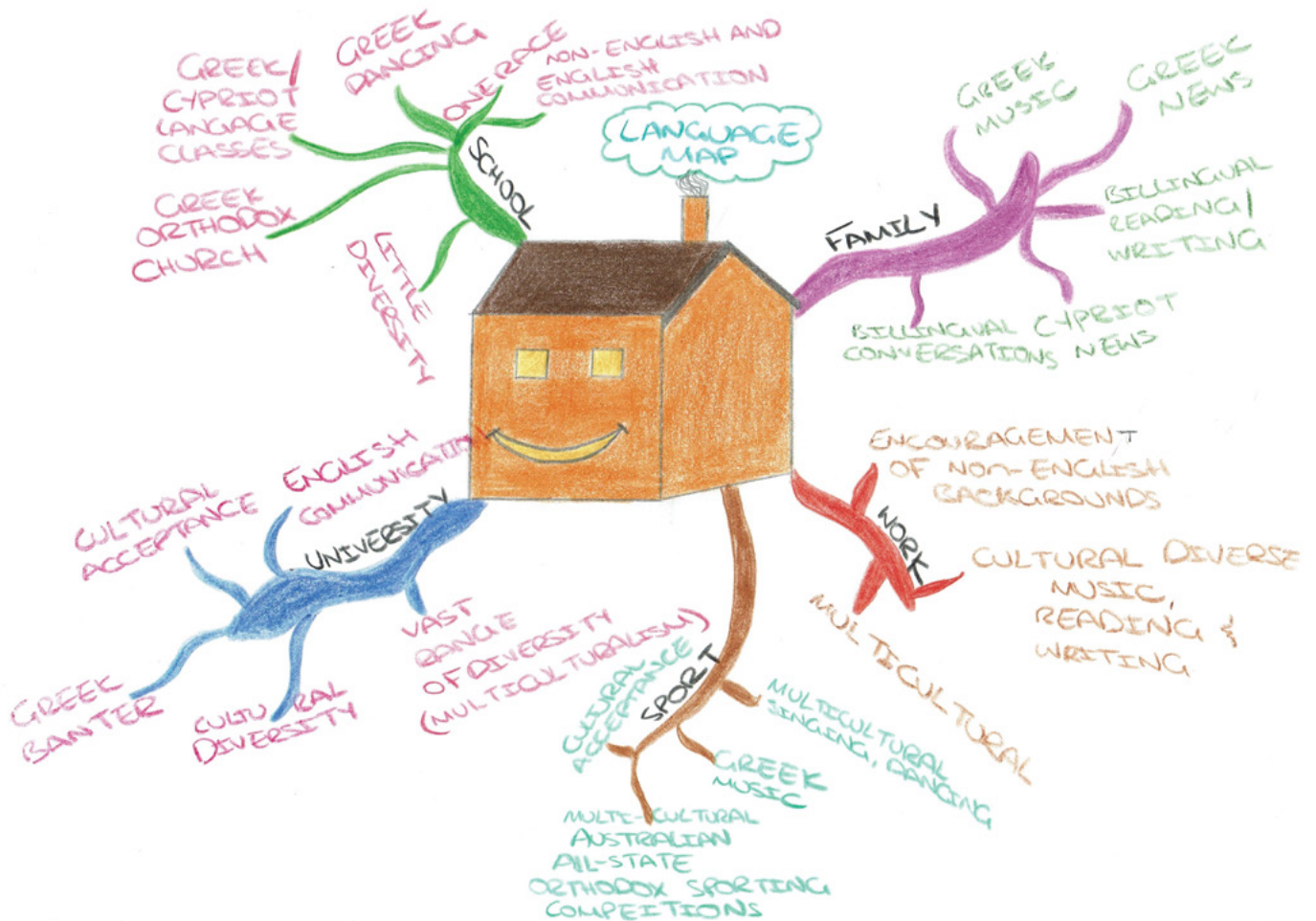


A sum of several monolinguals

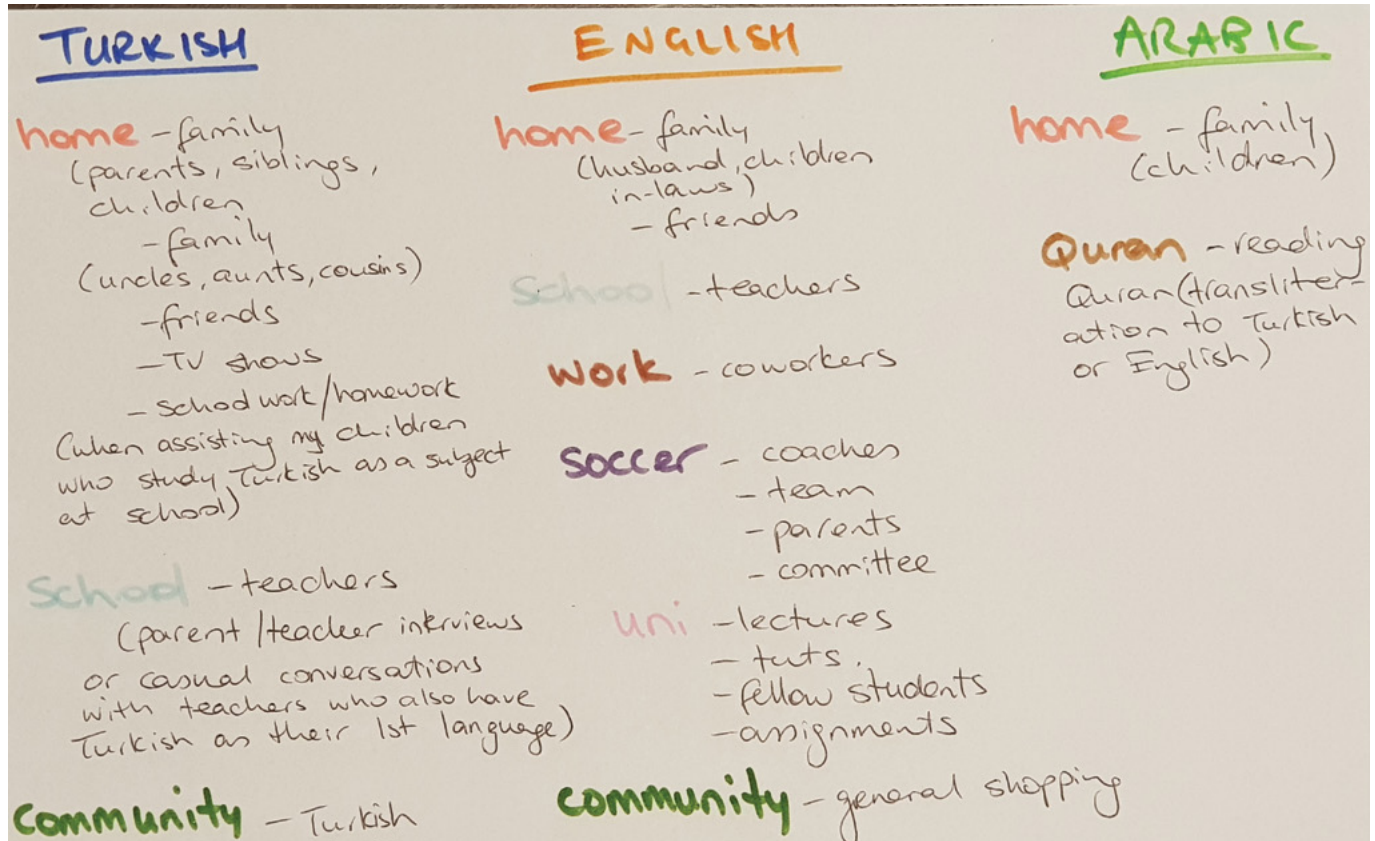
All maps made connections or separations between multiple worlds, places and spaces. Some participants used connected lines between bounded entities, and often participants depicted their communicative functions as separate, and compartmentalized. Commonly barriers to navigating language and literacy practices were represented by dividing lines; outlines of countries; bounded containers; discrete boxes around image and text, and spatial separations. As detailed in some of the maps above.

For Jenna (Map 6), a school like building appears to represent the self and all activity radiates out from the centre. Jenna sees the university as being a place of cultural acceptance and cultural diversity but English is dominant. Jenna notes acceptance of her culture and encouragement for people from non-English speaking backgrounds in her world. Greek language and culture is a major part of Jenna's life. Like her peers, Jenna's language knowledge and skill translated into her teaching with speakers of other languages in the following way: *I been in that situation, I understand that situation a bit better.*

Map 6 Jenna



Map 7 Khadija



Khadija a speaker of English, Turkish and Arabic has divided her map into three distinct languages. While the languages appear separate Khadija reported using these languages in concert particularly with her children. All three languages feature at home, Arabic is central to religious practice but also spoken at home with Turkish and English dominating social and cultural life. Khadija expressed a recognition of the ways a multilingual repertoire enhances meaning making. For Khadija; *children who have more than one language sometimes can be creative, but I am trying to think of the word - can maybe switch like I do. We don't get it in one language so you just do it in another language and you can get it and I found that especially with maths.* For Khadija knowing students and how they learn was central

Analysis suggested that for most participants' depictions of their linguistic repertoires involved monolingual orientations. As Melo-Pfeifer (2015, p. 205) also observed in her study of children's multilingual awareness, PSTs depicted themselves 'as the sum of several monolinguals'. As this interpretation shows the inherent power of the dominant language and its positioning in educational settings cannot be underestimated (Melo-Pfeifer, 2015).

