

Exploring Supports for Students with Complex
Communication Needs and Culturally and
Linguistically Diverse Backgrounds in School Settings



**Flinders
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By

Lam Ting, Trini

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Supervisor: Dr. Emma Grace

College of Education, Psychology and Specialised Education

Flinders University

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List of abbreviations

AAC	augmentative and alternative communication
BSSO	bilingual school services officer
CCN	complex communication needs
CLD	culturally and linguistically diverse
EALD	English as an additional language and dialect
OT	occupational therapist
SA	South Australia
SLP	speech and language pathologist
SSO	school services officer

ABSTRACT

Backgrounds: Communication and education are fundamental human rights, and communicative literacy is essential for everyone to improve their quality of life. Students with complex communication needs (CCN) depend on augmentative and alternative communication (AAC) devices to communicate. However, many schools may not be prepared to provide the appropriate support for students and their families, particularly for learners with CCN from culturally and linguistically diverse (CLD) backgrounds. This study aimed to explore and gather perspectives of in-service teachers regarding culturally and linguistically responsive practice for students with CCN in school settings. The participants reported how they respond to the diverse needs of students with CCN and support culturally and linguistically diverse students and the classroom.

Method: A qualitative descriptive design was utilised incorporating semi-structured interviews with three in-service teachers currently teaching in South Australia. The interview data was thematically analysed.

Results: Eight themes were identified: Traditional approach—communication support to students with CCN; Inclusivity—cultural understanding; Inclusivity—abandonment of monolingual mindset; Using home language to bridge communication barrier; Attitudes and goal setting; Experience and training; Holistic support; and Teamwork.

Conclusions: This study highlights the importance of in-service teachers' perceptions and reports how the monolingual mindset creates communication barriers and contributes to the double disadvantages of CLD students with CCN. The results suggest that it is imperative to support in-service teachers to be effective communication partners of CLD students with CCN and advocate for a culture change in school settings. Future research investigating the inclusion of students with CLD and CCN is required.

Key words: complex communication needs; augmentative and alternative communication; culturally and linguistically diverse backgrounds

Statement of Original Authorship

Declaration

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or a diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person where due reference is not made in the text.

Signature:

Date: 07/11/2023

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

Every student should have the right to access education and communicate with teachers and peers in all circumstances (Beukelman & Light, 2020; Woodfield & Ashby, 2016). The Disability Discrimination Act 1992 and the Disability Standards for Education 2005 advocated to provide equal educational opportunities and teaching adjustments to students with disability (Department of Education Australia, 2020). Nonetheless, students with complex communication needs (CCN) have restricted speech capabilities, hindering their ability to fulfil daily functional communication needs, thereby affecting their exercise of communication rights within both school and home environments (Beukelman & Light, 2020). Students with CCN face extensive difficulty in communication caused by a range of factors such as, intellectual disability, speech impairment, autism spectrum disorder (ASD), cerebral palsy, and/or other health impairments (Crowe et al., 2022; Langarika-Rocafort et al., 2021). Students with CCN depend on augmentative and alternative communication (AAC), which is an evidence-based communication tool to support people with CCN, to communicate (Langarika-Rocafort et al., 2021). AAC provides them a platform to express ideas, interact with people, and enhance their academic and social inclusion (Beukelman & Light, 2020; Downing et al., 2015).

Students with CCN face participation, communication, social, and learning barriers at school and require extensive adjustments to teaching (Da Fonte & Boesch, 2018; Harper-Hill et al., 2021). Most students with CCN receive education in segregated settings, such as special schools, and teachers are challenged by the adjustments required to support their specialised needs (Iacono et al., 2022; Leatherman & Wegner, 2022). Teachers are important communication partners that can support students with their communication development, learning and social participation through AAC implementation. However, inadequate teacher training, a lack of preparation time, absence of teamwork, and limited knowledge of assistive technology have deprived students of receiving appropriate support in schools (Andzik et al., 2019; Tönsing & Dada, 2016).

Given the challenges experienced by teachers to support students to use AAC at school and in the classroom more generally, supporting learners from culturally and linguistically

diverse (CLD) backgrounds at school and in the classroom becomes even more complex. The complexities arise from a range of complex factors: many AAC systems do not support languages other than English, limited availability of synthesised speech and accents available on speech-generating device (SGDs) that suit students with CLD backgrounds, AAC users with diverse backgrounds to the dominant English-speaking culture cannot communicate using their native language or language spoken at home (Ripat et al., 2019; Sun et al., 2023; Tönsing et al., 2019). Additionally, many families with diverse linguistic backgrounds choose to use AAC in English platforms and stop using their home language, leading to unavoidable communication barriers between parents and children. Although some bilingual learners and their families are proficient in English, it is still a limitation that they cannot use their native language on the AAC system (Hall et al., 2021). Consequently, CLD learners' communication and participation barriers are further exacerbated.

Because of this central phenomenon described above, further investigation of responsiveness to the CLD students with CCN in schools is critical, not only for students themselves, but for all stakeholders, for example, school leaders, teachers, parents, and speech-language pathologists (SLPs). The aim of this study is to explore the in-service teachers' perceptions on the current practices and responsiveness to the needs of students with CCN and home language other than English, investigate teachers' perspectives on the facilitators and barriers in their experiences, and examine how to support teachers with culturally and linguistically responsive practices.

1.2 RESEARCH PROBLEMS AND SIGNIFICANCE

It is the basic right of students with CCN to communicate and get access to education (Downing et al., 2015; Halder et al., 2023). However, the severe participation restrictions experienced by people with CCN usually extend into adulthood, and thus it is important to support children's development of communication skills which promotes further development opportunities in the future (Beukelman & Light, 2020; Downing et al., 2015; Light & McNaughton, 2014). Moreover, CLD learners with CCN face double disadvantages in communication and social participation, especially when they and/or their communication partners have limited English proficiency.

Teachers are important communication partners of students with CCN (Beukelman & Light, 2020; Kent-Walsh et al., 2015) and are critical factors in the successful implementation of AAC in schools (Goldman et al., 2021; Halder et al., 2023). Multiple studies have highlighted the key roles of teachers and suggested training teachers as natural communication partners (Crowe et al., 2022; Pit-ten Cate et al., 2018). Besides the training of SLPs, it has been frequently mentioned in the literature that training natural communication partners, such as teachers, is necessary (Biggs et al., 2018; Crowe et al., 2022). It is evident that extensive teaching adjustments and supports from teachers, who play a key role in schools, are necessary (Goldman et al., 2021; Halder et al., 2023). However, implementing evidence-based practice consistently could be a challenge for teachers given the knowledge and skills required for AAC intervention (Ivy et al., 2021). Given their role in the natural context, further study investigating the perceptions and experiences of teachers of how to address their skill barriers and develop diverse skill sets is warranted (Beukelman & Light, 2020; Halder et al., 2023).

Furthermore, supporting students with CCN who are also from CLD backgrounds may have distinct challenges for teachers. Hall (2021) advocated to support students who use AAC to uphold their linguistic and cultural identity in communication. It is suggested that the abandonment of the home language use affects the parent-child relationship of AAC users whose home language is not English and disrupt their participation in the family (Yu, 2018). Digard (2020) further recommended exploring the specific needs of families with autistic children from CLD settings. However, according to Biggs et al. (2018), there is limited research addressing the cultural and linguistic backgrounds of students with complex communication needs. It has been frequently suggested in literature that a more diverse profile of students with complex communication needs, such as autism, should be considered (Digard et al., 2020). With more inclusive profiles, it is believed that more effective AAC practice can be conducted. Both Crowe et al. (2022) and Sinclair et al. (2018) emphasised the importance of knowing students' cultural and ethnic backgrounds and the needs to be responsive to diversity. Langarika-Rocafort et al. (2021) stated the limited studies on AAC in languages other than English and suggested to respond to the linguistic diversity. Given the limited understanding of implementation of AAC in languages other than English (Langarika-Rocafort et al., 2021), it is imperative to address teachers' perceptions of supporting cultural and linguistic diversity of students with CCN and who use AAC.

CHAPTER 2: LITERATURE REVIEW

2.1 COMPLEX COMMUNICATION NEEDS (CCN) AND AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC)

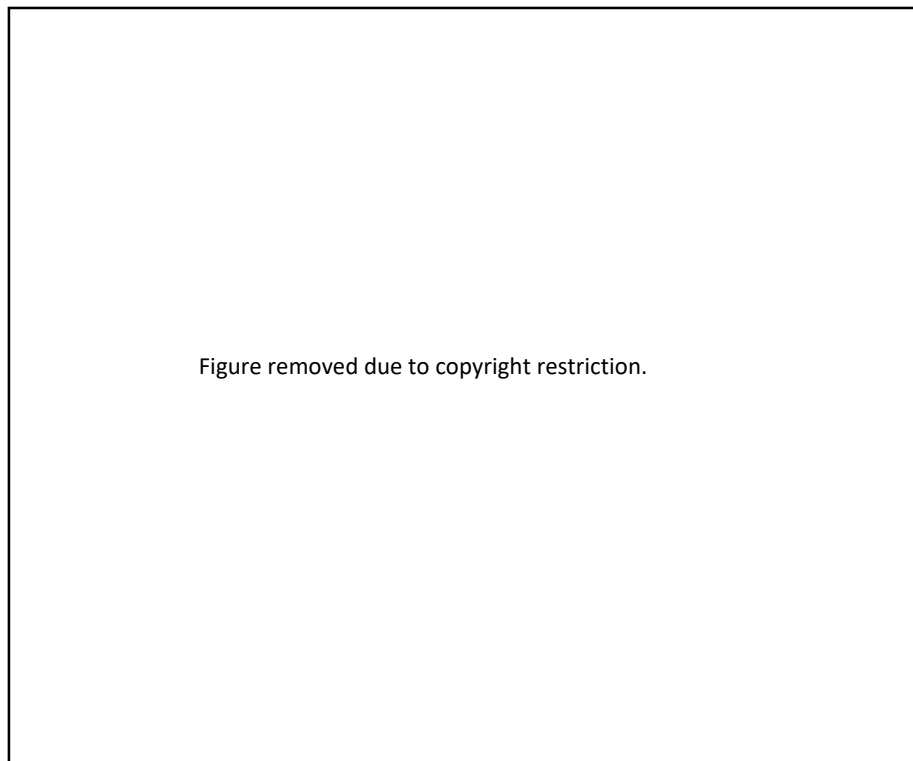
Every student should have the right to communicate (Downing et al., 2015; Halder et al., 2023). However, students with complex communication needs who have limited speech to meet daily functional communication needs rely on access to augmentative and alternative communication (AAC) systems for effective communication (Beukelman & Light, 2020). According to data from the Rehabilitation Engineering Research Centre in 2019, it was estimated that the population of people with CCN was increasing and had reached 97 million people (RERC, 2019). There is a diverse array of causes leading to complex communication needs, including physical, sensory, cognitive, and environmental reasons (Speech Pathology Australia, 2020). Moreover, developmental communication difficulties are most commonly caused by “severe intellectual developmental disability, cerebral palsy, Down syndrome, autism spectrum disorder (ASD), and developmental apraxia of speech” (Beukelman & Light, 2020, p.5). Complex communication needs lead to serious restrictions in participation with the community, and barriers in education, medical care, employment, family, and social engagement (Beukelman & Light, 2020; Langarika-Rocafort et al., 2021). To overcome the barriers, people with CCN use AAC to support their communication.

