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PERTENECEMOS: TRAJECTORIES OF BELONGING, KNOWING, AND
DISCOVERING FOR UNDERREPRESENTED UNDERGRADUATE
COMMUNICATIVE DISORDERS AND SCIENCES STUDENTS IN CALIFORNIA
STATE UNIVERSITIES

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Doctorate in Education

by

Marcella Cardoza Mccollum

May 2022

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Marcella Cardoza McCollum

APPROVED FOR THE DEPARTMENT OF EDUCATIONAL LEADERSHIP

SAN JOSÉ STATE UNIVERSITY

May 2022

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ABSTRACT

PERTENECEMOS: TRAJECTORIES OF BELONGING, KNOWING, AND
DISCOVERING FOR UNDERREPRESENTED UNDERGRADUATE
COMMUNICATIVE DISORDERS AND SCIENCES STUDENTS IN CALIFORNIA
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by Marcella Cardoza McCollum

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The purpose of this study was to identify the ways that seniors in undergraduate programs in speech, language, and hearing sciences engaged with the department as they entered into their undergraduate programs, the factors that they considered when deciding whether to apply to graduate school in speech-language pathology, and perceptions of supports and barriers to entering into graduate school. This study partnered with seniors enrolled in public California university programs designed for future speech-language pathologists. A mixed methods design was utilized to provide a holistic account of student experiences. Three major themes emerged from the study. Throughout the process within their programs, students discussed themes of belonging, knowing, and discovering. This study provides programs that engage in the preparation of undergraduate students for graduate school in speech-language pathology some guidance for considerations that can provide a greater sense of belonging and student success.

DEDICATION

Para los que para los que sembraron semillas para que yo pudiera crecer, los antepasados y los que están por venir. In Lak'ech. Tu eres mi otro yo.

ACKNOWLEDGEMENTS

progressed on this journey. Finally, I owe tremendous gratitude and debt to Terry Saenz, my third committee member. While I came into the doctoral program with pre-existing concerns, her study with Toya Wyatt and John Reinard was the spark that guided my direction, and this work stems from their initial work over twenty years ago. Terry is a role model in the field and the profession is better because of her work. Thank you, Terry, for encouraging me, for your faith in me and my topic, and for agreeing to join my committee. I am truly honored to have one of the people who planted the seeds of this study give this dissertation her blessing. On a personal level, I want to express my deep gratitude to all of the people who made space for me to do this work, gave hugs, sent texts of encouragement, and kept me sane when I doubted myself. This doesn't cover everyone, but Amna, Blanca, Karla, Leslye, Renee, Wendy, and Yolanda, your constant support lent me strength at key moments, and I thank you. Finally, I want to thank my girls who brought me tea, made me sweets, and gave me hugs. My husband, who gave me the freedom to step away from many of my familial roles while I completed this work (and helped me construct my tables and statistics) deserves a medal. James, Grace, and Sofia, mil gracias; I love you more than words can say.

I am here because I come from Maria de los Angeles Salazar Martinez, known to the world as Angie, and Efrain Baudilio Cardoza who came to the United States for better opportunities. I come from pupusas, chile verde, the cuchara de palo, Vicks Vaporub, and 'sana sana colita de rana'. I come from a father who always said "I don't care if you are the best, I just want you to do your best." Papi, I did my best, and I know you both are proud of me. I am proud of me too. Adelante.

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LIST OF ABBREVIATIONS

ASHA - The governing body that accredits graduate programs and certifies speech-language pathologists is called the American Speech-Language Hearing Association (ASHA).

BA - In this dissertation, BA is utilized to represent any bachelor's degree. Some programs offer BA, some BS. To maintain consistency, BA will be used to represent a bachelor's degree.

CAPCSD - Council on Academic Programs in Communicative Sciences and Disorders

CAA - Council on Academic Accreditation

CDC - Centers for Disease Control and Prevention

CSD - CSD is the common acronym used to refer to academic programs who provide degrees in speech, language, hearing sciences, communicative disorders and sciences, speech pathology, audiology, and related degrees.

IDEA - Individuals with Disabilities Education Act, or Individuals with Disabilities Education Improvement Act

IEP - Individualized Educational Plan

SLP - Speech-language pathologists or speech-language pathology- the profession and field utilize the same acronym

Introduction

"I can only imagine the people who will be overlooked. Not just the students, but the

clients." (Aurora, study participant).

In California alone, there are approximately 1,450 annual openings for speech-language

pathologists. By 2028, the state is projected to add 4,700 additional SLP jobs to meet the

needs of the population (Employment Development Department [EDD], 2022). In California,

that population is diverse and speaks hundreds of languages (Bojórquez, 2021).

Unfortunately, the profession of speech-language pathology has been a primarily

monolingual White profession, with a history of admitting mostly White students into

graduate school. This legacy has led to harmful outcomes to both students and the

community, as Aurora, a study participant, shared. This chapter will provide an overview of

the field of speech-language pathology, discuss how the field has evolved over the past two

centuries, share the current needs in the field, and posit why there is a great disparity between

the demographics of speech-language pathologists (SLP) and the population we serve.

Evidence will show that the lack of diversity in the profession is harmful to the public. A

description of the pipeline that leads to the SLP title will be given, along with how students

enter into graduate programs. Since this study was conducted in California, state-specific

data will be provided and discussed. However, due to the evidence that will be presented on

racial and ethnic bias in healthcare and educational professions, the findings and summaries

should be considered in any space where the demographics of the population and the

providers are not aligned.

Origins of the Problem: Overview

The field of speech-language pathology (speech therapy) is growing and expanding, although cultural, gender, and linguistic diversity among its providers continues to lag behind the population at large. While American Speech-Language-Hearing Association (ASHA) membership has increased by over 60,000 SLPs in the past ten years, over 52,000 of those SLPs are White. In 2020, U.S. News and World Report ranked speech-language pathologists as having the 8th best job in the country based on a combination of field growth, job prospects, stress level, salary, among other considerations. Speech-language pathologists serve students, patients, and clients in schools, hospitals, clinics, and private practice. Because of the prospects for the profession, applications to graduate school (which is required to practice independently) continue to go up, despite limited spots in those programs. Getting into graduate school in the field of speech-language pathology is a challenge, and that wall (admission into graduate school) continues to let in more White students than any other demographic group, despite increased diversity at the undergraduate level (Council of Academic Programs in Communication Sciences and Disorders & American Speech-Language- Hearing Association [CAPCSD], 2021b). Various research will be presented that has looked at this discrepancy, from GRE (Boles, 2018) to bias in reviewers (Squire, 2020). Studies show that increasing the diversity of providers improves outcomes for people from culturally and linguistically diverse backgrounds (Saha & Shipman, 2006). As the state and the nation continue to grow in both population and diversity, it is important that SLPs match that diversity.

Background and History

Speech-language pathologists (SLPs) are the 15th fastest growing occupation in the nation, with a prediction that the market will grow by 25% from 2019-2029 (Bureau of Labor Statistics, 2020). SLPs are federally mandated in the schools as part of the Individuals with Disabilities Education Act ([IDEA], 2004) to provide speech, language, and cognitive therapy, including literacy support. Speech-language pathologists are responsible for implementing Individualized Education Plans (IEP) in public schools in accordance with federal laws. In the hospitals, SLPs are deemed medically necessary (ASHA, n.d.-f) for patients who have suffered impacts of stroke, head injury, cancers, and other diseases that impact the respiratory system, the brain, or anything in between. SLPs help patients who stutter, work with autistic children and families, support patients developing or regaining cognitive, communicative, or swallowing skills (ASHA, n.d.-d).

The large scope of practice and the fact that speech, language, cognitive, and swallowing therapies are mandated in many settings, coupled with challenges related to developing large graduate programs, means that there is a decades-long shortage in the profession (Crowe et al., 2008) across the nation, especially in California (Barton et al., 2012; Diaz, 1985). The need for SLPs outpaces the actual number of practicing SLPs, especially in California which ranks 49th in SLP-to-population ratio, meaning that the golden state is unable to offer the same levels of services as other states (ASHA, 2021). This combination of growing demand combined with the existing shortage means that the need for SLPs in the United States will continue to increase.

In particular, bilingual/bicultural speech-language pathologists are needed to serve our many communities in the United States. There are over 330 million people in the United States, with over 127 million people identifying as non-White (38% of the population), and 60 million people, or nearly 20% identifying as Hispanic or Latina/o (U.S. Census Bureau, 2021). While the American population continues to be majority White, that population decreased by more than 8.6% in the preceding decade. In March 2022, the US Census put out a press release sharing that they had miscounted in demographics, statistically significant differences for Hispanic/Latino (4.99% undercount), non-Hispanic White (1.64% overcount), and Asian (2.62% overcount), leading to an even greater diversity than originally thought. In California, diversity is even greater (U.S. Census Bureau, 2022). Of the over 39 million people in California, 63.5% of the population identify as non-White and over 10 million are immigrants. In addition, 39% of all Californians identify as Hispanic or Latino (U.S. Census Bureau, n.d.). The group identified as Hispanic/Latino has tripled in the last 50 years, making the Latinx population the largest demographic group in the state (Johnson et al., 2022).

Speech-language pathologists by law must be provided in public schools for students who have IEP needs related to speech and language (IDEA of 2004, 2004). There are 10 million students age 3 or over who are enrolled in schools. Of publicly available data which focuses on public schools (California Department of Education, 2021), there are over 2 million students who speak a language other than English at home. While the majority of those students (30%) speak Spanish at home, languages range from Albanian to Zapoteco (California Department of Education, 2022) The majority of students enrolled in public schools in California identify as Hispanic/Latino, but over 75% of the student population

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identify as a non-White ethnicity. SLPs primarily serve students' IEPs, and in California there are nearly 800,000 students with IEPs. Of those 800,000 students, over 75% of those students are identified as non-White (California Department of Education, 2020). While other studies have considered the referral and eligibility process (Ahram et al., 2021; Robinson & Norton, 2019), this study will focus squarely on the providers.

As a medically necessary service, SLPs are also likely to encounter a diverse group. While children also receive medically necessary services, many of those students are addressed in schools (IDEA of 2004, 2004). According to the Centers for Disease Control and Prevention (CDC, n.d.), one in four adults in California have a disability. Of those nearly 9 million adults, over 5 million have disabilities that may benefit from speech therapy. In a state where 63.5% are ethnically diverse, and where over 200 languages are spoken, speech-language pathologists are increasingly expected to provide appropriate services with consideration for cultural and linguistic diversity. To be certain, SLPs in California will be working with a diverse population. Dr. Fatima Cody Stanford (2020) said it best when she highlighted the importance of having, a workforce "which represents the tapestry of our communities as it relates to race/ethnicity, gender, sexual orientation, immigration status, physical disability status, and socioeconomic level to render the best possible care to our diverse patient populations" (p. 247). The need to have a profession that represents the communities that it serves is undeniable in both evidence and as a matter of justice. Unfortunately, the current demographics published by the largest organization of speech-language pathologists in the nation, the American Speech-Language Hearing Association (ASHA), show that the field continues as a distinctly homogeneous field. In the United

States, 60% of the population is White (non-Hispanic), and 18.5% of the US population identifies as Hispanic/Latino (U.S. Census Bureau, 2021). In contrast, the most recent ASHA membership survey conducted in 2021 showed that of those who reported racial data, 7.2% of total certified speech-language pathologists identified as racial minorities, with Black being the largest racial group representing 3.6% of speech-language pathologists (ASHA, 2022a). Just over six percent identified as Hispanic/Latino. This gap in diversity can impact many aspects of care, from appropriate identification for special education (Skiba et al., 2002), to knowledge of appropriate interaction styles (Warda, 2000). In a perpetuating cycle, the lack of representation can serve to perpetuate beliefs about who belongs in the profession (Daughrity, 2020; Gardner, 2008; Leaper, 2015; Rainey et al., 2018; Schwarz & Zetkulic, 2019).

In order to understand where the field currently is, both demographically, and in terms of scope, it can be helpful to delve into the history of where it has been. As will be described, the origin of the title speech-language pathologist is steeped in colonialism, and White, middle class, deficit-minded perspectives. This is expressed in who receives services, how services are provided, and who provides those services (Abrahams et al., 2019).

An Ever-Evolving Profession

The modern field of speech-language pathology around the world has evolved significantly across the past two centuries and has European origins (Abrahams et al., 2019). Its origins in the US can be traced back as early as the 1800's. Judith Duchan (n.d.) describes three trends that led to the current iteration of the field of speech-language pathology. She described an elocution movement, which focused on those who wanted to improve their

public speaking. The second trend was focused on a scientific cause for speech or language disorders, spurred by Paul Broca and Carl Wernicke. The final trend was the rise of professionalism, or developing practices for certain fields of practice. While the history of the modern profession is typically identified as the founding of a professional practice organization in 1925, various ways of looking at the field of speech-language pathology exist, some of which go back to ancient times. In the current iteration, oration, rhetoric, and focus on speech production existed in the 18th and 19th century (Duchan, n.d.) Ebenezer Porter in 1827 published a book that referenced articulation, accent, etc. Andrew Comstock was a contemporary of Porter's who focused on stuttering and developed his own phonetic alphabet. Around this similar time, the Bell family was coming into their own (Duchan, n.d.).

Alexander Melville Bell was born in 1819 into a family focused on phonetics (the study of the production of speech sounds). His father, Alexander Bell, had been an authority on phonetics and speech disorders in Scotland. Alexander Melville moved to Canada and gave talks in the US on speech sounds. In 1867, he published a book that described how speech sounds are produced, arguably the beginning of the modern-day profession of speech-language pathology (Duchan, 2006). While people around the world had considered speech sound production, Bell (1890) was the first to formally publish the idea that, "The child unfailingly adjusts its organs of speech to the production of whatever sound it is accustomed to hear, and no difficulty is experienced in the process." (p. 23) emphasizing that speech sound development was a typical developmental process, regardless of language. He published the first books on phonetics in the United States, and subsequently dozens of publications focused on speech sounds.

At the same time as the international phonetic association was developing its own International Phonetic Alphabet (IPA), Alexander Melville Bell was developing alternative written forms of sound production to support deaf populations' efforts to learn and produce oral speech, called Visible Speech (Bell, 1867). During this same time, his son, Alexander Graham Bell, whose mother and wife were both deaf, was inspired to study human voice, following in his father and grandfather's tracks. It was this passion, combined with Thomas Watson's electrician background that led to the development of the voice transmitting device, our first telephone. In 1890, he established the American Association to Promote Teaching of Speech to the Deaf (Biography, 2019). However, he was not the only one focused on these areas.

From the 1800's to the 1930's there were a variety of people who formed loose associations in the area of speech sound production (Duchan, 2010). From 1895-1921, many schools began to hire teachers with the express focus of remediating speech (Duchan, 2010). In the early 1900s, two of the pre-existing associations combined to build a profession (Duchan, 2002). Teachers who were interested in the correction of speech formed the National Society for the Study and Correction of Speech Disorders. Separately, a group of professors, physicians, and school administrators formed the American Academy of Speech Correction (AASC). The latter had more stringent regulations and focused their efforts on developing a formal profession. The AASC began to develop standards for membership and for diagnosis of speech disorders. They developed tests, textbooks, and assigned etiologies to disorders. What was the AASC (formed in 1925) became the association that still exists

today, and eventually in 1978 assumed the name that is currently used; the American Speech-Language-Hearing Association (ASHA, n.d.-e).

In the early 20th century, a focus was placed on creating a field distinct from medicine and from speech communication. Each area was added based on needs of the time. From the 1940's through the 1960's the profession focused on less visible aspects of communication and language disorders. For example, the study of aphasia, which had been described for centuries, was studied in much greater numbers after World War I and subsequent wars in individuals who came back with aphasia as the result of traumatic brain injuries (TBI). By the 1970's there was a recognition that how people interacted affected their ability to communicate and understand communication, which brought about an area focused on social aspects of communication. In the 2000s, swallowing and augmentative and alternative communication were codified into the areas of study for graduate students. Since 1925, the field has expanded from a focus on speech correction including stuttering to nine distinct areas of practice.

Consistent in the trajectory of growth has been the connection to both medical and educational fields, as well as a White, middle-class-focused perspective of disorders and pathology (Hyter & Salas-Provance, 2021). From its inception, ASHA has focused on supporting rigorous profession and expanded the scope of practice to include what are now known as "The Big Nine" areas of practice (Table 1). Many of the areas in Table 1 are culturally and contextually situated, and can be impacted by the practitioner's understanding of the population they serve (Abrahams et al., 2019; Hyter & Salas-Provance, 2021).

Table 1
"The Big Nine" Areas of Practice

"The Big Nine"
• Speech sound production, to encompass articulation, motor planning and execution, phonology, and accent modification
• Fluency and fluency disorders
• Voice and resonance, including respiration and phonation
• Receptive and expressive language, including phonology, morphology, syntax, semantics, pragmatics (language use and social aspects of communication), prelinguistic communication, paralinguistic communication (e.g., gestures, signs, body language), and literacy in speaking, listening, reading, and writing
• Hearing, including the impact on speech and language
• Swallowing/feeding, including (a) structure and function of orofacial myology and (b) oral, pharyngeal, laryngeal, pulmonary, esophageal, gastrointestinal, and related functions across the life span
• Cognitive aspects of communication, including attention, memory, sequencing, problem solving, and executive functioning
• Social aspects of communication, including challenging behavior, ineffective social skills, and lack of communication opportunities
• Augmentative and alternative communication modalities (AAC)

Note. Source: https://www.asha.org/Certification/2020-SLP-Certification-Standards/

The field of speech-language pathology holds a crucial position in both the healthcare and educational settings. For example, speech-language pathologists provide life-affirming services in hospitals and nursing homes such as swallowing evaluations and evaluations for speaking valves for intubated patients (ASHA, n.d.-f.). Clinicians in public schools provide federally mandated services to students who need support with speech, language, voice, fluency, or many of the "Big Nine" listed above (IDEA of 2004, 2004).

