

Exploring How Speech-Language Pathologists Recall Changing Demographics and Assessment
Practices Related to Multicultural and Multilingual Children: A Retrospective Study

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Abstract

In 2023, immigrants and their United States born offspring accounted for approximately 90.8 million individuals (27%) of the civilian noninstitutionalized U.S. population (Batalova, 2024). Compared to 2010, this is a rise of about 14.7 million (20%). As the global population becomes more diverse, speech-language pathologists (SLPs) face the challenge of working with families representing various cultural and linguistic origins. The accurate diagnosis of speech and language impairments in multilingual children presents a significant clinical challenge for SLPs in the United States, where linguistic variety and communication difficulties are common (Kohnert & Medina, 2009). SLPs must refrain from using universal assessment methods, as members of cultural groups have cultural and individual identities. Appropriately assessing multilingual and multicultural children is a top priority for SLPs, and this study highlights the change in caseload demographics and extent to which clinicians practice incorporating identified best practice methods into their evaluation methods over time. Data were gathered through an online survey of school-based SLPs in the United States. The responses of 457 individuals were included. The data were analyzed using frequency distribution. Chi-square analysis and a paired sample *t*-test were used to compare responses. Results indicate that most SLPs and student teams continue to use English only measures during multilingual assessments. In addition, years of experience were not significant in the use of English only standardized assessments. Reports suggest that SLPs and student teams continue to use English only standardized assessments often. Collaboration was the only identified assessment practice that demonstrated increased with experience. The investigation led to the identification of the need for clinicians to enhance their practice by adopting and improving their evaluation methods through continuous implementation of best practices when assessing students from diverse backgrounds.

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LIST OF ABBREVIATIONS

CLD Culturally and linguistically diverse

DLD Developmental Language Disorder

DLLs Dual language learners

EL English Learners

ELLs English Language Learners

HL Home language

IDEA Individuals with Disabilities Education Act

LI Language Impairment

L1 First language.

L2; SL Second language.

SLI Specific Language Impairment

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Chapter I

INTRODUCTION

Student diversity continues to increase, gradually expanding the cultural and language diversity that speech-language pathologists (SLPs) encounter. Due to the cultural and linguistic diversity present, school-based SLPs face the clinical challenge of precisely diagnosing speech and language impairments in multicultural and multilingual children. SLPs are responsible for determining if culturally and linguistically diverse (CLD) students present with a true language difference or disorder. To provide an appropriate assessment, SLPs should consider cultural and first language components and assess using converging evidence. The recommended best practice procedures supported by research to use during multilingual assessments are not consistently executed. SLPs' implementation of required evaluative procedures may be influenced by various personal and professional experiences and available resources. The current study explored factors that may influence SLP evaluative procedures for language assessment for CLD students.

Purpose

The purpose of the study was twofold. To begin, within given periods based on years of SLP experience, the study sought to examine the patterns of SLP-caseload related to demographics and languages spoken, as well as SLP practices related to multilingual language assessments. Second, the study aimed to determine if and to what extent the identified caseload trends influenced the assessment practices of SLPs. This information is important because, during multilingual language assessments, SLPs should

use mandated best practices to make more accurate clinical decisions and prevent misdiagnosis of those who are assessed. Therefore, factors hindering the implementation of best practice procedures should be identified to better differentiate language differences from language disorders.

Statement of the Problem

The composition of caseload demographics and the native languages of students has fluctuated over time for practicing SLPs. This factor births an increased prevalence of cultural mismatch between clinicians and students. Due to the linguistic variety observed in the United States and the prevalence of communication disorders, SLPs encounter a notable clinical obstacle: the precise diagnosis of speech and language impairments in multilingual children (Kohnert & Medina, 2009). A variety of factors may contribute to caseload shifts including demographic changes, change in work setting, rezoning, and incorrect referrals. Nonetheless, all practicing school-based SLPs must assess CLD children with suspected speech and language concerns with assessment procedures that are adapted to accommodate the shifting caseloads.

Multilingual children from linguistic minority homes may be at an increased risk of overdiagnosis or inaccurate diagnosis. To diagnose developmental language disorder (DLD) and detect abnormal language development (ALD), bilingual children are often assessed utilizing monolingual techniques and standards (Rose et al., 2022). Standardized assessments are convenient to administer and frequently selected when testing bilingual children in schools (Arias & Friberg, 2017; Castilla-Earls et al., 2020). Employing a monolingual assessment tool with monolingual standards when evaluating bilingual children results in diminished diagnostic precision (Altman et al., 2021). Clinicians

should use standardized assessments with caution to avoid overidentification of bilingual children.

When assessing bilingual students, school-based SLPs should adhere to American Speech-Language-Hearing Association (ASHA) guidelines and the Individuals with Disabilities Education Act (IDEA) regulations. Therapists may also be responsible for adhering to guidelines and regulations enforced at state and local levels. SLPs should evaluate using convergent evidence and consider cultural and first-language factors to provide an accurate evaluation. The implementation of recommended best practice procedures for multilingual assessments is substantiated by research; however, it continues to lack consistency among SLPs.

Term Definitions

Bilingual- Individuals who speak or are exposed to two languages (De Lamo White & Jin, 2011).

Cultural competency – Skills and knowledge professionals need to effectively provide services to others while meeting their social, cultural, and language needs (Hernández & Hadley, 2020).

Culturally and linguistically diverse (CLD)- Individuals from different backgrounds who differ from the dominant culture based on components including language, ethnicity, and socioeconomic status (Perez, 1998).

Dual language learners (DLLs)- Individuals learning two languages from infancy or after the first language in early childhood (Genesee et al., 2004).

English Language Learners (ELLs)- Individuals with English language needs who come from non-English-speaking households (Roseberry-McKibbin, 2018).

Individuals with Disabilities Education Act (IDEA)- A law guaranteeing the provision of a free and suitable public education to all children, including those with communication disorders (Individuals with Disabilities Education Act [IDEA], 2004).

L1- The first language an individual learns (Paradis et al., 2010).

L2- The second language an individual learns (Paradis et al., 2010).

Multicultural- Individuals from minority racial and ethnic groups and other groups marginalized by gender, socioeconomic position, and sexual orientation (Battle, 2012).

Multilingual- An individual who speaks more than one language, has been exposed to other languages, or is learning English in addition to their native language(s) (Najarro, 2023).

Sequential bilingualism- Individuals who are introduced to their second language after age three, usually when they start school (Thordardottir, 2019).

Simultaneous bilingualism- Individuals who begin learning both languages as infants (Thordardottir, 2019).

Research Questions

1. To what extent do school-based SLPs report caseload demographic changes within specific periods?
2. To what extent do school-based SLPs report identified assessment practice use during multilingual assessment within specific periods?
3. To what extent has SLPs assessment practices used during multilingual assessments changed over years of work experience?

Research Hypotheses

1. It was hypothesized that SLP participants would report increased caseload diversity related to ethnicity over time., with those with more years of experience reporting a higher change
2. It was hypothesized that SLP participants with more years of experience would report higher use of identified best practice assessment practices than those with less years of experience.
3. It was hypothesized that all SLP participants would report a significant increase in all identified best practice assessment procedures over time.

Significance of the Study

The research findings have the potential to add to the existing knowledge in the field and highlight the importance of understanding marginalized populations by shedding light on the current state of SLP caseloads and the assessment practices implemented by SLPs. Analyzing past and present tendencies can provide insight and forecast future trends. It is intended that as cultural and linguistic diversity within caseloads increases, assessment practices will increase to reflect the needs of the caseload. If the reported assessment practices are low compared to the cultural and language diversity reported among caseloads, the representation of individuals from CLD backgrounds with true language disorders may be imprecise, and there may be an elevated representation of caseload diversity. By analyzing present patterns of caseload and clinical evaluation techniques, the study will enhance overall outcomes for assessed students.

Conceptual Framework

SLPs should tailor their methods of conducting speech and language evaluations based on students' linguistic and cultural backgrounds. Implementing the appropriate procedures is necessary to make rational clinical judgments and to meet the demands of fluctuating diverse caseloads. The initial part of the conceptual framework includes evaluators considering both languages of children when evaluating bilingual children. Developmental language disorder (DLD) should appear in both languages to reach a diagnosis (Nayeb et al., 2021). Evaluating the child's proficiency in additional languages serves as a method to determine the presence of a language issue based on the assumption that such a disorder would similarly affect the child's primary language (Mueller Gathercole, 2013). Examining young bilingual children in the HL (home language) only is not a meaningful measure of linguistic skills due to the influence that HL exposure has on SL (second language) (Nayeb et al., 2021). As LIs affects each language taught, it is optimal to base a solid diagnosis of language impairment (LI) in multilingual children on assessing both languages (Boerma & Blom, 2017).

The second part of the conceptual framework includes evaluators using various tools and assessment materials to accurately determine whether a student has a language impairment. The converging evidence framework is commonly recommended and posits that a singular technique cannot adequately address the complex assessment of dual-language learners (DLLs) (Castilla-Earls et al., 2020; Peña et al., 2015). Precise and reliable measures can be combined with other assessment techniques to comprehensively assess a child's requirements and capabilities (Dockrell & Marshall, 2015). Castilla-Earls et al. (2020) advise evaluators to collect data and subsequently employ clinical judgment

to analyze the converging evidence to ascertain the presence of language impairment. Evaluating English language learners (ELL) for the potential presence of an LLD is acceptable and permissible using approved nonstandardized measurements and information gathered from various sources (Roseberry-McKibbin & O'Hanlon, 2005). Li'el et al. (2018) assert that a combination of direct and indirect measures is optimal.

The factors investigated in the current study include gathering case history, collaborative practices, standardized assessments, and language samples. A comprehensive case history will involve caregivers, educators, and clinicians (Pieretti & Roseberry-McKibbin, 2016; Roseberry-McKibbin, 2018). The teacher's report will provide significant insights into the classroom performance, while the parent report captures parent concerns and language use at home. In a study conducted by Li'el et al. (2018), it was discovered that integrating a parent questionnaire alongside supplementary English-language activities could effectively facilitate the identification of DLD in multilingual children. SLPs should collaborate with all team members and utilize interpreters when needed during the assessment process.

Standardized examinations support the diagnostic process for children whose native language is exclusively English. Standardized assessments may be compromised in their ability to evaluate the language abilities of ELLs accurately and consistently, although they can provide vital information. According to Thordardottir (2015), simultaneous bilingual French-English speakers under the age of five who were exposed to the society language 75% of the time were classified as having language impairment if their scores in two social language domains were 1.5 to 1.75 standard deviations (SDs) or more below the monolingual mean (MM). If scores in two domains of the society

language were between 2.25 and 2.5 SD from the mean, language impairment can be identified in simultaneous bilinguals exposed to the society language 25% of the time (Thordardottir, 2015).

Oral language samples capture speakers' ordinary and functional language use (Miller & Iglesias, 2019). Language sampling offers several advantages, such as the capacity to collect a wide range of information and the capability to evaluate language proficiency within a tangible context. Teachers, parents, and students' data are essential for analyzing a student's strengths and limitations, impact on education, and need for particular instruction (Ireland & Conrad, 2016).

Summary of Methodology

Four hundred fifty-seven individuals who met the criteria completed a survey entirely. Each participant self-identified as a school-based therapist who had provided at least one assessment to a multilingual or multicultural student. Participants were divided into two groups based on their years of experience. In Group 1, participants identified as being in the field for ten years or less compared to Group 2, who reported 11–31 years or more of work experience. The majority of participants (66.5%) identified as Caucasian, and 4.2% (n = 19) males were included in the sample compared to 94.7 % (n = 433) females. Most participants (79.9%) identified themselves as a monolingual clinician, while 19.9% indicated fluency in other languages besides English.

The survey participation was voluntary, and the instrument was distributed through a hyperlink and QR Code that directed users to the Qualtrics platform. Recruitment included communities and special interest groups (SIGs) sponsored by ASHA, SLP Facebook groups, speech and hearing associations, universities with CSD

and SLP programs, direct email invitations, and word of mouth. Active data collection was conducted for five weeks. Since participants were allowed to omit some or portions of questions, the number of replies exhibited variability across different questions, and some participants were removed from the final sample due to an abundance of missing responses. A Chi-square analysis was used to determine group trends to answer the research questions. A paired sample *t*-test was calculated to examine disparities in reports of the initial employment demographics with the current employment demographics.

Limitations

The study has limitations. One constraint is the implementation of the survey methodology. Researchers could not inquire about participant responses or obtain further clarification through the anonymous survey link and QR code. Additionally, the estimated time to complete the survey was 10 minutes. The completion time potentially subjected respondents to fatigue before completing all responses, further constraining responses. Within the survey, participants were asked to reflect on broad periods of time (e.g., first practicing 10 years versus last practicing 10 years). The demand for critical recall skills may have influenced the accuracy of responses received. The recall factor may have also equated to more responses from SLPs early in their careers versus longer practicing clinicians.