Depicting a plurilingual person as the sum of several monolinguals prompts consideration of the role language teaching and curriculum plays in defining the use of any one language as an isolated system of meaning making. In educational contexts, embracing the multilingual repertoire and fluid communication would disrupt this perspective. While the multilingual knowledge and experience of the participants was rich and widespread, in discussing their experiences, language ideologies, were foregrounded prompting a critical interpretation of how educators see the relationship between home languages and in-school English learning. An examination and exploration of these relationships and concerns can support our Pre-service Teachers in disrupting the monolingual, monocultural mindset. While maps depicted rich resources, few participants recognised their language proficiencies and inherent skills in navigating multilingual contexts. Their full linguistic repertoires were not employed in their depictions of their linguistic lives, as very few used languages other than English on their maps. Almost all participants expressed a desire to be better at English, and few participants explicitly embraced their knowledge.

Reflecting on and visually representing ones' linguistic life offered researchers and participants information that is rarely shared in this way or in the context of pre-service teacher education. Mapping provided opportunities for expressing something emotional and meaningful that is rarely taken up in Initial Teacher Education. Visual methodologies may offer a way to appreciate and view constantly evolving linguistic competencies and the combination of visual and verbal data can add complexity to interpreting how language learning is experienced. This method could be used in pre-service teacher education to facilitate rich discussion and reflection about both learning and using language. Yet the maps only express their full meaning when they are analysed in the social and educational contexts in which they were produced. When the diversity of language use inside and outside educational institutions is acknowledged and used to promote all language learning, mapping is a useful analytic tool. The importance of researcher reflexivity and the influence of researchers' interpretations cannot be underestimated particularly in a context where the researcher does not speak the languages of participants. Multilayered, integrated repertoires are not actively deployed for learning across contexts in 21st century classrooms, yet we know that significant linguistic, cognitive and social benefits are derived from building on everyday linguistic and cultural knowledge (Garcia, 2016; Cummins, 2014). Clearly, this small scale study of two metropolitan Pre-service teacher education programs, illustrates that we are failing to capitalise on our rich resources and are in fact consolidating a monolingual orientation in Initial Teacher Education. Fostering a pluralist present and future (Paris & Alim, 2017) requires building on and extending people's full linguistic repertoires and this must start in the context of Initial Teacher Education with pre-service teachers.