Augmentative systems are used as supplemental techniques to support communication and alternative systems are used to support people who have completely lost their speech ability (Speech Pathology Australia, 2020). Indeed, some AAC users have limited speech, which may not support their communication in groups, noisy environments, or in a context with unfamiliar people; and some AAC users have permanent needs of adaptive communication support. Individuals with CCN depend on multiple AAC supports across a range of contexts (Beukelman & Light, 2020). These AAC systems can be categorised as aided AAC and unaided AAC (Halder et al., 2023) (See Figure 1). Unaided AAC systems include ‘symbols’, such as signs and vocalisation, and ‘strategies and techniques’, such as key word signing where only the key words are signed; they do not need any external tools (Beukelman & Light, 2020; Crowe et al., 2022; Halder et al., 2023; Lurah van der et al., 2012). On the other hand, aided AAC systems include ‘symbols’, such as photographs, ‘aids, displays and devices’,

such as communication board, and ‘strategies and techniques’, such as aided augmented input. Aided AAC systems can be classified into high-technology and low-technology devices. Low-technology AAC options include picture exchange communication system (PECS) and communication boards; high-technology AAC options include speech-generating device (SGDs), with mobile technologies such as iPads, and a wide range of applications such as Proloquo2Go (Beukelman & Light, 2020; Crowe et al., 2022; Mirenda, 2001). The choice of tools and techniques depends on the needs of each person and the professional judgements the professionals who prescribe these systems (Langarika-Rocafort et al., 2021). For effective implementation, ACC users and their communication partners needs training and coaching, and the systems need ongoing evaluation and development (Crowe et al., 2022; Ivy et al., 2021).

Figure 1

An Overview of AAC Symbols, Strategies, Aids, Displays, and Devices



Note. From “*The Routledge Handbook of Inclusive Education for Teacher Educators: Issues, Considerations, and Strategies,*” by S. Halder, S. Dada & R. Banerjee, 2023, Taylor & Francis Group, p. 363.

2.2 CLD STUDENTS WITH CCN

Globalisation and migration have caused an increasing number of multilingual populations as well as AAC users with CLD demographic backgrounds (Kulkarni & Parmar, 2017; Soto & Yu, 2014). According to the Australian Bureau of Statistics in 2021, 5.6 million or 22% Australians report to use a language other than English at home (Australian Bureau of Statistics, 2022). However, there is a lack of support and adequate service provision for bilingual or multilingual students and their families (Hampton et al., 2017). It was reported that bilingual individuals with disabilities were educationally excluded in the classrooms when English was the instructional language (Cioè - Peña, 2022). According to Hall (2021), there is a misconception that acquiring more than one language can cause further delay in communication development for children with disabilities. As a result, in the past, non-English speaking parents were advised to use English only with their children at home. This leads to a subtractive environment where families give up their own languages and cultures (Hall et al., 2021). Indeed, this myth has been debunked as it is evident that bilingual support benefits children's language learning in both native language and second language (Restrepo et al., 2013). Moreover, translanguaging was reported as an effective educational practice to reinforce students' learning by using two or more languages (Lewis et al., 2012; Oliver & Exell, 2020). As a result, it is strongly recommended to respect bilingualism and provide bilingual opportunities in AAC systems, even though some bilingual learners and their families are proficient in English (Hall et al., 2021).

Moreover, families are important communication partners with AAC users; they play a significant role in their growth and provide them with daily communication support (Beukelman & Light, 2020; Hall et al., 2021; Sun et al., 2023; Wilkinson & Finestack, 2020). Kulkarni and Parmar (2017) explained that children with CCN can benefit from the use of AAC at home in their primary language with family members as their frequent communication partners. For a more effective use of AAC, AAC systems and the communication partners should be responsive to the families' concerns and respect their linguistic and cultural preferences (Hall et al., 2021). However, AAC systems have limitations in their ability to support languages other than English (Stewart, 2017; Sun et al., 2023; Tönsing et al., 2019). The available aided AAC systems in the market, such as SGDs with synthetic speech, are

limited in supporting languages other than English, without enough inputs of preprogrammed vocabulary, grammar, and text prediction (Tönsing & Soto, 2020). Moreover, the current service AAC models are restrained in the inclusive design and exclude the code-switching and translanguaging practices (Tönsing & Soto, 2020). Whilst most AAC users with CLD backgrounds use their devices in English and mainly out of the home setting, their communication with their parents and their cultural and linguistic identity are sacrificed (Kulkarni & Parmar, 2017; Sun et al., 2023).

2.3 CURRENT PRACTICE AND SUPPORT IN SCHOOLS

AAC is regarded as a useful tool to support learning and integration in classrooms (Tönsing & Dada, 2016). With higher awareness of the inclusive school culture and the communication needs of students with CCN, teachers are increasingly responsible for incorporating AAC to create learning opportunities and foster communication and understanding of their students (Halder et al., 2023). Moreover, various scholars emphasize the importance of cultivating strong collaboration between SLPs and teachers to meet the specialised needs of students with CCN (Beukelman & Light, 2020; Downing et al., 2015). It is evident that there is an increase in the cooperation between SLPs and teachers to improve the communication interventions in schools, for example, regular meetings for information exchange on the job and informed decision making (Beukelman & Light, 2020; Brown et al., 2022).

However, teachers are facing a multitude of barriers to support students with CCN especially in low-resource contexts (Halder et al., 2023). Many teachers are not prepared to support students with CCN or have learned how to communicate with their students who use AAC (Biggs et al., 2019; Halder et al., 2023). Supporting students to use AAC involves skills and training, and thus can be a challenge to many teachers (Ivy et al., 2021). The shortage of training and unpreparedness of teachers can lead to communication breakdown between teachers and students (Goldman et al., 2021).

On the other hand, students with disabilities are under-represented and under-identified in their language and cultural diversity (Morgan et al., 2018). Most AAC users do not receive enough language support other than English; the low sensitivity to the cultural and linguistic diversity of the service providers, such as SLPs and teachers, makes it more difficult for non-

English speaking parents and students to get access to AAC resources, and affects their participation (Sun et al., 2023). Another difficulty is that students' cultural and linguistic diverse needs are not adequately addressed in schools. It is difficult to provide effective communication support to students using AAC without considering their diverse backgrounds (Crowe et al., 2022; Erdem, 2017; Langarika-Rocafort et al., 2021). As a result, it has become a great challenge for teachers because of the skill gap to communicate with CLD students with CCN (Halder et al., 2023).

Furthermore, the key problem is how schools can implement effective communication interventions in formal education settings. AAC practice requires professional skills and strategies. However, there are known limitations with regards to evidence-based implementation of communication interventions (Andzik et al., 2019; Biggs et al., 2019). In addition, the cultural and linguistic diversity of learners who use AAC is rarely considered when designing communication interventions (Hall et al., 2021). Without considering students' diverse backgrounds to English and the dominant Australian culture, it is difficult to provide effective communication support to students with CCN and their families (Crowe et al., 2022; Erdem, 2017; Langarika-Rocafort et al., 2021).

2.4 RESEARCH QUESTIONS

To advocate and support students with CCN from CLD backgrounds, and avoid them from further marginalisation (Hall et al., 2021), this research aims at collecting the perspectives of in-service teachers by answering the research questions below, and exploring how teachers are culturally and linguistically responsive to the backgrounds of students with CCN in school settings.

1. From the perspectives of professionals, how are in-service mainstream teachers currently responsive to the cultural and linguistic backgrounds of students with complex communication needs?
2. What are the mainstream teachers' perceptions on facilitators and barriers when supporting culturally and linguistically responsive teaching?

3. What do mainstream teachers report that can be done to support in-service teachers with culturally and linguistically diverse practices for students with complex communication needs?

The first research question focuses on mainstream teachers' perspectives on the current practices and responsiveness to students' specialised needs. The second research question focuses on mainstream teachers' perceptions on both facilitators and barriers in their experiences. The third research question shifts the concerns from the current practice to teachers' expectations in the future and explores what could be done to support mainstream teachers with culturally and linguistically diverse practices. The research results are expected to explore the perceptions of in-service mainstream teachers and investigate how they support bilingual students with complex communication.

CHAPTER 3: Method

3.1 RESEARCH DESIGN

To answer the research questions and address the problems faced by students with complex communication needs (CCN) from culturally and linguistically diverse (CLD) backgrounds, the researcher explored the perceptions of in-service teachers on how to implement culturally and linguistically diverse practices. Considering the nature of this research is to describe the subjective experiences and explore the perceptions of in-service teachers, the belief that reality is subjective and there can be multiple realities, relativism, is a foundational ontology of this research (Bradshaw et al., 2017). With ontological relativism as the foundation, the research was framed by the critical constructivist paradigm in which the researcher co-constructs the knowledge with the participants and strives for the social change (Creswell & Poth, 2018; Crotty, 1998).

As the aim of this research was to discover the experiences and gain insights from participants who work with students with CCN and CLD in natural contexts, we employed a qualitative descriptive methodology (Kim et al., 2017; Sandelowski, 1995, 2010). This qualitative descriptive study is exploratory in nature and will preliminarily work to inform practice and future research (Bradshaw et al., 2017; Kim et al., 2017). Additionally, qualitative description is the best approach in this study to listen to the voices of people who have limited time to engage in the comprehensive research procedures but would like to have their voices heard (Bradshaw et al., 2017). Under the ontological assumptions, qualitative descriptive approach is an inductive process to strive for in-depth understanding of a phenomenon or the perspectives of people who are experiencing the phenomenon (Bradshaw et al., 2017; Kim et al., 2017; Sandelowski, 2010). Under the epistemological assumptions, this approach focuses on the individual's subjective awareness to develop knowledge; the researcher plays an active role in the research process and co-creates the conversations with the research participants in a naturalistic approach (Bradshaw et al., 2017; Kim et al., 2017; Sandelowski, 2010).

Qualitative interview research method was used, as it is more suitable for collecting individual stories as an in-depth study, understanding the participants, and listening to their stories and experience (Cohen et al., 2018; Creswell, 2014; Creswell & Poth, 2018; Kervin et al., 2016). Qualitative interview is a method commonly used in qualitative description (Kim et

al., 2017). The qualitative individual interviews with teachers provided a useful platform for the researcher to find out the answers to the research questions, such as 'what are the barriers and challenges that teachers are facing?' (Atkins & Wallace, 2016; Creswell, 2014). Through individual interviews, the researcher interviewed in-service teachers supporting students with CCN and CLD backgrounds, listened to insiders' voices and got new insights to schools' future development (Punch, 2013; Thomas, 2017).

3.2 POSITIONING THE RESEARCHER

As a qualitative researcher, the researcher played an active role in recruiting teachers who are passionate about supporting students with specialised needs and have the qualities or experiences required for this study (Bradshaw et al., 2017). The researcher engaged in the conversations with the participants and co-constructed the knowledge with them in the research process.