Serving in a Global Pandemic

During the COVID-19 pandemic, speech-language services continued to be necessary in most settings (ASHA, n.d.-b; Castaneda, 2020; Crawford, 2020). Several news articles and video clips surfaced in 2020 showing the necessity of speech-language pathologists in supporting speaking, swallowing and cognitive recovery after COVID-19 (News 5 Cleveland, 2020; Crawford, 2020; University of Oklahoma, 2021). In the schools, many of those services, like most educational service provision, had to switch to a telepractice mode, and speech-language pathologists documented the difficulty that they experienced in providing appropriate services (Tohidast et al., 2020). Some of these challenges have led to SLPs leaving the field, just as other medical and educational professionals are. A google search for SLPs leaving the field led to 193,000 hits, with pages of websites written in the past two years dedicated to talking about why they are leaving the field (Liu, 2021) at the same time that there is an increased need for services (Bureau of Labor Statistics, 2020).

While there has been a long-standing recognition that there is a shortage of speech-language pathologists (Crowe et al., 2008; Edgar & Rosa-Lugo, 2007; Rosa-Lugo et al., 1998), the pandemic highlighted some of the challenges noted with regard to caseload and workload issues in the schools. With the shortage in a field that continues to expand, the logical step would involve increasing capacity in graduate programs. As will be explained below, a series of challenges in attaining certification makes implementing such a change difficult.

The Field: A Landscape

The field of communication sciences and disorders is broad and includes both undergraduate and graduate programs in speech, language, and hearing. Within the field, graduate and doctoral programs are accredited by the Council on Academic Accreditation (CAA, ASHA, n.d.-a.), which requires a series of standards that must be met, with required yearly reporting that asks about student success rates, clinical and academic progress tracking, and many other requirements (CAA, 2020). CAA is recognized by the US Department of Education and the Council for Higher Education Accreditation (CHEA), and is allowed to determine the process by which programs are accredited. This process requires that departments attest to the work that they are engaged in that supports student acquisition of content and skills, and what systems are in place to support struggling students and ensure success for each matriculated student. The undergraduate program does not have the same accreditation process. There is no specific body or organization within the profession that pays equal attention to the undergraduate program. In fact, a BA degree is not a prerequisite for some graduate programs who offer a leveling year in which students can complete any area of content that is missing and will bring them to a level that allows them to enter the graduate courses with sufficient breadth and depth of knowledge to engage in the academic and clinical rigor involved in graduate programs in speech-language pathology and audiology.

Graduate programs exist in both the fields of speech-language pathology and audiology. The initial degree required for independent practice in speech-language pathology is a master's degree, although a more recent branch within the field has allowed for people with a

bachelor's degree or similar content with specialized clinical experience to become speech-language pathology assistants. Since 2020, ASHA has certified speech-language pathology assistants (SLPA), although they have existed in California for years. The role of the speech-language pathology assistant is to implement pre-designed therapy plans and collect data (ASHA, n.d.-h). The SLPA may not design their own lesson plan independently, nor are they allowed to interpret data. The role is incredibly rewarding, but limits autonomy. As of 2007, the initial graduate degree for audiologists is a clinical doctorate degree. ASHA is exploring a similar degree for SLPs but as of now, the required degree for entry to the profession continues to be a master's degree.

Slightly more than 50% of the SLPs practicing in 2021 worked in schools, with nearly 40% working in hospitals and medical clinics (ASHA, 2022a). Because of the professional intersection between education and health care, the programs in CSD can be found in Colleges of Health and Human Sciences, Colleges of Education, and other related Colleges. The Master's Degree is sometimes a MA and sometimes an MS. There is no significant educational or clinical difference between SLPs with one or another degree; it tends to be a function of the school where a program is housed. The doctorate of audiology tends to be housed in either the same college as the SLP program, or if not, in a health and human services type of college since nearly 75% of audiologists work in the health care setting (ASHA, 2022a).

With regard to diversity, audiologists face similar challenges with a majority White profession, but the population of audiologists (13,910 in 2021) compared to SLPs (193,799 in 2021) is significantly smaller. While cultural competence and awareness is similarly crucial

in the field of audiology, many interactions between clinician and patient occur on a yearly or more basis (ASHA, 2018). Conversely, SLPs are likely to see their patients daily in hospitals, and weekly outside of hospitals. The need for diversity in the field of speech-language pathology is pressing and impacts a large percentage of the population on a more regular basis (ASHA 2016), therefore the focus of this research will be the field of speech-language pathology.

Pathway to the Profession

In order to assure that professionals have the appropriate knowledge and skills, and in order to gain certification as an SLP in the United States, a student must complete an accredited graduate program that provides the education and training to support competence in the "Big Nine" areas of practice as described in Table 1 (ASHA n.d.-a). The graduate program includes a minimum of 36 units of academic coursework plus 400 clinical clock hours of supervised clinical practice (clinical coursework), and must have been accredited by the Council on Academic Accreditation (CAA). Candidates must also pass a national Praxis exam. Finally, after graduation, candidates must complete a clinical fellowship lasting at least 36 weeks full time, or the equivalent part time experience (ASHA, n.d.-a).

The path to becoming a certified, licensed speech-language pathologist typically takes two-three years post Bachelor's Degree, along with potential review and oversight by three organizations: a national organization (ASHA), a state licensing board, and a state education credentialing board. Once certified, clinicians are expected to continue lifelong learning (certification maintenance hours, known as CMH) by completing a minimum of 30 hours of training every three years. The system is considered so integral to the American practice of

speech-language pathology that there are only five other countries in the world with mutual recognition agreements, meaning that someone certified in one of the member countries (Ireland, UK, Australia, New Zealand, and Canada) can apply for certification in the US and vice versa (ASHA, n.d.-c). Of note, all partner countries are English speaking, and have a history of oppressing linguistic and cultural diversity.

In California, as in many states, there are additional requirements depending on additional certifications needed. A student must have completed supervised clinical practice in three separate settings (Department of Consumer Affairs [DCA], n.d.). Clinical practice must have occurred with a diverse population and a breadth of clients. A state license is required to practice in non-public school settings as speech-language pathologists in California are governed by the Department of Consumer Affairs (DCA, n.d.). After graduating, clinicians may apply for temporary licensure and must complete a supervised 36-week full time work plan as part of their Required Professional Experience (RPE), as well as receive a passing score on a national exam (Praxis). The California Commission on Teacher Credentialing [CCTC] issues a preliminary credential that is valid for two years, during which the candidate must complete the aforementioned requirements. After successful completion of their mentored clinical experiences and a passing score on the Praxis and, the CTC issues a "Clear" Speech-Language Pathology Services Credential in Language, Speech, and Hearing. (CCTC, 2019).

Competition to Enter into the Field

Due to the intensity of the graduate program, a shortage of PhD faculty members required to maintain the graduate programs, and need for specialized clinical placements (Goldstein,

2014, CAPCSD, 2021b; ASHA, 2021) programs have made slow progress in increasing slots in graduate programs, although the median capacity for admissions has increased in the last few years by seven to accommodate 38 students per graduate program (CAPCSD, 2021b). Combined with the relatively low number of programs that graduate speech-language pathologists (290 of the 331 schools with a CSD focus have a master's program), the need for SLPs outpaces the rate of incoming students, with only 8,576 students graduating in 2020 across the nation. This has created a shortage of speech-language pathologists (Squires, 2013).

The limited number of spaces in graduate programs combined with an increased visibility into the field has dramatically increased the competition to enter into a graduate program. Across the country, the trend has grown in terms of competitiveness for graduate programs in speech-language pathology. Since 2010, the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) has paired with the American Speech-Language Hearing Association (ASHA) to aggregate admissions data (CAPCSD, 2021b; ASHA, 2021), including applications, admissions, and enrollment. These reports have provided data that allows the for the analysis of trends. In the most recent survey of the 331 American academic institutions who have undergraduate and/or graduate programs in communication disorders and sciences, also known as speech-language pathology, speech, language and hearing sciences, or communicative sciences and disorders (this group will be labeled CSD), CAPCSD (2021b) and ASHA (2021) received 302 responses. Those 302 participating institutions reported having over 37,000 undergraduate students and just over 20,000 graduate students enrolled in the master's programs throughout the nation. This data

included 17 of the 18 California programs that offer a master's degree in speech-language pathology.

Universities that participated in the survey reported receiving over 56,000 applications for admissions to graduate school with fewer than 10,000 students enrolled in their first year of graduate school and a mean capacity of 38 students per new admission cycle. Participating universities reported an acceptance rate of 39%. Of those newly enrolled students, 24% were reported as being of a 'racial ethnic minority,' which is the term that ASHA uses in survey data collection. This data included reports from all 12 California State Universities (CSU) that have CSD programs in California (CAPCSD, 2021b; ASHA, 2021).

Within California, where the non-Hispanic White demographic is 36.5% of the total population, White students make up 28% of the demographic in undergraduate programs, but the data jumps in graduate programs, where they take up 47.9% of the graduate seats. While this data is overall better than the national data, which shows that White students make up over 75% of the enrolled students in graduate CSD programs, the data is clear that there is a 25% drop in non-White representation in graduate school in California, despite the golden state being significantly more diverse than many other parts of the country (CAPCSD, 2021a; ASHA, 2021).

There were 18 accredited master's programs in California in 2021. Overall, the capacity for enrollment in California was slightly lower than national trends, with a median capacity of 35 students per program cohort, and correspondingly, the percentage of applications approved for admissions was significantly lower than the national average. In California, the rate dropped from 34.6% admission rate to 16.2%. Of 4,265 applications reported received,

960 were offered admission and of those 960 admissions offers, 537 students ended up entering into graduate programs. This data can be placed against a backdrop showing that in California in 2020, there were approximately 1,450 annual openings and it was projected that by 2028, the state will need 4,700 additional SLP jobs to meet the needs of the population (Bureau of Labor Statistics, 2020).

No data are publicly available about the yield rates for each respective graduate program, and there is no data that tracks students applying to their own graduate program. This ambiguity makes it difficult to parse out the specifics of actual likelihood of being accepted into a graduate program. While the specifics are not publicly available, the documented difficulty in entering the field is no surprise to those within the field (Boles, 2018; Polovoy, 2014; Sylvan et al., 2020), and the ongoing shortage continues to be a challenge. The only data available for California-specific universities comes from a CSU report (2021), which reported on the results of a grant that the state legislature created to support increasing student enrollment. That report showed that the eight CSU campuses that received funding increased total enrollment from 318 slots to 339 (CSU, 2021).

Undergraduate Programs

Many students make their way to graduate schools through undergraduate programs in CSD. While graduate schools are highly regulated, the same cannot be said for the undergraduate programs. A document analysis of five undergraduate programs shows that most programs offer approximately 36-51 units in their undergraduate programs. Many programs offer a series of six to eight similar courses: phonetics, introduction to the field, language development, hearing science, introduction to audiology, aural rehabilitation,

speech science, and some sort of pediatric and/or adult-based speech and language disorders. Some programs are more specific in the types of disorders that they offer, and many programs offer elective courses within the major; some courses are designed to prepare students for graduate school, such as clinical methods. Most undergraduate programs offer a bachelor's degree that prepares students for entry into graduate school in speech-language pathology or audiology. However, the number of undergraduate students as compared to graduate students is significant and immediately shows one of the challenges of the path.

SLP Demographics

The field of speech-language pathology is a primarily White and female field. This lack of diversity is visible within the profession, as well as at the student level. With regard to demographic makeup of students in CSD, according to the latest CAPCSD (2021b) & ASHA (2021) survey, male students comprised 6% of undergraduate and 4.2% of graduate programs, and non-binary students comprised 0.1% of graduate programs in speech-language pathology. The 2019 survey was the first time that gender was collected in a non-binary form. With regard to race/ethnicity of students in CSD programs, ASHA does not separate racial/ethnic groups, instead reporting all as one group (racial/ethnic minority). ASHA and CAPCSD made the decision to ask programs to only distinguish between non-international white students, non-international racial ethnic minority students, and international students in an attempt to make it easier for programs to report student data (H. Wilson, personal communication, April 22, 2020). Therefore, there is no way to take a nationwide view of the ethnic/racial makeup of students in CSD programs, which impacts the ability to analyze trends in admission, and to identify potential gaps in diversity. Data reported only shows

students who identify as White, and all other students are lumped together as one group titled "racial/ethnic minority," with a small number of international students as a third category. While the data does give some window into diversity, combining all groups outside of White as racial/ethnic minority is problematic in that it obscures the ability to analyze trends in admissions. ASHA data and census data point to differences in representation across ethnicities, and potential biases that cannot be parsed when all groups are combined. But even with that blending of all non-White students, the data is bleak. Data that was available showed that while undergraduate programs have a 31.5% racial/ethnic minority population, that percentage drops in graduate school where CSD students in SLP master's programs were 75% White, and 24% racial/ethnic minority (CAPCSD, 2021b; ASHA, 2021).

In California, the data looks significantly different, but racial/ethnic minority again is a broad category that obscures an actual specific reference point for ethnic/racial diversity. Per CAPCSD (2021a) and ASHA (2021), California reported 47.9% white students and 51.7% racial/ethnic minority students. There is a similar drop that shows the significant shift in diversity from undergraduate school to graduate school. In undergraduate programs, 69.7% of students are reported as 'racial/ethnic minority'. In California, there is a 25% drop in students identified as racial/ethnic minority upon entry into graduate school and no clear data as to who is being left behind. The undergraduate demographics tend to trend slightly closer to the actual demographic landscape of the state, while graduate school continues to have more White students than match the demographics of the state.

Upon graduation, ASHA does break out different racial groups by US Census categories, which allows for some theorizing to capture what might be happening within the large group

known as racial/ethnic minority. ASHA's 2020 Member and Affiliate Profile (ASHA, 2021)

showed that of 188,143 certified speech-language pathologists, 91.6% identify as White and

6.2% identify as Hispanic/Latino. Males comprise 3.7% of all speech-language pathologists

in the US, (non-binary data was not published for members in 2020, and it appears that non-

binary was just included in 2021 in membership profile data). In California, the data again

are slightly different. Of 14,971 certificated SLPs, 20% identify as racial minorities, and

12.5% identify as Hispanic/Latino. Males comprise approximately 5.9% of the California

SLP population. While California boasts a greater number of SLPs that identify as

Hispanic/Latino than most of the rest of the country (12.5%), the demographics within the

profession do not represent anywhere near the level of diversity that would be expected of a

state as diverse as California, especially in graduate school (ASHA, 2021).

The latest U.S. Census Bureau (2021) shows that of 331,893,745 people in the nation,

over 62 million are identified as Hispanic in the United States, comprising 18.5% of the total

US population. Hispanic/Latino origin is the largest ethnic population in the United States.

While 18.5% of the total US population is Hispanic/Latino, only 5.8% of professional

members identify as Hispanic/Latino. In California this disparity is greater. 12.5% of

California SLPs identify as Hispanic/Latino, while the total population of Hispanic/Latino in

California is over 3 times that percentage. Within the field of speech-language pathology, the

non-White category that is highest in California is Asian, with 13.3% of SLPs identifying as

Asian (ASHA, 2021). In general, the field of speech-language pathology skews white and

female, but in California, with its increased diversity, the racial group that seems to be the

largest is Asian, which may give some insight as to the demographics of who is coming

through graduate programs. Despite being the largest group of people in California, Latina/o

students are not entering the field in representative numbers. This discrepancy can impact

provision of services through bias (Chapman et al., 2013; Gregory et al., 2010), lack of

representation (Kaplan et al, 2018; Kayes, 2006), and intercultural miscommunication

(Sarangi, 1994).

Attempts to Diversify the Field

ASHA has had an Office of Multicultural Affairs (OMA) since 1969, a minority student

leadership program since 1999, and six caucuses all established from the 1970's, to the

1990's. As shown in Table 2, the oldest caucus is the Black Association for Speech-

Language Pathologists (NBASLH) established in 1978 and the newest is the Middle East and

North Africa Caucus, founded in the past year.

Table 2
ASHA Caucus by Year Founded

Name	Year Founded
National Black Association for Speech, Language, and Hearing (NBASLH)	1978
Asian Pacific Caucus	1985
Native American Caucus	1986
Lesbian, Gay, Bisexual Audiologists and Speech-Language Pathologists (L'GASP)	1991
Hispanic Caucus	1992
South Asian (formerly Asian Indian) Caucus	1994
Middle East and North Africa Caucus	2021

Note. Source, ASHA (n.d.)

Throughout its history, ASHA has created a coalition of multicultural concerns, a multicultural action plan, a multicultural action agenda, strategic planning, and many other initiatives, but there is no empirical data showing that these particular efforts have been successful (Richburg, 2022). Data collated from an analysis of over a decade of ASHA reported data (2009-2020 ASHA Member Counts) shows the stark reality that diversity is not growing at a rate that supports the diversity of the nation. Figure 1 shows that in sheer numbers, the membership is not catching up with the need.

Figure 1
ASHA Demographic Trends (2009-2020)
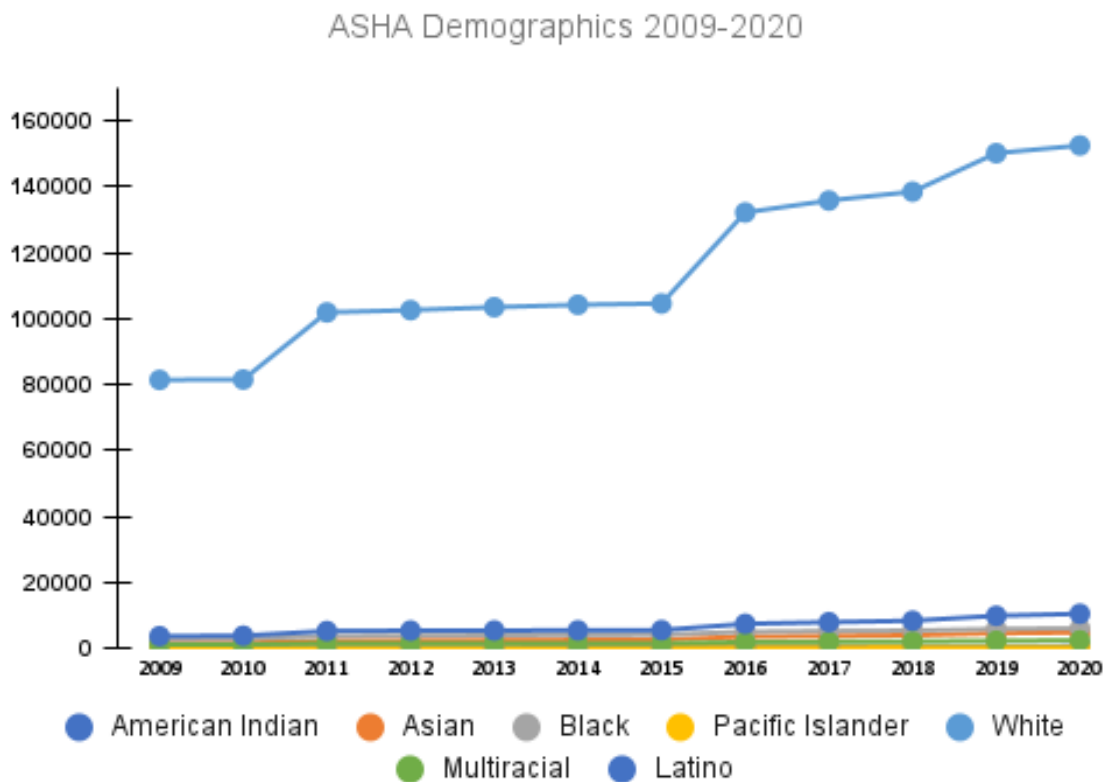
A desire to diversify the field has existed for decades. Whereas this area has been formally studied since at least 1987 (Cole, 1987), the data remains stubbornly meager,

increasing from 5% of the membership in 2001 to 8.5% of the membership in 2020 (ASHA, 2021). From 2010 to 2020, the US population grew in diversity (non-White) from 27.6% to 38.4%, which amounts to a compounded annual growth rate of 3.36% (US Census). The ASHA population that matches those census racial categories grew from 7.21% to 8.5% in those same ten years, which amounts to a compound annual growth rate of 1.75%. At this rate of growth, ASHA will never reach a level that matches the US demographics. Even if the nation did not increase in diversity after 2020, Figure 2 shows that at the current pace of racial growth in the field, it would take nearly 100 years for ASHA SLPs to reach 2020 parity in racial diversity with the country.