Final Analysis

As discussed earlier, the research goal was to undertake research with Pre-Service Teachers across four urban university sites in metropolitan Sydney, Australia. However, interruptions resulting from the COVID 19 pandemic, restricted access to participants across the four university sites and as such this report centres on the analysis of data collected from PSTs at two universities, Western Sydney University and the University of Sydney. Comparative analysis of key concepts was undertaken across the data set. This included attention to related questions in both survey and interview data for example, responses to questions about linguistic capacity, acknowledgment of languages by the universities, preparedness, and contribution to teaching. Codes were developed to link interview data and mapping tasks within and across the data set and to support explorations of dimensions (for e.g., language/s used and views of linguistic funds of knowledge). Iterative across site (Western Sydney University and the University of Sydney) thematic analysis was driven by the three research questions and research findings are presented below in response to those questions.

Survey data and interview data was predominately collected from participants enrolled in an Early Childhood Education teaching degrees. Survey participants included 54 % in Early Childhood, 38% enrolled in Primary Education programs and the remaining 8% of participants in a Secondary Education program. While Primary and Early Childhood Education teaching degrees were targeted, responses from those enrolled in Secondary Education teaching degrees were included as many teacher education programs include both primary and secondary teacher education students within the same units. This is a significant shift in the delivery of teacher education units across universities, units now commonly include students working P-12 and unit content continues to span an ever wider range of educational content and contexts.

Most survey and interview respondents were female and 80% of these respondents were born outside of Australia. For survey respondents, this was 78.95% of participants at Sydney University and at Western Sydney University 80.49% with the majority of these students enrolled as domestic students. Survey data from Western Sydney and Sydney Universities revealed that students came from 17 countries and spoke 22 languages, with 28 different languages spoken at home, while incredibly across the two universities students were learning an additional 18 languages and dialects. Interview data offered comparative patterns, of the 28 participants, 2 were male and 1 female, these participants were born in 14 different countries, 10 first languages were spoken and a combination of 21 language and dialects were used at home. Participants learning an additional 15 languages. The mapping data provided a further tool that enabled participants to go beyond reacting to questions and actively reflecting on and visually representing their linguistic lives in their own ways.

What are Pre-Service Teachers' views of their own linguistic 'Funds of Knowledge'?

Multilingualism as everyday lived experience

Data revealed that multilingualism was an everyday lived experience for the participants. For Paarul, a first language speaker of Telegu most of the languages were acquired by past experiences living in Mumbai, it's a cosmopolitan city; *in my surroundings; my environment I was always among people who spoke those languages, Telegu, Marathi, and Hindi, and other languages. I had friends who were Gujarati and then Punjabis. So, I learned and listened to those languages. I can understand, but I am not fluent in speaking. My husband is Tamil, so now I can speak and understand Tamil as well.* Lucia, learned German at school in Columbia as well as using and studying Spanish as a 1st language. For Amira it was French, Lebanese and English. When Amira arrived in Australia in Year 7, she was transferred to an intensive language centre. *I only lasted four days in high school and they had to transfer me to an intensive language centre. I was there for six months and then I went back to Year 7.* For Rewa, multilingualism was crucial to being and belonging; *all the languages [Spanish, Indonesian, English], except Korean, that I've*

learned initially it started off as like a tool of survival. I wanted to gain a sense of belonging in that society, so that was the tool that I could use in order to belong. Anis, grew up speaking English; but in Malaysia the national language is Bahasa Melayu and so from young we learned Malay as well, Bahasa Melayu alongside. So that's when I guess I would say I'm bilingual. I did have to learn a bit of Punjabi, that's the language for a Sikh. Pratyusha shared; fluently I can speak Hindi, Punjabi and English, but I know other languages Sanskrit and Haryanvi as well. Katia was exposed to multiple languages; Mum is a linguist they weren't second or third languages at home, but she did use French and German and Italian and Japanese for various routine things during the day. It was usually French or German but sometimes Italian and Japanese. I do speak some Mandarin and some Spanish as well.

Chi spoke English and Vietnamese and studied a little Chinese, Korean, French. Most recently, Chi was interested in revisiting those languages; *I love K-dramas, I love K-pop, like the Korean culture, and I know living in this area, Chinese is also quite a well-known language, so I think knowing those two languages was interesting.* For Zahiya, born in Sudan, languages learned on her journey to Australia included Arabic, English and Egyptian; *Egyptian was different a dialect, but it's still the same language. When we spoke to them, it was still Arabic but they didn't understand it. I learned Japanese, I think I've lost everything except the counting. I was very good at it at the time.* For Li Jing, language learning was progressive; *I learned Chinese Mandarin before I went to high school, I spoke one dialect of Chinese - it's not Mandarin. I went to high school we did a lot of learning. Then I went to the college, I started to learn English, because English became my major.* While participant's linguistic lives took many trajectories, rather than bilingual most often participants were multilingual, they were active users of multiple languages and they had a keen interest in language and language learning; data showcased the widespread linguistic versatility and flexibility of the participants.