She reflected on her experiences as a school leader, a high school teacher in Hong Kong, and a bilingual school services officer (BSSO) in Australia. She served as a high school teacher for 16 years and a school leader for 3 years in a secondary school with culturally and linguistically diverse learners in Hong Kong. She witnessed how students with disabilities felt unsupported in the classrooms and teachers were not provided with relevant support and training. Moreover, she experienced how teachers strived for opening the dialogues and valued their voices and stories. Being a school leader, she was committed to differentiating the curriculum and urging for school change. Additionally, she understood that no matter it is a top-down policy or a down-top reform, conversation and collaboration between different stakeholders are the key to success and achievement. The researcher currently works as a BSSO in a government school with students from diverse backgrounds in South Australia. She has more time and space to create dialogues with teachers and students than she did. The position shift provides her the opportunities to have different worldviews by using a new lens (Vass, 2014). The shift in perspectives shapes her to be a better listener and shows more understanding to both in-service teachers and students (Niesche & Gowlett, 2019).

In addition, the researcher reflected on her knowledge of languages, cultures, education, and support to people with CCN. She herself grows up in a multilingual and cultural family and speaks different home language from her parents. She studied the bachelor's degree in

linguistics and cultural studies and completed a master's degree in educational psychology, which provided her a rich background in education and the professional practice of understanding students from their perspectives. She took a gap year and volunteered to provide educational support to people with CCN in the disability home called 'Home of Loving Faithfulness' (HOLF) in Hong Kong between 2021 and 2022. She is currently studying a master's degree in inclusive and specialized education, which equips her to support learners with specialised needs, including complex communication needs and autism spectrum disorders.

From the researcher's professional knowledge and personal experience as a teacher, a volunteer, and an observer, she experienced that language and cultural differences could be the communication barriers without an inclusive mindset; it is important to respect and embrace diversity which should be transformed as our valuable resources we take pride in (Halder & Squires, 2023; Tucker, 2021). She recognised that there were differing perspectives to view the realities; she valued the subjective experiences of teachers who could use their representative voices to shape the research stories and meaning. In essence, the researcher's personal values, diverse background, and extensive experience have granted her a distinctive perspective, driving her commitment to advocate for an inclusive community. This commitment distinctly shapes her focus on promoting diversity and informs her interpretation within the research project.

Furthermore, Dr. Emma Grace, principal supervisor, provided a supporting role in the analysis of the study, as described in the method. Dr. Grace has extensive experience as a Speech Pathologist working with young people with complex communication needs, teaching university topics relevant to individuals with CCCN, and conducting research in this field. The diverse backgrounds between Dr. Grace and the researcher provided a rich context for discussions that formed part of the coding process in the study.

3.3 RECRUITMENT

After obtaining the Flinders University HREC approval (Appendix A), mainstream teachers with experience in supporting students with both CCN and more than one language at home were recruited to participate in an individual interview. Recognizing the busy schedules of teachers, online interviews were conducted to offer a flexible arrangement for the interviews.

An online approach was used to recruit the participants for data collection. The online research invitation was a recruitment flyer (Appendix B) with a Qualtrics link (Appendix C) to collect participants' contact methods and a secure link to obtain the participant information sheet of the project (Appendix D). Potential participants at appropriate organisations, education institutions and from the researcher's professional network were recruited via email. Potential participants from the researcher's professional network were recruited via social media: LinkedIn and Facebook groups. Permission from page administrators was obtained prior to posting. The post clearly and succinctly outlined relevant information about the project, and due to the short-form nature of the platform, encouraged participants to click a secure link to obtain further information on the project.

The sampling strategy was voluntary based, aimed at fostering in-depth conversations during the subsequent interviews. Three teachers who support bilingual students with CCN responded to the recruitment invitation and participated in the research. Following an expression of interest, the researcher contacted them individually via email, to arrange a convenient time for the interview. Both verbal and written informed consents were required before the interviews (Appendix E). The invitation emails sent to the participants clearly and succinctly outlined relevant information about the project: introduction to the researcher, aim of the project, requirements of the participants, remuneration for participation, advice that participation is voluntary, advice on informed consent and the secure link to participate the interview. All participants were provided with anonymity and confidentiality; and they were treated with professionalism and respect.

3.4 PARTICIPANTS

Three teachers participated in the research were Amy, Bethany, and Carol. Pseudonyms have been used to protect confidentiality of the participants. They all had experience teaching students with disabilities and CLD backgrounds in mainstream schools and were able to share their experiences in detail. However, only Carol who is a specialist educator had previous experience working with AAC users in the classroom. Based on their frontline school experience, they explained their current practice to support CLD students with CCN, shared their perceptions, and provided suggestions for development of these supports in the future (Atkins & Wallace, 2016; Creswell, 2014). It was believed that they had a great drive to

improve their teaching competency to cater for the specialised needs of students (Cooc, 2019). They answered the research questions and helped the researcher develop a detailed understanding of the central phenomenon (Atkins & Wallace, 2016; Creswell, 2014). A small summary of each participant is included below.

Amy

Amy is a language teacher with home language other than English. She was brought up in an Asian family and relocated from an Asian country to Australia a couple of decades ago. She has more than 10 years of primary school teaching experience in South Australia. She is multilingual and is serving in a local government school with a wide cultural and linguistic diversity. She is dedicated to designing teaching activities which are responsive to students' diverse cultural backgrounds.

Bethany

Bethany is an Australian teacher whose home language is English. She used to be a non-instructional time (NIT) teacher and has worked as a primary school language teacher in her current school for seven years. She is multilingual and has experience to support culturally and linguistically diverse students with autism. She is eager to engage every student in learning.

Carol

Carol is an Australian specialist teacher who only speaks English. She has been supporting students with learning difficulties and disabilities in secondary schools for more than 20 years. She is experienced to communicate with students with cerebral palsy and autism by using AAC and has received special education training from university, placements, and in her career path.

3.5 DATA COLLECTION

Qualitative individual interviews with in-service teachers were conducted as method for data collection (Atkins & Wallace, 2016). The researcher used the interview protocol (Appendix F) to conduct the interview (Creswell, 2014). Interviews were within one hour in length (Amy: 25 minutes; Bethany: 53 minutes; Carol: 54 minutes). The researcher played the role as a

facilitator by greeting the participants, introducing the topic, asking some demographic questions, pre-set open-ended questions, probing questions, and clarification (Creswell, 2014; Punch, 2013). The whole process was voice recorded via Microsoft Team software and an audit trail (Appendix G) was created to record every stage of the research (Creswell, 2014).

3.6 DATA ANALYSIS

An inductive thematic analysis was conducted to describe and interpret the perceptions and experiences of the participants supporting CLD students with CCN in school settings (Braun & Clarke, 2006, 2021). It is a step-by-step, reflexive approach to describe and interpret the data (See Figure 2) (Braun & Clarke, 2021; Nowell et al., 2017). The three one-to-one interviews were recorded and auto transcribed by the Microsoft Team software. Automated transcripts were proofread and revised by the researcher. Transcripts were shared with the participants to enable further reflection on the perspectives they had shared with the researcher. There were six phases of thematic analysis. In Phase 1, the researcher familiarised herself with the data through repeated data reading and the search for implicit meanings and patterns (Braun & Clarke, 2021). In this process, the researcher documented any theoretical and reflective ideas in the notes (Lincoln & Guba, 1985; Sandelowski, 1995).

In Phase 2, the researcher generated the initial codes by identifying the important sections of text and attaching labels to build codes on the computer software NVivo (Nowell et al., 2017). Hierarchical coding (Appendix H) was built in the codebook to analyse the texts at multiple levels (Nowell et al., 2017). For example, 'scaffolding' and 'speech support' are the child coding of 'individual/traditional strategy'. In addition, a visual map (Appendix I) was created to show the relationships between the codes and the three interviewees (Attride-Stirling, 2001).

In Phase 3, the researcher generated initial themes from the codes (Braun & Clarke, 2021; Nowell et al., 2017). The researcher worked together with the research supervisor to review the visual map on NVivo. They discussed ideas and generated the relevant codes into themes and sub-themes in relation to the research questions and their own values and experience (Braun & Clarke, 2006; Nowell et al., 2017). The researcher diagrammed the data and created a code manual (Appendix J) including relevant quotes from the participants based on the three research questions and different themes, such as 'traditional approach' and 'inclusivity'

(Braun & Clarke, 2006). The whole coding process of inductive thematic analysis was organic and unstructured; the researcher was active in the process and co-created the themes with the supervisor based on the data understanding of the researcher and her supervisor (Braun & Clarke, 2021; Ryan et al., 2007).

In Phase 4, the researcher and the research supervisor developed the themes by reviewing whether the themes reflected the meanings as a whole (Braun & Clarke, 2006; Nowell et al., 2017). Some data was recoded, refined, and reduced into significant themes to tell the overall story related to the teachers' perceptions on supporting students with CCN and CLD backgrounds and their professional perspectives to future support (Lincoln & Guba, 1985; Nowell et al., 2017). In Phase 5, the researcher refined, defined, and named the themes with the research supervisor and wrote a detailed analysis for each individual theme to identify the story (Braun & Clarke, 2006; Nowell et al., 2017).

Phase 6 is the final step to write up the report with final analysis, direct quotes, and literature support (Braun & Clarke, 2006; Nowell et al., 2017). The researcher referred to the reflexive journals (Appendix K) to interpret the findings and used the literature to confirm the findings or create challenges to the current knowledge (Nowell et al., 2017; Tuckett, 2005). Moreover, the researcher compared the similarities and differences of participants' perceptions and select representative quotes to illustrate each theme (Savage, 2000). Thematic analysis is a process from description to interpretation, with the connection to the philosophical assumptions and the researcher's values (Braun & Clarke, 2019). The final report would be sent to the participants as member reflection (Creswell, 2014; Kervin et al., 2016).

Figure removed due to copyright restriction.

Note. From “*Counselling and psychotherapy research: Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches, 21(1)*,” by Braun, V., & Clarke, V. (2021).

3.7 RIGOUR OF STUDY

To establish the trustworthiness and rigour of the study, the researcher followed the rules of credibility, dependability, confirmability, reflexivity, and transferability (See Figure 3) (Bradshaw et al., 2017; Nowell et al., 2017). Regarding credibility, the researcher tried to build rapport and develop a trusting relationship with the participants in the beginning of the interviews and show understanding and empathy during the interviews; in the whole research process, the researcher’s supervisor, who is the professional scholar in the field, reviewed the analysis and provide feedback. A comprehensive description of research settings, procedures, and participants was provided. The research process has been verified by the evidence provided in the appendices.

Regarding dependability, the different stages of the research process was clearly recorded and documented. All records of raw data, transcripts, and a reflexive journal were well kept. Both the researcher and the research supervisor discussed and reflected to ensure dependability of the process. Regarding confirmability, all interpretation and findings are clearly generated from the data with direct quotes. An audit trail with data collection process and evidence of decisions made by the researcher and her supervisor was developed. The demographic backgrounds of the participants were clearly described.

Regarding reflexivity, the researcher kept a reflexive journal as an account for her research process and own perspective reflection on own value, interests, and insights. All

participants were given the opportunity to read the transcripts and the completed study as member reflection. Regarding transferability, the researcher provided a thick and rich description with enough research details for recreation in other studies.

Figure 3

Rigour of Study

Figure removed due to copyright restriction.

Note. From “*Global qualitative nursing research, 4: Employing a qualitative description approach in health care research*” by Bradshaw, C., Atkinson, S., & Doody, O. (2017) and “*International Journal of Qualitative Methods, 16(1): Thematic Analysis: Striving to Meet the Trustworthiness Criteria*” by Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017).