The study sought representation from SLPs nationwide, and the gathered responses were incomparable. With ASHA representing 206,126 certified SLPs and 49.9% reportedly working in the school setting (American Speech-Language Hearing Association [ASHA], 2024), a sample size of 457 is small. The study's sample group is not a good representation of all employed SLPs who work in schools. Therefore,

outcomes should not be broadly generalized due to the limited sample size. Furthermore, because of the ability to skip questions, a number of participants did so, which may have marginally impacted the results given the small sample size. In addition, the survey was open to all SLPs including those who were not certified. Those without a certificate of clinical competence (CCC) are not required to adhere to ASHA guidelines regarding multilingual and multicultural assessment procedures. Not including certification requirements in the criteria may have influenced the quality of responses received.

In addition, having extended time for data collection could have increased potential participation. The additional time could have allowed the researcher more time to build connections, allowed time to wait for approval from various universities and associations, and to complete IRB applications for various school districts. Furthermore, the recruitment process presented a convenience sample bias because the recruitment methods could have omitted numerous individuals who may not be a part of specific social networks or professional communities, potentially contributing to the smaller sample size. An additional sample bias was present, as participants from special interest groups and state organizations may be more active and informed than SLPs from the general population. Individuals lacking proficiency or interest in evaluating CLD children may not have chosen to participate while attracting those with strong interests. Results provide a preliminary foundation.

Chapter II

REVIEW OF THE LITERATURE

Culture is perceived as the collective set of beliefs, customs, and values held by a group of individuals and how this group defines their social identity (Glazzard, 2017). Culture regulates individuals' conduct during everyday activities (Roseberry-McKibbin, 2018). Although cultural norms frequently influence behavior, every family and individual has distinct experiences that shape their attitudes, beliefs, and actions. Hence, each cultural group has unique beliefs, customs, and values that not all members of a cultural group share. Therefore, it is critical to avoid overgeneralization and remember that every component discussed is not factual for every group member. Within serving professions, such as speech-language pathology, it is essential to learn about various cultures and develop an acceptance to meet everyone's needs appropriately (Quach & Tsai, 2017). To ensure that students from CLD backgrounds can access appropriate educational options and programs, it is essential to be aware of cultural differences (Roseberry-McKibbin, 2018).

Cultural Diversity

Culturally diverse refers to individuals who can be differentiated from the dominant culture based on factors such as ethnicity, socioeconomic class, and/or language (Perez, 1998). The diversity of American culture is a vibrant and multicultural tapestry (Quach & Tsai, 2017). The culture of the American people is growing and evolving quickly, as evident by the significant growth of many racial, ethnic, and

linguistically diverse communities (Horton-Ikard et al., 2009). Since 1980, the increase has been more pronounced for the population that speaks a language other than English compared to those who exclusively speak English at home. Findings from The American Community Survey indicate that, in 2019, almost one in five individuals spoke a language other than English at home, accounting for at least one member of 22% of households (Dietrich & Hernandez, 2022). Expectantly, the number of people needing speech-language pathology or audiologists' services will rise as the population evolves, particularly for those with CLD backgrounds (Horton-Ikard et al., 2009). Quach and Tsai (2017) indicate that the number of students from CLD backgrounds who need SLP services outnumbers the number of SLPs equipped to offer these services. As today's society becomes more diverse, working with people from various cultural and linguistic backgrounds accordingly is crucial for speech-language pathologists (SLPs).

Ethnicity Groups

In the United States, ethnicity primarily manifests through race, language, and ancestral customs. Race and ethnicity are frequently utilized in a way that would suggest their interchangeability (Battle, 2012). However, these terms possess distinct interpretations. Ethnicity is a concept that encompasses a collective culture, serving as the foundation for a collective identity rooted in a shared historical awareness (Battle, 2012). The concept of race pertains to biological and anatomical characteristics and functionalities, encompassing elements such as skin pigmentation, face features, and hair patterns. Battle (2012) asserts that individuals of Hispanic origin have the potential to belong to any racial group.

In 2016, Cohn and Caumont predicted that within the next three decades, it is expected that the United States will no longer have a singular racial or ethnic majority. According to Bernstein (2012), the demographic composition of the United States is expected to radically change by 2043, with racial and ethnic minorities becoming the majority for the first time in the country's history. In the United States, 18.7% of the population self-identifies as Hispanic or Latino, while 38.4% self-identify as members of ethnically minoritized groups (U.S. Census Bureau, 2020).

Racial and ethnic variety in the United States has increased language diversity (Battle, 2012). Nearly 350 languages are spoken by diverse Americans (U.S. Census Bureau, 2015). In addition, one in every five individuals speaks a native language other than English in their household (Quach & Tsai, 2017). The proportion of Americans who spoke a language other than English at home nearly tripled between 1980 and 2019, from 23.1 million to 67.8 million (Dietrich & Hernandez, 2022). Asia accounts for 31% of all immigrants to the United States, led by Latin America and the Caribbean with 51% (Cerde et al., 2023). Moreover, the growth projected for the United States over the subsequent half-century will originate from the same ethnic groups (Cohn & Caumont, 2016). Consequently, an ever-increasing proportion of people in the United States will speak multiple languages, including English, with a non-native accent (Chakraborty et al., 2019).

Challenges and Needs for Increased Knowledge

CLD Caseload

SLPs in the United States treat a growing range of individuals, including people who speak languages other than English or those who speak distinct dialects of the same

language (Daugherty, 2021). In public school settings, SLPs serve more CLD patients, demanding a greater understanding of varied perspectives to provide culturally appropriate, effective intervention services (Derr, 2003). Kritikos (2003) reported that 95% of SLPs from selected states (Florida, New York, Texas, New Mexico, and California) with a large percentage of people who spoke a language other than English at home, worked with at least one client with a CLD background. In Minnesota, 55% of clinicians reported serving clients from at least four distinct racial/ethnic groups (Kohnert et al., 2003). Most respondents (83%) in Guiberson and Atkins' (2012) study stated they worked with many ethnically diverse children and families. One-third of respondents indicated that up to a quarter of their caseload consisted of children of Hispanic origins, while over 75% said they had numerous Hispanics on their caseload (Guiberson & Atkins, 2012).

ASHA Overview

Speech-language pathology was identified by Snyder et al. (2018) as one of the five least racially diverse health occupations with the largest proportion of White or Caucasian professionals. ASHA represents 218,291 constituents (ASHA, 2024). In 2023, White-only certified SLP members accounted for 163,324 individuals (ASHA, 2024), representing an increase from 154,953 in the previous year (ASHA, 2023a). Having a diverse workforce has been a challenge for the discipline of communication sciences and disorders (CSD; Abdelaziz et al., 2021), as there has been a lack of individuals who reflect different racial, ethnic, and cultural backgrounds, genders, and experiences with disabilities (Chun & Evans, 2016).

Approximately 9.5% of ASHA members and associates identify as members of racially minoritized groups, and approximately 7.0 % identify as Hispanic or Latino (ASHA, 2024). Both groups represent a slight increase from the previous year's recordings of 8.9% and 6.4%, respectively (ASHA, 2023a). Despite appeals for professional diversity (Guiberson & Vigil, 2021), the professional demographic continues to reflect an unchanging group (ASHA, 2024; O'Fallon & Garcia, 2023). Among the ASHA constituents, 18,046 (8.3%) reported providing services in more than one language. Of these, 12,073 (66.0%) were Spanish-language service providers (ASHA, 2023c). Multilingual service providers identified eighty-six spoken languages as qualifying for service delivery languages. The states with the largest percentages of ASHA multilingual service providers who say they speak a language other than English at home are California (43.9%), Texas (34.9%), New Jersey (31.7%), and New Mexico (31.2%) (ASHA, 2023c).

Monolingual Therapists

Most SLPs in the United States speak only English (ASHA 2023a, 2023c). The number of multilingual SLPs remains in the extreme minority, and there is an imbalance between the number of CLD clients and the number of bilingual service providers (ASHA 2023a, 2024). From 104 respondents from Minnesota, the clinician's inability to speak the client's language was encountered “often” (Kohnert et al., 2003) and “very frequently” from a national survey response by many participants (Roseberry-McKibbin et al., 2005). In replicated surveys, there was a slight decrease among corresponding respondents who did not speak the same language as the student between 1990 (66%) and 2001 (60%); (Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005).

Clinicians have found that working with clients who do not speak their native language can be a challenge (Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). Many SLPs have felt unprepared to serve the CLD community effectively because the majority are monolingual (Hammer et al., 2004; Narayanan & Ramsdell, 2022; Roseberry-McKibbin et al., 2005). When comparing monolingual and bilingual practicing SLPs' perceptions of effectiveness and language assessment, Kritikos (2003) provided results from 811 SLPs. Monolingual SLPs (the M group) reported lower personal efficacy while assessing a client who spoke a language the SLPs did not know in the presence of an interpreter. The monolingual SLPs felt the least competent (Kritikos, 2003).

Multilingual Therapists

Bilingual individuals are considered bicultural or at least culturally sensitive (Verdon et al., 2015). Several advantages have been associated with being bilingual. One advantage of being a bilingual SLP would include delivering therapy in various languages without an interpreter (Verdon et al., 2015). According to Kritikos (2003), it is likely that acquiring proficiency in two languages will enhance one's understanding of the language acquisition process and boost self-assurance in discerning differences between linguistic variations and language disorders. To investigate the parameters linked to the knowledge base and confidence levels of SLPs who are multilingual or monolingual, a survey was administered via email to SLPs throughout the United States (Narayanan & Ramsdell, 2022). The study received 1,319 anonymous responses. The results indicated that SLPs who were multilingual reported a higher level of familiarity with concepts and

more confidence compared to their monolingual counterparts, as seen by the frequency of their responses.

It is understood that language expertise does not always translate into cultural expertise. Being bilingual does not automatically equate to cultural competency (Kritikos, 2003). Verdon et al. (2015) indicate that an SLP's linguistic ability was not simply what made them culturally competent but also their cultural knowledge. Even clinicians who share the same culture or language with a client may not necessarily be able to render services to those with diverse backgrounds effectively. In their confidence in evaluating a client who speaks another language and is immersed in another culture, those who are merely linguistically competent in a second language may not necessarily vary from monolingual SLPs (Kritikos, 2003). According to Levey (2004), many of the 167 undergraduate and graduate speech-language pathology students who were proficient in both languages obtained accuracy percentages for questions about widely recognized linguistic distinctions that were low (Levey, 2004).

Understanding Diverse Cultures

An inadequate understanding of the client's culture and home environment is an additional challenge for SLPs (Kadyamusuma, 2016; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). Knowledge of typical language development (TLD) in simultaneous and sequential bilinguals allows SLPs to perceive normal in terms of L2 acquisition (Kadyamusuma, 2016). Findings from Kritikos (2003) indicate that 29% of participants reported a lack of understanding of the nature of L2 acquisition. Furthermore, 29% reported difficulty discriminating between a language difference and a language disorder (Kritikos, 2003). The replicated studies by

Roseberry-McKibbin and Eicholtz (1994) and Roseberry-McKibbin et al. (2005) indicated a slight decrease in very frequent lack of knowledge of developmental norms in students' primary language during 1990 (33%) and 2001 (31%) implementation respectively.

Cultural Competence

Cultural Competence Defined

The concept of "cultural competency" encompasses more than simply acknowledging and showing respect toward individuals from other backgrounds, cultures, and languages. It also entails appreciating and respecting the distinctions among varied populations (Brach & Fraserirector, 2000). The definition of cultural competency in clinical practice, as proposed by Cross et al. (1989), is widely acknowledged and accepted. It defines cultural competency as "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or amongst professionals and enables that system, agency, or those professionals to work effectively in cross-cultural situations" (p. iv).

Cross et al. (1989) further explain that the term culture is used because it refers to an integrated pattern of human behavior encompassing thoughts, communications, behaviors, practices, beliefs, values, and institutions of a racial, ethnic, religious, or social group. Competence is employed because it suggests an ability to perform a task effectively (Cross et al., 1989). Cultural competency is a concept that encompasses both attitudes and actions, which develop and change over time along a continuum (Preis, 2013). It involves comprehending and appropriately responding to the distinctive combination of cultural attributes and the complete spectrum of diverse dimensions

present in professional interactions with clients, patients, and their families (Hernández & Hadley, 2020).