Linguistic knowledge and skill

Most participants viewed their linguistic knowledge and flexibility as an asset, this was expressed by Amira in the following way; *having the ability to speak more than one language is an advantage always, I believe the more [languages] that you have, the more that you can offer, whether it's an extra language or not because you can think differently.* Chi was proud of her skill, it offered connections to her family and home country; *I get commendations like your Vietnamese is good. You don't sound Australian...so that was a good motivation to continue and keep that language. I connect not just talking to people. I guess music, culture, and when I go to visit my relatives in Vietnam, you can still keep that relationship with them.* Amani expressed the following view; *I think it's really cool. You feel like you can communicate in so many different ways.* Mi stated; *I am valuable I am bilingual.*

Chi and Emica saw an inherent skill in being able to translate and interpret for others. Few participants elaborated or praised their linguistic ability or discussed cumulative knowledge. Frank was one of the few participants to do this; *I benefit from the fact that I speak another language, I have a better understanding of different language systems - sorry, a better understanding of different knowledge systems.* Paarul and Amir were two of the minority of students who explicitly articulated enhanced cognitive ability: For Paarul this was realized in the following way; *I can switch on and off easily. Like I'm talking to one person in one language, and then if I'm talking to another person in a different language, I can quickly communicate. Easy transfer for me.* Amir suggested; *I think also that I seem to understand things a little bit faster or differently.*

Respect for diversity and empathy

The primary view expressed by participants was that their linguistic funds of knowledge were of benefit because they promoted empathy, openness and respect for diversity. For Rewa, this knowledge and skill offered; *a mindset to be open to everyone's culture. I think with the languages that you can speak, you can definitely broaden your understanding and skills towards perhaps humanity or different types of culture if that makes sense.* Amira suggested she; *was able to understand people's perspective you can see different people.* For Penelope, her linguistic skill promoted empathy, *because they've been in that situation, or understand the situation a bit better.* Anis shared a similar view; *I feel with learning many languages, I also learn the culture. So I would get a bit more knowledge, so I'm a bit more aware and respectful, I guess, of other cultures.*

The notion of intercultural awareness and a broadened perspective was a commonly expressed view. For Amani her linguistic funds of knowledge gave her; *a whole bigger idea of I don't know, a whole different world.* For Mia; *the world makes so much more sense when you know more languages.* Priti suggested; *my personal strength is I am very good at adapting - communicating with people who have language challenges.* Paarul was able to; *understand people better.* Emica was also positive; *I see myself as valuable.* However, for Emica this was attributed to Australia; *I think it is so because living in Australia now, 20-odd years, so English-speaking culture becomes my second nature.* Common was the view that English was all powerful and all participants expressed the view that their knowledge of English was most important.

Deficit perspectives

Data revealed that when reflecting on linguistic funds of knowledge, few participants detailed explicit strengths or discrete skill sets, in almost all cases participants they discussed one or more deficiencies in particular skills, or a particular language or modality. While there were a range of responses about individual knowledge and use of language, most participants considered that they were still developing knowledge about their first or another language. These languages were often only used in personal or informal communication rather than in academic or formal language learning settings. Most often participants' responses indicated little if any awareness of inherent linguistic or cognitive knowledge derived from their ability to make meaning in two or more languages. Few participants shared views that reflected an awareness of connections between developing language and literacy in English and their own knowledge of another language or semiotic system.

Participants who had formally studied and were literate in their first or another language, did not make a connection between the possession of this knowledge and the linguistic or academic benefits when learning or using English. The notion of linguistic transfer was not fully realized. When asked to reflect on their knowledge and skill almost all participants began by discussing areas of weakness and their linguistic challenges. Amani suggested she; *communicated well, but I don't write very well.* While Lucia had a keen interest in learning and maintaining her trilingual ability, when reflecting on her views she suggested; *I am trilingual "English is so --I'm trying to improve, I'm trying to improve pronunciation, I'm trying to communicate better.* Almost all participants agreed that English needed attention, for Jenna born in Australia and a speaker of Greek learned from parents and grandparents; *knowledge of English is quite interesting because I think it's constantly evolving.* Amira, viewed academic writing and reading as a weakness; *I still have obviously a lot of gaps. So yeah, I still struggle with spelling till now.* In reflecting on her knowledge, Li Jing expressed; *I did some test about Mandarin. I think I'm good at that, in English I think I'm in the middle level, it's not that high talented English, I mostly learn through self-study. I used books to practise listening and reading. Because my weakness, I know that is my speaking part, so I used apps.*

How might your linguistic strengths, knowledge and experience translate into teaching with culturally and linguistically diverse young people?

Most participants in this study had undertaken a professional experience in an educational setting and made reference to their experiences in those settings. There was however little or no reference to settings in which translanguaging spaces, or communities of learning (Dutton & Rushton, 2020; Iyer & Reese, 2013) had been developed in which PSTs could support EAL/D students to fully develop their linguistic resources. Most participants considered that their cultural and linguistic resources best positioned them as culturally and linguistically aware (Ellis, 2004) and therefore able to support student well-being.

Cultural sensitivity and well being

I think that if I get any job in early childhood setting, first of all, some of the parents and some of the children feel ashamed of their own language. This is I have noticed so many places. Because whenever they thought like if they're going to speak their own language, somebody going to laugh at them or somebody going to say they don't know English (Kamlesh). This awareness of, and sensitivity to the needs of EAL/D learners was the most commonly repeated response. Most participants stated that bilingualism or multilingualism fostered empathy for other language learners. *Emotionally I can definitely connect with them, and in terms of learning style, I definitely understand what kind of struggle and specifically what kind of struggle the students who speak English as a second language might encounter. (Frank)* *I'm empathic about it, I'm able to reach out more to, for example, families and parents and help with intervene in some sort of way. (Cindy)*

Many respondents also outlined the social and wellbeing benefits when teachers and students had this understanding but especially when they shared a first language. *I do feel that if I speak different languages, it can help me to understand their perspectives...Also, try to help them to build inclusive classrooms, because everyone should have the opportunity to speak their mother tongues freely in the classroom. So not only English you should speak in the classroom, but also the other languages should be used in the classroom too (Shun).* Shun's reference to 'inclusive classrooms' indirectly refers to a plurilingual pedagogical stance but neither Shun nor any other respondent elaborated on how this pedagogical stance could be realised in a classroom.