CHAPTER 4: FINDINGS

Perceptions about how mainstream teachers are responsive to CLD students with CCN, what the facilitators and barriers are in the process, and what can support mainstream teachers with CLD practices with students with CCN, were explored in the individual interviews. Eight themes were developed from thematic analysis. The themes include ‘traditional approach--communication support to students with CCN’, ‘inclusivity—cultural understanding’, ‘inclusivity—abandonment of monolingual mindset’, ‘using home language to bridge communication barrier’, ‘attitudes and goal setting’, ‘experience and training’, ‘holistic support’ and ‘teamwork’ (See Table 1).

Table 1

Description of Themes Identified in the Data

Linked section in findings	Theme
4.1	Traditional approach—communication support to students with CCN
4.2	Inclusivity—cultural understanding
4.3	Inclusivity—abandonment of monolingual mindset
4.4	Using home language to bridge communication barrier
4.5	Attitudes and Goal Setting <ul style="list-style-type: none"> • Attitudes to AAC • Attitudes to diversity • Goal setting to support students with CCN
4.6	Experience and Training <ul style="list-style-type: none"> • Predicaments faced by experienced teachers • Training to support CLD students with CCN
4.7	Holistic support
4.8	Teamwork <ul style="list-style-type: none"> • Communication and conversations • Teamwork from all levels

4.1 TRADITIONAL SUPPORT—COMMUNICATION SUPPORT TO STUDENTS WITH CCN

The three study participants reported between 7 to more than 20 years of experience working in schools and have experience to support students with CCN, such as students with autism. They all agreed that communication support should be provided to students with CCN and there should be more than one mode to support receptive language. They introduced a variety of practices they usually do in classrooms: scaffolding, gestures, visual support, and technology. Amy suggested scaffolding and stated, “I usually provide notes in front of them, so that they know what is going on, and what they can use to support their understanding”. Bethany reported using “a lot of scaffolding for the conversation” by gestures such as shaking head, thumb up, and thumb down. Carol mentioned multiple times about the use of visual support and technology. She explained the powerful use of pictures by using devices like “tablets with speech capabilities” [SGDs and communication boards].

“Pictures can be really helpful, and I've certainly worked with a lot of children where pictures are their way of communicating. If they choose, you know for whatever reasons when they're not talking, they-- either compress, press a button to show a picture, or give you a card.” (Carol)

Depending on their experience and understanding of students, the three participants used their own ways to support students with complex communication needs. Interestingly, they had different definitions of ‘visual’ and explored the use of visual supports in various ways, such as printed notes, gestures, pictures, and tablets.

4.2 INCLUSIVITY—CULTURAL UNDERSTANDING

To be responsive to the culturally diverse background of students with CCN, all participants expressed their concerns and willingness to show cultural understanding. Amy was eager to integrate the curriculum into learning other cultures and embed authentic cultural contexts to the lessons. “We also learn how to compare the similarities, and [also] differences between English and [also] other cultures such as the stories. How are they similar, and how are they different, [in order] to develop intercultural understanding,” Amy stated. She further explained how she introduced other cultures and indigenous perspectives in HASS [Humanities and Social Sciences] lessons, Book Week event, and research projects; Bethany supported inclusive education and mentioned the research journals she read about the

teachers in American schools “[using] inclusive education practices to help these bilingual kids [South American migrants]”.

Moreover, Carol advised to be more open-minded towards cultural differences, “a teacher of course can't be culturally aware across everyone, but I think it's more perhaps just being more open to the idea that culturally we're coming from two different angles”. To be realistic, it is impossible for teachers to know all cultures and all languages, but Carol believed that a positive and open-minded attitude towards cultural understanding was more important. Moreover, she is optimistic to the increasing public cultural awareness in the community, “we're moving closer in many ways” (Carol). All in all, the three participants agreed with the importance of cultural understanding and supported inclusivity in multiple ways.

4.3 INCLUSIVITY—ABANDONMENT OF ENGLISH-ONLY MINDSET

The three participants have varied observations of using a language other than English in school settings. From Amy's observations, she and her school held positive perceptions of other home languages. As students from her school came from diverse cultural backgrounds, they welcomed students to share their home languages and recognised the importance of other languages. She stated, “We do welcome; we do create a safe place to welcome, to make them feel welcome and to include their home language when we get to know each other at the beginning of the year” (Amy).

However, Bethany held a differing view to Amy. She believed that it was “a massive problem” that many people in Australia, including teachers, had the “English-only mindset”. “English only speak English... English is a world language, and they tend to think that if other people are coming to live in our country, then they should learn to speak English,” explained Bethany. This English-only mindset [monolingual mindset] blocked people to be open to other languages or to be inclusive to people speaking other languages. She further described the situation in her school,

“So I [Australians] don't need to learn another language because everyone in the world speaks English, or everyone should speak English. It's a very common mindset in the school that I work in at the moment...” (Bethany)

Whilst Bethany regarded that it was a massive problem for teachers to resist other languages, another participant, Carol, did not hold a strong view regarding this situation but gave some suggestions based on individual cases. She also realised that not knowing English in Australia can cause a big language barrier with others, “If you're even newly arrived into [in] Australia or language is not... as fluent in English as some other people might be, so I think understanding those systems can be difficult” (Carol). As many students in her school came from [name of country withheld for confidentiality], she understood the importance to communicate with parents and students who speak other languages. To overcome the language difficulty, she welcomed her school to recruit interpreters, “[they] help with parent-teacher interviews, and some of those more complex conversations about child's learning...that really was helpful, I think from both parties” (Carol). For her own practice, she mainly used visual support to bridge her communication with CLD students with CCN, “they know simple [English] words and would respond to the picture when they're not responding to the English word” (Carol). Although the participants had diverse perceptions of other language use in Australian schools, they shared the same attitude to give up ‘English-only’ (monolingual) mindset and welcome the use of other languages in different levels.

4.4 USING HOME LANGUAGE TO BRIDGE COMMUNICATION BARRIER

The three participants represented three diverse perspectives of the home language role in Australia. Amy noticed that the use of home language is less important in classrooms as most of her bilingual students were born in Australia and communicated in English. “Some of them use another language at home. We call that the ‘home language’, but they don't speak it in the class,” noted Amy.

However, Bethany reported that home language can be the emotional support to CLD students when they are experiencing high levels of stress. She recounted that one student in her school had an emotional “breakdown” one day. She could communicate in English; however, she could not do so when she was anxious and stressed. As the school services officer (SSO) who supported her did not know her home language, the school asked for help from Bethany and any staff members who knew the student’s home language. Bethany explained, “in those situations, [the student can] articulate really, really well in [language name withheld for confidentiality], but just can't do it in English when that stress

level...anxiety level is really high". From Bethany's perspective, home language plays an important role to bridge communication barrier.

In contrast, another participant Carol expressed her concern that non-English home language sometimes is the barrier to correct diagnosis from SLPs and the communication with teachers. She shared an experience supporting a CLD and neurodiverse student who was diagnosed to be non-verbal by SLPs. However, one day, that student suddenly spoke loudly with Carol in English, "Can you open the door? I need to go to the toilet." When Carol recalled this experience, she described it as, "I was like, blown away." She understood that English was not that student's home language and he loved [home language] music; in school, he communicated with others by using visual support, such as pictures and charts. "Do you think he's more selectively mute? Yes, he can talk, and if he's selectively mute, which [it] was really interesting," Carol reflected. In this specific situation, the student's inclination to use his home language could potentially impede his response to English questions from the SLP, posing a barrier to the information-gathering process regarding the student's communication skills. Despite the varied perceptions from the three participants, it can be concluded that another language use can be both the facilitator and the barrier of communication.

4.5 ATTITUDES AND GOAL SETTING

In this theme, three subthemes were identified, attitudes to AAC, attitudes to diversity, and goal setting to support students with CCN. These themes are described below.

Attitudes to AAC

Participants held varied views to the use of AAC depending on their experience and training. Amy did not have much understanding of AAC and stated, "we do not have a specific AAC per se" (Amy). Meanwhile, Bethany expressed her interest and open-minded attitude to the use of AAC. She had no experience to support students by using AAC, but she had observed how other teachers in another school effectively used AAC with students. She commented,

"I've seen kids grow in confidence in communicating when they've got this form of communication. It's like, yeah, they don't have to rely on the words. They can... They know that the teacher has set this system up and it gives them the confidence to communicate." (Bethany)

Similarly, Carol had positive and open-minded attitude as Bethany. She was excited about the advanced development of AAC and realised that AAC devices became more accessible, less expensive, and handier because of the availability of the smartphone apps. She recounted her experience when studying in the university, “[AAC] it's become more accessible now for everybody, whereas when I was at university, when you learned about these amazing devices that people with a disability were able to access, they were incredibly expensive” (Carol). However, she expressed her concerns about the teachers’ competence to support the use of AAC as not every teacher has the relevant experience and training.

Attitudes to Diversity

All participants demonstrated positive attitudes towards diversity and anticipated the growing public awareness of specialised needs. Amy welcomed the inclusion of cultural and linguistic diversity and emphasised the needs to study students’ learning profiles and cater for the individual diversity, “we get to know the students from their teachers in previous years [to] understand their specific needs and what strategies they have been working on” (Amy). Similarly, Bethany welcomed diversity and appreciated the change of the public awareness; however, she admitted that it would take a long time to transform our society to be inclusive,

“The general public became more aware of the needs of individuals, and people started [to] talk about it more and be a little bit more accepting, but I think it -- there's still a really long way to go. Umm, I think there's still stigma attached to [cultural and linguistic diversity].” (Bethany)

Meanwhile, Carol shared similar positive attitudes and urged to be more open-minded and understand individual differences. She realised that it might be easy for teachers to make assumptions when they did not have good understanding of diversity. She mentioned the importance of listening and called for actions, “having children with a disability is difficult and [it's, you know,] you're having to push and fight for your child every step of the way” (Carol).

Goal Setting to Support Students with CCN

All three participants agreed that clear goal setting is key to support students with CCN and shared a variety of their current practices and suggestions. Amy introduced the use of One Plan and explained, “One Plan is a plan where teachers who work with them will identify

strategies that they are working towards, where they set smarter goals”. Similarly, Bethany mentioned the importance of strategies and goals, “the more targeted strategies are, the easier it is to... support particular students [students with specialised needs]”. Carol further suggested that teachers should be patient and flexible when designing individualised strategies based on students’ specialised needs. She reminded teachers not to have low expectations even though it was easy to be discouraged in the process, “Every--person can learn, and so what [is it] we can do [is] to keep moving the bar up” (Carol).

4.6 EXPERIENCE AND TRAINING

In this theme, two subthemes were identified, predicaments faced by experienced teachers and training to support CLD Students with CCN. These themes are described below.

Predicaments Faced by Experienced Teachers

All participants are teachers who have experience to support students with CCN or have received relevant training; however, they all admitted that they had uncertainty and struggles when supporting the students. Amy is experienced in supporting students with specialised needs. Moreover, she clearly knew how to understand students’ learning profiles by communicating with the students’ previous teachers and studying their diagnosis reports, assessments, and One Plan which was an online platform for teachers to study students’ learning profiles and suggested teaching strategies. Despite her experience in teaching, she had no experience to support students who use AAC. In addition, Amy felt uncertain about the term ‘complex communication needs’ and expressed her preference to use another term ‘special communication needs’,

“I’m not sure whether we have any student who have complex communication needs, but we do have students with very specific or special communication needs due to the conditions such as autism, ADHD, learning impairment like dyslexia and or with communication and social skills needs.” (Amy)

Correspondingly, Bethany was also an experienced teacher, but she did not have any opportunity to support students who use AAC or received relevant training, “I haven't heard any students that use [AAC] devices” (Bethany). Furthermore, she had the same confusion about the relationship between autism and complex communication needs, “Is autism...do

they have communication need? But I wasn't really sure what it --was because it's [CCN] such a vague term," asked Bethany.