Figure 2
Projecting out ASHA at the Current Rate of Growth by Race

Projected Growth in % of ASHA non-White SLPs vs 2020 US Census non-White SLP
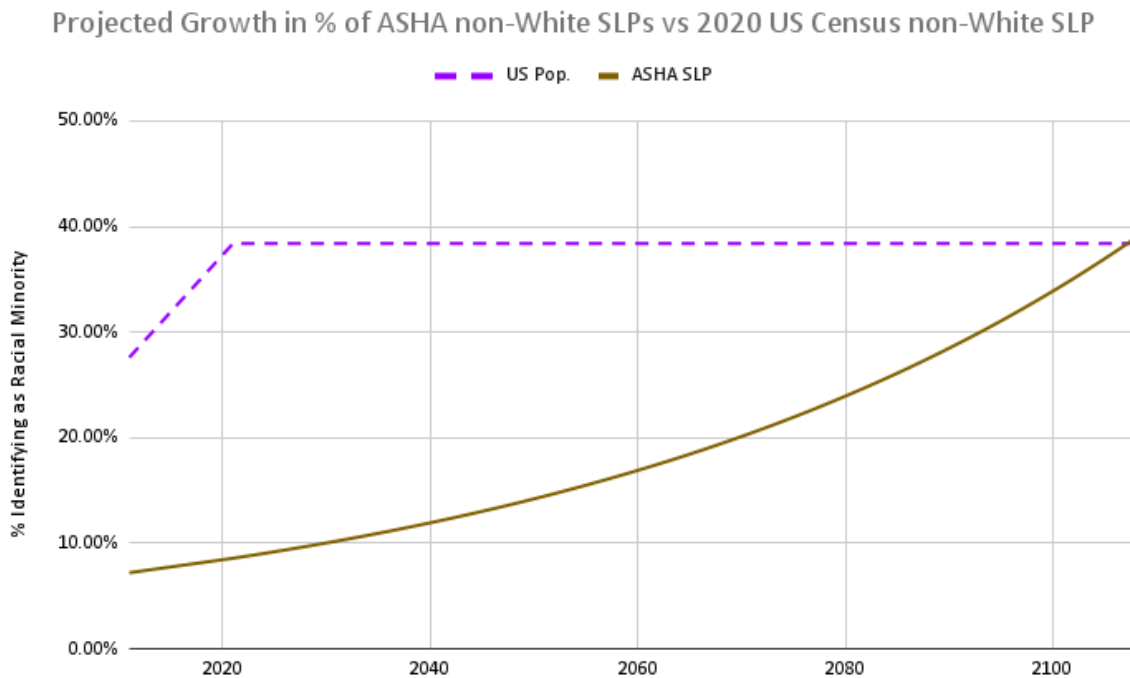
Note. initial figures adapted from US Census and ASHA data.

ASHA has produced statements and initiatives (ASHA, n.d.-g) to address this desire to increase the diversity of the field, but the volume with which statements were made was low, and the resources devoted to creating change are unknown due to limited financial data publicly available. Prior to the summer of 2020, the language used tended to be passive with a limited introspective lens willing to discuss the significant disparity in the demographics of professionals and the community. When the nation erupted in protest over George Floyd's murder (Altman, 2020), ASHA initially put out a statement matching the previous platitudes and using language that they had used in the past (ASHA, 2020a). Among other statements, they highlighted "We stand with those who stand against violence of any kind, especially recent racially motivated violence" (ASHA, 2020a) The lack of active denunciation caused an outcry. The backlash was quick and fierce, on both Facebook and Twitter (ASHA, 2020b), and was so powerful that ASHA revised their statement to read, "ASHA explicitly condemns systemic racism and oppression, and the violent acts that took the lives most recently of Ahmaud Arbery, Breonna Taylor, and George Floyd, and so many before them," also adding a statement against anti-Asian hate (ASHA, n.d.-g). From that point until 2022, ASHA has increased its activities and willingness to label the inequities and the disparities that exist within the profession. So much so that in a search of articles on the ASHA journals website alone, the number of articles using the term 'systemic racism' has gone from seven spanning 1994-2019 to 38 across 2020-2022, a four-fold increase in two years, with 20 published in 2021 alone. The clarion is sounding louder, which gives hope to a more diverse future for this field.

Most studies have looked at specific aspects of students, but usually from a distance. Individual factors have been considered and presented for discussion (Boles, 2018; Fuse & Bergen, 2018; Koay et al., 2016; Kovacs, 2022; Roos & Schreck, 2019), but while the overall broad diversity of graduate students may increase slightly, the change in members from underrepresented groups, specifically Latinx population, continues to stagnate. While the visibility of the problem has been elevated, rarely are the voices of students heard, and it is even more rare to hear from students who do not go on to graduate school. This study seeks to listen to those voices in order to better investigate the inclusion (or lack thereof) of underrepresented students in the graduate pipeline, and to offer potential ways to mitigate that lack of inclusion. This study listens to all underrepresented ethnic groups, with a focus on Latinx students, as that community is the largest ethnic group in California. The question of how to increase membership for professionals of color into the profession requires further exploration.

Zeroing in on the Problem

The field of speech-language pathology is currently understaffed and the need for SLPs is projected to continue to increase (Bureau of Labor Statistics, 2020). While the field keeps growing incrementally, the number of SLPs of color (non-White) is not matching the same pace as White SLPs. At the pace of growth in the past 10 years, Educational and health care outcomes are significantly impacted by the people providing the services and decades of data show the importance of having a diverse workforce (Robinson & Norton, 2019; Saha, 2014; Saha & Shipman, 2006). Separately, it is a matter of social justice (Wilbur et al., 2020) that a workforce (especially one in key industries like healthcare and education) looks like the

population it serves. In California, where the largest ethnic group is Latinx and over 3 million households speak Spanish, bilingual, bicultural SLPs are crucial to the well-being of the population, and yet our graduate programs are not admitting students to match the diversity we need.

Advancing the Field Through This Study

This study sought to hear from students (in their own words) regarding what they go through when applying to graduate school, or what factors make them choose not to apply to graduate school. In doing so, I hoped to shed a light on supports and constraints for entry to graduate school. While other researchers have looked at factors like the GRE, admissions criteria, or racial/ethnic minorities as a mass, the field of speech-language pathology has not spent sufficient time speaking deeply and honestly about why our graduate programs continue to admit majority White students. This requires both macro and micro analysis. Investigating root causes requires looking at systems, and listening to students in real time. Surveys are helpful, but in addition, the field needs to hear from students in their own words, more than just their feedback on surveys. With the lack of diversity in the field, the purpose of this study was to explore potential barriers as well as supports that can influence the future demographic trajectory of our undergraduate CSD majors, and the profession at large.

Research Questions

This study seeks to examine the supports and constraints that influence diversity in graduate programs in speech-language pathology; and better understand the presence (or lack of) underrepresented cultures and languages in graduate school, despite being better represented in undergraduate programs. The voices of all underrepresented students were

invited to participate, and all voices were included in this study; however, a focus was placed on Latinx students, as it is the largest demographic in the state, the majority of participants self-identified as Latinx or a related category, and the need for Latinx SLPs in California would impact the greatest number of communities. Table 3 provides an overview of the problem, purpose, and research questions. Specific research questions were:

1. How do underrepresented students exist in CSD spaces: how do they perceive their sense of belonging when they join the department

2. How do they navigate the CSD system: what are the supports and constraints that influence if and where they apply to graduate school, and

3. What could be done to better support underrepresented students as they navigate this system so that we increase their presence in graduate school?

Table 3
Overview of the Study

Problem	Purpose of the Study	Research Question
• Lack of diversity in the field is unjust • Lack of diversity leads to poor healthcare and educational outcomes. • Despite discussion since 1969, diversity in this field remains stubbornly White.	• Listen to student voices • Learn what barriers exist to applying to graduate school • Identify supports that helped them belong, learn, and succeed.	• How are students navigating their place in CSD programs? • What supports and constraints influence decisions about grad school? • How can we better support our students of color?

Research Design Overview

Conceptually, this research sought to build on work that had been completed within the field (Fuse & Bergen, 2018; Saenz et al., 1998) with an intentional focus on the journey that college seniors experience in their final year of college. As they are headed toward their bachelor's degree, students navigate their environment in very different ways, frequently based on their past experiences and current feelings/challenges (Kovacs, 2022). Many students experience intense stress as they prepare for graduate school admission (Roos & Schreck, 2019), and this can impact their perceptions of the admissions process and their perception of support.

This study intended to capture both the snapshot of student perceptions at a certain time and place (quantitative survey) and the longer-term experience (semi-structured interview) that students navigate in their senior year in a major that requires a graduate degree in order to independently practice within the profession. The ASHA demographics are stark for all groups other than White, and the discrepancy grows when compared to California demographic data. This study invited all students to participate in the survey portion, but focused on those underrepresented groups for the extended interviews. The fact that the second most spoken language in the United States (Spanish) combined with the data that shows that the largest demographic group in California identifies ethnically as Hispanic/Latino increased the salience of the participants who fit into that category, but the commonalities among all underrepresented students showed that many of the concepts addressed in this research should be considered when determining how to eliminate barriers.

Stepping into the Frame

Cousin (2010) states that our knowledge of the world is mediated by our positionality and that if we ignore the step of reflexive engagement, we do so at the risk of wearing blinders and limiting the scope and understanding of how we enter the field, how we may be perceived (if we are engaging directly with the subjects), and may be missing dangerous blind spots in our research. Cousin (2010) provides for our overlapping identities and intersections to create a 'grey' area which we navigate in our research.

I come to this research as a self-identified Latina, whose parents immigrated to the United States, although the border crossed my mother's family generations ago. My limited exposure to college was my mother taking university classes offered to her by her company just as I was finishing high school. Although neither parent had taken a traditional educational path, both of my parents let me know from a young age that I was to go to college. Graduate school was not in any of our plans initially, but college was not even a conversation. The expectation that I would attend college was in contrast to statements that I have heard from well-meaning people with little to no understanding of Latinx families. These people make statements like, "if we could just let the families know how important education is, they might support their students." In the midst of this pandemic, I have heard these statements time and again. I do not believe that Latinax families don't understand the importance of education; in fact Latinx families have fought time and again for the right for our children to have access to high quality education (Valencia, 2005; Valencia & Black, 2002).

I am involved in this research as a lecturer who works regularly with undergraduate students and sees that some students seem to hold secret keys to a hidden curriculum (Giroux & Penna, 1979). I believe that not all students have equal access to supports that facilitate entrance into graduate school, and that community and cultural wealth (Yosso, 2005) is not currently valued as much as grade point averages and test scores. I am a faculty member and alumni of a CSU graduate program in speech-language pathology and have had a front row seat to observe the diversity of our program expand slightly but continue to leave behind the people that are often left behind in other aspects of life, whether actively through systemic oppression or passively through the maintenance of those systems and lack of active emancipatory practices. I get to partner with colleagues who seek to upend these practices that harm our bilingual and bicultural experiences, and also recognize that it isn't yet enough. It is my goal that this research contributes to the understanding of racial/ethnic stratification of CSD students, and serves as an opportunity for programs to have open dialogue about students' perspectives and to consider potential supports that can be embedded as well as barriers that can be removed to improve the diversity of our students and the lives of the people that we serve.

Terminology

Communication Sciences and Disorders (CSD). Programs that lead to a degree in communication sciences and disorders have varied terms throughout the state and the country. Some examples include communicative disorders and sciences, speech, language and hearing sciences, and communication disorders and sciences. All of these programs tend to have certain classes in common, such as language development, phonetics, hearing

sciences, introduction to audiology, and courses on pediatric and adult speech and language disorders. All of these programs that lead to a Bachelor of Arts degree will be called communication sciences and disorders or CSD programs.

Cultural and Linguistic Diversity (CLD). In the field of speech-language pathology, the focus on providing culturally competent care is an important area of study. People who come from culturally diverse backgrounds, or linguistically diverse backgrounds are grouped into one term entitled culturally/linguistically diverse. Faculty and professionals speak of cultural and linguistic diversity as a strength but also an area that many are not sufficiently trained on. Within the profession, non-White, non-English speaking people are grouped as CLD. That term is also used in research to speak of people who come from diverse backgrounds.

Latina/o, Latinx, and Hispanic. I have spent my entire life navigating these terms. Mexican, Salvadoreña, Latina, Hispanic, Latinx, Chicana, these terms are *enredada*(entangled) just within this one body. The broad terms, Latina/o, Latinx, Hispanic all span race, language, and experiences. People who are part of this group identify as nearly every racial category on the US Census. Fergus (2016) highlights some of the challenges and identities that reflect the diversity of this group. For example, families in the U.S. from Argentina have typically come a very different route than indigenous families from Guatemala. And yet, most people who are counted as Hispanic/Latino on the U.S. Census continue to show shared outcomes that indicate some commonality within this demographic (Brown et al., 2003; Fry 2002; Salinas, Jr. 2017). Hispanic is a U.S.-invented category that was developed in the 1970's for the 1980 Census (Demby, 2014). In the decades leading up

to the 1980 Census, groups such as La Raza were pushing for a term that would combine the populations of the Spanish speaking countries into one group for recognition of the needs and power of the group (Simon, 2020). Since it is a governmental term and does not exist in many of the countries of origin of the very people it seeks to describe, many people do not identify using the term Hispanic. In addition, many people from countries south of the United States and in Puerto Rico often prefer to identify by the place of their origin, or through a connection to political activism (as in Chicano) rather than as a monolith (Demby, 2014). I spent dozens of hours debating which term, and regularly went back and forth, matching my lived experiences with these terms. In recognition of my non-binary friends and family, and to shift my own binary framing, for consistency, in general when speaking of people who have a shared ethnic/language-based background, I will utilize the term Latinx. When citing sources, I will use the language they use, highlighting how this group is labeled differently in different spaces. When referring to comments from students who self-identify as Latina or any other term, I will utilize their preferred term.

Underrepresented Students. Underrepresented students is a term used in place of the California State University's (CSU, 2020) preferred related term: underrepresented minority student (URM). Using the CSU definition aligns this work with public university literature and is reflective of the group primarily studied in this dissertation. URM or underrepresented refers to students who have historically not been present at universities, and specifically refers to African American, American Indian/Alaska Natives, and Latinx people.

Middle Eastern or North African (MENA) descent. One student participant whose voice was included in the study identified as Iranian. While the US Census continues to identify

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MENA as White only, people who identify as Middle Eastern or North African do not

navigate this country as White (Chow, 2017; Maghbouleh, 2020), are not perceived as such,

and therefore their experiences are more similar to other groups of color (Maghbouleh et al.,

2022). I considered her voice underrepresented in the field and included her in this study.

Literature Review

Introduction

    This chapter will give an overview of many of the ways that literature has described the need for diversity in the profession with a focus on research showing that increased bias leads to decreased outcomes and that bias is decreased with a diverse workforce. The research will show that the way to increase diversity in the profession is to increase diversity within those programs that produce speech-language pathologists, and this study focuses on this aspect. The process, which can be likened to running a gauntlet, will be explained, along with literature that shows the bias that exists at nearly every step of the process, including the admissions review process. Data on students of color in higher education will be provided, with a focus on Latinx students. Additional barriers within the field of CSD will be highlighted, along with gaps in the literature. Of note, this dissertation was completed during a period of a global pandemic and discussion on social justice issues, especially after the murder of George Floyd changed the trajectory of many aspects of life, including discussions in the field of speech-language pathology. As a result of the shift, post-George-Floyd-published research will be shared. Finally, consideration for epistemological frameworks that shaped this research will be presented.

The Need for Diversity

    Speech-language pathologists serve an incredibly diverse group of people in multiple settings. ASHA (2022a) reports that just over 50% of SLPs work in the school setting, while nearly 40% work in healthcare. Both settings have an extensive history of racist practices and biases that continue today (Elias & Paradies, 2021; Marom, 2019). From penalizing

racialized teachers who don't fit into 'White normativity' and categorizing them as deficient under the category of 'professionalism' (Marom, 2019), to the outcomes of homogenous teaching of homogenous worldviews in ways that are harmful to students who have been minoritized, both students and teachers experience harm in the current system. In healthcare, from bias in diagnosis, to disparities in pharmacological medical management, to the recent disproportional impact of COVID-19 in terms of mortality rate (Reyes, 2020). Using a human rights framework, Maritza Vasquez Reyes (2020) stated in her article, "Disparate COVID-19 mortality rates among the African American population reflect longstanding inequalities rooted in systemic and pervasive problems in the United States" (p. 304). The professionals that work in these settings need to be aware of the spaces in which they occupy and consider the factors that play into the services that families and students receive (Deal-Williams, 2020).