Similarly, the importance and value of the first language and culture was demonstrated in most responses but not developed beyond communication or cultural understanding as Kun states: *Their values may be different from Australian values – go beyond the language to the culture (Kun).* The difficulty for young students of learning more than one language was appreciated and the first language was valued but seen as being in a seemingly irresolvable dialectic relationship with the development of English; *I think I can understand that it's so much effort, there is so much emotional, mental effort that a person puts in learning a second language and in trying to communicate... first is the value that I give to those for languages that I think it's going to be important when teaching because I'm going to be like, okay, there is a priority here... do you really need to put all that pressure on the kids to learn English? I don't know. I think that's a question that I will bring in my service (Lucia).*

Cognitive advantages of multilingualism and multicultural knowledge

In most participants' responses, recognition of language capacity did not extend beyond empathy for speakers of other languages. The linguistic and cognitive benefits were not recognised even though, as shown in other studies (Hinojosa Parejua & Lopez Lopez, 2018; Iversen, 2020; Lew & Siffrinn, 2019; Moloney & Giles, 2015), participants valued their cultural and linguistic knowledge they found making explicit connections to teaching very challenging. In fact, most participants stated that they needed to further develop strategies for working with EAL/D learners. There was a strong focus on helping students to engage, "fit in" and be accepted in largely monolingual classrooms, often through the use of a shared first language. *Then when he saw me, he just spoke to me in Korean and when I responded to him in Korean they were like, oh yeah, he can speak now. So I guess in that way, I could help the children sort of feel more perhaps – I could give them the support that they feel that they can still have that culture in them and still be accepted in the society.* Rewa and similarly Pratyusha noted that; *it is really helpful to connect with the parents and the student and initially to get them to the level of other students so that they feel comfortable, and they fit into the environment.*

Some respondents, like Li Jing, did not think there was a role for teachers in using the first language in the classroom; *for cultural understanding, I think it's a good thing. For language itself, I don't think it helps, I think it's a weakness.* Furthermore, as Priti notes, many parents are focussed on their children learning English which also impacts on how teachers position themselves: *I said, what are the efforts they're putting in sustaining the child's home language or native language? They said, they're not really doing much... They said parents come here they want – they say they want the children to improve the command of English. So, they prefer the child to develop the English, don't worry about the other languages.* An understanding of the importance of the first language extended to preserving it, *I think with bilingual children, I think it's really important for them to preserve their other languages* (Penelope), and as Kamlesh notes there is a relationship between developing the mother tongue and an additional language (Ellis, 2013; Krashen, 1992). *If child has a good command in his or her mother tongue, he can easily learn another language* (Kamlesh). The focus on an

English only classroom as the norm is confirmed by Amani who reports on her friend's use of her first language in her professional experience... *she would kind of speak to them in Arabic but she'd want them to improve in English so she'd just translate a little bit and help them gain more English.* The use of the first language was only seen as useful when it supported the development of the second, or dominant language, English.

Emica began to outline a pedagogical stance which best supports language development; *I don't want to expect any improvement in a short period of time because language takes time. Years to improve... So I don't - I never rush and I understand that I need to be patient and I am patient and I care.* The need to engage students in language learning is also touched on by Shufen: *I think if we just teach young people just in a very fixed way, like teach them how to pronounce and how to write the word, it's kind of boring for them, and I don't think it can make the maximum learning outcomes for them. If we explain the meaning behind the word or use the word to create stories, and tell the stories to young people, they might be more interested in learning.* Only one respondent, Chun, drew on his personal experience as a language learner and a Secondary PST as he recognised and explicitly elaborated on how students' first languages might support their learning in English in a translanguaging space. *"...if they really cannot say what they want in English, or write down the answers they want in English, this is especially for migrants who come into say a high school context without having had a lot of English background I would actually consider encouraging them to write it in their own language... reflect upon that as a limited version which I can actually talk with the students about."*

What is the relationship between the university's institutional practices and Pre-Service Teachers' views of their own linguistic 'Funds of Knowledge'?

The dominant discourse in Initial Teacher Education is concerned with competency in English and this is supported by the standardised framework in which initial teacher education and accreditation takes place. For instance, The International English Language Testing System (IELTS), the Language and Numeracy Test for Initial Teacher Education (LANTITE) and the Australian Professional Standards for Teachers (APST) are used from application to accreditation to ensure that pre-service teachers are competent in English. While this is of course understandable, there is no formal recognition in policy documents, of the attributes of a multilingual teacher. These policy frameworks index the power and privilege of English and unfortunately work to silence and exclude multilingual proficiencies. This is reinforced across educational context as in this study, participants stated that they were never called on to reflect on or use any language other than English during their pre-service education.