In contrast, Carol had received professional training from her bachelor's degree about Disability Studies, placements in special schools where she supported people who had cerebral palsy and used AAC, and her workplace where she worked with students with disabilities in a mainstream setting. Despite her rich exposure and experience in the field, she admitted that she had never received any training about culturally and linguistically diverse practices, "it's an area that I don't know much about. So, as I said, I don't think I'd come across any training [in cultural and linguistically responsive practice]" (Carol).

Training to Support CLD Students with CCN

Bethany and Carol supported relevant teacher training and development when Amy did not cover this topic. Regarding pre-service teacher training, Carol mentioned the teacher training she experienced in Queensland,

"We studied a subject on disability just as a general teaching thing, and we all did a prac[ticum], either in a special school or working with children with disability in a mainstream setting. That's not something that I think I've come across in SA [South Australia]." (Carol)

Regarding the training to in-service teachers, Carol suggested learning the powerful use of AAC when Amy repeated the ideas of teachers' knowledge and integrated curriculum for multiple times. Additionally, Bethany proposed both school leaders and in-service teachers should receive professional training, "they would need to attend professional development so that they know what to look for so that they know what strategies to use." (Carol)

4.7 HOLISTIC SUPPORT

All participants raised the importance to support students with diverse backgrounds and specialised needs. Although each participant focused on a unique aspect of support, for example, support from government policy, leadership development, whole school approach, or the teachers. Carol was pleased to witness the increasing awareness of disability and the government policy to include students with disabilities in the mainstream schools, "We're

moving away from the whole special sort of school and the whole sort of special class to the idea that people, children should be just in mainstream.” (Carol)

When more students with specialised needs studied in the mainstream schools, Bethany believed that the school leadership should be more widely represented, “It [the government policy] could be changing slightly now, but the people who are in power are English, mainly English speaking or English-only speaking people” (Bethany). Moreover, the school leaders are suggested to receive the professional training of differentiation and specialised education to cater for the diverse needs of students. “I think teachers and leaders should be trained better, which means they would need to attend professional development so that they know what to look for so that they know what strategies to use,” noted Bethany.

School leaders are expected to uphold inclusivity in school and implement a whole school approach to support students with diverse needs. Amy recommended, “the special education leaders or the EALD [English as an Additional Language or Dialect] leaders and the whole school approach is [are] to help the school to have a consistent approach in supporting all these kids”. She added that schools need to be fostered in a whole school approach curriculum which is important enough to be measured. She took an example of the culturally responsive practices and assessments, “So, in my opinion, the barriers are the conceptual understanding and also the deep learning about other cultures, including what type of assessment to determine their learning outcome.” (Amy)

Apart from government policy, leadership, and whole school approach, Carol reminded that teachers should be guaranteed to receive abundant support in schools when implementing the school policies. She mentioned the difficulties faced by teachers, “With those you don't quite get the same proportion of support, and that can be very difficult for teachers” (Carol). Moreover, she shared the classroom settings she used to experience,

“I wonder if each school to [can] have an extra person in your classroom... I worked in a disability unit for a time, it was lovely to have eight students in a class and you always had an extra person with you.” (Carol)

All in all, support in a holistic approach--from the government to the individual--is prominent when initiating the culturally and linguistically responsive practices in schools.

4.8 TEAMWORK

In this theme, two subthemes were identified, communication and conversations, and teamwork from all levels. These themes are described below.

Communication and Conversations

The participants had divergent experiences when trying to communicate for the sake of the students, but they all agreed that different stakeholders should open conversation and start communication. Amy valued the communication with her colleagues, parents, and all supporting professionals to understand the needs of the students,

“Firstly, we get to know the students from their teachers in previous years [to] understand their specific needs and what strategies they have been working on... we also work very closely with the ongoing support personnel, like, for example, if they have OT [occupational therapist] or psychologist sessions, we also work with parents to talk about their needs.” (Amy)

However, Bethany was disappointed about the lack of communication with the school,

“I've never been told about any form of communication needs for any of my students. I've had to work it out on my own and I've had to take the initiative to approach the class teachers about it and with the very young children.” (Bethany)

She suggested that teachers should start from communication with the specialist teachers to support the students, “I think there needs to be more communication between specialist teachers, class teachers and leaders.” (Bethany)

On the other hand, Carol faced difficulties to communicate with parents when English was not their first language, “how much actual communication is happening is very variable across different families” (Carol). Despite the challenges, she hoped to find a pathway to overcome the communication barriers with parents, “I think from a teaching angle, often it's more the— conversation, more is the challenge of how [do] we communicate to parents and so how do we do that?” (Carol)

Teamwork from All Levels

All participants associated effective support with teamwork from all levels. Amy recognised the importance of working together and believed that everybody must work together, “...to

ensure that the students with [these] culturally and linguistically diverse needs or with CCN are appropriately and sufficiently met, [we] need the whole school and also leaders to work together with the teachers” (Amy). The opinions of Bethany aligned with Amy’s and supported the teamwork at all levels, from leaders, specialist teachers, class teachers, to SSOs. Carol remarked that teamwork and network are the key to effective support to students,

“I think we went better in teams sometimes. Sometimes you can be a bit depending where--you work. Sometimes you can feel a little bit isolated by because you're by yourself, but--also yeah, you need -- to be able to have time to be able to plan and be able to talk together and umm, you know network too because you learn so much more from each other.” (Carol)

In summary, dialogue and teamwork within leaders, specialist teachers, parents, class teachers, other teachers, SSOs and other supporting personnel is crucial to support culturally and linguistically responsive practices in school settings.

CHAPTER 5: DISCUSSION

This exploratory study aimed to report perspectives of teachers regarding culturally and linguistically responsive practice for students with CCN in school settings. The three participants were highly engaged in deep discussions and personal experience sharing that gave the researcher the opportunity to address the research questions and explore beyond them to other topics related to inclusivity, monolingual mindset and the prominent roles of conversation and teamwork. The three research questions were:

1. From the perspectives of professionals, how are mainstream in-service mainstream teachers currently responsive to the cultural and linguistic backgrounds of students with complex communication needs?
2. What are the mainstream teachers' perceptions on facilitators and barriers when supporting culturally and linguistically responsive teaching?
3. What do teachers report that can be done to support in-service mainstream teachers with culturally and linguistically diverse practices for students with complex communication needs?

During the development of the themes from the codes, the research team identified overlapping themes across the research questions. The themes were combined to present 8 overarching themes for the study. For clarity the themes are listed below for each of the research questions (See Table 2).

Table 2

List of Themes by Research Questions

Themes that answer the research questions

Q1. From the perspectives of professionals, how are in-service teachers currently responsive to the cultural and linguistic backgrounds of students with complex communication needs?

- 4.1 Traditional approach—communication support to support students with CCN
- 4.2 Inclusivity—cultural understanding
- 4.3 Inclusivity—giving up monolingual mindset

Q2. What are the teachers' perceptions on facilitators and barriers when supporting culturally and linguistically responsive teaching?

- 4.4 Using home language to reach communication barrier
- 4.5 Attitudes and goal setting
- 4.6 Experience and training
- 4.8 Teamwork

Q3. What do teachers report that can be done to support in-service teachers with culturally and linguistically diverse practices for students with complex communication needs?

- 4.6 Experience and training
 - 4.7 Holistic support
 - 4.8 Teamwork
-

5.1 BROAD PERSPECTIVES ON AAC AND HOME LANGUAGE

All participants in this study are teachers who are committed to catering for learners' individual needs; however, they demonstrated a broad range of perspectives on the use of AAC and home language.

AAC is an evidence-based communication tool to support effective communication for learners with CCN (Beukelman & Light, 2020; Crowe et al., 2022). However, AAC is not yet widely used with full extensive support in mainstream schools (Iacono et al., 2022). Teachers in mainstream schools also showed diverse views to AAC based on their personal experience and training (Leatherman & Wegner, 2022; Tönsing & Dada, 2016). Among the three participants, only Carol, who was a specialist teacher, had professional training and school experience to support students with CCN to use AAC. Carol had a positive view on the use of AAC and recognised AAC as an important support to students with communication needs. On the other hand, Amy and Bethany had never been supported or trained to use AAC or

implement any evidence-based communication intervention; although they had the need to support neurodiverse students who had limited speech in their classrooms. AAC users and their communication partners, such as teachers, needs AAC training and coaching before they can effectively implement AAC (Ivy et al., 2021). Although Amy and Bethany recognised the value of multiple modes and visual supports, they were still facing a wide range of obstacles, and they could only use their own ways to adjust the lessons for students with neurodiversity in their classrooms. Previous studies have identified this phenomenon that teachers are facing a myriad of barriers in low-resource contexts (Biggs et al., 2019; Biggs et al., 2022; Halder et al., 2023).

Regarding views of home language use, the participants reported contrasting views. Home language was regarded as both a facilitator and a barrier to support for CLD students with CCN. Bethany viewed home language as an effective emotional support to CLD students at times of high stress. It is evident in the literature that home language plays a key role in people's well-being and emotional expression (De Houwer, 2020; Ivaz et al., 2016; Sun, 2019). For example, Bethany reported being linguistically responsive to the student with emotional "breakdown", using home language to address the student's communication needs (See quote, results p.28). Hall (2021) also noted that it was imperative to affirm home language and culture and avoid marginalisation of CLD students who had communication impairments.

Alternatively, home language can be the communication barrier between English-only speakers and speakers whose home language is not English. Carol respected the diverse backgrounds of students but suspected that home language might increase the language barrier between the English-speaking SLP and the CLD student and gave an example where the use of more than one language inadvertently led to the misperception that a student was non-verbal (See quote, results, p. 28-29). This finding aligned with the current studies that CLD learners with CCN have double disadvantages in communication and social participation (Halder et al., 2023; Hall et al., 2021). Similarly, in another study (Kangas, 2021), teachers reported challenges supporting learners who were dually identified as second English learners with disabilities. For students with limited use of natural speech and a home language other than English, these dual language barriers are an ongoing challenge and restrictions in participation in the classroom.

5.2 INCLUSIVITY MINDSET

Morgan et al. (2018) noted that CLD students with disabilities are still under-represented and under-identified; their needs are not adequately addressed in schools. Such concerns were also expressed by the participants in our study. Both participants, Amy and Bethany, had a high rate of students who have communication needs; for example, Amy had 8 out of 43 students who required communication support; however, the participants did not receive any training or guidelines about the use of AAC. In addition, Bethany mentioned that she was not informed any communication needs of students in her class and urged for more communication with the specialist teachers. Halder et al. (2023) explained that it is a great challenge for teachers to support CLD students with CCN because of the big skill gap. Another participant, Carol, admitted that she was not aware of the linguistic and cultural needs of her students who had CLD backgrounds. The lack of awareness is possibly another reason for not being culturally and linguistically responsive (Hollie & Allen, 2018; Tanguay et al., 2018).