Implicit and Explicit Bias

Broadly speaking, bias refers to a preference or prejudice either in favor of or against a person or thing (Fitzgerald & Hurt, 2017). The premise behind bias appears to be related to our brain's need to group and categorize (Devine, 1989). Our brain needs to process an incredible amount of information at lightning speed. Many of our decisions are made at a level that requires little to no conscious thought. Those decisions that do require more conscious thought are often fed by the subconscious thoughts that just occurred prior to our decision-making process. Those decisions may impact how we perceive people around us. Many people have posited the theory that the preference toward an in-group (people like us) was evolutionary and allowed people to quickly identify safe people from potential enemies

(Fu et al., 2012; Hammond & Axelrod, 2006; Masadu & Fu, 2015). While bias as a construct has existed for thousands of years, the ideas of implicit bias have been studied for just a few decades.

Prior to the 1970's, research focused on the theory that attitudes and beliefs predicted behavior. However, a seminal article from Wicker (1969) reviewed previous studies and experiments looking at beliefs and how they diverged from actions. Much of the research he cited surveyed participants by asking people how they would react in a given situation and then placed those people in those actual situations. His analysis found that results of behavior varied widely from purported beliefs/attitudes, which spawned subsequent research into that difference. He identified that something else was going on and posited that the connection from attitude to behavior was not always a straight line. Related research from the 1970's to the mid-1990's focused on automatic associations and the connections between words and labels (Brownstein, 2017). That research led to studies looking at how those automatic associations potentially related to our behavior and judgments. The fields of psychology (Guerin & Foster, 1994), and organizational behavior studied the ability to predict behavior based on beliefs (Ajzen, 1991). But in 1995, Greenwald and Banjali put out a new theory. This initial term of "implicit bias", generated by Greenwald and Banjali (1995), formed the basis for the research that is being conducted today. They identified that contrary to previously held beliefs that our externalized behavior was under our conscious control, this then-new theory identified that our behavior may be guided more by implicit or unconscious beliefs. While unconscious and implicit bias are often used interchangeably, there is an implication with unconscious bias that we are not yet aware of our biases. The key

characteristics of implicit bias are that everyone possesses implicit biases, and while some

biases are positive toward people who are similar to us, many biases are reflective of external

narratives. Of note, implicit bias can be in direct contrast to our beliefs and values.

Explicit bias refers to the behaviors, statements, and perspectives that sit on the conscious

forefront of our experiences. Explicit bias is studied in educational fields with regard to

issues such as discipline and achievement (Gregory et al., 2010), in legal fields with regard to

issues like sentencing and rates of prosecution (Clark, 2018), and in health care fields with a

focus on challenges like access to quality medical care and appropriate diagnosis (Williams,

2012). The key differentiator between implicit and explicit bias is that explicit bias is a

conscious awareness. For example, a study conducted by Hoffman et al. (2016) found

explicit bias in beliefs about pain assessment and treatment based on race. Medical residents

(and students) were given mock medical cases and asked about beliefs related to pain. Those

who ascribed to false beliefs related to race were more likely to provide insufficient pain

medication management to Black patients. These biases exist in nearly every setting, but the

two most relevant to the field of speech-language pathology are healthcare and education.

Bias in Healthcare

While very few studies have been conducted in the field of speech-language pathology

connected to healthcare, thousands of studies have been conducted on bias in healthcare in

general, specifically racial bias in healthcare. Systematic reviews have been conducted on

bias and health care utilization (Ben et al., 2017), healthcare professionals (Fitzgerald &

Hurt, 2017), and health care outcomes (Hall et al., 2015). Williams (2012) wrote a powerful

overview of the topic and highlighted the need to develop an evidence-based guide to

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mitigate the race-related inequities in health. He identified differing rates and ages of death, earlier onset of disease in racial/ethnic minorities, and disparities in how disease impacts the body.

Race and institutional racism were two key external factors that impacted health, and Williams (2012) suggested that improvement of social policies had a direct improvement in health outcomes and mortality rates. Bias in healthcare occurs for a variety of reasons. One reason for potential bias includes the time constraints (Stepanikova, 2012). Doctors who are in a hurry to make a diagnosis before they have to move to the next patient may use data points with regard to race or gender-based risk factors and use prior experience paired with research to make clinical decisions. While on the surface those decisions appear to make sense, when viewed as a whole, patterns reflecting bias and harm begin to emerge.

In a study measuring bias using medical vignettes, Stepanikova found that doctors who were primed with racial/ethnic words tended to determine a less severe diagnosis for patients they perceived as Black or Hispanic, and to under refer Black patients to specialists. Using a method called subliminal priming, where racial-ethnic information was presented in ways that were not consciously registered, Stepanikova (2012) measured doctors' responses to a medical vignette describing a patient with chest pain. No information about race/ethnicity was stated, and all doctors were given the same vignette. The only racial/ethnic marker was the subliminal priming where words related to ethnicity/race were flashed on a screen in the periphery for 80 milliseconds. One group was given three minutes to make decisions about the single case, and a second group was given the same time but had to diagnose one additional case, increasing the time pressure. The first group did not make statistically

significant differences in assessment of cases, or referrals. For the second group, the doctors who had been assigned the subliminal priming with Black stimuli referred patients to a specialist 39% of the time as compared to the control group, who referred patients 76% of the time, and were more likely to diagnose angina vs coronary heart disease in Black and Hispanic patients. This outcome suggested that Black and Hispanic patients likely receive worse care when doctors are under time constraints, and as argued in her article, doctors are regularly pressed for time (Stepanikova, 2012).

Chapman et al. (2013) reviewed dozens of articles with regard to race, gender, and bias. They found that when adjusting for confounding factors, Hispanic and Black patients were frequently prescribed fewer pain-related medications for the same injury as White patients. Researchers have also looked at how perceptions of care can impact actual physical and psychological health. Studies found that weight-related discrimination (Sutin et al., 2015) and race-related discrimination (Arya et al., 2018; Lukachko et al., 2014) led to higher levels of major disease or death. In particular, Lukachko et al. (2014) looked at structural racism and its effect on health and found that Black people living in areas with higher structural racism indicators (lack of representation in government, incarceration, etc.) were more likely to have had a myocardial infarction than those who lived in areas with lower structural racism indices. When the data show higher numbers of a particular disease or outcome, doctors can be encouraged into a confirmation bias, thereby increasing the impact that bias has on healthcare (Markowitz, 2022). Even though the field of speech-language pathology has not conducted its own studies, the transferability of findings of bias is likely to be related in a field that is whiter than the medical profession (Xierali & Nivet, 2018).

Bias in Education

Implicit bias is noted in all aspects of education, from achievement expectations and outcomes (Peterson et al., 2016), to discipline (Skiba et al., 2011), to access to higher education (Yosso et al., 2004) and even retention and promotion among faculty (Urrieta Jr. et al., 2014). Bias in discipline has been studied extensively (Carter et al., 2017; Gregory et al., 2010; Gregory et al., 2017), with thousands of articles looking at perceptions of behaviors and punishment. As behavior can be perceived differently than the intended meaning, discipline is one of the challenges within education. Many studies have documented the higher number of students of color being sent to the office for infractions related to subjective measures (being disruptive, disrespectful, etc.) vs. White students who are sent to the office for more concrete, objective infractions (vandalism, physical assault, etc.). Similar to Hoffman et al. (2016), case studies have been conducted with teachers, giving vignettes and asking for recommendations on punishment. Those studies have found that when a student was perceived to be Black (even just when given a name, no racial information), the teachers escalated disciplinary infractions.

Many of those ways that education is impacted by racism are influenced by an educational system that views White as the 'normative' or preferred way of being. Ledesma and Calderón (2015) highlight the work that has been done to examine those influences. They focus on pedagogy and curriculum, encouraging teachers and teacher preparation programs to continue to examine what it is to teach, and what content looks like, especially as the history of education has tried to paint itself as 'colorblind' and they highlight scholars who recommend that White teachers begin to recognize the underlying racism in labeling

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themselves absent of 'color' or culture and begin to bring in context and history as they consider how curriculum is taught. Ledesma and Calderón continue to talk about the importance of increasing teachers of color (which can be extrapolated to include SLPs of color) and to teach in culturally relevant ways. They highlight the deficit framework that underlies the current k-12 education system, especially for multilingual learners and students of color, citing one specific researcher, Pérez Huber, who in 2011 found that undocumented students were framed as deficient, and having a problem because of the expectations of English dominance and normative expectations in school. Ledesma and Calderón also shared how school finance, policy, community engagement all influenced outcomes in school. From funding, to discipline, to locations of schools, every aspect of schooling was influenced by race and history.

For a deeper historical framework with which to consider racism in public schools, Lopez and Burciaga (2014) gave a salient example in their article, looking at the landmark Supreme Court case, Brown v Board of Education. They used the 60th anniversary of the ruling as an opportunity to revisit the landmark ruling, but they noted that while the primary questions being asked were focused on comparing schooling in 1954 to schooling in 2014, those same questions were asked the decade before, and the decade before.

They touched on those questions, noting continued racial inequalities, but also a lack of understanding in the general public about the timeline of the civil rights movement, reflecting that the average American could name a few major players in the civil rights movement, they might struggle to place the Brown decision on a timeline related to other civil rights movements. As a point of reference, it was ten years before Dr. King's "I Have a Dream"

speech, and three years before the Little Rock Nine (Lopez & Burciaga, 2014). They continued by placing Brown v Board in context with subsequent cases that made it clear that the weight of Brown v Board would be felt by states that had embraced de jure segregation, or segregation by law. States that had de facto segregation were not held to the same standards, which influenced where and how integration occurred.

In addition to situating the Brown v Board of Education case in history and within the sociopolitical context, Lopez and Burciaga (2014) cite the subsequent legal cases as one piece of evidence that court systems have continued to dismantle the intent of Brown v Board with subsequent rulings, giving multiple examples of White families bringing suits against schools who used race as a factor in determining access to admission. They suggest metaphorically letting go of the Brown decision in order to move forward and make meaningful progress on true equal access to education, citing existing biases that continue to plague all aspects of the educational system. Speech-language pathologists are trained in these school systems, exposed to the systemic and deficit ideologies discussed in the above research, and research within the field has shown the results of that immersion.

Research on Bias Within the Profession

As practitioners in both healthcare and education, speech-language pathologists need to be aware of the biases that exist within those systems, as they can influence how they themselves perceive the people that they work with. Biases are discussed within the field of speech-language pathology, but a majority of the research has focused squarely on service provision. There have been some studies that have assessed perceptions of clinicians and measured their comfort in working with CLD populations (Guiberson & Atkins, 2012;

Harris, 2005; Kohnert et al., 2003; Kritikos, 2003). With regard to pediatrics, discussions

revolve around appropriate assessment based on families who are culturally or linguistically

diverse (Arias & Friberg, 2017; Cheng, 1996; Kayser, 1996) and with clinicians providing

services to CLD populations (Robinson & Crowe, 1998; Roseberry-McKibbin et al., 2005).

There is a focus on making sure that clinicians provide appropriate assessment and

placement, which is a crucial aspect of the field, but most articles ignore the race/ethnicity of

those providing the services. Some studies have looked at disproportionate identification for

special education (Robinson & Norton, 2019), or for developmental language disorders

(McGregor, 2020), or for services at all (Morgan et al., 2017).

With regard to adult patients, the field of speech-language pathology has looked at

assessment and treatment primarily in swallowing (Riquelme, 2007) and cognition

(Ulatowska et al., 2011). One article did note the factors that may play a role in better patient

care and outcomes. Again, research has taken a more external view of assessment tools, as

opposed to internalized perceptions and beliefs and how they can impact care. Of note, areas

that were studied included clinician perspective in assessment of cognition, linguistic

expectations post-trauma, and interactions between clinicians and clients as they pertain to

management of ongoing challenges in communication, cognition, and swallowing. Very

limited research has looked at areas of bias in a manner similar to related fields of healthcare

and education.

One of those limited studies was Ebert (2013), who studied graduate students. In a

survey, she found that White students, when asked about racial inequalities and White

privilege, most students reported that race did not affect service delivery or training

opportunities, and over 1/3 of the respondents rejected the notion of White privilege, with some expressing anger or hostility over the concept. The area of bias within the system that produces SLPs has not sufficiently been examined in a deep and meaningful way, and the demographic shifts continue to be underwhelming.

The Pipeline

As mentioned in Chapter One, the process to become an SLP is extensive, and requires a certification process which is initiated after successful completion of a graduate program and passing a Praxis examination. That path often begins in undergraduate programs.

Undergraduate Programs

In California, there are 17 programs that offer a bachelor's degree in CSD and 18 programs that offer a master's degree in speech-language pathology. The 17 programs vary wildly in size. Of the 16 programs that responded, 3,420 students are enrolled in the CSD programs, and universities granted 1,121 undergraduate degrees in 2021. Of those programs, 10 are Hispanic- Serving Institutions (HSI). HSIs receive the designation when students identified as Hispanic/Latino make up 25% or more of the school enrollment (US Department of Education, n.d.). All ten are part of the California State University (CSU) system. Some programs are as small as 33 students, while others are as large as 484 (ASHA, 2022a), with a mean of 214 per program. With an undergraduate program averaging 214 per university, when those same programs average 31 graduate seats per department, this 14% acceptance rate means that the other 183 students are left outside of the profession of speech-language pathology. Some students may choose another profession, and some may choose to become speech-language pathology assistants. Some may get a job in a related field. But

some students are likely being pushed out of the profession. Unfortunately, this area of focus has not yet been studied in the profession, which is a critical gap in the literature.

Entry into Graduate Programs: The Gate

There are 327 accredited institutions that offer programs in CSD and related fields. Two hundred seventy-three offer undergraduate programs, and 281 offer graduate programs in speech-language pathology. The remaining programs offer clinical entry programs in audiology, post-entry level clinical doctoral programs in speech-language pathology or audiology, and research doctoral programs. Since at least 2010, the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) has paired with the American Speech-Language-Hearing Association (ASHA) to aggregate admissions data including applications, admissions, and enrollment. These reports tend to have a high response rate (over 90%). They have allowed for the analysis of trends, and paint a picture of the landscape that describes entry into the profession.

In the most recent survey, which included 302 of the 331 American academic institutions who have programs in the CSD field, CAPCSD (2021b) and ASHA (2021) found that there were over 37,909 undergraduate students enrolled in one of the 272 institutions that offer a CSD undergraduate degree. Nationwide, there were over 56,000 applications for admissions to one of 290 graduate schools. As many students apply to more than one graduate school, these 56,000 were not unique applications. Of the applications, 21,877 were offered admission although again, not unique students, and many high performing students received multiple offers of admission. In the end, 9,826 students enrolled in their first year of graduate school with a mean capacity of 38 students per new admission cycle. This data included

reports from 17 of the 18 accredited programs in California that offer a master's degree program. All 12 of the California State Universities (CSU) that have CSD programs in California contributed to the data.

CAPCSD and ASHA report applications received and numbers offered admission, but just as many applications were not unique applicants, and the numbers offered admissions were not unique admissions. They report that 39% of applications were offered admissions, but there is no way to identify how many of those were duplicate admissions, nor the likelihood that one student over another would be selected. ASHA reports that 39% of applications were offered admissions, but there is no way to determine the percent of unique applicants offered admission. For instance, consider one strong student with solid financial security that can apply to 9 programs and is accepted to all of them. Then consider seven other students who each apply to 2 graduate programs, and none of them receive an offer of admission. As you can see, without understanding percent of unique students offered admissions, the 39% published figure by ASHA can be very misleading. Figure 3 exemplifies this with two students each applying to nine programs and one receiving 9 offers while the other only receives one offer.

Of the 17 accredited programs in California, the median capacity drops to 31 students per program cohort. In California, the rate of acceptance drops from 34.6% to 16.2% but this number may in fact be lower considering duplicate applications. Of 4,661 applications received, 755 were approved for admissions, and of those 755 admissions, 500 students ended up entering into graduate programs.

Figure 3

Average Admissions Acceptance Rate: A tale of Two Students

Average Admissions Acceptance Rate: A Tale of Two Students

Student A: 9 admission offers
Student B: 1 admission offer

Average admissions offered=5
Seats in grad school=2
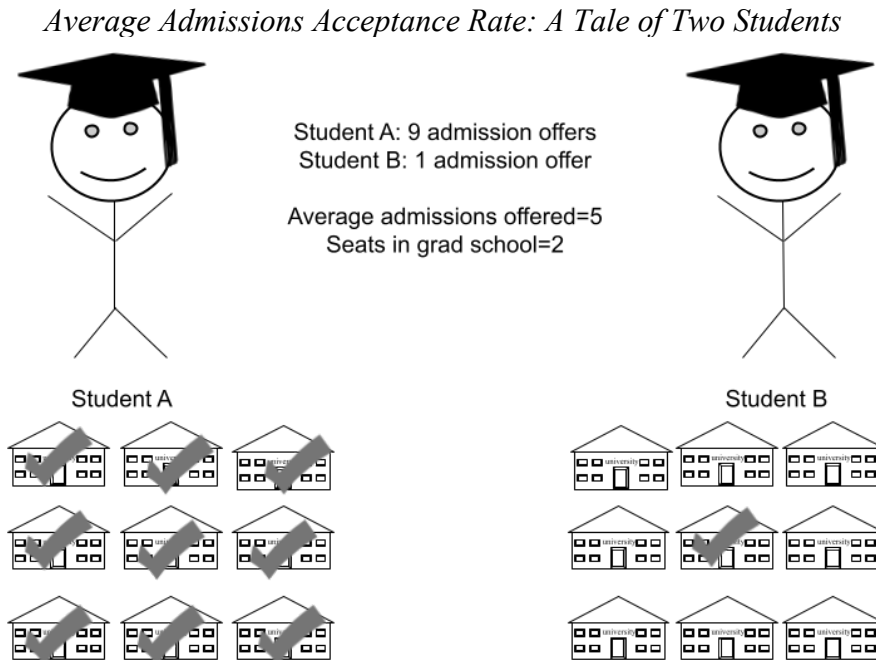
Student A

Student B

The 500 first year master's students can be placed against a backdrop showing that in California, there are approximately 1,450 annual openings and it is projected that by 2028, the state will add 4,700 additional SLP jobs to meet the needs of the population (EDD, 2022). No data are publicly available about the yield rates for each respective graduate program, and there is no data that tracks students applying to their own graduate program. This ambiguity makes it difficult to parse out the specifics of actual likelihood of being accepted into a graduate program. While the specifics are not publicly available, the documented difficulty in entering the field is no surprise to those within the field (Boles, 2018; Polovoy, 2014; Sylvan et al., 2020), and the ongoing lack of graduating SLPs continues to be documented. There is a measurable attempt to increase capacity. Since 2010, 24 new programs have been

accredited, and 23 programs are candidates for accreditation, currently graduating speech-language pathologists (CAA, n.d.).