In contrast, the importance of being able to choose and use a particular language to express abstract ideas about literature and culture was discussed by Piao, who recognised the rich emotional, social and cultural benefits of multilingualism especially for reflective literate learners. *"I think there are those instances in which languages really bring something out. Also, in terms of Chinese... written Chinese characters. I'll write it down first... This whole word ... means listen, but this one, this part ... means ear, and then the one in the middle, ... means heart. I think it's something very beautiful, because when you listen, you have to listen with your heart, like you use your ears and you use your heart to listen. I think there's just so many things like that in language that a lot of people don't realise.*

Almost all participants answered no when responding to the survey and interview question: Do you feel your university recognises your languages (your linguistic strengths). Participants identified a clear division between social and cultural or academic recognition. Participants who responded yes to this question, felt that socially the universities recognised diversity. A number of participants recalled social and cultural events undertaken at the university, such as joining language and social clubs. *I'm pretty sure there's things out there because I see lots of girls and boys doing those clubs and things like that, but I haven't personally done any of those things.* Chi recalled one event; *the only cultural thing I would remember is when I chose an elective about Asian studies, so it was during summer, so it was quite short.* A number of students mentioned, English conversation sessions. Kamlesh recalled: *so, they have this program where they get people like us to get together once a week with international students and just have a casual conversation.* Yet Amir one of the few students who reported; *coming to UWS, they actually promote diversity, they mean it. Hands down. You see diversity, you learn diversity, you study diversity. It's embedded in their curriculum; the way they teach which is amazing.*

In contrast, many participants suggested that few if any opportunities were offered for them to reflect on their language knowledge and skill. Shufen found it hard to recall an event that required a language other than English; *I'm trying to recall like an event where I had to speak the language that I speak but there was none so far.* This was supported by Paarul who stated; *I never had any such an experience where the university tried to connect with me or try to utilise the skills that we have.* While few participants saw this happen many participants welcomed the opportunity. Lan suggested; *It's very focused you have to be good at English. I don't really see any focus on other languages, oh it would be nice if you have another language.* Yet others disagreed, An suggested; *it's all in English basically. I feel like that's okay for me because actually English is the main language here. So for me I feel like it's fair enough.* Views about the take up of language knowledge in individual teacher education programs differed little. While most students suggested a recognition of diversity and linguistic difference within their programs, few could recall opportunities were they themselves were able to really call on or use their linguistic knowledge.

Discussion

Contextual limitations and affordances

Findings in this study align with similar studies undertaken with Pre-Service Teacher cohorts both in Australia and internationally (Coleman, 2014, 2016; Coleman, 2015; Safford & Kelley, 2010). While many participants expressed active realisations of language as part of their identity (Lew & Siffrinn, 2019) and expressed evidence of linguistic expertise and affiliation, most participants expressed the academic bonuses of being bilingual as coming from deploying biculturality, rather than the bilingual language skills they possessed (e.g., Coleman 2015; 2016; Cross, 2010 and others). PSTs in this study, expressed little understanding of how to activate their linguistic expertise (Safford & Kelly, 2010; Stillman et al, 2019) and had difficulty making links between their linguistic knowledge and their skills. Consequently, participants' language skills and understandings were not at the forefront of their developing identities as teachers. Yet monolingual assumptions no longer reflect or respond to the nature of contemporary education systems, and in fact work *against* teachers' capacity to realise their own or their students' full learning potential. This study responds to calls within the discipline to shift from the conventional focus on what is "lacking", to instead identifying and productively mobilise the diverse funds of knowledge (e.g., Moll et al. 1992) and the full range of linguistic resources that our pre-service teachers' bring to the teaching/learning relationship (García 2016).

This research also mirrors much of the research undertaken across Initial Teacher Education, participants saw little or no recognition for their first language in their courses, this is particularly striking as linguistic and cultural diversity is the norm in the teacher education contexts in which this study took place. While it is increasingly evident that the PSTs have rich cultural and linguistic 'funds of knowledge', these knowledges and linguistic skills were rarely leveraged to advance understandings of effective teaching, particularly for students with diverse language backgrounds (Anderson & Stillman, 2013; Anderson et al, 2019; Coleman, 2019). Participants were for the most part unable to articulate what effective teaching looked like for culturally and linguistically diverse students. Unfortunately, theory and practice upon which most mainstream pedagogy currently relies depends on and perpetuates a monolingual bias: the assumption that students rely on only one language system to (i.e., Standard Australian English) to access and produce knowledge. This runs counter to well-established research, that reports multilingual people do not rely on a single meaning-making system (Cook & Wei 2016; Garcia, 2016).

In the Australian educational landscape, bilingualism and bilingual education have been privileged when the acquisition of particular languages are seen as influential, valued, and supported (e.g., Asian languages: NALSAS strategy). In contrast, the maintenance and development of home languages does not receive such validation and often signals disadvantage, and is often positioned as in need of remediation (Smala, Paz, & Lingard, 2012). Cruickshank and Wright, (2016) have detailed the relationship between cultural capital and languages education and the ways this differs significantly across socioeconomic contexts. Cruickshank and Wright's research highlights how languages and cultural capital are linked and the ways this is deployed by schools aiming to attract middle class parents. Yet this discourse is most often absent from lower socio-economic schools. Unfortunately, this positioning often leads many young people, and parents, to hold internalized deficit views of their own skills (D'warte, 2018; French, 2016) and they fail to see their home language competencies as assets. These notions are evident in our research.

Despite institutional claims to support diversity, participants reported that their linguistic and cultural knowledge and understandings were rarely taken up across the institution and ignored within their teacher education program. This supports the view that higher education institutions maintain a standard that excludes changes in language policies and practices (Van der Walt, 2013). Lo Bianco (2014, p, 17) points out, “acknowledging multilingualism and multi-literacy throughout the academic and administrative operations of education can enhance the quality, seriousness and equity of education for all learners, not just for those who were brought up multilingually”. We counter the assumption that the only language resource available to students for developing literacy is English. This study makes us ever mindful of the social positioning, and valuing of students’ linguistic lives in relation to education systems and multilingualism present across our student community is also present across our teaching community.