Cultural Humility, Community Engagement, and Responsiveness

Cultural competence is a dynamic and complex process that necessitates continual self-evaluation, ongoing cultural education, openness to the values and beliefs of others, and willingness to communicate one's own values and views (ASHA, n.d.b). Cultural humility and community engagement or participation are linked to cultural competence. Cultural humility is accepting another person's culture as legitimate and equal to one's own and the recognition that in order to better comprehend the views and cultural identities of others, one must first examine one's own beliefs and cultural identity (ASHA, n.d.b). Cultural humility entails recognizing the inherent impossibility of achieving absolute cultural competence and embracing the continuous and lifelong pursuit of developing cultural competence (de Diego-Lázaro et al., 2020). This concept recognizes individuals' inclination to criticize different cultures while simultaneously prioritizing cultural values such as intelligence and dignity without assigning specific attributes (Ginsberg, 2018).

Community involvement or engagement refers to the active participation of individuals in activities aimed at improving the well-being of a specific group without receiving any form of compensation (de Diego-Lázaro et al., 2020). Understanding and appropriately incorporating cultural elements, as well as the whole range of unique aspects that each individual offers to interpersonal interactions, are all part of cultural responsiveness (ASHA, n.d.b). Cultural competency, humility, and responsiveness are

interconnected and evolving processes often utilized interchangeably, although they possess distinct characteristics (ASHA, n.d.b).

In Speech Pathology

Professionals who acquire cultural competence will be able to adapt their instructional programs appropriately to accommodate and fulfill the requirements of students from diverse cultural and linguistic backgrounds (Roseberry-McKibbin, 2018). SLPs should understand the extensive range of linguistic, cultural, and identity variations within families. They must recognize the potential influence of these differences on interpersonal dynamics within the broader societal context (McLeod et al., 2017). In addition to possessing knowledge of the phonology, semantics, morphology, syntax, and pragmatics of the client's language(s) and dialect(s), cultural competence necessitates a foundational understanding of the client's culture, including the ability to recognize and appreciate individual variations within families (McLeod et al., 2017). Understanding the impact of culture on communication is a crucial aspect to consider, encompassing elements such as eye contact, proximity to others, and who speaks to whom (McLeod et al., 2017). All members of a culture do not have the same beliefs, values, and customs; therefore, each family's unique experience should be considered.

Speech and Language

Communication refers to transmitting information; it is noteworthy that infants communicate immediately after birth (Dockrell & Marshall, 2015). In contrast, a language primarily functions as a representational system that develops as the cognitive abilities support comprehension and organization of the world for individuals (Dockrell & Marshall, 2015). Language serves as a means of communication, employing words and

adhering to logical principles for arranging these words (Gleason & Ratner, 2022). It is important to note, however, that while language functions as a mode of communication, not all forms of communication must involve language (Gleason & Ratner, 2022).

Language is a symbolic system that facilitates mutually comprehensible communication among speakers (Berko-Gleason, 2009). Bloom and Lahey (1978) define language as “a code whereby ideas about the world are expressed through a conversational system of arbitrary signals for communication” (p. 2).

Language has five components: syntax, morphology, phonology, semantics, and pragmatics. While languages are established among various cultures, language components are universal, but the governing rules may differ (Hegde, 2004; Nelson, 2010). Syntax, or grammar, is associated with organizational rules and addresses sentence structure (e.g., blue car vs. car blue). Difficulty with syntax impacts the ability to express one's thoughts, ideas, and needs verbally and in written form (Hegde, 2004). Derived from the word morpheme, the smaller unit of meaning, morphology, is the study of word forms. Sufficient morphological abilities allow one to recognize meaning differences based on word construction (e.g., walk, waking, walked) (Hegde, 2004).

Phonology originates from the word phoneme, the smallest sound unit, and is associated with the sound system of a language (Hegde, 2004; Nelson, 2010).

Phonological skills enable one to understand the rules of a sound system and sound combinations (e.g., cat vs. cap) (Nelson, 2010). Semantics addresses expressive (oral and written) and receptive (listening and reading) vocabulary throughout the lifespan.

Semantics is associated with meaning at the word, phrase, sentence, and conversation levels. Difficulty with semantics impacts one's ability to understand and express language

(i.e., difficulty following verbal directions). Pragmatics is the appropriate use of language in a social context and may include turn-taking and greetings (Hegde, 2004; Nelson, 2010). With appropriate pragmatics, one can effectively use language in a socially acceptable way (Hegde, 2004).

Language Acquisition for Bilinguals

Language acquisition in children is facilitated by their social interactions with other individuals, including parents, family members, siblings, peers, and community members. According to Peña (2016), many children learn one or more languages at home and then acquire another language to communicate better in their broader social environment. The acquisition of bilingual language skills is influenced by various elements, including the age at which an individual is first exposed to the languages, the extent of possibilities to actively engage with each language, the specific learning environment, the social significance attributed to the languages, and the level of formal education received, among other relevant considerations (Bedore et al., 2012).

First and Second Language

First-language (L1) and second-language (L2) acquisition are the categories used to describe language learning. The primary language refers to the language an individual initially acquired and predominantly utilized during the early phases of their language acquisition process (Roseberry-McKibbin, 2018). Regardless of home language, L1 acquisition is a universal process. With early acquisition of the L2, it is hypothesized that the relationship between the participant's L1 and L2 may demonstrate bi-directionality (Meir et al., 2016), suggesting that the L2 can impact the L1, similar to how the first language influences the L2.

Language acquisition is frequently described using concepts linked to bilingualism, which include simultaneous bilingualism, sequential bilingualism, DLLs, and ELLs. Individuals who speak and are exposed to two or more languages can be called bilinguals (De Lamo White & Jin, 2011). Valde's and Figueroa (1994) defined bilingualism as the acquisition and mastery of multiple languages, with varying degrees of proficiency, along a continuum.

Sequential and Simultaneous Multilingual Speakers

Typically, a heritage language is taught at home beginning at birth, sequentially or concurrently with the society language (Montrul, 2018). Simultaneous bilinguals are exposed to more than one language from birth in various circumstances, whereas sequential bilinguals acquire an L2 after age three (Thordardottir, 2019) or after acquiring the fundamental linguistic skills in their L1 (Paradis et al., 2011). Sequential multilingual speakers establish their first language(s) in the home environment and then pick up additional languages in school or social contexts, whereas simultaneous multilingual speakers are exposed to several languages from birth (McLeod et al., 2017). Children who are simultaneous learners start speaking at the same time as those who are monolingual. Furthermore, children who simultaneously learn two languages in naturalistic settings appear to experience little disruption in their learning (Roseberry-McKibbin, 2018). Three identified characteristics are common to both simultaneous and sequential multilingual speakers' typical development (Kohnert, 2010). Characteristics include distributed skills, uneven ability, cross-language associations, and individual variation.

English and Dual Language Learners

DLLs may learn two languages simultaneously or sequentially, while ELLs start learning English as a second language once they start school (Nelson, 2010). ELLs are students who do not speak English well enough to benefit from regular classroom education (Goldenberg, 2008), while children who have learned two languages from birth or are learning two languages are known as DLLs (Genesee et al., 2004). ELLs, also known as language minority students in the United States, acquire English, the dominant language, to achieve social integration and scholastic objectives. The prevalence of DLLs is on the rise in educational settings within the United States (Kena et al., 2016).

Observed Similarities and Differences in Acquisition for Bilinguals

Bilingual children who exhibit typical development demonstrate comparable language acquisition rates in both languages, akin to those observed in monolingual children 2-4 years old (Nayeb et al., 2021). Aside from receptive vocabulary expansion, simultaneous bilingual children often learn at the same rate as monolinguals, making independent grammatical advances in each language (Genesee & Nicoladis, 2007). Not only are there differences between the language development of monolingual and bilingual children (Chang, 2016), but it is also possible that monolingual rules will not apply in a bilingual situation. Sequential bilinguals exhibit a delay in the societal language that reflects their length and amount of exposure to the society language (Armon-Lotem et al., 2021; Bohman et al., 2010). Kohnert (2010) indicates that bilingual preschool-aged children in Spanish and English exhibit a slower rate of acquiring certain linguistic structures than their monolingual counterparts. However, by age 5, these

bilingual children demonstrate comparable accuracy on these structures (Goldstein et al., 2005).

Language Dominance and Proficiency

Considering the multifaceted nature of acquiring multilingual language skills, it is crucial to examine measurement methods' influence on language dominance and proficiency (Bedore et al., 2012). The dominant language refers to the language that the learner is most fluent in at the present moment (Roseberry-McKibbin, 2018). If there are shifts in the linguistic patterns the child is exposed to, the dominant language may also shift. Furthermore, the degree of language dominance may differ based on the specific linguistic feature being evaluated, such as syntax or vocabulary (Roseberry-McKibbin, 2018).

A child's proficiency in a language indicates how well they can communicate in that language. There is considerable variation in the language proficiency of children concerning different languages (Gutiérrez-Clellen & Kreiter, 2003), and due to insufficient time to acquire L2, bilingual children may have L1 attrition and fail to reach age-expected language proficiency in both languages (Paradis et al., 2010). Despite demonstrating fluency in both languages, bilingual children exhibit variations in their performance across different language activities, such as reading with better linguistic skills than listening comprehension (Gutiérrez-Clellen & Kreiter, 2003).

Language Impairment

Specific-language impairment (SLI) is classified as one of the fourteen categories outlined in the federal regulations of the IDEA (Ireland & Conrad, 2016). IDEA ensures that all children with disabilities are entitled to a public education that is both suitable and

free of charge (IDEA, 2004). IDEA defines speech-language impairment as a communication issue that impacts education. Stuttering, articulation, language, and vocal disability are included. The term "language-impaired" should be reserved for learners whose impairments fundamentally hinder their ability to learn any language (Pieretti & Roseberry-McKibbin, 2016). Most states utilize the designation SLI, but some use "Language Impaired" (Mississippi) or "Speech Impairment" (North Dakota).

Not every ELL or limited English proficient (LEP) student is eligible for speech-language therapy (Kimble, 2013). Bilingual children appear to have a similar LI prevalence to monolingual children (Gillam et al., 2013; Hambly et al., 2013). A fraction of children who speak non-standard dialects will have a developmental language impairment, just like most adolescents who speak standard dialects (Seymour, 2004). Rose et al. (2022) indicates that five to seven percent of bilingual and monolingual children have DLD. For bilinguals, there is no evidence that suggests bilingualism increases the likelihood of developing a language impairment (Peña, 2016) or directly causes language disorders (Kohnert, 2007).

Assessment

Regulations and Ethics

SLPs must follow IDEA, state, and local evaluation guidelines for evaluation practices (Ireland & Conrad, 2016). Professionals in education may find support and guidance from state and local education agencies and professional organizations such as ASHA in their clinical decision-making and advocacy efforts (ASHA, n.d.a; Ireland & Conrad, 2016). ASHA may provide professional guidelines, while state and local jurisdictions set assessment requirements (ASHA, n.d.a). However, it is important to note

that while guidelines can be helpful, they do not override or replace official regulations (Ireland & Conrad, 2016). SLPs must know their state's unique requirements to ensure compliance with federal and state legislation, as any supplementary requirements imposed must be adhered to and solely applicable inside the respective state (Ireland & Conrad, 2016).

IDEA

According to IDEA Part B, it is necessary to utilize technically sound instruments carefully chosen and administered to avoid racial or cultural bias, and procedures in the child's preferred language or mode of communication should be utilized (IDEA, 2004). All evaluations should adhere to the criteria outlining the process and handling issues, including bias, nationality, and linguistic and cultural disparities. IDEA prohibits the use of a single metric or evaluation to determine a child's disability status and develop an appropriate educational program (IDEA, 2004). Furthermore, the assessment process covers child and family assessments under IDEA Part C.

ASHA Code of Ethics

The ASHA Code of Ethics provides professionals with a framework and a manual to help them make decisions about their conduct as professionals daily (ASHA, 2023b). Some principles and rules speak to cultural and linguistic competence. According to Principle I of the ASHA Code of Ethics, individuals must uphold their obligation to prioritize the welfare of those they work with professionally or who participate in academic and research endeavors, and they must treat study animals with compassion. Rules A and B state that clinical and scientific services should be provided competently, and to guarantee that high-quality services are delivered, individuals must use all

available resources, including interprofessional collaboration and/or referral, as necessary. Rule C proclaims that, without discrimination, SLPs must provide services to all people, regardless of race, culture, or language (ASHA, 2023b). Furthermore, Rule F indicates that certified clinicians should not delegate duties that call for special expertise, knowledge, judgment, or qualifications to others, such as assistants, aids, technicians, or support staff.

Principle of Ethics II states, “Individuals shall honor their responsibility to achieve and maintain the highest level of professional competence and performance” (ASHA, 2023b, p.6). In compliance with Rule A of the principle, certified clinicians should engage in professional aspects within their professional practice and competence. Rule D reminds professionals of the value of lifelong learning in acquiring the information and skills necessary to deliver culturally and linguistically appropriate services. Principle of Ethics IV indicates that individuals must support the dignity and autonomy of the professions, maintain collaborative and friendly, cooperative ties between and within their professions, and accept the standards each profession has set for itself. Discrimination in any professional area and against any individual for any cause, whether subtle or overt, ultimately dishonors the profession and hurts all those involved in the practice, according to Rule L. Through principles and rules, the ASHA Code of Ethics demonstrates ASHA's ongoing dedication to protecting the reputation and integrity of the profession while ensuring the welfare of clients (ASHA, 2023b).