Graduate School Admissions Process

The graduate school admission process is the gatekeeper that determines how to decide which of the thousands of applications are awarded seats in a graduate program in speech-language pathology. While some schools have introduced an interview process, most rely on four primary sources of input; GPA, GRE, letters of recommendation, and a personal statement. Many programs focus on GPA and GRE as a primary way to shrink the pool of applicants and make the review process more manageable (Polovoy, 2014), but most programs continue to require and utilize all four components in determining who to admit. Predictive factors in the admissions process continue to be a nationwide dilemma (Troche & Towson, 2018) with some research looking at GRE scores compared to graduate GPA and others looking at GRE as compared to Praxis scores (Boles, 2018).

Getting Into Graduate School: The Gauntlet

The experience of applying to highly competitive graduate schools can be described using dual metaphors of running a gauntlet, which McGraw-Hill (n.d.) defined as enduring "a series of problems, threats, or criticisms", or "picking up the gauntlet", which Merriam-Webster (n.d.) describes as "to show that one is willing and ready to fight". All students who choose to apply to graduate school face a series of challenges and make a conscious decision to fight through the challenges of the application process. Students of color and first-generation students face additional challenges (Lunceford, 2011; Ramirez, 2011). Nationwide, there is limited research on predictive factors for success in CDS graduate

programs (Anderson et al., 2017; Forrest & Naremore, 1998; Moore, 2013), yet many

graduate programs continue to use the same process for applying to graduate school; GRE,

GPA, letters of recommendation, and a written statement; a process that has existed for

decades (Steffani & Slavin, 1997). With all of the concern regarding applying to graduate

school, students often experience the most stress around the GPA and GRE requirements

(Roos & Schreck, 2019), but there are four components to the traditional application to

graduate school in speech-language pathology: GRE, GPA, letters of recommendation, and

personal statements.

GRE

Of the four typical admissions criteria, the one that has been critiqued the most is the

GRE (Miller & Stassun, 2014). Many studies show that there continue to be limitations and

gender/ethnic biases in the GRE scores (Bleske-Rechek & Browne, 2014; Forrest &

Naremore, 1998). However, until 2021, most CSD graduate programs continued to utilize the

GRE scores as a factor in determining admissions. In 2020-2021, the GRE was put on hold as

a requirement for many schools as testing centers were closed due to the global pandemic.

The ultimate decision as to whether programs will reinstate it continues to be discussed.

While many programs have reinstituted the requirement, others have either temporarily

paused it, or are eliminating it completely. In the meantime, for those who have reinstated the

requirement, the GRE continues to be used as a predictive factor for success in grad

programs with no clear consensus as to its predictive validity (Kjelgaard & Guarino, 2012;

Morrison & Morrison, 1995). Several studies have shown that GRE is not a strong predictor

of graduate school success, and in fact can serve to eliminate otherwise highly qualified

students. In their article noting limitations to usefulness of the GRE, Miller and Stassun

(2014) reflect on success in a bridge program and highlight that many students who

successfully completed a PhD program would have been rejected if the program had utilized

standard GRE cut-off scores. Among the fields that have discussed the limitations of the

GRE or related admissions tests in predicting success in graduate school are biomedical

(Moneta-Koehler et al., 2017), public health (Farley, 2020), STEM (Petersen et al., 2018),

dental (Chaviano-Moran et al., 2019), and psychology (Sternberg & Williams, 1997). Gaps

in scores implicating bias have been detected based on race/ethnicity (Bleske-Rechek &

Browne, 2014; Miller & Stassun, 2014), non-native English speakers (Flor et al., 2015), and

gender (Petersen et al., 2018), leading many to recommend removing the GRE and use of

cutoff scores (Miller, 2013).

Grade Point Average (GPA)

GPA is the second major factor that many universities use for admissions on the premise

tha undergraduate GPA is a valid predictor of graduate GPA. While many studies have

shown that assumption broadly to be true (Anderson et al., 2017; Kuncel et al., 2001), when

the data becomes more granular, some challenges begin to surface. Fauria and Fuller (2015)

looked specifically at transfer students, since nearly 60% of students attended more than one

university, and many students either did not complete their degree or took much longer than

non-transfer students to graduate (Fuaria & Fuller, 2015). They cited transfer shock (transfer

student adjustment as it is known in the literature) as having a significant impact on GPA,

and studied specifically a group of activities known as educationally purposeful activities

(EPA) to determine how they impacted GPA. Using regression analysis, they determined that

there were not many activities that had a meaningful effect on GPA, but suggested that the GPA tool itself was flawed, and cited inconsistencies in grading processes, as well as differences in grading across majors. They concluded by noting that the face of transfer students has changed and traditional models of support may not be as successful with the newer cohorts of students. The two areas that they found impacted GPA were prompt feedback from faculty and giving students the opportunity to tutor other students (Fuaria & Fuller, 2015). Unfortunately, these practices are not practiced consistently across campuses.

Assessor Bias

John Malouff has written several articles on the concern of halo bias, which he describes as the influence of prior knowledge of the student influencing how assignments are graded. For example, in one study, three groups of graders were given the exact same assignment to evaluate (Malouff et al., 2014). One group was asked to watch an oral presentation from the student where the student was well groomed and gave a good presentation, while the second group was asked to watch the same student give a poor presentation, dressed in a more casual style. The third group did not watch a video before grading. There was a direct link between the specific video that was watched and the graded score of the written assignment. Additional biases were present in a follow up meta-analysis that reviewed multiple studies showing that when participants were given irrelevant information on the student such as personality, race, gender, the grading score varied based on the external information vs. the quality of the content (Malouff & Thorsteinsson, 2016). All of these biases can be present in the determination of GPA.

GPA continues to be a primary determiner of fit for graduate schools, despite specific research cautioning the use of such a biased tool, especially when the facts do not seem to bear out differences based on smaller differences in GPA scores. Van Overschelde and Lopez (2018) identified no significant difference between students who had a GPA below 2.75 and cautioned against increasing GPA admission requirements in teacher preparation programs, as it decreased both ethnic and gender diversity of teachers, citing a lack of evidence for GPA difference (noting that students below a 2.75 did not perform significantly differently from students with above a 3.0 GPA). Within the field, Richardson et al. (2020) corroborated the findings of no correlation between undergraduate GPA and clinical success. Yet, undergraduate GPA continues to be a primary determining factor in deciding admission to graduate school in speech-language pathology.

Letters of Recommendation

Letters of recommendation are often viewed as references for potential candidates, asking people to 'vouch' for a student and their capabilities for performance in graduate school. However, validity of the use of letters of recommendation has been called into question. Saudek et al. (2018) looked at reviewers' opinions of applicants based on letters of recommendation and found that certain phrases and codes, as well as the quality of the letter influenced how they viewed the candidate. Specifically, they cited that a weaker candidate might be viewed more positively with a strong letter of recommendation, but a stronger candidate could be viewed less favorably if they received a poorly written letter, showing that sometimes, student can be unknowingly impacted by the quality of the letter, especially for those writers who are less familiar with the admissions process.

In addition, bias in ratings of letters of recommendation by applicants' perceived gender (Dutt et al., 2016) or race/ethnicity continues to be a challenge. In a study looking specifically at letters of recommendation, Morgan et al. (2013) provided participants with four letters of recommendation and asked them to state whether they would grant admission to the candidate. Even though the content of the letters was the same, they found that raters evaluated students with African American names lower than Caucasian names. Houser and Lemmons (2018) led a retrospective analysis in which they reviewed letters of recommendation after students had been admitted and they compared the types of words used in letters of recommendation. They found that students who had been admitted had letters addressing specific interactions, with language focusing on 'certainty'. Examples included "achievement", "absolute", and "always" (Hauser & Lemmons, 2018, p. 589). Those who were not admitted had more cautious and less concrete wording. Examples included 'should', 'attractive', and 'emotion" (Hauser & Lemmons, 2018, p. 589). When they compared White vs non-White students, they found that non-White students had a greater number of affect words and emotion, while letters for White students with similar GPAs contained more words about cognitive ability, productivity, and insight.

In the field, Newkirk-Turner and Hudson (2021) analyzed 161 letters of recommendation written for Black students. Of those letters, they found 202 instances of what they called 'phrases that may bias readers, (PBR)' (p. 4), using previous literature to identify types of phrases that had been viewed as biased. Phrases were categorized based on the potential negative perception and then identified by how many per letter. They found that 40% of the letters of recommendation had four or more PBRs. While there was no connection between

the number of PBRs and other factors like GRE, there was a connection between the number of PBRs in the letter and offers of admissions. While this article was helpful, it is hosted in a special interest group and has not yet been widely distributed to the field. This is one more way that the field perpetuates Whiteness.

Personal Statements

While the field of speech-language pathology has not researched this aspect of the application process, other fields have. Appleby and Appleby (2006) conducted a qualitative study by sending letters to department chairs, asking for examples of submissions or characteristics that decreased otherwise qualified candidates from receiving offers of admissions. They grouped those responses into categories that they called kiss of death, or KOD categories. Four of the five categories were related to the personal statement. Damaging personal statements (described as oversharing, inappropriate, excessive altruism, and sharing of untreated mental health issues) were reported and clear examples were given. Lack of understanding of the focus of a specific school was listed as another "KOD". Poor writing skills were listed and separated into two subcategories: spelling/grammatical errors, and poorly written materials. Appleby and Appleby (2006) cited one chair who stated "People who want to get their doctorate should already know how to write." (p. 21) Underlying this message was a priori understanding of what 'strong' writing skills should look like, with an assumption that a writing format and style should match a historically White, middle class educational model of literacy. They recommended mentoring, advising, and offering explicit courses on applying to graduate school.

The Review Process

Finally, there can be bias in the reviewer process (Attiyeh & Attiyeh, 1997). The specific

background of the reviewer can impact admissions processes, as Squire (2020) presented in

his critical race counter-narrative on admissions processes. He highlighted that faculty of

color did not apply the same value of merit to GRE or other standardized measures, meaning

that they did not elevate the measures above all, recognizing that excellence existed in many

spaces. Faculty of color pushed back on meritocracy ideologies, and challenged dominant

narratives as they looked at applicants for admission to graduate school. Unfortunately,

faculty in higher institutions tend to be primarily White (Squire, 2020). In many other

studies, mere perceptions of specific non-dominant demographics impacted outcomes. Words

associated with sexuality can affect reviewer perception, as Strunk and Bailey (2015) found.

Spertus et al. (2020) studied reviewer harshness and found that while some reviewers broadly

were harsher than others, biases cropped up in the admissions processes in terms of identity,

specifically race (Capers et al. 2017, as cited in Spertus et al. 2020). With all of that research,

sometimes students are discouraged from even applying. But the research points to additional

reasons why graduate school is not as diverse as undergraduate schools.

Stress

With all of the variables at play in the application and admissions process, it could be

expected that students would be under stress. Evidence from studies within the field have

borne that out (Beck et al., 2017; Beck et al., 2020). In a recent study, Roos and Schreck

(2019) delved deeper into this area by conducting a mixed method study of undergraduate

students to determine levels of stress, causes of stress, and how they manage stress. In the

quantitative portion of the study, they found that undergraduate students were under a great deal of stress related to academics, finances, and graduate school. Their stress manifested itself in physical symptoms. Of note, even students who believed they could get into graduate school reported thinking about graduate school daily, increasing their stress levels. They conducted simultaneous focus groups that confirmed the quantitative findings. They also found feelings of competition and difficulty communicating with peers during the application process because of the sensitivity of applying to and being admitted (or not) into graduate programs.

Students of Color in Higher Education

Within the profession of speech-language pathology, historically marginalized people are not well represented (ASHA, 2022a). However, this is not unique. Gasman et al. (2009) found that there is a steep decline in representation of URM from bachelor's degree through to doctoral degree completion. Wang et al. (2017) conducted research on support for students transferring into STEM majors from community colleges. They found that soft supports were helpful for White students, but not as helpful for students of color as concrete services. They referred to previous scholarship that suggested that an academic culture did not support the formation of 'scientific identity' (Wang et al., 2017, p. 325) in anyone who did not identify as a White male, citing the formation of scientific culture as generated by White males. They recommended creating an intentional support system that would help the transition to university from community college.

It can also be helpful to look at the entire educational trajectory. In 2006, Yosso and Solórzano published a Latino Policy and Issues brief entitled "Leaks in the Chicana and

Chicano Educational Pipeline". They drew a pipeline and found that starting with unequal K-12 schools, to informal tracking within schools, to high stakes exit exams, Chicana/o students may be discouraged from continuing their education. Moving to community colleges, 10% of Latina/os who enter community colleges with plans to transfer to a 4-year college ever reach that goal of transferring. Those who do enter four-year institutions find that they are not represented on their faculty and tend to experience higher levels of stress than their White counterparts. Making it into graduate school becomes an isolating experience, where many students feel like imposters (Tulshyan & Burey, 2021). Yosso and Solórzano state, "Chicana/o students and families should not have to compensate for the failure of the United States to educate all of its students equally" (p. 2). Yosso and Solórzano (2006) provide a list of recommendations that span the educational system, from training educators to providing default curriculum that prepares all students for access to college, and then once they get there, focus on increasing faculty that are representative of the Chicana/o community, develop race-conscious admissions programs, and focus on retention of Chicana/o students.

Representation

Students need to see themselves represented in their schools (Yosso & Solórzano, 2006). When students do not see peers similar to them, they feel isolated, which increases stress (Billingsley & Hurd, 2019). Rincón (2020) noted that representation within the cohort can impact representation in STEM fields. When faculty do not represent the students that they teach, their evaluations can be biased (Fan et al., 2019). When students do not see faculty that have shared background or experiences, they are less likely to consider that profession as a reasonable pathway (Hagedorn et al., 2007). Unfortunately, multiple studies have shown the

challenges that exist in the current educational system with recruiting and retaining a diverse faculty pool.

In their narrative account of Black and Brown leaders in higher education, Mendoza-Reis et al. (2021) highlight the dismal statistics of full-time faculty in higher education with data on women of color resembling the profession of speech-language pathology, at 5% representation for Asian/Pacific Islanders, three percent for Hispanic women and African American women, and one percent for American Indian/Alaska Natives. They interwove their stories to tie together the experience of female faculty of color in higher education. From teacher preparation to experiences regarding treatment when in academia, they found that challenges and barriers all impacted their experiences in their settings. They highlighted activities that could help future faculty of color, but recognized that limitations existed in experiences through 2021. Kayes (2006), Kaplan et al. (2018), and Wilder et al. (2017) identified limits in recruitment and retention of diverse faculty. Kaplan et al. (2018) conducted a series of semi-structured interviews of medical school leaders and found that there was a lack of minority faculty in general. To attempt to address these biases, many universities have employed diversity officers (Suarez et al., 2018) but the outcome continues to be mixed.

Latinx Students in Higher Education

Although Latinx people make up a large portion of the public educational system, research shows that the college representation that shows growth tends to be in open access colleges (like community colleges) and that they are underindexed in selective colleges (Carnevale & Fasules, 2017). In their article, Running Faster, but Still Behind, Carnevale and

Fasules (2017) noted that Latinos comprised 20 percent of jobs that required a high school diploma, but only held six percent of jobs that required a graduate degree. In a systemic review of quantitative and qualitative research, Crisp et al. (2015) identified factors contributing to Latina/o undergraduate success. They started with the overlapping societal conditions that influence Latina/o students, including lack of access to education, racism, cultural mismatch, stereotype threat, and economic factors. In a review of 190 studies related to academic success, they found nine areas that in some combinations are linked to academic success. A combination of sociocultural characteristics, such as socioeconomic status, parent education, and gender was correlated to GPA. They noted that many studies don't sort by Latina/o subgroups, with a small exception of undocumented students, who reported additional barriers. Academic self-confidence, beliefs, identity, coping styles all related to persistence and completion of college goals, even at primarily White serving institutions (PWI). They found that pre-college experiences influenced college grades and persistence, and that once they got to college, how they experienced college played a role in their ability to succeed. Amount and type of financial support was significantly tied to degree completion with some studies highlighting Pell grant aid as a specific benefit to Latina/o students. They recommended that non-need-based loans in the first years of college could help with persistence as well. The review found many studies that focused on the importance of role models, peers, and Latina/o communities on campus, as well as perceived campus climate.

Baker et al. (2018) studied college enrollment over a period of nearly 30 years. They sorted college attainment by classifying hierarchies among institutions (2-year, 4-year, most selective colleges) and found that when considering economic outcomes, the type of college

that a student enrolled in helped determine their future success. Across data, they confirmed previous research that showed the closing of a racial gap in terms of overall enrollment in college, but their study contributed to the literature in that they highlighted that the closing of the gap appeared to come from Black and Latina/o students enrolling in non-degree granting institutions. When they removed those enrollments, they found that enrollment selectivity gaps continue to grow. And they found that there is a significant correlation between parents who have attended college and level of college attainment by Latina/o students, findings that were corroborated by Banks and Dohy (2019).

While Baker, Klasik, and Reardon looked at where students were going, Valle (2016) published a white paper describing what happened once they arrived. She identified some of the challenges that Latina/o students may face when in college. Sixty-two percent of Latina/o students worked while enrolled in school full time, while 54% were the first in their family to attend college. 31% were legally responsible for caring for someone else, and more than half of Latina/or students who enroll in community college do not graduate.

Additional Barriers for Underrepresented Students in CSD Programs

While the admissions criteria and predictive factors are the focus of most studies, one recent study looked at the process itself from the student perspective. In 2020, Sylvan, Perkins, and Truglio published a study that asked students to describe the admissions process. Students who were planning to apply or had already applied to graduate school shared their decision-making process. The study started with interviews of 16 students who had applied to and been admitted into graduate school. From there they conducted a survey of students throughout the United States who had applied for admission to graduate school.