Demonising diversity and marginalising non dominant groups is a key tenant of current era discourses. Enabling equitable access to educational development for all children means challenging the positioning of literacy as inextricably linked to the English language (only). These discourses are not only having a significant influence on political and social landscapes, but also on educational policy and practice. When dynamic and complex forms of expression are erased, denying opportunities for linguistic knowledge and experience to be brought into school contexts, the links between language, identity and belonging are ignored and this inhibits students’ capacity to fully access the curriculum. Unfortunately, our teachers are being trained through a prism of policies that have continually ignored multilingualism and this has positioned them as “silenced plurilinguals, whose skills go to waste” (Ellis, 2016, p. 268).

Further research is needed with pre-service teachers to illuminate the ways plurilingual students and teachers can interact and negotiate their linguistic knowledges. We are mindful of our roles as teacher educators and keenly aware that research with multilingual pre-service teachers should equip them with culturally and linguistically sustaining theoretical and pedagogical tools that can enrich their professional lives. Across Australia, all state education authorities require initial teacher education programs to ensure that beginning teachers can work effectively with students from culturally and linguistically diverse backgrounds (AITSL 2017). Standard 1, for example, requires graduate teachers to “*know their students and how they learn*”—which includes being capable of developing strategies that support “*students with diverse linguistic, cultural, religious and socioeconomic backgrounds*” (Focus area 1.3; AITSL 2011: 10), yet minimal guidance exists on how this can be implemented. We are mindful of the crucial and pressing need for new forms of applied knowledge on how educational sectors can actively capitalise on the multilingual capabilities of the Australian population.

Recommendations

Explicit recognition of the attributes and benefits of multilingualism

Teacher preparation programs, teacher educators, and practicum stakeholders, need to address the challenges of recognizing, honouring, and extending plurilingualism and intersectional identity variables of students and teachers. A closer alignment between in-service and preservice teacher education, policies and accreditation bodies would support a better understanding of the benefits of multilingualism. The cognitive and social benefits of multilingualism should be recognised in the standards-based framework used to inform the education and employment of teachers, especially in a context where the number of LBOTE and EAL/D students is increasing. In the APST, the framework used to accredit and promote teachers, linguistic diversity is mentioned in only two focus areas of one of seven standards. More explicit attention and reference to multilingualism in policies is needed to support understanding of its social and cognitive benefits. Changes to policies and frameworks like the APST will impact on classrooms, schools and Initial Teacher Education (ITE) programs.

Review of ITE courses to include recognition of the attributes of multilingualism

A review of ITE courses is needed to develop a focus on supporting pre-service teachers to recognise their linguistic strengths, knowledge and experiences and how their individual attributes might translate into teaching culturally and linguistically diverse students. This change of focus would benefit not just multilingual but also monolingual PST's as understanding the benefits of multilingualism will impact on choices made in schools and classrooms when working with EAL/D students and when teaching English language to all students. A review would recognise and utilise the linguistic resources of lecturers, tutors and PSTs in formal and informal interactions and include reading about, interpreting and implementing plurilingual practices. Units that include and design dedicated linguistically sustaining pedagogical frameworks are needed.

Further research on translanguaging and plurilingual practices in supporting English language learning

More research into practices which support multilingual learners to use all their language resources and also to achieve academic success is needed to underpin change. A deficit model, which does not recognise the benefits of multilingualism, often informs the support offered to EAL/D learners in classrooms. Further research into plurilingual practices like translanguaging, which support the recognition of the cognitive and cultural attributes of LBOTE and EAL/D learners would help to shift the understanding of multilingualism. Our pre-service teachers need to see more teachers implementing translanguaging and plurilingual practices in classrooms. This would include identifying expert teachers who are implementing these skills. Expanding professional learning in this area is crucial. Models of practice must accompany syllabus documents and be included in the suite of educational resources available to teachers.

Developing teachers capable of actively capitalising on the multilingual capabilities of Australian students contributes to the global focus on how schools and teachers might successfully improve and enhance learning for diverse multilingual learners. We are also informed by knowledge that meaning-making relies on a continuum of multiple linguistic repertoires that are working together as the basis for social practices that include learning, literacy, thinking and cognition, and intercultural awareness (Cook 2007; García 2009).

We suggest Kathleen Heugh's (2018, 2019) conceptions of the horizontal and vertical dimensions of multilingualism, necessary in education, and particularly essential for learning. Horizontal multilingual practice involves understanding how speakers draw on their entire linguistic repertoire to negotiate meaning, building on students' resources for identity construction, engagement, home language maintenance, and English learning. Heugh's vertical dimension requires an examination of and participation in the hierarchal linguistic structures that facilitate access to the powerful English discourses that promote achievement and social progression. We recommend considering how this dimension is mandated in school structures, policy documents and assessment practices across schools and give special attention to the agency of teachers in implementing multilingual strategies.