Pre-evaluation

When an ELL child is recommended for evaluation, it is best to carry out a thorough pre-evaluation before starting a formal assessment process (Roseberry-

McKibbin & O'Hanlon, 2005). The preliminary assessment aids clinicians in determining the necessity of carrying out additional tests. Rather than selectively examining specific aspects of a student's home and academic life, clinicians consider all relevant characteristics to identify the student's strengths and weaknesses accurately. The pre-evaluation process encompasses several key components, including conducting teacher interviews, gathering case histories from parents, and information about health and development issues. Student interviews may also be conducted where appropriate, as Ireland and Conrad (2016) suggested, as they can offer valuable insights into students' self-perception of their communication abilities and their motivation to enhance them. In necessary instances, SLPs should establish a close collaborative relationship with an interpreter to obtain a thorough and comprehensive case history (Arias & Friberg, 2017; Orellana et al., 2019).

A comprehensive case study will involve caregivers, educators, and clinicians (Pieretti & Roseberry-McKibbin, 2016; Roseberry-McKibbin, 2018). This comprehensive approach allows for the implementation of suitable interventions. The case history provides a well-rounded picture of the student by examining the student's academic, social, and emotional growth and birth and medical histories (Ireland & Conrad, 2016). The way students' linguistic skills and abilities affect their speaking, listening, writing, and reading proficiency in different circumstances can also be considered (Ireland & Conrad, 2016). The teacher's report will provide valuable information regarding classroom performance, while parent concerns and developmental history will be determined based on the report of the parent or caregiver. Clinicians can

assess language problems and experiences by administering questionnaires that rely on information provided by parents and teachers.

Culturally appropriate questionnaires may vary but can provide valuable information about past and present language experiences (Castilla-Earls et al., 2020). According to Pua et al. (2017), the subjective assessments provided by parents and teachers could provide useful insights into a child's communicative abilities within social or academic settings, both at home and in school. Based on the research conducted by Dollaghan and Horner (2011), it has been established that prior studies have demonstrated the significance and reliability of the viewpoints provided by parents, teachers, and other influential individuals in the lives of children. The observations can assist professionals in accurately discerning disparities in language and primary language impairment among ELL children. Cultural variations can influence the findings of questionnaires across groups, and the expectations about child development may differ for caregivers and teachers. For instance, Castilla-Earls et al. (2020) express that communication behavior that may equate to a communication disorder for SLPs may not be considered a concern to parents.

Best Practice

Students who have a speech or language disability can be identified through effective and culturally sensitive testing procedures, skills, and processes (Kimble, 2013; Seymour, 2004). SLPs have a professional and ethical duty to offer culturally competent services to DLLs (Castilla-Earls et al., 2020). However, accurately diagnosing SLI in children who speak several languages is an identified clinical obstacle (Castilla-Earls et al., 2020; Karimijavan et al., 2021). Armon-Lotem et al. (2015) and Orellana et al. (2019)

indicate that there is no established gold standard for assessing multilingual and multicultural individuals. Making the DLD diagnostic procedure more precise and advantageous for all parties is necessary (Abutbul-Oz & Armon-Lotem, 2022). Several evidence-based means exist to assess the language of bilingual children. Commonly recommended practices for assessments for multilingual and multicultural students include assessing in both languages (ASHA, 2021; Kraemer & Fabiano-Smith, 2017; Li'el et al., 2018) and using multiple assessment measures (Castilla-Earls et al., 2020; Dockrell & Marshall, 2015).

Considering all Languages

When completing bilingual screenings and assessments, it is recommended that evaluators consider and implement items in all languages (Arias & Friberg, 2017; ASHA, 2021; Eisenwort et al., 2020; Kraemer & Fabiano-Smith, 2017; Li'el et al., 2018; Lugo-Neris et al., 2015). Instruments should be accessible in the student's preferred language or mode of communication and designed to generate reliable and accurate results (Ireland & Conrad, 2016). Examining both languages can provide more comprehensive information about the child's linguistic capacity, particularly if the child is more proficient in L1 (ASHA, 2004; Karimijavan et al., 2021). LI is not limited to one language because bilingual children may have distributed vocabulary knowledge across their two languages (Bedore & Peña, 2008), affecting each language learned (Boerma & Blom, 2017). It is optimal to base a solid diagnosis of LI in multilingual children on assessing both languages (Boerma & Blom, 2017).

An evaluation of each language may reveal varying strengths in specific language domains spread unevenly among the languages (Kohnert & Bates, 2002), highlighting the

importance of routinely evaluating all languages to obtain a complete picture of language capabilities (McLeod et al., 2017). Nayeb et al. (2021) suggest that examining young bilingual children in the SL only is not a meaningful measure of linguistic skills due to the influence of SL exposure or the HL. When investigating the reliability of four screening models for multilingual children, model three included using a hybrid of the two languages. The third model, based on direct evaluation of the child's two primary languages, was the only one to attain the required levels of accuracy (sensitivity 88%, specificity 82%, positive predictive value 67%, and negative predictive value 94%) (Nayeb et al., 2021).

Altman et al. (2021) conducted a study involving a sample of 443 DLD and TLD children who were bilingual Hebrew speakers aged 61 to 78 months. Using monolingual standards to assess SLI in Hebrew-speaking bilingual individuals led to an overdiagnosis. Through the administration of the Goralnik Screening Test for Hebrew, the results consistently demonstrate that bilingual children with TLD consistently exhibit a gap of more than one standard deviation compared to monolingual norms (Altman et al., 2021).

Most SLPs acknowledge that they do not administer assessments concerning the evaluation of children in both their L1 and L2 (Shenoy, 2014). A thorough review of eighty-eight evaluations revealed that 32 participants were assessed in Spanish, 38 in English, and 18 in English and Spanish (Kraemer & Fabiano-Smith, 2017). From a sample of 132 Michigan SLPs, most participants (75%) said that, when evaluating bilingual children, English was the language they utilized the most frequently, and 68% indicated that they used English during assessment administration (Caesar & Kohler, 2007). In contrast, from a survey of 164 mostly monolingual therapists, 60% of

respondents declared that they frequently assessed the child's native tongue and English (Arias & Friberg, 2017).

Boerma and Blom (2017) report that assessing in all languages is frequently impossible because of the wide variety of language pairings encountered in clinical practice. A trained professional should administer assessments in the student's L1 when possible. SLPs can assess another language by recording a competent adult speaker who speaks the same language and dialect taking the test for a comparative measure, familiarizing themselves with the language and assessment tool or test, and training a native speaker (interpreter or parent) to help when necessary (McLeod et al., 2017). Another option is to capture the child on audio and video using top-notch recording tools and microphones (McLeod et al., 2017).

Converging Evidence

With converging evidence, a clinical decision is formulated based on analyzing diverse sets of evaluative data. Since assessment components are not mutually exclusive but rather intertwined (Dockrell & Marshall, 2015), it is crucial to use converging evidence to determine eligibility for speech and language services (Castilla-Earls et al., 2020; Dockrell & Marshall, 2015) and make sound decisions to accurately diagnose DLL (Castilla-Earls et al., 2020). IDEA mandates the use of multiple sources (IDEA, 2004). Each component is reliable for identifying language and speech impairments in DLLs. Therefore, the clinician gives equal weight to all the available data (Castilla-Earls et al., 2020). To arrive at a diagnosis, various assessment data must come together and trend in the same direction. Once most information points to a language impairment or typical language skills, the clinicians make a clinical decision (Castilla-Earls et al., 2020).

Relying solely on a single test can have negative implications and is consistently inadequate for determining whether a child is developing typically or experiencing a delay at any stage of development (Dockrell & Marshall, 2015; Dollaghan & Horner, 2011). According to Shenoy (2014), using multiple measures may reduce the misidentification of ELLs for those with language acquisition disabilities. It is essential to remember that a convergent evidence strategy can be implemented without a standardized test (Castillo-Earls et al., 2020). Ireland and Conrad (2016) suggest a full review, including consideration of dialect, socioeconomic status, and cultural disparities, is necessary to make educated decisions. Others indicate a combination of formal norm-referenced testing, developmental checklists, informal exams, and clinical judgment is the best approach for screening language disorders (Dockrell & Marshall, 2015; Lugo-Neris et al., 2015). Work samples, classroom observations, and rating scales are additional alternative non-standardized assessment tools for the comprehensive diagnostic process (Shenoy, 2014).

Supporting Research

In a comprehensive meta-analysis to assess the diagnostic accuracy of standardized and nonstandardized assessment measures in identifying LI in students who were considered Spanish–English dual language learners (SEDLL) within the United States, Dollaghan and Horner (2011) determined that no single measure demonstrated optimal diagnostic accuracy for identifying language impairments or standard language abilities in bilingual children who speak both Spanish and English. Lazewnik et al. (2019) found no definitive measure, whether standardized or non-standardized, was the optimal method for categorizing children with SLI or TLD. Most single measurements

for Dollaghan and Horner (2011) indicated positive likelihood ratios (LR+) that were diagnostically suggestive, requiring supplementary information to complement each measure (Lazewnik et al., 2019).

Similarly, Bonifacci, et al. (2020) investigated a procedure for evaluating DLD in language-minority bilingual children (LMBC). A typical developing and DLD group was included in the study. None of the single measurements had high specificity/sensitivity ratings. Instead, when examining the various models, those incorporating numerous indicators exhibit increased levels of specificity and sensitivity (Bonifacci et al., 2020). It was indicated that a combination of two measures, in a study conducted by Simon-Cereijido and Gutierrez-Clellen (2007), yielded a fair to good discrimination between children with LI and typically developing children (TL). The discriminatory accuracy of this combination was found to be 79%, indicating its ability to correctly identify children with LI, while the specificity was 100%, indicating its ability to identify typically developing children accurately.

Therefore, the accurate diagnosis of language disorders can be obtained by employing numerous evaluation tools, which yield reliable scores. Convergent evidence for identifying LI in DLLs is crucial, as using a single measure raises issues (Bonifacci et al., 2020; Dockrell & Marshall, 2015; Dollaghan & Horner, 2011; Li'el et al., 2018).

Standardized Assessments

Standardized testing is a part of the converging evidence strategy, but it does not determine the diagnosis in and of itself (Castilla-Earls et al., 2020; Rose et al., 2022). The purpose of a standardized examination is to facilitate the diagnosis of children who speak only English as their first language. Standardized assessments are convenient to

administer and frequently selected when testing bilingual children or those with limited English proficiency in schools (Arias & Friberg, 2017; Castilla-Earls et al., 2020; Roseberry-McKibbin & O'Hanlon, 2005). Standardized assessments have the potential to yield valuable insights; however, the accuracy and consistency of standardized exams may be compromised when assessing the proficiency of ELL children.

Compared to monolingual children, bilingual children are more likely to obtain lower scores on standard language tests (Thordardottir & Brandeker, 2013). Low ratings may also result from language disorders, cultural barriers, or a lack of experience (Castilla-Earls et al., 2020). Standardized assessments emphasizing English can be confusing for bilingual or second-language learners and disadvantage them (Castilla-Earls et al., 2020) and may exhibit inherent biases toward ELLs (Roseberry-McKibbin, 2018). Test items that require considerable knowledge and experience in popular culture are considered to possess a substantial "cultural load," while test items that require a high level of proficiency in the English language are considered to have a considerable "language load" (Ireland & Conrad, 2016).

Sequential bilingual children with TLD tend to perform less favorably on standardized language tests than monolingual children during the early stages of L2 exposure (Meir et al., 2016). This phenomenon arises because assessments are constructed and standardized using the performance of monolingual children as a reference point (Restrepo, 1998), leading to the assumption that language deficits are present. The composite score developed by Rose et al. (2022) for monolingual populations' differential diagnosis has flaws. The findings indicated that bilingual

children could not rely on a composite score used for differential diagnosis in monolingual children.

Arias and Friberg's (2017) survey revealed that 58% of respondents reported completing multilingual tests occasionally, and 51% often checked assessment tools for cultural bias. The exclusive utilization of standardized tests for evaluating the language proficiency of bilingual individuals is not considered optimal in terms of best practices, and it is also not in compliance with legal requirements (Roseberry-McKibbin, 2018). It is essential to use caution when using monolingual tests to differentiate between bilingual children who have and do not have atypical language development (ALD) (Castilla-Earls et al., 2020; Rose et al., 2022).