Their overall findings were a strong contribution to the field. They found that financial issues influenced how students determined how many and which schools to apply to. Perceptions about GPA and GRE also influenced students in their decisions of where to apply and why. Ninety-five percent of their participants had been admitted to graduate school, which means those who did not apply, or those who were not accepted were not well represented in the study. This study also did not ask for racial demographic information, so there was no way to see which groups of students may have expressed some of the needs or concerns more uniformly than others.

Types of support within the field of speech-language pathology and hearing have not been studied as significantly as in the broad research of academic success in undergraduate students. Specifically, no known published research has looked specifically at the Latinx population within the profession of speech-language pathology. A few studies have explored historically underrepresented groups identified as either culturally and linguistically diverse, or minority students. Saenz et al. (1998) studied potential barriers and supports to underrepresented students in a CSU program. They identified that there could be some potential challenges with consideration for learning and communication styles that are different from the dominant culture. They recognized that with only 7.3% of ASHA membership identifying as a racial/ethnic minority (a statistic that has only marginally moved since 1998), most minority students were unlikely to interact with faculty members who resembled them, understood and valued their communication skills and learning style. This lack of diversity caused them to publish one of the first studies looking squarely at CSD programs and determining supports and barriers for students enrolled in these specific

programs. They utilized the results of a survey combined with existing practices in recruitment and retention literature and a deeper understanding through ethnographic interviews to implement changes within their department and found positive outcomes. Explicit immediate changes included providing financial support through grants, academic support through faculty mentoring, peer mentoring, developing courses focused on multicultural principles, recruiting diverse faculty members, and a redesign of the graduate school admissions process. In the four years studied in their article, their minority student enrollment doubled, and has continued to remain high (T. Saenz, personal communication, June 31, 2020).

In 2018, Fuse and Bergen picked up the baton and again reviewed external research related to recruitment and retention to look at the problem of this particularly homogeneous field. They cited an ASHA report which highlighted the potential barriers to graduate school including admissions requirements and financial barriers along with lack of pre-existing diversity in the programs. They took external research on the importance of role models and socioeconomic status and related it to the challenging path that exists for people interested in becoming speech-language pathologists. Instead of interviewing current students (as Saenz et al. did), they sent a survey to 347 alumni. Of the 62 who responded to the survey, 14 alumni were practicing as an SLP or audiologist (AuD). Only one of the 14 fell into the category of culturally or linguistically diverse (CLD). They designed their survey to consider factors that had been investigated in formal measures like the Census, as well as a review of research and instruments that had been utilized to focus on student experiences and graduate school admissions. They found that alumni with CLD backgrounds tended to receive less tuition

support from their family than non-CLD students, and that the likelihood that a student was accepted into graduate school was significantly greater based on student family support. Interestingly, there was no GPA difference between the group who received more tuition support vs less tuition support. In addition, all groups who reported having greater emotional and moral support reported higher GPA than those students who did not report having high levels of emotional support. The level of emotional/moral support played a larger role in both GPA and percentage of students who were admitted to graduate school than reported academic support, implying that emotional and moral support is a key factor for all students in their success in CSD programs (Fuse & Bergen, 2018).

In a parallel study to Fuse and Bergen (2018), Fuse (2018) interviewed current undergraduate students to determine perceived needs and limitations, analyzed by socioeconomic status. She identified that students reporting lower SES also reported having fewer hours to study and that corresponded with a lower GPA than higher SES students. As GPA is one of the key factors in determining admissions into graduate school, she recommended that focus be placed on financial support, as well as emphasized the need to ensure that students who do not have higher education role models in the house see themselves reflected within the college. She suggested that students would benefit from being provided mentors who have shared SES, or ethnic/racial backgrounds.

George Floyd and Racial Reckoning

Prior to June 2020, ASHA had information on multicultural awareness, shared the year over year discrepancy between the profession and the US Census data, and highlighted the efforts that they made toward supporting developing a more diverse profession, but did not

outwardly critique the association or profession itself. Critiques were not widely published or accepted in the mainstream communication platforms for the field. As mentioned earlier, most studies or discussion on bias was limited to clinician/client relationships, not on programs, admissions, or other aspects. Most articles that were published were limited to a special interest group publication, and not the major journals that were more outward facing. Since 2020, the number of publications focusing on the pipeline and the systems that may limit diversity have ballooned. While there were many people who cared about this issue, it was not a highly published area. Most studies that did exist cited the same authors cited here, mostly because there was a limited amount of data. Since June 2020, ASHA has put out a multitude of statements, published more articles, and held listening sessions. The earliest, most visible article was by Vicki R. Deal-Williams (2020, June 1), naming the frustration that many SLPs in the profession had felt. At the time she was the chief staff officer for multicultural affairs, but she was promoted to CEO in 2021. In 2020, she said:

> We have failed to eliminate the disparities in admissions of students of color, achieve inclusion within our academic programs, address microaggressions leveled at students and professionals of color, and achieve multicultural infusion in the CSD curriculum on a wide scale. The issue is not with individuals, but with our systems.

Dr. Deal-Williams' statement laid bare the challenges that had previously been hinted at, commented on behind closed doors, but not explicitly stated so boldly. She named the issues as a systemic issue, when previous studies had focused on individual factors. Prior to this statement, commentary similar to this had been limited in nature and reach, but this statement was downloaded nearly 30,000 times. The journal section of ASHA's website has developed a special diversity, equity and inclusion (DEI) section where they collected articles from

across the various journals focused on DEI. Of the 29 articles that are included, 27 were published after June 1st, 2020. This work did not emerge from the ether, the people publishing these studies had been looking at many of these areas for years or decades, but the focus of most articles had focused squarely on practice. This shift in focus to studying the profession is increasing and hopefully will lead to evidence-based change in the field. The outcome remains to be seen, but in the short term, more researchers are publishing in this area.

Gaps in the Literature

While separately some research has looked at aspects of this study's research questions, no study has disaggregated data, nor have they looked at undergraduate students exclusively, including students who did not apply to graduate school. Two studies did investigate undergraduate experience and perspectives in the graduate application process (Pavelko et al., 2015; Sylvan et al. 2020) but most participants had been admitted into graduate programs, and the authors did not separate their findings by ethnicity. Two studies looked at perceived supports or needs, but those authors combined underrepresented groups into one reporting category. Fuse and Bergen (2018) extrapolated their data by combining CLD students together. Saenz et al. (1998) also analyzed their data based on minority status. A search for multiple key terms, such as undergraduate, minority, underrepresented, graduate school, admission, application, CSD, speech-language pathology, and speech therapy yielded no published research on students who do not apply to graduation, and limited data exists on those who apply but are not accepted. A data search of existing literature did not reveal a study on the trajectory of seniors within the crucial decision-making year. While much time

and attention have been devoted to studying the admissions process, the fact remains that there are students interested in the field of speech-language pathology who are not able to access that dream. For historically underrepresented students, this perpetuates the idea that the field is not for them.

Epistemological Frameworks

As the literature and history have shown, inequities within educational and professional settings based on racial biases, linguistic imperialism, and hidden curriculum continue to perpetuate discriminatory opportunities. This study centers itself squarely within the following complementary frameworks.

Critical Race Theory

Critical Race Theory has its origins in legal studies, and was born from scholars such as Derrick A Bell Jr., Kimberlé Crenshaw, and Mari Matsuda (Crenshaw et al., 1995), coming out of a Critical Legal Studies framework. Crenshaw (1998) deconstructed arguments about 'neutral' law and shared "Exposing the centrality of race consciousness, is crucial to identifying and delegitimating beliefs that present hierarchy as inevitable and fair." (p. 1369) Following up on those scholars, in her seminal article, "Whose Culture has Capital? A Critical Race Theory Discussion of Community Cultural Wealth" Yosso (2005), gives a genealogy of the birth of critical race theory (CRT), drawing from a variety of -isms (marxism, feminism, cultural nationalism, etc.) as she tells the story of its origins. In the over 30 years since the theory was developed, it has expanded to include other critical race discussions, such as LatCrit (Latina/o critical race). Yosso describes how all of these critical race branches work to recognize the oppression and racism that silences the voices of people

of color. A key factor in CRT is the recognition that racism is often hidden in plain sight in neutral and normative statements and expectations.

Critical Race Theory in Education

A major shift in the consideration of Critical Race Theory, came in 1995, when Gloria Ladson-Billings and William F Tate IV wrote an article that drew parallels from Critical Race Theory in legal fields to education. They drew upon the critical race theory to describe the phenomena of inequities in schooling. They also critiqued Brown v Board of Education, highlighting the continued segregation of schools, and that the models of segregation are those that, "ensures that whites are happy (and do not leave the system altogether) regardless of whether African-American and other students of color achieve or remain." (Ladson-Billings & Tate, 1995, p. 56). In education, the concept of race and property intersecting is visible in Whiteness being property. Clothing, ways of speaking and knowing are designed to allow White students to navigate smoothly, while excluding other groups of students. This allowance of exclusion is visible in the concept of white flight, as well as vouchers, school choice, gifted and AP courses, etc.

In a similar fashion, Solórzano (1997) pointed out the systems at play that impact education and identified five key principles that should be considered when setting educational policy. He highlighted the need to recognize that race and racism are integral to how this nation functions and that analysis of the topic transcends boundaries. Within CRT, exploration of education looks at both historical and contemporary issues, and utilizes frameworks from other fields of inquiry. He suggests that exploring concepts with a CRT

lens challenges dominant ideologies and serves a social justice agenda. Finally, CRT values the experiences and lived stories of people of color.

Epistemological Summary

This study is built on a belief that the various aspects of identity tend to mean that lived experiences are different, walking into spaces of higher education are not always open and welcoming to diverse students, especially students who do not meet the historical majority, White, middle class, monolingual English stereotype, for which many institutes of higher education have been built (Delgado Bernal, 2002). This study considers the research above and study after study that proves that bias exists, while universities continue to perpetuate inequities by maintaining the status quo in admissions. Ledesma and Calderon (2015) highlight the use of narrative to "give voice and agency to those historically dispossessed of power." (p. 217) and Delgado Bernal et al., (2012) emphasize the importance of mapping testimonios highlighting excellence and struggle. Therefore, the goal of this study is to contribute to the literature specific to this field, adding student voices that are not always amplified, seeking to expand their voices, aiming to turn those words into meaningful action that can literally change the face of the profession.

Research Design and Methodology

Introduction

This chapter summarizes the frameworks that were considered and walks through the research methodology and procedures that were used in this study. A mixed methods approach served the purpose of providing both qualitative narratives, in order to best honor the voices of the participants, and quantitative data to expand findings and look for patterns. A survey was chosen as effective way to gather a large amount of data from a larger group of students. A series of semi-structured interviews (Stewart et al., 2009) across a period of time was selected to gain a greater understanding of the thoughts underlying the responses in the surveys, and to travel on a journey with the students as they made plans for post-graduation trajectories. Public universities in California were selected as a way to expand upon previous findings (Fuse & Bergen, 2018; Saenz et al. 1998) and to focus on the most financially accessible path to graduate school. Analysis of the two data collection methods helped triangulate common themes (Sandelowski, 2000) that impacted resilience and challenge among students in CSD programs.

Review of the Problem

Despite decades of reported attempts to diversify the field of speech-language pathology, the field continues to remain stubbornly female, white, and monolingual. This lack of diversity hurts the entire community since a lack of diversity can lead to bias in assessment and treatment. This study seeks to investigate the perception of supports and barriers that students experience in their senior year as they decide whether and where to apply to graduate school. While this study was open to any group that identified as underrepresented,

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an intentional emphasis was placed on Latinx students as those students tend to be missing in graduate school, despite being well-represented in undergraduate programs.

Epistemological Approach to Mixed Methods

I believe that numbers can paint a picture. Quantitative data, such as that which can be analyzed in surveys can help point a researcher to that which needs further investigation. While quantitative methods such as survey analysis provide structure, qualitative methods such as interviews provide texture and granularity that cannot be captured with a series of Likert scales, or even open-ended prompts. In addition, these students shared their concerns, stresses, joys, and anger in those interviews. Emotions and expansions would not have been adequately captured in a one-time survey. Qualitative data was placed into perspective using the information provided in the survey, and the survey data was better expanded by the live interviews that were conducted. The ability to triangulate data by combining survey results with interview data and outcome data (learning who was accepted into graduate school) increased the validity of the research design.

Ontologically, I believe that the experiences that students live through in school are shaped by the historical structures that exist in higher education, which was founded from a European, elitist perspective that valued gatekeeping and exclusion of diversity of any sort (ethnic, linguistic, cultural). They bring their personal history and understandings to the university and interact with the systems, sometimes assimilating, sometimes, resisting, sometimes being pushed out. Epistemologically, I see these students, year in and year out, and I hear them outside of this study, questioning their worth, struggling to navigate syllabi, classes, supports, and graduate school. I have a lens that views their challenges on a regular

basis, which is what brought me to this study. Therefore, a critical theory paradigm shapes

the structure of the study (Guba & Lincoln, 1994).

Research Design and Procedure

This particular design framework was developed to model a previous study, conducted in

1998 by Saenz, et al. that focused on implementing change within a CSU program. As a way

to set the stage for the research, a survey was sent to undergraduate students enrolled in

public CSD programs across the state of California, to ask them about perceived supports and

barriers. The anonymous survey was followed up by individual interviews over a period of

time to ask about perceptions during the admissions process in their senior year. Semi-

structured interviews allowed students to share their additional thoughts with the interviewer

in a way that could not be captured in an anonymous survey. Quantitative data was analyzed

using descriptive statistics to determine any themes. Qualitative data was analyzed using

inductive and deductive coding to further help explore themes generated in the survey.

The decision to select a mixed-methods study (Ivankova et al., 2006) stemmed from a review of the

limited research that focused on a similar population and asked similar questions. Previous studies in

the field of speech-language pathology that have looked at diversity and representation in the

undergraduate to graduate school pipeline have completed this work through surveys (Fuse &

Bergen, 2018; Saenz et al., 1998). Saenz et al. (1998) developed their survey by reviewing research

related to recruitment and retention. They administered a survey to 199 mostly undergraduate

students. Separately, they followed up with a series of ethnographic interviews with three culturally

distinct groups (African American, Mexican American, Japanese American). They utilized both the

survey and the subsequent ethnographic interviews to provide concrete findings that spurred a

number of changes. Their article in 1998 was a case study discussing the changes that one CSU program made as a result of the survey and interviews. As a result of the survey, they implemented practices that resulted in a larger, more diverse student population, as well as faculty population. However, it was the combination of the survey plus ethnographic interviews that provided the information needed to make and sustain change (T. Saenz, personal communication, June 31, 2020). As a result of that combination of information, the university studied in the initial survey has been able to maintain diversity in the program due in large part to a consistent commitment to implement and sustain the practices that they discussed over 20 years ago.

This combined method of research created significant change in one public institution, and may be sustainable in others as well. Twenty years later, Fuse and Bergen (2018) conducted a survey, although the group they studied was a bit different. While their study involved 62 participants, all had graduated from CSD programs within 5 years of the survey. The benefit of Fuse and Bergen's survey was the increase in specificity with regard to demographic makeup, and additional factors for consideration in the survey design. The goal of the current study was to build upon the previous researchers who have paved a path, and to create avenues for dialogue on transforming the field and ultimately develop pathways to the profession that increase the diversity of the field.

Survey

The survey allowed for the collection of a large sample of quantifiable data with regard to demographic information and beliefs. Surveys are a common form of gathering information on personal perspectives. A Google Scholar search on survey methodology yielded over five million responses. One such response focused on describing survey methods. Groves et al.

(2009) defines a survey as "a systematic method for gathering information from a (sample of) entities for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members." (p. 2). Jamsen and Corley (2007) discussed the benefits of a survey. A survey is an efficient way to collect the written thoughts of many people in a standardized way over a short period of time, and an electronic survey has the added benefit of being able to branch off into different directions depending on the answer that the participant provides. This was useful with regard to demographic data, as well as giving different questions to students who did not plan to apply to graduate school. The data collected in the survey gave a background that painted a richer picture when engaging in semi-structured interviews.

Semi-Structured Interviews

The purpose of using interviews at three key times across the senior year provided crucial understanding and insights into why students made decisions about applying for graduate school, and what supports and barriers they perceived. Newkirk-Turner and Hudson (2021) highlighted that while many CSD studies have focused on the 'what' or 'how' of the problem of lack of diversity, very few studies looked at the 'why'. The interviews provided some of the 'why', with the theory that the phenomenon of determining what to do after graduation in CSD would be better understood when students themselves were able to speak to the process, in their own words, in real time. This exchange of views (Bloomberg & Volpe, 2019) in a semi-structured format with an interview guide was a powerful way to capture student emotion and self-generated directions. Table 4 provides a visual representation of the tools, methods and purpose.

Table 4

Summary Table of Tools and Purpose

Method	Instrument	Purpose
Qualitative	Survey and semi-structured interviews	Narratives describe the experiences when thinking about graduate school.
Quantitative Qualitative	Survey	Expands qualitative findings for increased generalization

Context

The setting for this research was California State Universities (CSU) that have programs in communication sciences and disorders (CSD) or a comparable major. This context was selected for multiple reasons. First, the CSU system boasts the largest and most affordable public four-year university system, and one of the most diverse (CSU, n.d.). With the shortage of speech-language pathologists and the need for diversifying the field (Cole, 1987; Fuse & Bergen, 2018), the CSU system is well positioned to contribute to the effort due to its diverse student body.

Second, the CSU system is committed to closing equity and achievement gaps, which is in line with the current parallel interest within the field. Just as ASHA has developed mentoring programs and scholarships for students of color, the CSU system has programs like CSU community partnerships, the Chancellor's Doctoral Incentive Program (CDIP), Graduation Initiative 2025, and the President's Council on Underserved Students (CSU,

n.d.). Current interest in diversifying the profession positions this proposed study within the CSU beautifully.

Demographic Selection

The selection of public university undergraduate students was deliberate as the CSU system graduated the largest number of speech-language pathologists in the state. Of the 16 reporting universities, 12 are CSU programs, and in the 2019-2020 academic year (the latest reported cycle), 942 of the 1121 bachelor's degrees reported were awarded through the CSU system (ASHA, 2021; CAPCSD, 2021b). In addition, many students who enroll in the CSU undergraduate program likely seek admission in the graduate program (ASHA, 2021; CAPCSD, 2021b). The exclusion of private universities was intentional as data from that student population may have confounded the findings. Private universities tend to have a higher entry cost even with financial aid opportunities, while the CSU system advertises its affordability, and public universities tend to be emphasized as opportunities for entry to first generation, low SES, and historically underrepresented students (CSU, n.d.).