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Appendix

Appendix A

Google forms survey questions

Survey of Pre-Service Teachers

We are conducting a survey on how Pre-Service Teachers learn and use languages other than English, in both formal and informal contexts and how they see this relating to their teaching. The survey is conducted by researchers from Western Sydney University, Macquarie University, Sydney University and University of Technology Sydney. Students completing this survey have the option to go into a draw for a \$50 gift card! The ethical aspects of this study have been approved by the Human Research Ethics Committee of each university. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Ethics Committee of your university. Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

- WSU: Ph: 4736 0229/
email: humanethics@westernsydney.edu.au
(approval HREC H13707)
- UTS: Ph: 9514 2478 /
email: Research.Ethics@uts.edu.au
(approval ETH20-4711)
- Macquarie: TBA
- USyd: Ph: 4736 0229/
email: humanethics@westernsydney.edu.au
(approval HREC H13707)

Consent: *This is an on-going research project but only the researchers will have access to the research data, which will be stored safely. The data collected will be de-identified and used for academic publications. All personal data and identifiable details will not be used in publications, and pseudonyms will be used. Please note that completing and submitting the survey will be taken as consent to participate.*

Your details

1. Please choose your institution
 - Western Sydney University
 - University of Technology Sydney
 - The University of Sydney
 - Macquarie University
2. Your Degree
 - Early Childhood Education (Bachelor)
 - Primary Education (Bachelor)
 - Early Childhood Education (Master)
 - Primary Education (Master)
 - Secondary Education (Bachelor)
 - Secondary Education (Master)
3. Degree Progress (Current progress in your degree)
 - Year 1
 - Year 2
 - Year 3
 - Year 4
4. Are you a
 - Domestic student
 - International student
5. Name (Surname, First name)
Surname, First name (If interested in participating in the lucky draw) This information will only be used for verification and for notification of a lucky door prize of \$50 associated with participation in this survey. If you are not interested in participating in the lucky draw, please write 'NA'
6. Gender
 - Female
 - Male
 - Prefer not to say
7. Your age
8. Were you born in Australia?
 - Yes - Skip to question 11
 - No - Skip to question 9
9. Age when first arrived in Australia
10. Country of origin

Language use

1. Your first language(s)
2. Languages used at home (You can nominate more than one)
3. Other language(s) you have learned:
Please name the language(s) you have learned in school or university or in other contexts.
4. About your language use:
Please write a brief description of your experiences of learning that language. When? Where? How? (100 words)
5. Your experience of using Language (X):
If you have learned more than one language/s, please describe your experiences here (100 words).
6. How do you decide on when/where to use Language X (Y/Z...) or English?
Please elaborate on your answer (100 words)
7. What do you think are factors that are most / least helpful to develop multilingualism?
Please elaborate your answer (100 words)
8. Do you think it is important for every Australian to learn an additional language other than English?
 Yes – *Skip to question 19*
 No – *Skip to question 20*
9. Please elaborate
Skip to question 21
10. Please elaborate
Skip to question 21
11. Do you feel your university recognises your languages (linguistic strengths)?
 Yes – *Skip to question 22*
 No – *Skip to question 23*
12. Please elaborate
Skip to question 24
13. Please elaborate
Skip to question 24

14. Do you feel your languages (linguistic strengths) are recognised, built on or utilised in your teacher education course?
 Yes – *Skip to question 25*
 No – *Skip to question 26*
15. Please elaborate
Skip to question 27
16. Please elaborate
Skip to question 27
17. Do you feel you are prepared for working with students from culturally and linguistically diverse backgrounds?
 Yes – *Skip to question 28*
 No – *Skip to question 29*
18. Please elaborate
Skip to question 30
19. Please elaborate
Skip to question 30

Thank you

20. We would also like to interview some students to collect more information on specific experiences. An interview would take 30-45 minutes at a time/ location suitable to you. Are you willing to participate in an interview?
 Yes – *Skip to question 31*
 No

If you are willing to participate in an interview, please provide your contact details below. You will be contacted by the end of the week with further details on the interview, including participant consent information. If you have any further questions regarding the interview, please email Amalina Abu Bakar (Project Research Assistant) at a.abubakar2@westernsydney.edu.au.

21. Name
22. Email
23. Mobile

Appendix B

Interview and language mapping protocol

Introduction

Hello, I'm Dr _____, I work in the School of _____ at [University name]. As the information sheet states the research is taking place at 4 universities and we are investigating the language and literacy histories of Pre-Service Teachers. Your information will be kept confidential and anonymously reported. Is it ok if we audiotape this interview?

Questions

Demographic

1. What is your first and last name?
2. What is your age? How long have you been at Western Sydney University? (Other institutions included as required)
3. Have you lived in any other country besides Australia? If YES – what country/ies? In another state besides NSW? If YES – what states? In another place besides Sydney?
4. What is your cultural background?
5. What languages do you speak?
6. Can you tell us a little about how you acquired those languages/your language learning?

So let's talk about how you use language/s and communicate and in what languages you use when. Can you think about the ways you communicate and use language/s, consider what languages you use? With whom? In what contexts? For example, do you speak the same language/s and in the same way to people at home as you do to others in different places. Do you use a different language/s at home to at university and to other formal or informal places?

Specific

Here is a large A3 sheet and various drawing materials. We would like you to please have a go at visually representing your everyday language worlds. That is please think about the language/s (i.e., reading, writing, talking, listening and viewing) you use in particular places with particular people in your everyday life. (Show a child's example of this task)

7. Now that you have completed the map can you talk a little about what you have drawn
8. What are your views of your own linguistic strengths?
9. How might your linguistic strengths, knowledge and experience translate into teaching with culturally and linguistically diverse young people?
10. Do you feel your university recognises your languages (your linguistic strengths)?
11. Do you feel your languages (linguistic strengths) are recognised, built on or utilised in your teacher education course?
12. In your teacher education program, you may have heard of the Australian Professional Standards for Teachers. Do you feel your linguistic skills and strengths are relevant to these Teacher Standards?
13. Do you feel prepared to teach CALD students?
14. Is there anything else you would like to add?

Concluding the interview

Thank you for your assistance.

Is there anything you'd like to add before I end the interview?

We will make a general announcement about presentations of our research findings on your

University program website or through usual presentation announcement forums at the university. If would you like to be personally notified about the public seminar we will be running to present our findings, please give me your preferred contact details and we will make sure to notify you personally.