Language Samples

Language samples reflect how speakers communicate in everyday contexts by documenting oral language to capture the speaker's usual and functional language use (Miller & Iglesias, 2019). Through a language sample, clinicians can assess a student's linguistic structure. Grammatical, semantic, pragmatic, and dialectal differences in either language should be considered for bilingual children (Arias & Friberg, 2017). There are multiple benefits associated with language sampling, such as the opportunity to assess language abilities within a contextual framework and the ability to gather diverse information. Samples can provide insights into story structure and organization, the number of utterances, the average length of utterances (MLU), the number of words used, and the variety of vocabulary employed (Lazewnik et al., 2019).

It has been agreed that language sampling is the best method for evaluating the linguistic competence of DLLs (Heilmann et al., 2016). Language samples employ

authentic and useful communication situations, such as academic contexts, and the same scenario can be utilized to elicit a sample of both Spanish and English. Lim and Russell-George (2021) and Smith et al. (2020) conducted studies that demonstrated that, despite parents' and teachers' exposure to and utilization of both English and Spanish, most children in the study could not offer a language sample in both languages. Bilingual language samples using narrative elicitation is recommended for the clinical evaluation of DLLs (Ebert & Pham, 2017). The narrative retelling protocol is beneficial as it reduces the demands on memory recall and uses wordless picture storybooks to rule out the impact of printed text on children's narrative language output (Castilla-Earls et al., 2020).

Collection

Suggestions for gathering a language sample include collecting in familiar contexts and using numerous conversation partners (Roseberry-McKibbin, 2018). Language samples can also be obtained over different days for varying increments. Recording the sample is optimal, as the analyzer can analyze the sample verbatim. Clinicians should ensure the student is relaxed during collection (Roseberry-McKibbin, 2018). Several naturalistic contexts have been identified as suitable environments for samples, including narratives, play, and picture descriptions (McLeod et al., 2017). Being suitable for multilingual children (Washington et al., 2021), using the School-Aged Language Assessment Measure (SLAM) cards can also be helpful. SLAM is a narrative elicitation tool available for free (Crowley & Biagorri, 2014). It includes stimulus photographs showing children of many ethnicities in various real-world circumstances that the student can sequence, retell, and answer related questions.

Case History and Collaboration

The preliminary assessment, also known as the case history, aids clinicians in determining the necessity of carrying out additional tests. The pre-evaluation includes conducting teacher interviews, gathering case histories from parents, and administering language competency tests. Student interviews may also be conducted where appropriate, as Ireland and Conrad (2016) suggested. The clinician will utilize clinical observation to gather information and formulate the case history (Pieretti & Roseberry-McKibbin, 2016). In necessary instances, SLPs should establish a close collaborative relationship with an interpreter to obtain a thorough and comprehensive case history (Arias & Friberg, 2017; Orellana et al., 2019).

According to Pua et al. (2017), the subjective assessments provided by parents and teachers could provide useful insights into a child's communicative abilities within social or academic settings, both at home and in school. The teacher's report will provide valuable information regarding classroom performance. Parent concerns will be evaluated by examining the parent-reported case history. Clinicians can assess language problems and experiences by administering questionnaires that rely on information provided by parents and teachers. Based on the research conducted by Dollaghan and Horner (2011), it has been established that prior studies have demonstrated the significance and reliability of the viewpoints provided by parents, teachers, and other influential individuals in the lives of children. The observations can assist professionals in accurately discerning disparities in language and primary language impairment among ELL children (Dollaghan & Horner, 2011).

Culturally appropriate questionnaires may vary but can provide valuable information about past and present language experiences (Castilla-Earls et al., 2020). The case history provides a well-rounded picture of the student. Students' academic, social, and emotional growth, and birth and medical histories can be better understood using a case history (Ireland & Conrad, 2016). It also presents significant findings regarding the impact of a student's linguistic skills and abilities on their overall proficiency in various language domains, including speaking, listening, writing, and reading, across diverse contexts. According to Ireland and Conrad (2016), conducting student interviews can offer valuable insights into students' self-perception of their communication abilities and their motivation to enhance them.

Interpreters

It has been suggested that translators and other cultural support workers should be used when the SLP's proficiency falls short of the standard set by ASHA (ASHA, 2023b; Kadyamusuma, 2016). Facilitating bilingual interventions and fostering relationships between families and schools can be accomplished by using interpreters or volunteers as well. According to Guiberson and Atkins (2012), findings from a survey of 154 SLPs in the United States indicated that seventy-five percent of SLPs reported having less confidence when working with interpreters. An extensive examination of 88 assessment reports on speech-language abilities of Latino English Learner (EL) children indicated that a significant majority of these children ($n = 87$) were evaluated without the assistance of an interpreter (Kraemer & Fabiano-Smith, 2017). Caesar and Kohler (2007) reported that, when evaluating bilingual children, 48% of respondents said they used interpreter support.

Working with interpreters presents its own difficulties (Albudoor & Peña, 2022). Respondents from Guiberson and Atkins (2012) found it difficult to find interpreters and translators (55%). Most of the 208 California SLPs surveyed by Saenz and Langdon (2019) who reported previously working with interpreters said there had been times when they were unable to use an interpreter that was needed. The inability to obtain an interpreter (69%), confusion regarding the interpreter's training (26%), and a lack of necessary help from the interpreter (23%) were the most frequent causes of the reported challenges (Saenz & Langdon, 2019). In addition, with a shortage of interpreters, SLPs reported having to access a variety of other school workers (Guiberson & Atkins, 2012) and family members or family friends to help with the administration (Guiberson, 2009).

Kadyamusuma (2016) reports that clinicians might not always be able to obtain translators proficient in the same language needed. Finding interpreters with native proficiency who can deliver appropriate interpretations is not always simple, as even skilled interpreters and translators occasionally lack the vocabulary and terminology specific to the profession (Kadyamusuma, 2016). When asked about interpreters, the highest response regarding the lack of interpreters who speak the necessary languages to provide services was 24% "very frequently" (Roseberry-McKibbin et al., 2005). In contrast, in 1990, responses were close in range, ranging from 18-22 across all domains (from infrequently to very frequently) (Roseberry-McKibbin & Eicholtz, 1994). Forty-four percent of participants reported a shortage of interpreters who can communicate in the client's language (Kritikos, 2003).

The briefing-interaction-debriefing paradigm, proposed by Langdon and Cheng (2002), is a recommended approach for improving the quality of interactions between

SLPs and interpreters. Before the commencement of sessions, the SLP and interpreter convene to engage in a comprehensive discussion regarding the evaluation and intervention objectives and to deliberate on the decisions on interpretation (McLeod et al., 2017). This practice is commonly referred to as briefing. The SLP and interpreter collaborate with the child during the interaction phase. In the end, the SLP and interpreter engage in a debriefing session to analyze the session's outcomes and formulate subsequent plans for further intervention, as McLeod et al. (2017) outlined.

Bilingual Representation

The bilingual population may be over- or under-identified as having DLD due to major implementation difficulties (Albudoor & Peña, 2022). Growing concerns have been raised about the overrepresentation of children from ethnic minority groups in speech and language therapists' caseloads and the overidentification of these children as having communication and language issues in general (Dockrell et al., 2014). Bilingual students are reported to be underrepresented in special education programming at younger ages (Arias & Friberg, 2017; Kapantzoglou et al., 2012). Insufficient academic abilities give rise to apprehensions regarding the disproportionate enrollment of multilingual students in special education programs during the later stages of elementary education (Kapantzoglou et al., 2012; Samson & Lesaux, 2009), leading to multilingual students being overrepresented in special education programming in later elementary grades (Kapantzoglou et al., 2012).

Assumptions

DLD in multilingual children may remain undiagnosed (Nayeb et al., 2021). Sanatullova-Allison and Robison-Young (2016) suggest that ELLs are underserved in the

public education system due to insufficient assistance and support. The underrepresentation of DLL in special education programming at younger ages may also be credited to experts attributing learning impairments to L2 acquisition (Kapantzoglou et al., 2012; Sanatullova-Allison & Robison-Young, 2016). There may be an assumption that the language concerns of bilinguals may be related to acquiring a second language, and professionals may under-refer bilingual children in preschool and kindergarten who may be at risk for LI (Bedore & Peña, 2008; Kapantzoglou et al., 2012). Therefore, bilingual children are sometimes underdiagnosed because assessors wait until the child has learned more English before noticing problems (Bedore & Peña, 2008). As a result, when teachers wait to identify LI after students have mastered the L2, LI could be under-identified (Karimijavan et al., 2021). In addition, children who speak more than one language may be misdiagnosed or not referred for speech sound disorders because communication difficulties, such as unintelligible speech, may be misunderstood as characteristics of multilingualism (Kritikos, 2003).

Contributors

Factors contributing to ELLs' difficulties in the classroom include the demands of the language, or more specifically, the linguistic abilities necessary for efficient participation (Shenoy, 2014). Bilingual children with TLD are often misdiagnosed as having DLD due to the influence of the home language, and their verbal abilities in the societal language are lower than those of their age-matched monolingual peers (Meir et al., 2016). A lack of appropriate assessment tools for bilingual individuals can be attributed to bilingual children with DLD who have been underdiagnosed (Altman et al., 2021). Bilingual testing is also frequently hampered by a lack of time and access to

assessment tools and training (Arias & Friberg, 2017), raising the likelihood of DLD misdiagnosis (Albudoor & Peña, 2022). In addition, using incorrect evaluations to evaluate a child's eligibility for special education and associated services and normative samples that do not reflect the child's cultural and linguistic background may contribute to this issue (Lazewnik et al., 2019). Some bilingual children with TLD have been incorrectly diagnosed with DLD because of the lack of appropriate assessment tools for bilingual individuals (Altman et al., 2021).

Existing language evaluation procedures are insufficient for detecting LI in bilinguals because normative data have been scarce on an early sequential bilingual language learning trajectory, and data on clinical markers for bilingual children is still emerging (Bedore & Peña, 2008; Karimijavan et al., 2021; Pieretti & Roseberry-McKibbin, 2016;). Few languages have valid language tests; even then, proficient assessors might not be readily available (Abutbul-Oz & Armon-Lotem, 2022). The lack of standardized testing in the children's home language and the scarcity of SLPs who are fluent in the many home languages make identification even more difficult, as assessment should be done in both languages, which can lead to overdiagnosis (Abutbul-Oz & Armon-Lotem, 2022). As a result, bilingual children are sometimes over-diagnosed with a language disorder because assessors have unrealistic expectations for their level of development (Bedore & Peña, 2008; Karimijavan et al., 2021; Pieretti & Roseberry-McKibbin, 2016).

Various assessment tools may be used during multilingual language assessments. Available standardized tests mostly target bilinguals who speak Spanish and English (Peña et al., 2020). The Bilingual English-Spanish Assessment (BESA) (Peña, et al.,

2018) includes assessments in both Spanish and English based on research on language learning and cultural backgrounds. The assessment was developed as a comprehensive semantics, syntax, pragmatics, and phonology evaluation tool for children with specific language impairment (SLI) aged 4–6 years and 11 months (Lazewnik et al., 2019). Lazewnik et al. (2019) indicate that administering subtests with different age groups has shown moderate to high accuracy in identifying children with LI.

Potential Consequences

From a clinical standpoint, speech-language disorders could be misdiagnosed, which could cause ELLs to fall behind English-speaking children in school (Kraemer & Fabiano-Smith, 2017). Overdiagnosis of DLDs can result in the inappropriate placement of children with TLD in special education preschools for children with DLD (Kraemer & Fabiano-Smith, 2017; Ruiz-Felter et al., 2016). This practice may not always be necessary and might lead to decreased exposure to academic content (Kraemer & Fabiano-Smith, 2017). In addition, improperly assigning children to special education programs has reduced teacher expectations and student academic achievement (Shifrer, 2016). In contrast, students proficient in English as their first language and who have completed the necessary evaluations can continue participating in classroom instruction and actively in educational endeavors (Kraemer & Fabiano-Smith, 2017).

Because educational settings are limited in quantity and in high demand, inaccurate placement in special education harms children with DLD who are denied entrance due to restricted availability (Lugo-Neris et al., 2015). A very high rate of overdiagnosis can also burden resources and strain both the healthcare system and educational resources in the preschool and kindergarten years (Abutbul-Oz & Armon-

Lotem, 2022; Nelson et al., 2006). Overidentification of children might deplete resources and cause unnecessary stress (Dockrell & Marshall, 2015), and incorrectly labeling students as LD produces a lifelong label and a potential stigma (Sanatullova-Allison & Robison-Young, 2016). The overdiagnosis of DLD distorts the distribution of resources and increases the marginalization of students from language minority groups diagnosed with DLD merely because they are bilingual (Albudoor & Peña, 2022).