From the data of this study, English-monolingual mindset is possible to be a significant reason for teachers' unresponsiveness to the learning needs of CLD students (Gramling, 2016; Hajek & Slaughter, 2014). According to Gramling (2016), monolingualism refers to the supremacy of any language over other languages in a specific historical or social context (Gramling, 2016); the view of the participant Bethany reflected this definition. Bethany shared in the interview that the 'English-only mindset' (monolingual mindset) was the obstacle for teachers to show responsiveness to the linguistic and cultural diversity. The monolingual mindset would create a linguistic hierarchy which devalues bilingualism, justify power inequality, and marginalised the vulnerable groups, including students who are non-English users, or whose primary language is not English (Beatty et al., 2021; Cho, 2023). It further explains why some CLD students with CCN have double disadvantages and why Hall (2021) directs professionals to strive for upholding a child's linguistic and cultural identity.

The journey to responsiveness starts with a change in mindset (Hollie & Allen, 2018). Teachers do not need to be competent in every culture and language. When teachers are the key communication partners and supporters of students in schools (Mowat, 2023; Pit-ten Cate et al., 2018; Zagona et al., 2017), it is more important for teachers to be respectful of other cultures, understand that difference does not equate to limitation or impairment, and build the inclusivity mindset within teachers (Mowat, 2023; Pit-ten Cate et al., 2018). All the

participants in this study welcomed the cultural and linguistic diversity in school and encouraged everyone to have an open-minded attitude. They believed that it was worthwhile for everyone in the community to understand the differences and embrace the diversity. According to Mowat (2023), schools are a microcosm of society and reflects the cultural value and social norms, thus schools have the mission to build an equitable and inclusive learning environment without discrimination and marginalisation. To build a culturally and linguistically responsive school landscape, family-school partnerships are critical to gather students' linguistic learning profiles and implement the translanguaging practices in schools (See Figure 4) (Beatty et al., 2021). As discussed above, it is imperative to understand students' diverse cultural and linguistic backgrounds and be responsive to their diverse needs (Crowe et al., 2022; Sinclair et al., 2018).

Figure 4

Culturally and Linguistically Responsive Family-School Partnerships



Note. ELL=English language learner; ESL=English as a second language; EL=English learner. From *Young Exceptional Children*, 24(3): Translanguaging in inclusive classrooms: Learning with children and families by Beatty, L., Acar, S., & Cheatham, G. A., 2021, p. 156.

5.3 SUPPORTING TEACHERS TO BE EFFECTIVE COMMUNICATION PARTNERS

Students with complex communication needs face a multitude of barriers in learning and social participation, thus they require extensive curriculum and lesson adjustments in schools (Da Fonte & Boesch, 2018; Halder et al., 2023; Scheuermann et al., 2018). However, many teachers are not prepared to teach bilingual students with disabilities, nor trained to communicate with students by using AAC (Biggs et al., 2019; Halder et al., 2023; Jozwik et al., 2020). This challenge was evident in the current study. All participants expressed their struggles when supporting students with diverse needs. Both Amy and Bethany showed their uncertainty with whether their neurodiverse students have complex communication needs and stated that they had no experience to support students who use AAC; Carol also mentioned that she had not received any training about culturally and linguistically responsive practices.

This current study highlighted the need for support and cooperation between teachers and SLPs. It is obvious that teachers need more support from the professionals, such as SLPs, for screening, diagnosis, and identification (Beukelman & Light, 2020; Hall, 2018). The positive sign is that the participants in the current study stated that the awareness of supporting students with disabilities had increased and two participants, Amy and Carol, mentioned that the supporting professionals, such as SLPs, visited their schools regularly and they had the chance to read the diagnosis reports. The need for increased collaboration between SLPs and teachers has been reported by others (Archibald, 2017; Brady & Kim, 2023).

Besides the collaboration with SLPs, the logical next step is providing adequate teacher training. Two of the participants, Bethany and Carol, urged for the relevant teacher training to support CLD students with CCN. Another participant Amy also mentioned the importance of teachers' knowledge. The findings of this study are associated with multiple studies which investigated the significant roles of teachers as natural communication partners and proposed relevant training to teachers (Biggs et al., 2018; Crowe et al., 2022; Pit-ten Cate et al., 2018). More in-house training and job-embedded professional development can be provided to help teachers learn how to adjust the current instructions and practices based on the needs of students and how to create a culturally and linguistically responsive intensive education program (IEP) in a team (Tran et al., 2018).

5.4 CONVERSATIONS AND COLLABORATIONS

Our findings indicate that the participants support a holistic approach for school change. They suggested a whole-school policy from the top level--government or school leaders—to support marginalised students; on the other hand, change should also be initiated from the bottom by providing support and training to teachers and developing the inclusivity mindset. Indeed, both the top-to-down approach and the down-to-top approach can be used together as a sophisticated blend of strategy (Fullan, 1994). This two-pronged approach was suggested to start the change in an organisation from multi-perspectives (Heyden et al., 2017). Take the school reform as an example. Frontline teachers have created the inclusivity mindset and have a deeper understanding of students' needs; government and school leaders also understand the needs to support students in marginalised groups and have the power of resource allocation. Based on this two-pronged approach, if the educational reform was initiated by teachers and executed by the government and the school leaders, the reform would be more effectively implemented in schools. According to Heyden et al. (2017), the key to successful change is ensuring the space of dialogue which fosters the collaborations from bottom to top, and from top to bottom.

Aligned with the literature of Heyden (2017), the findings of the current study highlight the need for conversations on education change. All participants agreed that the change should start with open conversations with a wide range of stakeholders, including school leaders, teachers, SLPs, education support personnel, parents, and students. The participant, Amy, chose to initiate the conversation from cross-cultural awareness with her students. She authentically embedded other cultures in her lessons and invited students and parents from culturally diverse backgrounds to share their cultures. It is believed that the ground-level classroom conversation with cross-cultural awareness is the first step to the success of the education change (Tavares, 2017). It echoes with another study that conversations that make meaningful education change should be created based on respect, reciprocity, and shared values (Pleschová et al., 2021). However, Pleschová et al. (2021) further remarked that there would possibly be risks, uncertainty and vulnerability in the conversations. Simply to put, a flat, courageous conversation is the start of the education change which should be founded on a shared value or a meaningful purpose, requiring the tolerance of uncertainty.

Apart from shared mindset (inclusivity) and mutual conversations, the current study indicated that teamwork was a main concern of all participants. They believed that the team collaboration plays a vital role in effective support to CLD students with CCN. It associated with the literature by Fullan (2020) which emphasises the importance of purposeful collaboration. With the understanding of students' needs and the moral reasons for the change, teachers proactively increased the interactions with other stakeholders and collaborated for their shared goals (Thiers, 2017). To advocate a culture change in schools and ensure that the needs of CLD students with CCN are addressed, three elements are essential (See Figure): moral purpose, which is the inclusivity mindset in this study; relationships, which have a strong link with conversations and communication; and purposeful collaboration, which is teamwork mentioned by the participants (Fullan, 2020).

Figure 5

Three Essential Elements of a Culture Change

Figure removed due to copyright restriction.

Note. From *Leading in a culture of change* (2nd ed.) by Fullan, M. (2020).

5.5 LIMITATIONS AND FURTHER RESEARCH

The current study was exploratory and innovative in nature. Results provide qualitative insights into teachers' perspectives of supports for students with CCN and CLD backgrounds in school settings. These findings bear important implications for directing the attention of future research on the linguistically and culturally responsive practices that support students with CCN. Our study's results imply that teachers are the crucial communication partners and supporters of students with diverse needs; however, support to teachers vary among schools and some teachers still work in low-resource contexts. It is essential that future research investigates how teachers can be supported to address the needs of CLD students with CCN, and how the stakeholders can collaborate to create an inclusive learning environment.

Regarding the research limitations, all participants are in-service teachers serving in mainstream schools. As the study aims at representing the views of mainstream teachers, perspectives from teachers in other school settings who may have diverse views on supporting CLD students with CCN are not represented. Future research can further investigate the perspectives of teachers in other contexts, for example, special schools. In addition, there is little in the literature on listening to the voices of students with CCN and home language other than English or supporting their diverse needs in school settings. It will be valuable that the future research can explore the perceptions of bilingual students with CCN and their families to improve our understanding of their experience.

CHAPTER 6: CONCLUSION

This exploratory study was the first to investigate the perspectives of in-service teachers that support students with complex communication needs and culturally and linguistically diverse backgrounds in school settings. Students with CCN and CLD backgrounds have double disadvantages (Hall et al., 2021): they have limited natural speech to communicate and require educational adjustments provided by schools (Beukelman & Light, 2020); concurrently, the current AAC systems provide limited support to AAC users who speak languages other than English (Langarika-Rocafort et al., 2021) and many schools are not prepared to provide linguistically and culturally responsive educational practices (Halder & Squires, 2023).

As teachers are important communication partners and supporters to CLD students with CCN in schools (Pit-ten Cate et al., 2018), a qualitative descriptive research study was conducted to interview three in-service teachers who support bilingual students with CCN. The participants in the study reported the challenges faced by teachers; and how the monolingual mindset created communication barriers and contributed to the double disadvantages of CLD students with CCN. The findings of this study suggested creating inclusivity mindset and supporting teachers to be effective communication partners of students with diverse needs. Students need an inclusive learning environment; and the success of the culture change depended on the conversations, collaboration, and shared mindset of different stakeholders. Further research studies are needed to explore culturally and linguistically responsive teaching, and also to study the perspectives of other key stakeholders such as students and their families, and school leaders in future research.

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APPENDICES

APPENDIX A: LETTER OF ETHICAL APPROVAL



HUMAN ETHICS LOW RISK PANEL APPROVAL NOTICE

Dear Dr Emma Grace,

The below proposed project has been **approved** on the basis of the information contained in the application and its attachments.

Project No: 6429
Project Title: Exploring supports for students with complex communication needs and culturally and linguistically diverse backgrounds in school settings
Chief Investigator: Dr Emma Grace
Approval Date: 28/08/2023
Expiry Date: 29/12/2023
Approved Co-Investigator/s: Ms Ting Lam

Please note: For all research projects wishing to recruit Flinders University students as participants, approval needs to be sought from the Pro Vice-Chancellor (Learning and Teaching Innovation), Professor Michelle Picard. To seek approval, please provide a copy of the Ethics approval for the project and a copy of the project application (including Participant Information and Consent Forms, advertising materials and questionnaires etc.) to the Pro Vice-Chancellor (Learning and Teaching Innovation) via michelle.picard@flinders.edu.au.

RESPONSIBILITIES OF RESEARCHERS AND SUPERVISORS

1. Participant Documentation

Please note that it is the responsibility of researchers and supervisors, in the case of student projects, to ensure that:

- all participant documents are checked for spelling, grammatical, numbering and formatting errors. The Committee does not accept any responsibility for the above mentioned errors.
- the Flinders University logo is included on all participant documentation (e.g., letters of Introduction, information Sheets, consent forms, debriefing information and questionnaires – with the exception of purchased research tools) and the current Flinders University letterhead is included in the header of all letters of introduction. The Flinders University international logo/letterhead should be used and documentation should contain international dialing codes for all telephone and fax numbers listed for all research to be conducted overseas.

2. Annual Progress / Final Reports

In order to comply with the monitoring requirements of the *National Statement on Ethical Conduct in Human Research 2007 (updated 2018)* an annual progress report must be submitted each year on the approval anniversary date for the duration of the ethics approval using the HREC Annual/Final Report Form available online via the ResearchNow Ethics & Biosafety system.