Population and Sample

A search for California programs was conducted by a search in ASHA's EdFind (https://find.asha.org/ed), which reports on the over 300 programs in communication sciences and disorders. A search for California specific schools resulted in 21 programs. After removing the private universities and those that only have a graduate program, 12 California universities were identified. There are no CSD undergraduate to graduate programs in the UC system. All 12 public universities are CSU programs. Of the 12, eleven had submitted data to EdFind in the previous two years. This allowed for an analysis of the number of students

enrolled in the undergraduate programs. Of the eleven undergraduate programs, the number of enrolled undergraduate students varied, from 130 to 484. Utilizing previous years graduation data to extrapolate potential number of seniors across the 11 programs, it can be assumed that the total number of seniors in CSD programs in the reporting programs stands at approximately 942.

Due to IRB limitations (each university had its own IRB process which required different levels of engagement), a smaller sample of CSD programs was surveyed. The survey was sent to six of the twelve programs, spread evenly across the state. The total presumed number of seniors in those programs receiving the survey was approximately 584. Saleh and Bista (2017) reported that traditional research in surveys shows an approximate response rate of 4.8%. This would have resulted in 28 participants. Of the six CSU programs that were invited to participate, the survey received responses from four universities, spread across the state. Using the presumed number of seniors for those four programs, I received a 12% response rate, three times the estimated traditional survey response rate.

Quantitative Design

A survey was selected as an efficient method of gathering additional information from across the state. The use of this format allowed for true anonymity, along with the ability to collect both numerical data and gave respondents the ability to expand on data through the use of open-ended questions. The online survey format allowed participants to complete the survey at their own convenience and in a pandemic was the only reasonable method of delivery of a survey. Additionally, the Qualtrics survey software allowed for the development of branches of the survey, so that participants were only shown content that was relevant to

them, decreasing the relative length of the survey (Jamsen & Corley, 2007). The drawbacks to a survey were that the information tended to be limited to short answers and Likert-scale responses, which did not allow for a full depth of understanding (Bloomberg & Volpe, 2019).

Qualitative Design

Rapley (2004) stated that interviews are "inherently interactional events" and "locally and collaboratively produced" (p.16), recognizing the interconnectedness of the interviewer and interviewee, as well as the fact that that interview is an account in that moment in time. Saldana (2011) reported that interviews are the most common form of data collection in qualitative research, and that improvised conversation can also generate meaningful insights. Students who completed the Qualtrics survey were invited to participate in a series of live interviews. These interviews were offered to students in either a focus group format, or a semi-structured one-on-one interview. Interviews allowed for a greater depth of information to be gathered, and independently generated opinions to be provided. This qualitative study was open to all students who identified as a category that is poorly represented in the field, which was anyone who identified as non-White. Based on the data at one local university, it was projected that a majority of the interview participants self-identified (on the survey) as Hispanic, Latina/o, Latinx, Chicanx, Chicana/o, or related terms. Seven of the nine participants self-identified within the Latinx category.

Constructing the Survey

Building off of both Saenz et al. (1998) and Fuse and Bergen (2018), this survey contained many of the same questions as were included in the two earlier surveys (Appendix A). Changes reflected the different nature of this study. As this survey was conducted across

multiple universities in California, a question asking students to select which university they attend was added to analyze patterns within and across universities. Basic demographic questions were modified to include two additional text entry options: one regarding gender and one regarding ethnicity. Gender text entry was included to allow students to list the term/terms that they use rather than limiting them to pre-selected options. An ethnicity text box was included to investigate whether there was a connection between self-identified ethnicity, levels of support and determination to apply to graduate school as compared to US Census data and pre-selected limited categories for identification. Individuals who manifest a desire to self-identify outside of established categories may show patterns in beliefs in the system.

A question asking if the students were raised speaking a language other than English was added as a potential variable to investigate. Students who learned English later or were raised speaking another language may have experiences that can impact perceptions of the program, support, and potentially access to graduate school. A question asking about the highest education level was modified from Fuse and Bergen (2018) to allow for multiple relationships to be shared, and to eliminate the gendered two-parent questions that ask about mother's highest education and father's highest education. Since many students live in households with parent figures that may not be mother or father, a text-based answer was developed to have students list the people in the home who had earned the highest level of education. Number of individuals in the household can help paint a picture of the current living and studying opportunities afforded a student.

As the focus of analysis was on college seniors, questions about intent to apply to graduate school and if not, why not were added. This study sought to investigate the reasons why students may or may not apply to graduate school, so questions about why they made those decisions were included.

Piloting the Survey

This survey instrument was piloted with one recent graduate (a senior who had just completed their last course), and one current graduate student who would graduate before the study began in order to obtain input for validity. Questions were modified based on responses and feedback. For example, a question on who held the highest level of education in the home was ambiguous (what was the highest education level in your household growing up?), causing the student to list themselves. The language was modified (Not including yourself, what was the highest education level in your household growing up?) to aid in clarity of responses. A review of the instrument for shortening the wording of 6 questions made the survey easier to read. Modifications were made to the consent portion as well as questions related to support so that the participant could better understand the questions.

Constructing the Interviews

Students were given the opportunity to self-select into focus groups or one-on-one interviews. In preparation for both, questions were designed to accommodate either format for interviews. All but one student selected one-on-one interviews or indicated that they had no preference. The one student who requested a focus group chose not to participate in the study. This allowed for increased confidentiality as each participant was interviewed at a time and pace of their preference. The timeline of this study began in spring 2021, as students

were in the process of receiving notice of the status of their applications if they applied to graduate school. By this time, all participants were set on their planned path post-graduation. A follow up interview happened two to three months after the initial interview, when students could confirm what they planned to do after graduation. One final interview was conducted four to five months after the previous interview, to see how they felt, if they had any regrets, and to ask for advice and recommendations for future students, as well as programs. Questions related to the theme of application to graduate school. For round one of interviews (Appendix B), an initial grouping of questions included:

- What are your plans after graduation?

- What factors are influencing your thought process?

- How has your home/family life influenced this decision?

- How has school influenced this decision?

After analyzing potential responses, and in order to provide additional detail and depth, each question was expanded to give options for questions targeting those who were applying to graduate school, as well as those who were not. After the initial interviews were conducted, two interviews were analyzed using deductive coding initially, with in-vivo coding completed for the second analysis of those two interviews. A word cloud (see Figure 4) was generated from the initial hybrid coding method.

Figure 4
MaxQDA Word Cloud with Deductive and in-Vivo Coding

    Subsequent interviews were designed based on analysis of the first set of interviews.

Round two questions bounced off of the original coding, asking about the themes that were

most common. Round three continued to tap into the previous coding patterns, as well as

tapping into underrepresented themes, like fit, imposter syndrome (which was not an original

code, nor an in-vivo code after interview one, but in analysis did appear to come up). One

additional question was added to round three to match the survey, asking participants to

reflect on perceived supports, experiences, and to give advice to both departments, and to

students.

Data Collection and Analysis Procedures

Data was collected across a period of nine months, in various forms. Figure 5 shows a timeline of the development and administration of the instruments, as well as analysis of data.

Figure 5
Research Timeline
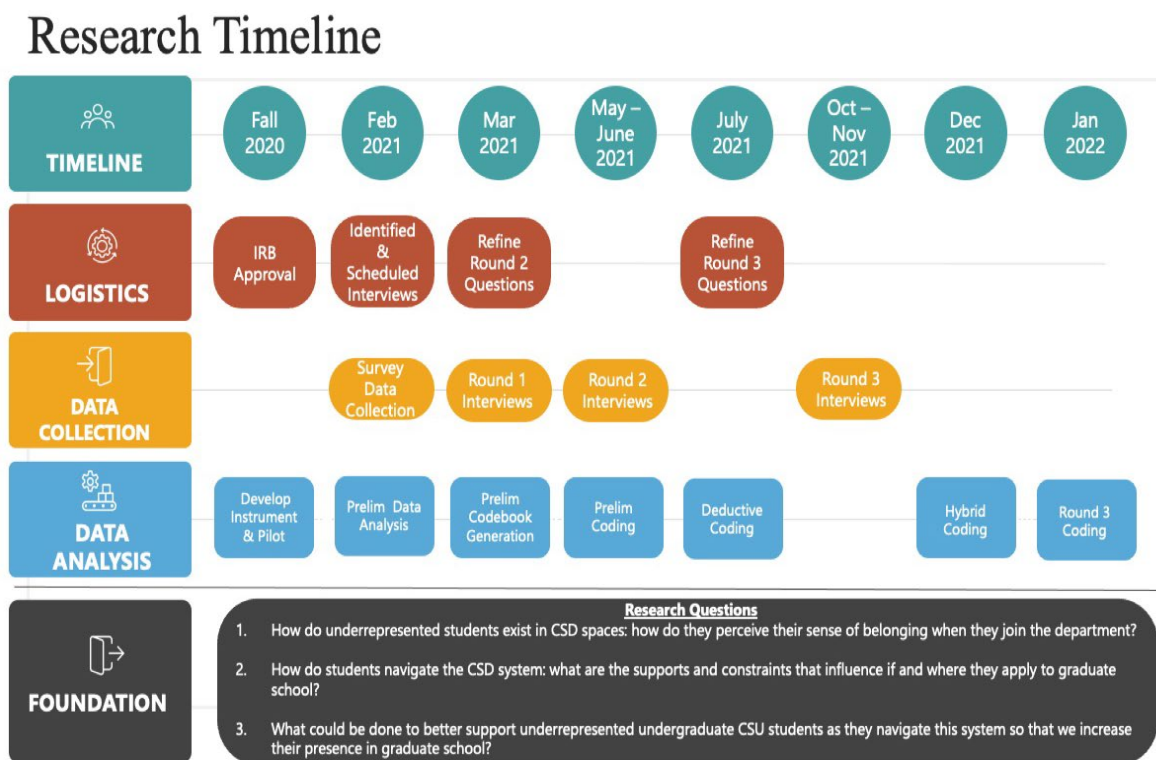
Administering the Quantitative Instrument

A Qualtrics survey link was sent to department chairs in all 12 CSU programs across the state. In order to increase the likelihood of it being passed on to students, an email was sent to each chair with information on the purpose of the study, the contribution to the literature, and the benefit to the programs by learning about student experience in their senior year.

Tactics to Increase Response Rate

Based on the findings of Saleh and Bista (2017), this survey included a specific request for help from the respondents, in both the instrument as well as the email. A deadline with a statement of selectivity also has proven to increase survey response rates and was included in the email request. Finally, I received support from a department chair who offered to send an introductory email from one department chair to the others to increase the legitimacy of the request. I followed up with personalized emails to each chair, sharing a flier with details of the survey, and requesting that they pass it on to their seniors. As survey results began to come in, any university that had no respondents was contacted again. In the case of three universities, pre-established faculty contacts were emailed to request support in encouraging the chair to send the survey out. Chairs were contacted one last time if after seven days, no participants from that university had completed the survey.

Embedded in the flier was an anonymous link to the survey so that personally identifying information would not be collected from participants. Students were given 14 days to complete the GPA so that there was sufficient time between when the chairs may receive the survey and when they chose to send the email out. The actual survey stayed open for an additional seven days to capture any late submissions.

Administering the Qualitative Instrument

Students who completed the Qualtrics survey were invited to participate in a series of live interviews at the end of the quantitative survey. If they said yes or maybe, they were given a link to another survey, to maintain their anonymity on the quantitative interview. After they completed the interview survey, they were screened for ethnicity/racial demographics.

Students who listed an ethnicity that was not well represented in the profession were all contacted. This included students who identified as Latina, Hmong, Black, Persian, and Egyptian. Of the 21 students who completed the survey, five were screened out due to not meeting ethnic/racial criteria. The remaining 16 were contacted via email. If they did not respond, they were sent two follow up emails, one week apart. In the end, seven participants confirmed their participation. Each participant was invited to refer any other peers who might meet the criteria. Two students referred two additional candidates, increasing the participant count to nine. Interviews allowed for a greater depth of information to be gathered, and independently generated opinions to be provided.

Avoiding Potential Bias

Saldana (2011) commented on power dynamics that can influence interview responses. This was mitigated in various ways. Per Saldana's recommendations, interviews were conducted with the goals to "establish an atmosphere and working relationship of comfort, security, and equity." (p. 39, 2011) For students who were a part of my department, an expert in quantitative interviewing who was a faculty member outside of any CSD department was utilized to increase comfort in sharing honest perspectives.

Quantitative Analytical Procedures

The Statistical Package for the Social Sciences (SPSS) version 28 was utilized to analyze the survey data. In this study, descriptive statistical analyses were conducted in order to determine the demographics and populations that responded. Frequency counts, mean ratings, and distribution were analyzed for patterns. Initial descriptive statistics were utilized to develop interview questions, and later to compare with qualitative themes generated. Areas

measured included perceptions of the importance of specific areas of support, and levels of

support and barriers perceived.

Qualitative Analytical Procedures

The interview data was recorded and transcribed using the software Zoom and coded

utilizing MaxQDA software. Thematic analysis was selected as an appropriate method based

on the volume of data which included 29 interviews, and over 500 minutes of interaction. A

review of the survey data was used to generate a preliminary codebook. Initial typologies

included the following deductive codes: application, competition, stress, support, and

barriers. Inductive coding was added after a preliminary round of coding, during which in

vivo coding was also utilized, resulting in nine parent codes, and 50 subcodes, and an

additional ten 2nd level codes falling under those subcodes. Analytic memos (Saldana, 2011)

were utilized to track themes and progress on the study, and were recorded via MaxQDA and

a Google document. After initial two rounds of coding, themes were developed to help group

the codes and focus the analysis. Themes were identified as strands of interconnected

relationships, and I immediately thought of hair, being braided, as separate strands, distinct,

but interwoven. Quiñones (2016) explained the function of using this specific metaphor as a

reference to Chicana/Latina feminist scholarship, "grounded in raced-gendered

epistemology" (p. 339). She shared the function of using the explicit method of *trenzas* to

harken back to history of using *trenzas* in legal writings, citing Montoya et al., (2008) who

infused Spanish terminology as a form of resistance, a counternarrative to dominant ways of

analyzing, writing, and engaging in scholarship. I have selected this language as a fitting way

of connecting the data in this study. The themes were grouped around the metaphor of

trenzas (braids), as they were interconnected strands, weaving together a narrative. A third round of analysis with the three themes of belonging, knowing, and discovering were lined up against a temporal presentation of the data, in which participants shared their entry into the major, thoughts about the program, factors related to deciding whether to apply to graduate school, the process of applying to graduate school, and the subsequent sequelae. This third analysis is what will be shared in the results. Validity was substantiated with two, or 22% participant-member check-ins (Saldana, 2011).

Table 5 provides a summary of the questions investigated, discusses sources of data, and what procedures were completed to analyze the data.

Table 5
Data Summary Table

Research Question	Source of Information	Analysis/Procedure
How do underrepresented students exist in CSD spaces: how do they perceive their sense of belonging when they join the department?	Quantitative survey Semi-structured Interview	Descriptive Statistics Transcription, inductive coding, deductive coding
How do they navigate the CSD system: what are the supports and constraints that influence if and where they apply to graduate school?	Quantitative Survey Semi-structured Interview	Descriptive Statistics Transcription, inductive coding, deductive coding, thematic analysis
What could be done to better support underrepresented students as they navigate this system so that we increase their presence in graduate school?	Quantitative survey Semi-structured Interview	Open coding of survey responses Transcription, inductive coding, deductive coding, thematic analysis

Summary

This chapter provided a summary review of the problem, and explained the research design and procedure. I gave a summary of my epistemological approach to mixed methods for this study, and provided a rationale for the two instruments used in this research. The context of the CSU system was explained, along with the specific description of the demographics. The design of the instruments was provided, and the specific construction of the items were described. Administration was discussed, as were the data analysis procedures.

Key Findings

"Tu Eres Mi Otro Yo" – In Lak'ech

With the goal of hearing from students in CSU CSD programs across the state of California, a survey was sent out which collected information from 50 students across four of six invited universities, spanning three main regions of California (northern, central, and southern). Those 50 students shared thoughts, details, and ideas. In addition to the contributions that those students provided, nine students agreed to be interviewed across a series of eight months. With respect to their commitment, and a recognition that the detail, depth, and insight they provided was so deep, their voices are the primary driver of this research. Figure 6 describes the analysis process and how those voices were evaluated, with cycle four being the premise of this chapter.

Figure 6
Cycles of Qualitative Analysis

Cycle One
- Review of Survey Data: Preliminary Codebook
- Sample Interview Analysis: Deductive + In-Vivo Coding

Cycle Two
- First Round of Comprehensive Coding
- Inductive and Deductive Coding with Thematic Analysis

Cycle Three
- Thematic Generation

Cycle Four
- Thematic Analysis and Findings
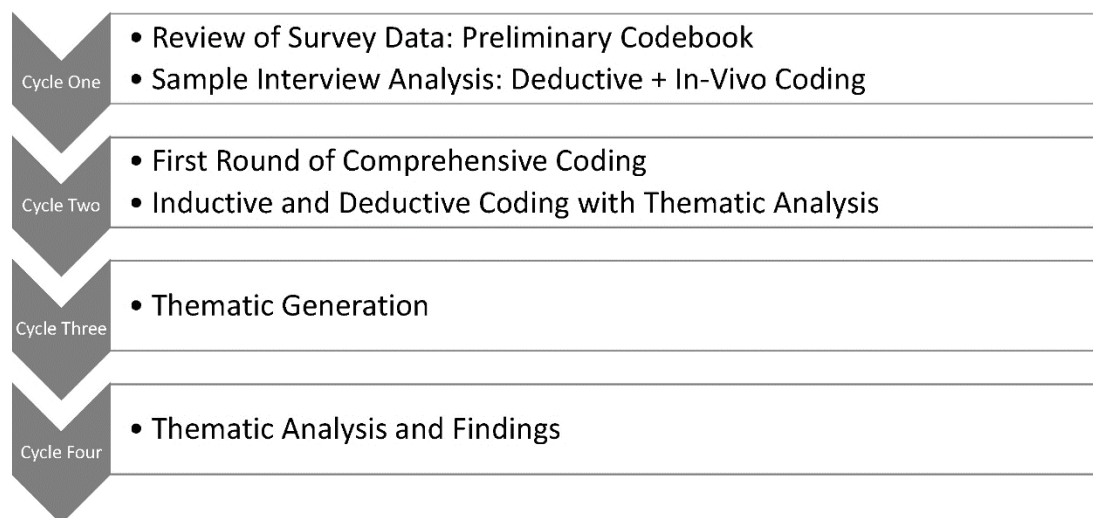
Note. Cycles method adapted from Bingham and Witkowsky (2022).