Examining the economic consequences is just as crucial as looking at the possible educational costs faced by EL children. Taxpayers ultimately bear the financial burden, as misclassifying children as having disorders within the public education system can annually cost thousands of dollars per child. In contrast, underdiagnosis has a comparable negative impact in the school years (Abutbul-Oz & Armon-Lotem, 2022), as severe language difficulties may indicate other developmental defects (Nayeb et al., 2021). Under-referral of children at risk for LI by screening programs can also delay early intervention and identification (Dollaghan, 2007; Nayeb et al., 2021). The under-identification of DLD has been linked to increased academic failure, dropout rates, and incarceration (Albudoor & Peña, 2022; Anderson et al., 2016). Marginalized individuals, particularly those who experience greater death rates, imprisonment, and unemployment, are disproportionately impacted by risks (Wood et al., 2017).

Conclusion

As cultural and linguistic diversity in the United States evolves, clinicians and students face a cultural mismatch. The CSD field has encountered difficulties maintaining a diverse workforce (Abdelaziz et al., 2021). The discrepancy between the quantity of CLD clients and bilingual service providers continues (ASHA 2023a, 2023c), making it

difficult for many clinicians to assess and diagnose language impairments appropriately. The identification of students who have speech or language disabilities can be achieved by employing testing procedures, skills, and processes that are both effective and culturally sensitive (Kimble, 2013; Seymour, 2004). Insufficient cultural sensitivity can result in accidental misidentification of deficits in language acquisition since language products that are dialectically and culturally suitable may be erroneously seen as poor compared to standard American English (Ireland & Conrad, 2016).

When assessing bilingual students, school-based SLPs should adhere to ASHA guidelines and the IDEA. Evaluating ELL children for the potential presence of an LLD is acceptable and permissible, as is using approved nonstandardized measurements and information gathered from various sources (Roseberry-McKibbin & O'Hanlon, 2005). By gathering copious supporting data, assessment teams must prove that a placement in a special education program is suitable. Sources may include language experience questionnaires, bilingual language sample analysis using large-scale reference databases, learning potential evaluation, and standardized testing (Castilla-Earls et al., 2020). Clinicians should also consider the child's L1 status and test in all languages (Kraemer & Fabiano-Smith, 2017; Li'el et al., 2018).

Clinicians can utilize clinical observation to gather information and formulate the case history (Pieretti & Roseberry-McKibbin, 2016). SLPs and special education teachers should prioritize the inclusion of collaborative assessment in their work with ELL children (Brice et al., 2006). In addition, carefully conducted parent interviews and home language surveys may provide the greatest information on home language use (Roseberry-McKibbin, 2018). Interpreters and other cultural support workers should be

brought in when the SLP's proficiency is deemed inadequate according to ASHA standards (ASHA, 2023b; Kadyamusuma, 2016). When a team approach is encompassed, the possibility of misdiagnosing a bilingual student is reduced.

Bilingual children are frequently evaluated using monolingual techniques and standards to identify abnormal language development (ALD) and help diagnose DLD (Rose et al., 2022). Standardized tests can be a great tool for research, but when used to evaluate ELLs, there is a risk that their reliability and validity will be impaired. Language assessment evaluation can be assessed through informal language sampling and can shed light on oral communication skills (Roseberry-McKibbin, 2018).

SLPs should be aware that variances and diversity in the learning or use of English do not indicate pathology or deficiencies. Thus, it is important to recognize and understand the differences associated with ELLs and dialect speakers (Levey, 2011) and determine if differences are developmental, cultural, or atypical (Arias & Friberg, 2017). It is implied that SLPs who fail to understand how linguistic and cultural variations affect speech and language may break state and federal regulations by wrongly categorizing children as having a language problem when just demonstrating language variants (Arias & Friberg, 2017; Levey & Sola, 2013; Roseberry-McKibbin, 2018).

Exploratory Questions

The eligibility for speech and language services for LEP and ELL students will vary (Kimble, 2013). Therefore, it is imperative to properly evaluate multicultural and multilingual children with suspected speech and language concerns to determine and identify accurate eligibility and needs. All assessments should conform with established criteria that take into account issues like bias, cultural and linguistic diversity, and

national origin. An array of evidence-based methods exists for evaluating the linguistic proficiency of bilingual children. SLPs should consider and implement test items in all languages (Arias & Friberg, 2017) and utilize convergent evidence when assessing eligibility for speech and language services (Castilla-Earls et al., 2020; Dockrell & Marshall, 2015).

The study examined SLP caseload patterns based on years of experience, including demographics, languages spoken, and techniques for multilingual language assessments. The second objective of the research was to find out whether and how the detected workload patterns affected the way SLPs conducted their assessments. This information is crucial because SLPs should adhere to mandated best practices during multilingual language assessments in order to make more precise clinical decisions and prevent misdiagnosis of those being evaluated. Thus, in order to more accurately distinguish linguistic variances from language disorders, it is important to identify the factors impeding the application of best practices. The study addressed the following research questions:

1. To what extent do school-based SLPs report caseload demographic changes within specific periods?

2. To what extent do school-based SLPs report identified assessment practice use during multilingual assessment within specific periods?

3. To what extent has SLPs assessment practices used during multilingual assessments changed over years of work experience?

Research Hypotheses

1. It was hypothesized that SLP participants would report a greater diversity of cases in their caseloads pertaining to ethnicity over time.
2. It was hypothesized that SLP participants with more years of experience would utilize identified best practice assessment techniques more frequently.
3. It was hypothesized that SLP participants would report a significant increase in all identified best practice assessment procedures over courses of time.

Chapter III

METHODOLOGY

Accounting for years of experience, the study explored SLP caseload patterns related to demographics and languages spoken, and techniques used for multilingual language assessments. A survey inviting all school-based SLPs who met the criterion was used to invite participants. Research question one was, “To what extent do school-based SLPs report caseload demographic changes within specific periods?” Research question two was, “To what extent do school-based SLPs report identified assessment practice use during multilingual assessment within specific periods?” Research question three was the final question and asked, “To what extent has SLPs assessment practices used during multilingual assessments changed over years of work experience?”

Participants

Research procedures were approved by Valdosta State University's IRB (included in Appendix A), and an unlimited number of SLP participants were invited to complete the survey. The researcher recruited SLP participants from ASHA communities and special interest groups 14 and 16 (Cultural and Linguistic Diversity and School-Based Issues), social media, speech and hearing associations, word of mouth, universities with CSD and SLP programs, direct email invitations, and convenience sampling. Given the nature of the recruitment procedure, it is unknown how many SLPs were invited to participate in the survey.

Study participants met the following criteria to be included: a) primarily practicing as a school-based therapist providing speech and language assessments to children 18 years or younger in the U.S., b) having assessed at least one multilingual or multicultural child, and c) being at least 18 years of age. Participants used a computer or smart device to access and complete the survey using a link or scanning a QR code. Participants completed the survey once. Four hundred fifty-seven eligible participants completed the survey in its entirety.

The participants were divided into two groups based on their years of experience. Participants in Group 1 (n = 231) verified having ten years or less of experience in the profession, in contrast to Group 2 (n = 226), whose members reported 11-31 years or more of experience. Male participants accounted for 4.2% (n = 19) of the sample versus 94.7% (n = 433) females. The majority of the participants (66.5%) identified as Caucasian. Most respondents (58.4%) identified “elementary” as the primary population served, followed by "preschool" (17.1%).

The majority of participants (79.9%) self-reported as monolingual clinicians, with 19.9% indicating fluency in languages other than English. When asked about the ability to independently administer non-English language assessments, 84% (n = 365) of participants reported no and 15.8% (n = 95) reported yes. Regarding training in providing speech and language assessment to individuals from diverse cultural and linguistic backgrounds, most reported that they had received training (83.2%) while sixteen percent indicated that they had not received training. Data on demographics are further summarized in Table 1.

Table 1

SLP Participant Demographics and Backgrounds

Characteristics	N	%
Race		
Caucasian	304	66.5
African American	59	12.9
Hispanic	29	6.3
American Indian	1	.2
Asian	15	3.3
Pacific Islander	2	.4
Middle Eastern	4	.9
Prefer not to respond	15	3.3
Multiracial	29	6.3
Education Level		
Masters	374	81.8
Specialists	51	11.2
Clinical Doctorate	11	2.4
PhD	10	2.2
Other	11	2.4
Work Area Description		
Rural	34	7.4
Suburban	298	65.2
Urban	112	24.5
Other	13	2.8
Age of Population Served		
Early Intervention	8	1.8
Preschool	78	17.1
Elementary	267	58.4
Middle School	61	13.3
High School	43	9.4
Experience with Evaluating Multilingual or Multicultural Children		
None	1	.2
Minimal	75	16.4
Some	145	31.7
Moderate	127	27.8
Substantial	78	17.1
Years of Experience		
Less than five years	117	25.6
5-10 years	114	24.9
11-15 years	51	11.2
16-20 years	48	10.5
21-25 years	50	10.9
26-30 years	54	11.8
31+ years	23	5

Study Design

A survey study methodology was utilized to gather the information to gauge current practices experienced when assessing multicultural and multilingual children and demographic changes in caseloads. Through seeking knowledge of the impact of assessment practices, the survey aimed to measure changing caseload makeup by comparing demographics and languages with simple questions and go on to more difficult or probing ones as they near their conclusion. The variables of interest for the survey included demographics, caseload demographics, ability, and experience, and assessment practices. Participants answered various question types within the survey including: binary, multiple choice, ranking consonant sum, and matrix questions. Demographic, ability, and experience questions proceeded the reflective caseload demographics and assessment practice questions, respectively.

Procedures

Within recruitment messages (Appendix B), participants were provided information about the study, including the purpose, nature, anticipated duration of the survey, and the role of the participants. Participants were provided with an email address inside the recruitment message to inquire about the purpose or procedures of the research. If participants had concerns or questions about their rights as research participants, they were directed to contact the Valdosta State University IRB Administrator. The recruitment message informed participants that participation was voluntary, and they could stop responding at any time or skip any questions they did not desire to answer. Respondents accessed the survey by using either the anonymous link or QR code included in the recruitment message. Each item was displayed in sequential order.

Respondents could move on to the next item in the sequence by clicking on a button that included a forward arrow. An estimated ten minutes were required to complete the survey. Data were actively gathered for a duration of five weeks. Participating in the research did not entail any foreseen risks.

Measures

A survey was used to measure participant responses. The first set of questions included binary screening questions to ensure participants met the inclusion criterion before proceeding to the remaining questions. Following the screening questions, questions related to demographic and language abilities required categorical responses. The remaining questions required participants to reflect on their caseload demographics and multicultural assessment procedures within given periods. Timelines were given according to the participant's years of experience. The researchers developed the initial set of questions that asked participants to reflect on and provide caseload demographics for time periods. The remaining reflective portion of the published survey regarding speech-language assessment procedures was edited questions from Guiberson and Atkins (2012) and Jarzynski (2023). The survey utilized in this study is detailed in Appendix C.

Data Analysis

Data for the survey were collected using Qualtrics[®] XM, a tool that facilitates survey creation, distribution, and data collection and monitoring. The online survey tool is designed to export data into numerous forms, including the software Statistical Package for the Social Sciences (SPSS), which was used for statistical analysis. The chi-square analysis and paired sample *t*-test were also used to analyze data. The chi-square test determines the association between non-numerical variables commonly employed in

statistical studies (Kothari, 2007). This allows for the identification of trends among participant choices, particularly when using Likert-type scales. Paired *t*-tests examine the difference between two paired results and can be classified as a subtype of the *t*-test for a single sample (Kim, 2015).

To answer research question one which examines reported shifts in the demographics of SLP caseloads, a frequency distribution was utilized. Once frequencies were calculated among groups, trends within groups were examined using a chi-square analysis. Trends were considered for all reported responses. In order to determine whether there were significant differences between the responses provided as a function of time and group, a paired sample *t*-test was conducted. Variables included the first half of an individual's career and the second half, and ten years or less and more than ten years of work experience.

To answer research question two which examines reported school-based SLP changes in assessment practices throughout certain timeframes, a descriptive data analysis summarized identified frequency patterns and a series of chi-square analyses were used to identify significant trends among assessment practice responses for each group. There was an effort to identify trends throughout the first and second portion of an individual's career. To answer research question three, which examines the extent SLP assessment practices used during multilingual assessments changed over years of work experience, inferences were made by comparing data from question two over two increments of time.

Chapter IV

RESULTS

Home Languages and Dialects

The first research question examines reported demographic shifts in SLP caseloads. A chi-square goodness of fit analysis was conducted to investigate the presence of significant trends among the survey response data that were obtained from those who have been working up to ten years as well as for those who have been working over ten years. For the question that inquired how much the diversity of home languages and dialects of the students has changed, those who have been working ten years or less demonstrated a significant response trend toward responding that diversity had neither increased or decreased; $X^2(4, N = 214) = 114.27, p < .001$. In contrast, those who have been working over ten years demonstrated a significant response trend toward responding that diversity had greatly increased $X^2(4, N = 204) = 185.90, p < .001$. In addition, group (11+ years) exhibited a significant response pattern when asked for the explanation of this perceived change $X^2(5, N = 204) = 388.22, p < .001$. This group tended to claim that changing demographics were the culprit behind the change in home language diversity.