Please note that no data collection can be undertaken after the ethics approval expiry date listed at the top of this notice. If data is collected after expiry, it will not be covered in terms of ethics. It is the responsibility of the researcher to ensure that annual progress reports are submitted on time; and that no data is collected after ethics has expired.

If the project is completed before ethics approval has expired please ensure a final report is submitted immediately. If ethics approval for your project expires please either submit (1) a final report; or (2) an extension of time request (using the HREC Modification Form).

For student projects, the Low Risk Panel recommends that current ethics approval is maintained until a student's thesis has been submitted, assessed and finalised. This is to protect the student in the event that reviewers recommend that additional data be collected from participants.

3. Modifications to Project

Modifications to the project must not proceed until approval has been obtained from the Ethics Committee. Such proposed changes / modifications include:

- change of project title;
- change to research team (e.g., additions, removals, researchers and supervisors)
- changes to research objectives;
- changes to research protocol;
- changes to participant recruitment methods;
- changes / additions to source(s) of participants;
- changes of procedures used to seek informed consent;
- changes to reimbursements provided to participants;
- changes to information / documents to be given to potential participants;
- changes to research tools (e.g., survey, interview questions, focus group questions etc);
- extensions of time (i.e. to extend the period of ethics approval past current expiry date).

To notify the Committee of any proposed modifications to the project please submit a Modification Request Form available online via the ResearchNow Ethics & Biosafety system. Please note that extension of time requests should be submitted prior to the Ethics Approval Expiry Date listed on this notice.

4. Adverse Events and/or Complaints

Researchers should advise the Executive Officer of the Human Research Ethics Committee on at human_researchethics@flinders.edu.au immediately if:

- any complaints regarding the research are received;
- a serious or unexpected adverse event occurs that effects participants;
- an unforeseen event occurs that may affect the ethical acceptability of the project.

Yours sincerely,

Hendryk Flaegel

on behalf of

Human Ethics Low Risk Panel
Research Development and Support
human_researchethics@flinders.edu.au

Flinders University
Sturt Road, Bedford Park, South Australia, 5042
GPO Box 2100, Adelaide, South Australia, 5001

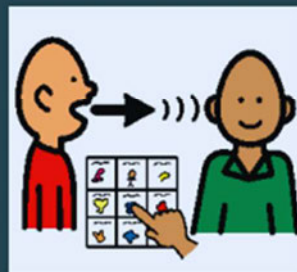
ResearchNow
Ethics & Biosafety

RESEARCH PARTICIPATION

Are you a teacher with students who have complex communication needs (CCN) and more than one language at home?


In this master's research project, I am conducting online interviews to hear about your experiences supporting bilingual students with CCN.

Please [click here](#) or scan for more information/expressing your interest in participation.



THIS RESEARCH PROJECT HAS BEEN APPROVED BY FLINDERS UNIVERSITY'S HUMAN RESEARCH ETHICS COMMITTEE (PROJECT NUMBER: 6429)

APPENDIX C: QUALTRICS LINK TO COLLECT PARTICIPANTS' CONTACT METHODS

 Flinders University

Please click [here](#) for more information of the project.

Are you willing to participate in the online interview?

Yes

No

What is your name?

Please write down your preferred contact method (phone number or email address).

APPENDIX D: PARTICIPANT INFORMATION SHEET

PARTICIPANT INFORMATION SHEET

Title: Exploring supports for students with complex communication needs and culturally and linguistically diverse backgrounds in school settings

Chief Investigator / Supervisor

Dr. Emma Grace

College of Education, Psychology and Specialised Education

Flinders University

Tel:

Co-investigator

Ms. Ting Lam, Trini

College of Education

Flinders University

Tel:

My name is Trini and I am a Flinders University Masters student. I am undertaking this research with my supervisor, Dr. Emma Grace, as part of my degree. For further information, you are more than welcome to contact my supervisor. Her details are listed above.

Description of the study

This project will investigate in-service teachers' perceptions of how to support students with complex communication needs (CCN) and culturally and linguistically diverse (CLD) backgrounds in school settings. This project is supported by Flinders University, College of Education.

Purpose of the study

This project aims to find out the perspectives of teachers on how to implement culturally and linguistically diverse practices and advocate to support students with CCN from CLD backgrounds.

Benefits of the study

The sharing of your experiences will help the public listen to the insiders' voice, expand their knowledge to support students with disabilities in school settings, and contribute to create an inclusive learning environment.

Participant involvement and potential risks

If you agree to participate in the research study, you will be asked to:

- attend a one-on-one interview with a researcher that will be video recorded. You can choose to turn off the video camera, with only the voice being audio-recorded.
- discuss how teachers currently support students with CCN and CLD backgrounds, share your stories supporting the bilingual students with CCN, and your insights to schools' future development.

The interview will take about 30 minutes and participation is entirely voluntary. The researchers do not expect the questions to cause any harm or discomfort to you. However, if you experience feelings of distress as a result of participation in this study, please let the research team know immediately. You can also contact the following services for support:

- Lifeline – 13 11 14, <http://www.lifeline.org.au>
- Beyond Blue – 1300 22 4636, <http://www.beyondblue.org.au>

Withdrawal Rights

You may decline to take part in this research study. If you decide to take part and later change your mind, you may, withdraw at any time without providing an explanation. To withdraw, you may just refuse to answer any questions, close the internet browser and leave the online interview. Any data collected up to the point of your withdrawal will be securely destroyed.

Confidentiality and Privacy

Only researchers listed on this form have access to the individual information provided by you. Privacy and confidentiality will be assured at all times. The research outcomes may be presented at conferences, written up for publication or used for other research purposes as described in this information form. The privacy and confidentiality of individuals will be protected at all times. However, participants may be identifiable due to the small sample size. Anonymity cannot be guaranteed.

No data, including identifiable, non-identifiable and de-identified datasets, will be shared or used in future research projects without your explicit consent. Please provide your consent to this by ticking the appropriate box on the Consent Form at the end of this form.

Data Storage

The information collected will be stored securely on a password protected computer and/or Flinders University server throughout the study. Any identifiable data will be de-identified for data storage purposes unless indicated otherwise. All data will be securely transferred to and stored at Flinders University for no more than 5 years after publication of the results. Following the required data storage period, all data will be securely destroyed according to university protocols.

Recognition of Contribution / Time / Travel costs

If you would like to participate, in recognition of your contribution and participation time, you will be provided with a \$20 Apple Gift Card. This voucher will be provided via emails, on completion of the interview.

How will I receive feedback?

On project completion, a short summary of the outcomes will be provided to all participants via email.

Ethics Committee Approval

The project has been approved by Flinders University's Human Research Ethics Committee (HREC project number: 6429).

Queries and Concerns

Queries or concerns regarding the research can be directed to the research team. If you have any complaints or reservations about the ethical conduct of this study, you may contact the Flinders University's Research Ethics and Compliance Office team either via telephone (08) 8201 2543 or by emailing the Office via human.researchethics@flinders.edu.au.

Thank you for taking the time to read this information sheet which is yours to keep.

If you accept our invitation to be involved, please sign the enclosed Consent Form.

APPENDIX E: CONSENT FORM

CONSENT FORM

Title: Exploring supports for students with complex communication needs and culturally and linguistically diverse backgrounds in school settings (HREC Project number: 6429).

Consent Statement

- I have read and understood the information about the research, and I understand I am being asked to provide informed consent to participate in this research study. I understand that I can contact the research team if I have further questions about this research study.
- I am not aware of any condition that would prevent my participation, and I agree to participate in this project.
- I understand that I am free to withdraw at any time during the study.
- I understand that I can contact Flinders University's Research Ethics and Compliance Office if I have any complaints or reservations about the ethical conduct of this study.
- I understand that my involvement is confidential, and that the information collected may be published. I understand that I may be identifiable due to the small sample size. Anonymity cannot be guaranteed.

I further consent to:

- participating in an interview
- having my information video recorded (with my video camera turning off upon my choice)
- my data and information being used in this project and other related projects for an extended period of time (no more than 5 years after publication of the data)

Signed:

Name:

Date:

APPENDIX F: INTERVIEW PROTOCOL

Exploring supports for students with complex communication needs (CCN) and culturally and linguistically diverse background (CLD) in school settings.

Researcher: Ms. Trini Lam

1. Opening

Hello! My name is Trini Lam. I am a master's degree student of Inclusive and Specialised Education undertaking a research project "Exploring supports for students with complex communication needs (CCN) and culturally and linguistically diverse (CLD) backgrounds in school settings". Thank you for participating in this research project.

In the interview process, we may use some key terms to describe the special situations of the students. We use the term 'CCN' to represent 'complex communication needs', which means the limited speech of people to meet daily functional communication needs. We also use the term 'AAC' which means Augmentative and Alternative Communication systems. They are evidence-based communication tools to support people with CCN to communicate. The last term is 'CLD'—culturally and linguistically diverse backgrounds. People with CLD backgrounds have more than one language and culture at home.

The aim of this study is to explore the perceptions of in-service teachers on how to be culturally and linguistically responsive to the backgrounds of students with CCN in school settings. There is a need to listen to teachers' perceptions of providing communication support and responding to CCN students' diverse backgrounds in school settings. It is hoped that this study can advocate to support bilingual students with complex communication needs.

In the interview, we will discuss how teachers currently support students with CCN and CLD backgrounds, invite you to share your stories with the bilingual students with CCN, and listen to your voices and insights to schools' future development. The interview will last for around 30 minutes and your participation is entirely voluntary. A \$20 Apple Gift Card will be rewarded to you, as a small gesture to acknowledge your valuable time spent.

Now I would like to confirm your written and verbal consent of participation that:

- you have read and understood the information about the research, and you understand you are being asked to provide informed consent to participate in this research study. You understand that you can contact the research team if you have further questions about this research study.
- you are not aware of any condition that would prevent your participation, and you agree to participate in this project.
- you understand that I am free to withdraw at any time during the study.

- you understand that you can contact Flinders University’s Research Ethics and Compliance Office if you have any complaints or reservations about the ethical conduct of this study.
- you understand that your involvement is confidential, and that the information collected may be published.
- you understand that you will not be identified in any research products.

You further consent to participating in an interview, having your information video recorded with the video camera turning off upon your choice, and your data and information being used in this project and other related projects for an extended period of time (no more than 5 years after publication of the data).

I do not expect the questions to cause any harm or discomfort to you. However, if you experience feelings of distress as a result of participation in this study, please let the research team know immediately. You can also contact the following services for support:

- Lifeline – 13 11 14, www.lifeline.org.au
- Beyond Blue – 1300 22 4636, www.beyondblue.org.au

Do you have any question about the interview?

2. Questions and Discussion

We will now begin the interview. When sharing any story, please use pseudonym. You do not need to provide any real name.

1. How long have you been working in school?
2. What kind of school do you work in?
3. Which year(s) of students do you usually support?
4. Do you mind sharing your main job duties in school?
5. Do you support any students who have complex communication needs and use more than one language at home? Do you mind sharing some details?
 - 5.1 Prompts: How many are they? How do you communicate with them? Do they use AAC to support their communication? Do they prefer using English or their home language?