Racial Composition

Participants who have worked ten years or less were asked to estimate the racial composition of their caseload during the first five years in which they worked and then again after the first five years. Those who had worked less than five years only estimated their current racial composition. Participants who have worked more than ten years were

asked to estimate the racial composition of their caseload during the first ten years in which they worked and then again after the first ten years. A paired samples *t*-test was performed to investigate the presence of significant differences between the responses that were given as a function of group (10 or less; 11 or more) and time (first portion; second portion). The group that had been working ten years or less demonstrated no significant differences between their estimates, indicating no perceived changes in the demographics of their caseload had occurred during the questioned timeframe. However, the group with over ten years of experience reported significantly less Caucasian students (29.81%) currently than during their first ten years (38.65%); $t(96) = 4.45, p < .001$. In addition, this group reported significantly higher percentages of Hispanic students on their caseload currently (32.47%) than during their first ten years (28.43%); $t(96) = -2.43, p = .017$. Results are summarized in Table 2.

Table 2

Languages and Dialect Diversity Change Factors

Question	χ^2	<i>p</i> -value	Identified Trend
For those working up to 10 years, reported change in home languages/dialects diversity	114.27	< .001	Neither increased or decreased (n = 81)
For those working over 10 years, reported change in home languages/dialects diversity	185.91	< .001	Greatly increased (n = 95)
Reason for reported home languages/dialects diversity change	388.22	< .001	Changing demographics (n = 191)

Multilingual Assessment Practices

A series of chi-square goodness of fit analyses were conducted on the survey response data to identify any overall trends in responses to the specific questions that were asked regarding multilingual assessment practices. Participants were asked a set of questions which asked about the use of specific practices during the assessment of multilingual and multicultural children. The five-point Likert scale ranged from “always” to “never”. Participants in Group 1 (10 years or less) were asked what assessment practices were used during multilingual assessments during the first five years in which they worked and then again after the first five years. Those in Group 2 (11+ years) were asked what assessment practices were used during multilingual assessments during the first ten years in which they worked and then again after the first ten years. Tables 3-10 list participants' responses for each identified assessment practice over two periods of time, including identified significant trends.

Case History and Standardized Assessments

Pertaining to the implementation of case history, no significant changes were observed for those who have been working up to ten years over the two segments of time (see Table 3). There was a slight increase in “always” response for those who have been working over ten years. When asked about the use of standardized assessments, participants were asked about implementation in English only, home language only, and English and home language. Results for each group are provided in Table 4, Table 5, and Table 6. Trends for individuals working less than ten years remained to be “always,” “usually,” and “sometimes” for use of assessments in English only. When implementing

standardized tests in students' home language, there was a decreased report in "rarely" and an increased report of "sometimes" for individuals in the group (10 years or less).

For the group of individuals working more than ten years, the high reported usage of standardized assessments in English only remained similar between the first and second portions of time. Individuals in group (11+ years) had no trends observable pertaining to the implementation of standardized tests in the home language for the first timeframe. The implementation of standardized tests in both English and the home language of the student was reportedly used "usually" and "sometimes" for the ten-years or less group, while for those working over ten years, there was a slight increase in the reporting of "usually" over time.

Table 3

Use of Case History during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	154	35	8	3	0
+5-10 years	80	17	1	1	0
-First 10 years	71	10	4	0	1
/10+ years	77	6	3	0	0

* $X^2(3, N = 200) = 300.28, p < .001$;

+ $X^2(3, N = 99) = 171.34, p < .001$;

- $X^2(3, N = 86) = 153.91, p < .001$;

/ $X^2(2, N = 86) = 122.40, p < .001$

Table 4

Use of Standardized Test in English Only during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	56	55	53	22	13
+5-10 years	27	27	24	13	7
-First 10 years	23	28	24	5	4
/10+ years	22	25	22	8	6

* $X^2(4, N = 199) = 42.78, p < .001$;

+ $X^2(4, N = 98) = 16.90, p = .002$;

- $X^2(4, N = 84) = 30.88, p < .001$;

/ $X^2(4, N = 83) = 18.99, p < .001$

Table 5

Use of Standardized Test in Home Language during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	13	27	60	58	38
+5-10 years	13	12	37	15	21
-First 10 years	8	14	24	20	16
/10+ years	7	15	32	14	16

* $X^2(4, N = 196) = 41.40, p < .001$;

+ $X^2(4, N = 98) = 21.80, p < .001$;

- $X^2(4, N = 82) = 8.98, p = .062$;

/ $X^2(4, N = 84) = 20.17, p < .001$

Table 6

Use of Standardized Test in English and Home Language during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	29	64	57	33	15
+5-10 years	17	30	34	13	5
-First 10 years	16	21	30	10	7
/10+ years	16	28	29	8	5

* $X^2(4, N = 198) = 41.90, p < .001$;

+ $X^2(4, N = 99) = 29.23, p < .001$;

- $X^2(4, N = 84) = 19.93, p < .001$;

/ $X^2(4, N = 86) = 28.54, p < .001$

Language Samples

For participants with up to ten years of experience, the report of the incorporation of language samples in “English only” tended to be “always,” “usually,” and “sometimes” (see Table 7). Seventeen individuals reported “rarely” in the first five-year period. There were no majorly observed changes with time for the group (10 years or less). While “always” remained high for those working more than ten years for the first and second portions of time, there was a slight observed decrease for “usually” and increase for “sometimes” with time for language samples in English only. When asked about language samples in home language only, there was a decrease in reports of “rarely” for those with ten years or less of work experience (see Table 8). Many individuals with more than ten years of experience reported “rarely” in response to the question for the first portion of time. No significant trends were observed for the second portion of time for the group (11+ years).

The use of English and home language during language samples were reportedly used “usually,” and “sometimes” for those working ten years or less (see Table 9). The groups’ (10 years or less) reports of “rarely” decreased more than 50% for the second

timeframe. Those who have been working over ten years demonstrated a response trend towards reporting that language samples in English and home languages were “rarely” used during the first portion of their careers. For the second portion of the group’s (11+ years) career, no significant trends were calculated. However, it should be noted that when comparing the two periods of time for the group, an increase in responses for “usually” and “sometimes” was observed for second half, and the reporting of “rarely” also decreased by comparison.

Table 7

Use of Language Sample in English Only during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	55	57	50	18	17
+5-10 years	30	25	26	10	7
-First 10 years	31	22	19	7	5
/10+ years	29	15	24	9	6

* $X^2(4, N = 197) = 41.25, p < .001$;

+ $X^2(4, N = 98) = 21.90, p < .001$;

- $X^2(4, N = 84) = 27.91, p < .001$;

/ $X^2(4, N = 83) = 22.96, p < .001$

Table 8

Use of Language Sample in Home Language Only during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	15	24	59	43	56
+5-10 years	11	13	31	26	17
-First 10 years	12	7	21	25	18
/10+ years	14	9	18	24	19

* $X^2(4, N = 197) = 38.20, p < .001$;

+ $X^2(4, N = 98) = 15.06, p = .005$;

- $X^2(4, N = 83) = 12.36, p = .015$;

/ $X^2(4, N = 84) = 7.55, p = .110$

Table 9

Use of Language Sample in English and Home Language during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	33	59	48	35	24
+5-10 years	13	28	35	18	5
-First 10 years	14	17	19	27	8
/10+ years	13	23	20	20	9

* $X^2(4, N = 199) = 18.97, p < .001$;

+ $X^2(4, N = 99) = 28.63, p < .001$;

- $X^2(4, N = 84) = 11.41, p = .022$;

/ $X^2(4, N = 83) = 7.88, p = .096$

Collaboration

The final set of questions inquired about collaborative practices. The results can be viewed in Table 10. Those who have been working up to ten years demonstrated trends towards “always” during the first and second portions of time. During the second portion, “rarely” and “never” responses decreased, while there was a slight increase in a report of “always” for the group (10 years or less). Similarly, those who have been working more than ten years demonstrated a significant response trend towards “always”. When comparing trends among first and second portions of time, an increase in the report of “usually” was observed along with a decrease for “sometimes,” “rarely,” and “never” among the group (11+ years).

Table 10

Use of Collaboration during Multilingual Assessment

	Always	Usually	Sometimes	Rarely	Never
*First 5 years	88	52	40	12	7
+5-10 years	53	23	14	7	2
-First 10 years	42	15	18	7	4
/10+ years	54	16	13	2	1

* $X^2(4, N = 199) = 108.56, p < .001$;

+ $X^2(4, N = 99) = 82.16, p < .001$;

- $X^2(4, N = 86) = 52.26, p < .001$;

/ $X^2(4, N = 86) = 108.53, p < .001$

Chapter V

DISCUSSION

Study participants closely reflected ASHA's demographics at large. The results of the current study suggest that, with more years of experience, SLP caseload demographics have increased and SLP practices assessing students from diverse backgrounds differ based on which practice is being used. Both groups (10 years or less and 11+ years) reported an overall increase in caseload demographics over time.. There were no significant changes that were identified for the caseloads of those working ten years or less with respect to the Caucasian, African American, and Hispanic populations, compared to an observable decrease in the percentage of Caucasian and increase in Hispanic students in the caseloads of those with more than ten years of work experience over time.

The primary reasoning for the demographic shift included change in demographics and the ability of the SLP to change work locations. The rationale suggests that the population overall is evolving but also speaks to the flexibility in SLPs' abilities to shift to a new work location and setting. The reported change for Group 2 may be due to the fact that individuals in the group have worked more years, served more students, and had more opportunities to change work environments, allowing them to experience and reflect on such changes. From the total of 418 responses, 106 respondents indicated that the diversity of home languages and dialects of assessed students had neither an increased or decreased. However, when asked for reasons to explain shifts, only sixty-

eight indicated no change was observed. The additional explanations may not represent first-hand experiences but may be influenced by assumptions and outside factors.

Most participants reported “some” and “moderate” experience evaluating multicultural and multilingual children with the majority indicating that they had received training. Regarding SLP assessment practices when assessing children from diverse backgrounds, responses differed based on the identified assessment practice. Participants working ten years or less reported an increase in case history usage over time, while reports of participants working more than ten years indicated a greater appreciation for case history use over time. In addition, collaborative practices appeared to increase with experience for both groups (10 years or less and 11+ years). The high utilization report and increased use of case history and collaboration practices for both groups may be because these assessment components allow SLPs to gather information and partner with others without requiring them to be fluent in other languages.

SLP implementation of standardized assessments remains elevated, and experience did not appear to influence change in use. Rare and never use of English standardized assessments slightly decreased with time for those working up to ten years and slightly increased for those working up to ten years. With experience, the use of standardized assessments in English only remained elevated, and the incorporation of home language remained to be used sometimes. While there was an observed decrease in reports of rare implementation of standardized assessment in the home language with experience, high numbers of rare usage were reported for both groups (10 years or less and 11+ years). The inclusion of both English and the home language within standardized assessments remained unchanged with experience with reports of usual and usage

sometimes. The ongoing use of standardized assessments reflects the SLP's dependence on standardized measures, although no federal law requires standardized tests during evaluations.

For both groups (10 years or less and 11+ years), the majority reported high use of language samples in English only. For those with more than 10 years of work experience, a slight increase in never and rare implementation of language samples in English only was noted. There was an increase in occasional use and decrease of never using language samples in the home language only for those with ten years or less of experience. No significant trends were noted for those with more than ten years of experience regarding using language samples in the home language only. However, for those with more than ten years of work experience, reports of rare use of language samples in the home language remained to be the highest even with experience.

Reports of never using a mixture of English and the home language were notably elevated for those with up to ten years of experience. Never implementing language samples in English and the home language decreased with experience for the first group (10 years or less) and slightly increased for the second group (11+ years). The group with up to ten years of work experience reported higher ratings of usual and occasional use of language samples in English and the native language, with the highest rating being reported during the initial five-year work period that included those working five years or less. The continued implementation of standardized assessments and language samples in English may only reflect the SLP's role. When asked about the implementation of components in L1 and L2, there may have been the possibility for higher reported uses considering all team member roles. However, the SLP may have only reporting their role

during assessments, although the questions inquired about the performance of the SLP and those on the assessment team.

Significant observed changes in the study included an increase in collaborative practice when assessing multilingual students that came with experience for both groups, those working up to ten years and more than ten years. In addition, use of standardized assessment in English only remains to be commonly used and uninfluenced by experience. While assessment questions inquired about assessment practices regarding the student's team, some responses may have reflected those actions of the SLP only. Nonetheless, it is evident that the ongoing effort to improve consistent use of specific procedures for evaluating students who are multicultural and multilingual continues to be a need, as the lack of consistent use of identified assessment practices can influence the accurate representation of CLD students on caseloads.