6. How are you (and your team) currently responsive to students with complex communication needs and culturally and linguistically diverse backgrounds?
 - 6.1 Prompts: What do you do to assist your communication with them? What do you know about their home culture and language? How do you and your team respond and show your respect to their diverse backgrounds?

 7. What are the barriers and facilitators(support) you are experiencing when supporting culturally and linguistically responsive teaching?
 - 7.1 Prompts: Have you ever faced any difficulties when supporting CLD students with CCN? Have you received any support when teaching them? Can you share some stories when practising culturally and linguistically responsive teaching?

 8. What can be done to support teachers with culturally and linguistically diverse practices for students with CCN?
 - 8.1 Prompts: What kinds of support do teachers need? What do you think the school, or the government, can do to support teachers? Who do you want to work with the most when teaching this group of students: co-workers, speech and language pathologists, inclusion team leaders, SSO, or parents? Why?
- *Inquirer to ensure participant is comfortable throughout question time, and if necessary, offer a short break*

3. Closure

That's the end of the interview. Thank you for your cooperation and participation in this research project. How do you feel right now? *(Pause for participant's response.)*

If you experience any feeling of distress as a result of the participation in this study, please let me know. You may like to talk to someone in your support network or reach out to counselling services for support.

All the data collected in the audio recording will be used for this research only and your personal information will be kept with confidentiality. You are very welcome to contact me if you want to share anything more. Do you have any more questions about this research project? *(Pause for participant's response.)*

Thank you again for your participation. A \$20 Apple Gift Card will be rewarded to you, as a small gesture to acknowledge your valuable time spent. It will be provided to you via emails, on completion of the interview.

That's the end of the video-recording of the interview. Thank you.

APPENDIX G: AUDIT TRAIL

 01_Research Approval Application	26/10/2023 7:48 PM	File folder
 02_Recruitment Resources	26/10/2023 7:46 PM	File folder
 03_Interviews	8/09/2023 6:30 PM	File folder
 04_Themes	16/10/2023 5:03 PM	File folder
 05_Analysis	15/10/2023 5:01 PM	File folder
 06_Meeting with Supervisor	26/10/2023 7:45 PM	File folder

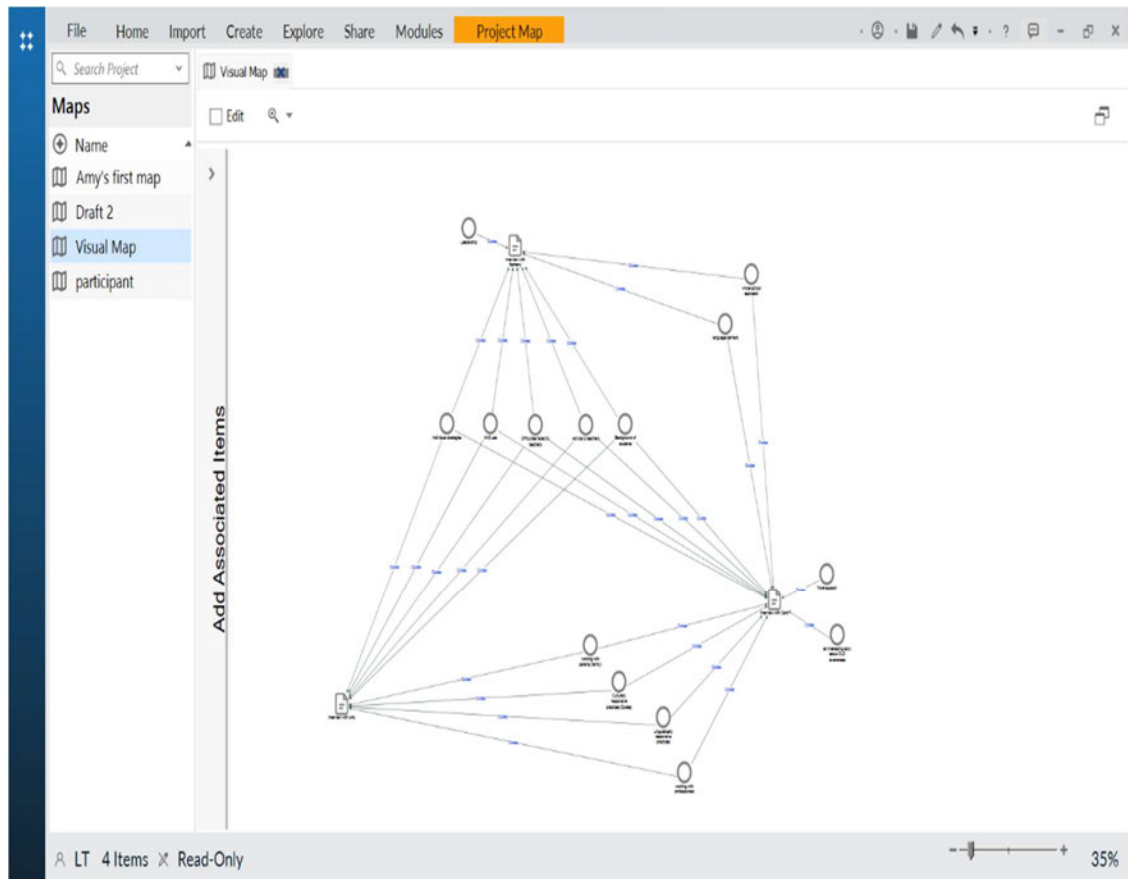
APPENDIX H: HIERARCHICAL CODING FROM NVIVO

Codes

Name	Files	References	Created on	Created by	Modified on	Modified by
○ Culturally responsive practices (Codes)	3	12	22/09/2023	LT	3/10/2023 7:	LT
○ authentic contexts	1	1	22/09/2023	LT	22/09/2023	LT
○ integrated curriculum	1	2	22/09/2023	LT	22/09/2023	LT
○ intercultural understanding	2	6	22/09/2023	LT	22/09/2023	LT
○ Difficulties faced by teachers	3	13	2/10/2023 7:	LT	2/10/2023 7:	LT
○ lack of AAC understanding	2	4	2/10/2023 7:	LT	2/10/2023 7:	LT
○ lack of measurable objectives and assessments	2	3	22/09/2023	LT	22/09/2023	LT
○ unsure of the definition of CCN	3	6	19/09/2023	LT	22/09/2023	LT
○ individual strategies	3	37	19/09/2023	LT	22/09/2023	LT
○ Lack of communication or translation support	1	1	3/10/2023 9:	LT	3/10/2023 9:	LT
○ lack of support	1	1	3/10/2023 7:	LT	3/10/2023 7:	LT
○ language barriers	2	15	22/09/2023	LT	22/09/2023	LT
○ Leadership	1	4	22/09/2023	LT	22/09/2023	LT
○ Linguistically responsive practices (they are open-minded t...	3	26	22/09/2023	LT	3/10/2023 7:	LT
○ More support	1	6	22/09/2023	LT	22/09/2023	LT
○ whole school approach	2	9	22/09/2023	LT	22/09/2023	LT
○ working with parents (family)	2	14	19/09/2023	LT	22/09/2023	LT

LT 46 Items

APPENDIX I: VISUAL MAP



APPENDIX J: CODE MANUAL

Here is the format of the coding manual as the first page.

Research Questions	Themes	Direct quotes	Journal notes
<p>Question 1. From the perspectives of professionals, how are educators currently responsive to the cultural and linguistic backgrounds of students with complex communication needs?</p>	<p>Traditional approach: Communication support from scaffolding, gestures, visual support, technology</p>	<p>we also do scaffolding support, for example, kids with dyslexia and also person who doesn't want to ask for help. Ohh, but I understand that they do not understand certain things, or do not want to write, so I usually provide notes for them in front of them, so that they know what is going on, and what they can use to support their understanding. (Amy)</p> <p>And do a lot of the uh, do a lot of scaffolding for the conversation, scaffolding with them, and sometimes if they're feeling really shy or they're just, you know, they don't wanna use words they might not, then I have had kids who will they will communicate with a partner if I'm there and they'll use umm. gestures like not English shaking their head or umm some up some down, that kind of thing. (Bethany)</p> <p>use images to construct meaning, understand the meaning of words. (Carol)</p> <p>previously too I have worked with these few students who were using tablets with... Yeah, yeah...with speech sort of capabilities on there as well. (Carol)</p> <p>I think the good thing now we have tablets is that it would be relatively easy to find a picture</p>	<p>more than one mode to support receptive language.</p> <p>Scaffolding / mirroring and mapping</p> <p>SGD (AAC complex device)</p>

		<p>and a word come out to speak it. (Carol)</p> <p>And then as we moved on and working in the area of autism, working with a lot of picture form as well, yeah. (Carol)</p> <p>Yeah, but he was a child...where we did use a lot of pictures, so he was able to come if he didn't want to speak; he did use a chart, so that was a way that he did. (Carol)</p> <p>I think that's why pictures are quite helpful, because having worked with a lot of children where English hasn't been their first language, who are verbal, sometimes when they're looking at you and you've got no idea what you're talking about. (Carol)</p> <p>they might have some suggestions of how that can help, but then I think that's where pictures can be really helpful and I've certainly worked with a lot of children where pictures is their way of communicating. (Carol)</p> <p>If they choose, you know for whatever reasons when they're not talking, they-- either compress, press a button to show a picture, or give you a card. (Carol)</p>	<p>Activity board / communication board</p>
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APPENDIX K: REFLEXIVE JOURNAL

13/9 Questions to Emma:

- How do I do the data analysis by using NVivo? If I don't use coding, what should I use? (descriptive approach)
- Is it good to start by locating the similarities and differences of the interviewees' responses?
- 3 interviewees have 3 diff. approaches
 - culturally responsive
 - linguistically responsive
 - no awareness, but well-trained to support Ss with CCN

perceptions of linguistic or cultural responsiveness
- Suggestions = policy + ↑ teacher's awareness
- Definition of Complex communication needs. Is it an umbrella term?
 - physical non-verbal?
 - emotionally unwilling to be verbal if ASD?
 - * interesting story = wrong diagnosis of non-verbal because of L2 barrier?

Latent / manifest coding obivous

How the code is manifested → credibility

use similar words

represent the participants

reduce from their lay concepts

⑥ CLD + CCN is a new area.

Surprising findings:

- Confusion about the term CCN. Autism counted in CCN? ⇒ Lit = teacher's world & training
- Language barrier + story x2. The impact of + Emotional support (Suggestions of bilingual communication boards, SSO...)
- Definition of best practice → Flexible ⇒ mindset & attitude ⇒ participation model?
- All are team motivated teachers. Low awareness of being responsive to the needs of CLD students / CCN in our community. Contact = H.I. With high rate of students of AACB CCN learners, but damn AAC or receive any guideline or support from school. C = expert, specialist but no awareness of the needs of CLD students ⇒ I'm happy that... Role of ~~being~~ another language use (barrier or facilitator?)
- Different perceptions based of difference experience and training

⑤ Similarity & difference

- Inclusivity → cultural understanding
 - communication support
 - ~~Embrace~~ Diversity
 - goal setting
 - NO ~~awareness~~ awareness / training to be ~~sq~~ responsive to CLD Ss with CCN
 - top down support
 - conversation + team work
- Different observations towards ~~long~~ other language use
 - resist
 - accept / embrace
 - ⇒ give up by my mindset
- Use of home lang. — facilitator (emotional support) or barrier
 - ⇒ bridge communication barrier
- Diff. expertise and perceptions + AAC