Assessment Recommendations

Continuing with current assessment measures will increase the risk of inaccurately qualifying students who may be exhibiting a language difference. To ensure that the true speech and language abilities of all students are considered using appropriate measures, it is recommended that assessments are implemented in a manner that meets the needs of students from all backgrounds. In order to accomplish this, multiple factors other than standardized assessments and monolingual measures should be administered. SLPs and assessment teams should try to learn as much as they can about the child's abilities from a variety of sources and provide tests in both languages if possible. These evaluation strategies and tools are believed to improve diagnostic precision. The

approach of gathering supplemental data is incorporated in the use of convergent evidence (Castilla-Earls et al., 2020).

When assessing, the goal should be to incorporate multiple languages and measures to determine language impairment or language difference. SLPs who are fluent in other languages can offer great assistance during multilingual language administration and interpretation. To better utilize SLPs who are fluent in students' home language, school districts could provide incentives such as financial stipends or change in job title to attract and retain multilingual therapists to provide services and expertise during assessments. The roles of bilingual therapists may include sole assessment responsibilities or expand outside their everyday caseload duties.

For monolingual SLPs, districts can offer language learning opportunities for SLPs interested in learning predominant languages or specific language features. Language learning can occur through academic coursework and immersion opportunities. Districts should also present continual continuing education (CEU) course opportunities covering multilingual assessment procedures and methods to implement culturally and linguistically fair assessments. SLPs should be reminded of the risk of using only norms from standardized assessments, taught how to select assessments that may be less biased for multilingual learners, and increase the use of standardized informal evaluations. SLPs can use the information when administration by fluent speakers is not available. Incentives offered for educator professional development, such as stipends, free tuition, and promotion opportunities, should be available for language learning courses and multilingual assessment CEUs.

In addition to utilizing SLP professionals, developing partnerships with others outside of the profession may be appropriate to assist during test administration. Districts should properly train individuals with good oral and written bilingual skills and provide an understanding of ethical responsibilities. Parent liaisons and other staff members can be trained to fill the need. In addition, community members and peer mentors can also be trained to assist. Partnerships among school personnel and community members can quickly and readily grant access to interpreters.

Furthermore, a dedicated interpretation service for assessing multilingual learners can be advantageous. The service can be scheduled or on-demand, granting access to SLPs who are not fluent in the student's home language. This service can also provide availability to interpreters who may be fluent in languages less prevalent in the community. To fully incorporate assessment procedures for children from diverse backgrounds, it is crucial to consider maximizing the use of qualified SLPs, providing ongoing education and training, and increasing community partnerships and available resources.

Future Research

The proper implementation of assessment measures may be influenced by obstacles SLPs face and the knowledge they possess for using them. Future research should identify specific constraints that hinder SLPs and assessment teams from using convergent evidence in all languages. Gaining an understanding of the knowledge SLPs have about correct implementation could also offer valuable insight. The research could involve in-depth interviews with SLPs in the field to understand better the barriers encountered and obtained knowledge.

Additionally, with the limited ability of knowing if participant representation was present from every state in the United States, future research could explore constraints and variations in standards of practice that may be evident at the system level within states. Finally, to help generalize findings, future research should include more participants. The extended avenues to gather additional information may reinforce the study's conclusions and gain a more profound knowledge of the topic at hand. These research efforts will lead to significant improvements in assessment procedures, benefiting children from diverse backgrounds.

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APPENDIX A:

Institutional Review Board Exemption Report

APPENDIX A

Institutional Review Board Exemption Report



***Institutional Review Board (IRB)
for the Protection of Human Research Participants***

PROTOCOL EXEMPTION REPORT

Protocol Number: 04491-2024

Responsible Researcher: Dr. Matthew Carter

Supervising Faculty: n/a

Co-Investigator: Nadia Millsap

Project Title: *Exploring How Speech-Language Pathologists Recall Changing Demographics and Assessment Practices Related to Multicultural and Multilingual Children: A Retrospective Study.*

INSTITUTIONAL REVIEW BOARD DETERMINATION:

This research protocol is **exempt** from Institutional Review Board (IRB) oversight under 45 CFR 46.101(b) of the federal regulations, **category 2**. If the nature of the research changes such that exemption criteria no longer apply, please consult with the IRB Administrator (irb@valdosta.edu) before continuing your research study.

ADDITIONAL COMMENTS:

I

- *Upon completion of the research study all data (e.g., data, pseudonym list, email lists, transcript, etc.) must be securely maintained (e.g., locked file cabinet, password protected computer, etc.) and accessible only by the researcher for a minimum of 3 years. At the end of the required time, collected data must be permanently destroyed.*

Please submit any documents you revise to the IRB Administrator at tmwright@valdosta.edu to ensure an updated record of your exemption.

Elizabeth W. Ophie

02.02.2024

Thank you for submitting an IRB

application.

*Elizabeth W. Ophie, IRB Administrator
229-259-5045.*

Date

Please direct questions to irb@valdosta.edu or

Revised: 06.02.16

APPENDIX B:
Research Statement

APPENDIX B

Research Statement

You are being asked to participate in a survey entitled “*Exploring How Speech-Language Pathologists Recall Changing Demographics and Assessment Practices Related to Multicultural and Multilingual Children: A Retrospective Study*,” which is being conducted by Nadia Millsap, a doctoral candidate, and Matt Carter, a faculty member at Valdosta State University. The purpose of the study is to better understand the current practices and barriers that are experienced during the assessment of multicultural and multilingual children. You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about the methods of grade assignment in university settings. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. Participation should take approximately ten minutes to complete. This survey is anonymous. No one, including the researcher, will be able to associate your responses with your identity. Your participation is voluntary. You may choose not to take the survey, to stop responding at any time, or to skip any questions that you do not want to answer. Participants must be at least 18 years of age to participate in this study. Your completion of the survey serves as your voluntary agreement to participate in this research project and your certification that you are 18 or older. You may print a copy of this statement for your records.

Questions regarding the purpose or procedures of the research should be directed to Matt Carter at mdcarter@valdosta.edu. This study has been exempted from Institutional Review Board (IRB) review in accordance with Federal regulations. The IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

APPENDIX C:

Survey: Reflective Study

APPENDIX C

Survey: Reflective Study

Screening

1. Are you a school based SLP currently providing speech and language assessments to children 18 years or younger in the United States?

Yes

No

2. Have you administered a speech and language assessment for at least one multilingual or multicultural child within your speech and language career?

Yes

No

Demographics

3. What is your age?

20-29

30-39

40-49

50-59

60+

4. Select your gender.

Female

Male

Non-binary

Prefer not to say

5. With which race and/or ethnicity do you identify? Select all that apply.

White

Black or African-American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

2 or more races

Other (please specify)

Prefer not to answer

6. What is the highest degree you hold in a speech-language program?

Master's Degree

Specialist Degree

Clinical Doctorate Degree

PhD

Other (please specify)

7. Including this academic year, how many total years have you spent working in a school setting?

less than 5 years

5 to 10 years

11 to 14 years

15 to 20 years

21 to 24 years

25 to 30 years

31 or more years

8. Which of the following best describes the area in which your school district is located

Rural: Less dense, sparse population, not built up, at a distance.

Suburban: Moderate density and population, area on the edge of a large town or city

where people who work in the town or city often live.

Urban: More dense, large population, built up, close together.

Rural

Suburban

Urban

Other (please specify)

9. With which age group do you primarily work with?

Early Intervention (age birth-3)

Elementary School (grades K-5)

Middle School (grades 6-8)

High School (grades 9-12)

For the following questions, you will be asked to reflect and provide caseload demographics within timeframes during your career as a school based SLP. Timeframe increments will be based on your years of experience.

10. In the **first 5 years** or less that you were practicing as a speech-language pathologist, what was the estimated racial composition of your caseload? Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

11. In the **first 5 years** that you were practicing as a speech-language pathologist, what was the estimated racial composition of your caseload? Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

12. During the **remaining time practicing** as a speech-language pathologist (post 5 years), what was the estimated racial composition of your caseload? Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

13. In the **first 10 years** that you were practicing as a speech-language pathologist, what was the estimated racial composition of your caseload? Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

14. During the **remaining time practicing** as a speech-language pathologist (post 10 years), what was the estimated racial composition of your caseload? Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

15. During the **last 10 years** practicing as a speech-language pathologist, what was the estimated racial composition of your caseload? Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

16. In the **10 years prior** to the previously reported timeframe that you were practicing as a speech-language pathologist, what was the estimated racial composition of your caseload.

Please provide proportions that add to 100%. Count each child once.

White or Caucasian

Black or African American

Hispanic or Latino

American Indian or Alaska Native

Native Hawaiian or Pacific Islander

Asian

Middle Eastern/Arab

Other (please specify)

Ability and Experience

17. Do you speak a language other than English fluently?

No

Yes (please specify languages)

18. Can you independently provide comprehensive diagnostic and treatment services in a language other than English?

No

Yes (please specify languages)

19. Have you had training in providing speech and language assessment to individuals from diverse cultural or linguistic backgrounds?

No

Yes

20. In what setting have you learned about how to work with culturally and linguistically diverse children and their families? Select all that apply.

In my graduate program

In continuing education outside my place of employment

In a training organized by an employer

Through mentorship from other speech-language pathologist

On the job

Other (please specify)

21. Please rate the amount of experience you have in evaluating multilingual or multicultural children.

None

Minimal

Some

Moderate

Substantial

22. In the **last 5 years** of practicing as a speech language pathologist, to what extent has the diversity of home languages/dialects of the students you have assessed changed?

Greatly Increased

Slightly Increased

Neither Increased or Decreased

Slightly Decreased

Greatly Decreased

23. In the **last 5 years** practicing as a speech language pathologist, please rate the occurrence of the languages of multilingual or multicultural children you have encountered, give a percent. (0 indicates no occurrence)

Spanish, French or French Creole, Tagalog, Korean, Chinese, Arabic, Vietnamese, German, Russian, Portuguese, Italian, Hindi, Other (please specify languages not listed)

24. In the **last 10 years** of practicing as a speech language pathologist, to what extent has the diversity of home languages/dialects of the students you have assessed changed?

Greatly Increased

Slightly Increased

Neither Increased or Decreased

Slightly Decreased

Greatly Decreased

25. In the **last 10 years** practicing as a speech language pathologist, please rate the occurrence of the languages of multilingual or multicultural children you have encountered, give a percent. (0 indicates no occurrence)

Spanish, French or French Creole, Tagalog, Korean, Chinese, Arabic, Vietnamese, German, Russian, Portuguese, Italian, Hindi, Other (please specify languages not listed)

26. What reason would you associate with the change?

Changing Demographics, Change in work location, Rezoning, Incorrect Referrals, Other (please specify), No Change Observed

For the following questions, you will be asked to reflect and provide information about speech-language assessment procedures used within timeframes during your career as a school based SLP. Timeframe increments will be based on your years of experience.

Participants rate the following statements as ‘always,’ ‘usually,’ ‘sometimes,’ ‘rarely,’ or ‘never’.

Case History: Child’s developmental, medical, and family history, parent and teacher level of concern about the child, and child’s language history.

Standardized or criterion-based assessment designed for the English language only.

Standardized or criterion-based assessment designed for the home language only.

Standardized or criterion-based assessment for the English AND home language.

Language sample and use in English only (conversation, narrative, class observation).

Language sample and use in the home language only.

Language sample and use in English AND home language.

Collaborate with an interpreter, another professional, or a community member to learn about the child’s language, culture, or speech norms and patterns. (e.g., a family member, professional colleague, or other cultural informant).

27. Reflect on your speech-language assessments **during your time of practice (5 years or less)**. To what extent did you or your team complete when assessing multilingual and multicultural children?

28. Reflect on your speech-language assessments during your **first 5-years of practice**. To what extent did you or your team complete when assessing multilingual and multicultural children?

29. Reflect on your speech-language assessments **during your remaining time of practice (post 5 years)**. To what extent did you or your team complete when assessing multilingual and multicultural children?

30. Reflect on your speech-language assessments during your **first 10 years of practice**. To what extent did you or your team complete when assessing multilingual and multicultural children?

31. Reflect on your speech-language assessments during your **remaining time of practice (post 10 years)**. To what extent did you or your team complete when assessing multilingual and multicultural children?

32. Reflect on your speech-language assessments within the **last 10 years of practice**. To what extent did you or your team complete when assessing multilingual and multicultural children?

33. Reflect on your speech-language assessments during the **10 years prior** to the previously reported timeframe. To what extent did you or your team complete when assessing multilingual and multicultural children?