Beginning at the Beginning: Common Dreams, Common Themes

In order to better understand the themes of belonging, knowing, and discovering, it is imperative to identify the nine participants that provided the data for this study. This section will introduce the reader to the participants, their entry into the profession, and help address some of the 'why' that Newkirk-Turner and Hudson (2021) advocated for in their article. While every one of these participants was born and raised in different circumstances, exposed to different languages, experiences, values, and educational opportunities, many of them shared commonalities. Seven of the nine participants identified as Latinx, and all of the students who were selected to participate in the extended interviews were members of communities that have been historically minoritized, and are currently underrepresented in the field of speech-language pathology. Those students also had hopes, dreams, and needs that were very similar. All of the students entered with positivity and hope. They wanted to belong to this profession that meant so much to them. As unfamiliar rules, guidance, expectations, and finances began to stack up, brick by brick, a wall began to emerge that blocked their way. Some climbed up and over, utilizing both visible and invisible footholds. For others, those walls were too high, and footholds were not as apparent or as available. As I sat and listened to their stories, I was reminded of the many times and many ways I had been told I was not ready, was not good enough, was not the right fit, up to and including a doctorate. I connected with their stories, shared challenges and doubts, as well as pride and love. My heart heard their words and began to weave them into three coherent, salient themes, or *trenzas* (Quiñones, 2016). The theme of belonging wove its way from the moment they envisioned themselves as speech-language pathologists to the moments they shared after

graduation. The concept of knowing, being comfortable in knowledge, and feeling like others had knowledge that they did not was a powerful theme throughout their experience. Finally, the discoveries they made along the way, both positive and negative, shaped their perceptions of the program, the people in the programs, and themselves.

Their ways of belonging, knowing, and the discoveries that they made along the way were powerful and insightful. Starting from entry into the major, all the way until post-graduation, they shared their stories, experiences, feelings, and doubts. While their stories are front and center in this research, additional survey data supports their reflections.

Meet the Dream Team

Amna (she/her) enrolled in her CSU straight from high school. She was raised speaking a language other than English, and identified as Middle Eastern. Her family had a history of college experience. They received their education outside of the United States, and were not familiar with the American higher education model. Her family supported her financial costs for education. She identified her academic program as moderately intense.

Rigo (he/him) also enrolled in his CSU straight from high school. He identified as Mexican and was raised speaking a language other than English. His family had a history of college experience with his sister receiving her bachelor's degree. He relied on family financial support combined with work, loans/scholarships, and fellowships. He identified his academic program as moderately intense.

Sofia (she/her) enrolled in her CSU after transferring from a community college. She was raised speaking a language other than English and identified as Hispanic/Latino, but when asked to identify race in census terms, she selected "other" and put in mestiza. The highest

level of educational opportunities in her house was her father who had completed some high school. She utilized grants, scholarships, and fellowships to complete her education. She described her academic program as extremely intense.

Carmen(she/her) also attended her CSU after transferring from a community college. When asked to define her ethnicity, she identified as white, but when asked to utilize census terms, she identified as Hispanic Origin. She was raised speaking a language other than English. The highest level of educational opportunity in her household was her mother, who had a graduate degree. She relied on work, loans, and scholarships to complete her education. She described her academic program as extremely intense.

Karla (she/her) transferred to her CSU program from a community college. She identified as Latino/Latina. She was raised speaking English only. The highest level of education that she identified in her house was some college, attended by both parents. A majority of her education was paid for by loans, with about 5% support from parents and 5% from fellowships. She described her academic program as moderately intense.

Maria (she/her) transferred to her CSU from a community college. She identified as Hispanic and was raised speaking a language other than English. She described the highest level of education in her home as both parents completing some high school. She reported that her educational funding came from mostly fellowships/grants and scholarships, with about 20% of her funding paid from loans. She described her academic program as moderately intense.

Aurora (she/her) - attended a Northern California university, enrolling directly from high school. She identified as Black American and was raised speaking English only. The highest

educational level in her home was her mother who completed college. She reported that half of her educational funding came from grants and scholarships, with the rest coming from work and loans. She described her academic program as moderately intense.

Yolanda (she/her) transferred to her selected CSU program from community college. She identified as Latina and grew up speaking a language other than English. She did not complete the additional survey questions.

Alice (she/her) - attended a Northern California university, enrolling directly from high school. She identified as Latinx, and was raised speaking a language other than English. The highest education level in her home prior to her was some high school, completed by her mother. She reported that her educational funding came mostly from grants and fellowships, with approximately 10% funding from work and her parents. She described her academic program as moderately intense.

Supporting Team (Survey Participants)

Of the 50 participants that completed some or all of the survey, 50% or 25 identified as White, 48% or 24 self-identified as Hispanic, Latina/o, Spanish Origin, 10% or 5 self-identified as Asian, 8% or 4 students checked 'other', 6% or three students identified as Black/African American, and 2% or 1 student per category self-identified as American Indian or Alaska Native, African, Middle Eastern, North African, Persian. Participants were allowed to select more than one box, and many of those who selected two boxes were participants checking White and Hispanic. When removing them from the White category, the data shifted significantly, with White dropping down to 17, or 34%. Of the 'other category, two self-identified as Mexican or Central American, increasing the demographics

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of the participants to just over 50% Latinx. The demographic completing the survey was much closer to the California demographics than the field (ASHA, 2022b). With regard to language, 26 were raised speaking a language other than English. Reporting students ranged in age from 20-46 with a mean age of 24. Of the students that self-reported GPA, the mean GPA was 3.479, with a minimum of 2.4 and a maximum of 4.0. GPA was analyzed for normal distribution. GPA range (2.4-4.0) had a mean of 3.479, median of 3.5, and SD of .373 with a skewness of -.865, showing a normal distribution.

Giving Back and Paying Forward

Every student who participated in the interviews started their program in communication sciences and disorders (CSD) with dreams of becoming a speech-language pathologist. For most, it was born of personal experiences and a desire to give back to their community, most frequently tied into the familial capital that they brought with them (Yosso, 2005). Amna participated in speech therapy as a child that she believed transformed her trajectory. She noted that her disability was not recognized in her schools and it wasn't until her mother got a job in a 'better off school' and learned more after working with that school's SLP that she was able to receive services. Amna shared the desire to give back that was born from her lived experience, saying, "She helped me be who I am today, so I was like I want to do the same for them [underrepresented students]." Alice also received services as a child. "I grew up with a stutter so I kind of know what it's like to have a communication disorder." She described her path to the major, saying, "I came into it [the field], because it combined my personal experiences, along with my interests, so, for that reason I decided that this was a perfect fit for me." Alice found a sense of belonging within the profession since she had

experienced services and with her specific interests in neurogenic impairment, she identified

a path that would be well suited for her cognitive interests, and connect with her personally.

Maria had been interested in the field, but became even more passionate about the field

when her son received speech services. She talked about how she felt when her son was

frustrated because he struggled to communicate, and the changes she saw as she worked with

the speech therapist to help him develop his language. Her feeling of gratitude, combined

with her areas of interest pushed her toward the major. She reflected on that time and

connected it to her dreams, saying, "Seeing those changes really empowered me because,

like, I know what it's like to be on the other end. I know the improvements [that can come

from speech therapy] and I want to do that, [have]that impact." Her desire to give back to her

community corresponded with her personal experiences, and she believed that her personal

experience would help her be a stronger advocate and clinician.

Culturally Responsive Care

All of the students were raised in households that were not mainstream, White homes.

This allowed them to view the world through a different lens, and as they talked about what

kind of SLP they wanted to be, their views reflected that deep awareness. Alice grew up as a

child in a home where her parents did not speak English and she reflected on her experiences

as a member of that family along with the recognition that the system wasn't built for her

family.

> I grew up in an only Spanish speaking family, so I know that it can be difficult
> when it comes to doctors' appointments, or any official business. So, for me, I just
> want to be able to provide equitable care to people who speak Spanish or people
> who have different experiences than what the typical White American experience
> is.

In that one statement, she beautifully expressed her viewpoint of the world, with a commentary that the current system is built for White, English-speaking families. Being a member of a family that did not meet that standard, Alice was able to reflect on the real challenges that impact non-English-speaking families, and she recognized that she had skills and a lens that could help decrease barriers for future Spanish-speaking families seeking speech services.

Aurora furthered the discussion on challenges with the current process, as she mused about the homogeneity of the profession. She compared her lived experience against the experiences of monolingual English, White majority and commented on the raciolinguistic ideologies (Flores & Rosa, 2015) that pervade the profession of speech-language pathology. She commented on the term "Standard English" and highlighted that there was no law regulating language, but that one version was popularized by a majority and other versions were viewed as substandard. She gave specific examples of what she had heard, relating to both language and skin color, saying that people who don't fit into the "Standard English" speaking pattern "… are often seen as unintelligent or, it's just wrong or they need to be changed, and then for us who don't fit the phenotype of what's typically expected, we're seen as trying to conform." Aurora identified the hypocrisy of a profession committed to effective communication limiting and demeaning communication patterns that did not align with the pre-determined speech and language patterns that match a monolingual dominant ideology (Ebert, 2013).

Likewise, in her closing analysis of the challenges with a homogenous profession, Alice emphasized the commonality that all the interview participants had – their ability to

understand a lived experience that was outside of the monolithic White, English-speaking, middle-class system. That commonality seemed to be a powerful driver in their desire to change the face of the field, and she shared the facts about demographic changes tied into the limited change within the profession. She beautifully described the issue facing the profession.

> The problem that I see with this is that the field remains very White; we don't have a big percentage of people of color who are speech pathologists. Yet our clientele and patients are increasingly more and more and more diverse. So it can be difficult for a speech pathologist who does not know much about a culture to provide equitable ethical therapy to these populations.

Alice's focus on equity was a thread that continued in her conversations across the months. Her recognition that the professional norms were not matching the needs of the community wove its way into many of her comments throughout the process. Despite being told to engage with the world in a certain way, Alice brought with her a resistance capital (Yosso, 2005) that allowed her to question the 'norms' around her and identify how the current model was ineffective and harmful to communities of color. Alice was clear and objective in stating her observations about the challenges that the profession faced, and she was comfortable identifying a problem that existed in the field that she was seeking to be a part of, echoing work that has been more recently disseminated on those discrepancies (Daughrity, 2020; Deal-Williams, 2020).

Linguistic Diversity

Seven of the nine participants were bilingual, and many of them talked about being able to provide support in a linguistically appropriate fashion, although all participants spoke about providing services in a culturally responsive way. When thinking about the services

she could provide, Amna reflected on personal experiences in her childhood that made her feel like she did not belong in some spaces because of her family's background. She talked about losing aspects of her identity, and yearning to bring them back and her desire to provide spaces where her clients can feel supported in their cultures and languages. She reflected on the close ties between language, culture, and identity. As she talked about what kind of speech-therapist she wanted to be, she highlighted her desire to support both their culture and their home language, connecting it to her personal experience. She shared, "I definitely feel like I've lost my culture, and I have to get myself to remember it and so I want to…make sure that they're not losing their identity throughout the whole process." Amna showed a desire to support clients holistically, with a focus on encouraging them to bring their whole selves to the session. In that same quote, she also shared her own experiences of being marginalized and the hurt she still harbored. Yet, she was using those memories to improve the lives of others, a beautiful reimagining of her experience.

Carmen also shared a motivation to use her home language to better support Spanish-speaking families and a recognition that her community lacked the professionals it deserved. She shared, "Where I'm from there's a lot of need for native Spanish speakers. So that's something; I want to be able to learn how to help those students who need it, the most." Maria talked about opportunity, both for her and for the community. She commented, "I'm able to reach more than just the English-speaking people, like the community…I feel like it opens more doors, being able to speak both languages." Yolanda shared a similar sentiment, highlighting her life experiences, her job experiences, and expressed a sense of pride for the value that she could add to the field. After reflecting on what who she wanted to serve,

Yolanda talked about entering into Chicana/Chicano Studies and how in those classes she was able to replant herself in her roots, which gave her direction as to how she would contribute to the profession. Yolanda elaborated,

> I know where I wanted to emphasize my learning, like what kind of speech language pathologist I want to be, a bilingual speech language pathologist. So it did get more focused on what I kinda wanted to be after connecting more to my roots and my first language, so I think that's what influenced me.

Amna reflected on the link between culture and language and recognized that many of the hopes she had for giving back to the community came from her personal experiences, both as a child receiving speech services, and as an Iranian American. "I hope to make others feel comfortable in their native language because, a lot of times for me, just like being outside and speaking with my parents in Farsi I feel misjudged, like I shouldn't belong here." Her personal experiences with belonging strongly influenced how she believed the field should care for the communities that are served. Amna shared that she had received services as a child from someone who was familiar with the cultural norms in her home, and navigated through a hypothetical scenario as to what her experience with therapy might have looked like if someone who had not been familiar with her cultural background had conducted an assessment.

> I would assume if it was another speech pathologist who didn't know that our culture is more reserved and know, like, you might not make direct eye contact or you know you're not supposed to be super outspoken for females...that it might be perceived poorly and you might get a diagnosis that might not be as accurate.

Amna identified that in addition to the importance of being familiar with linguistic structures and norms, it is just as important to be aware of cultural structures and norms. She reflected on her own home and personal experience, recognizing that all aspects of speech therapy,

from intake, to assessment, to treatment, can be impacted by a lack of understanding or awareness of cultural differences. Her observation highlighted the help that a more diverse workforce can provide in addressing the various cultural and linguistic guidelines that exist within our varied communities.

Pride and Representation

Some spoke of a desire to provide representation for others. Rigo shared that his ultimate goal is to be a professor. As he delved into the many reasons, the primary sources of this desire came from aspirational and familial capital (Yosso, 2005). Despite the fact that the highest model of education he had in his home was his sister who had attained a bachelor's degree, Rigo still created his own dreams of possibilities that were far greater than the paths that his current models had shown him, and he was grounded in a desire to provide support for his community. He spoke about the importance of being a model for future students especially after his own experiences as an undergraduate, saying, "I want to give back to those people who are like me, that are feeling lost, that want more resources. Just to be more of a representation for students." Implicit in Rigo's statement was a recognition that currently there existed an underrepresentation of faculty of color, a statement echoed by many researchers (Abrahams et al., 2019; Deal-Williams, 2020).

Another common theme was pride and a desire to make their family proud. Aurora also identified the aspirational capital that she brought with her in her statement on plans for future professional trajectories.

> …I'm not even gonna lie, I'm a high achiever so… I said that I wasn't going to go to grad school and bachelor's is one and done for me. But then you know I'm like, let me just keep going it's only two years and then you know I'm currently at the point where I'm like, maybe not a PhD but...I know I know me myself I'm just

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going to keep going because, I'm always competing with myself to be better so I'm probably just gonna go ahead and get it, and then it is also nice to just see how proud, like my family is of me.

In that one statement, Aurora shared her personal dreams, hopes, aspirations, and reflected on her internal motivations. It was evident in Aurora's reflections throughout the interviews that she had a strong sense of identity, pride, and a strong work ethic, seen here in her ascribing 'high achieving' as a defining characteristic for herself. Aurora also showed strong characteristics of high resilience, deep roots, and care for others in her words, and sentiments. Her ambition in pursuing a doctorate showed her deep desire for learning and advancement.

For students whose parents had not completed college, there was a clear desire to be the model for future generations, in addition to making their family proud. Rigo made clear that while his primary goal was to be an SLP and a professor, he also was aware of his role as a beacon of light for other family and community members. His goal was to, "set an example for myself and my family that like, we can attain higher education, and we can do better for ourselves." Yolanda credited her family for helping her raise her son so that she could continue to attend school, and felt that their support helped shape her trajectory. She shared, "I feel like obtaining my bachelor's was a little bit more, something that I wanted to obtain for my parents, for everything that they have done for me; like being a mom at a young age, it was because of them that I continued my education. But now, like going into the master's program, I feel like that's more for me, something that I want to accomplish for me like my career and also for my son, knowing that everything is possible like if you continue to do hard work." For the students who were also parents, the desire to show their children what was possible shone a light on their hopes and dreams for the future generation.

The Qualtrics data was analyzed for comparison with regard to strengths. Students were asked an open-ended question as to what the survey participants felt they could bring to the field. The data was very similar. Of the 31 statements provided, 20 used words that resonated: "diverse perspective", "bilingualism and interpersonal communication", "hard work and determination", and "I have insight to what it is like to receive services so I can relate to clients" all echoed the themes that were woven within the dialogues.

Another Brick in The Wall

Most of the students entered with positivity and hope. When they arrived, they each experienced the CSD program a little differently. Some felt welcomed and invited in, paving the way for them to succeed in their classes. Others did not find those welcoming paths, instead finding bricks that began to stack up. For most transfer students, transitioning from community college to university was a barrier, a brick. Stacked upon that brick for some was a lack of institutional knowledge. Another brick for some was lack of supportive advising. Brick by brick, a wall began to emerge. Some students found footholds and climbed up and over. For others, the bricks stacked up in a way that made them rethink their path, and look for other ways. Along their journeys, the three themes of belonging, knowing, and discovering were common among all participants and their ways of belonging, knowing, and the discoveries that they made along the way were powerful and insightful. Starting from entry into the major, through the decision to apply for grad school and the application process, all the way through their lives after graduation, they shared their stories, experiences, feelings, doubts, and hopes.

Entry Into the Major

Belonging

After sharing how they entered into the field, students began to share what they experienced as they entered into CSD programs. Through the myriad responses, students continued to share themes of belonging, knowing, and discovering. Some students mentioned being welcomed into the department by faculty and staff, others felt as if they were left alone to find their own way. Most students noted that early on, the faculty and department impacted their sense of belonging. Maria noted, "even before asking, like at the beginning of class, I had a few instructors that gave you a lot of resources in their syllabus, like counseling." that made her feel supported. Yolanda commented on the various resources she felt that she had, saying, "I feel like if we needed something, there was somewhere to go to get help." Likewise, Sofia said "I feel like the advisors are very connected, like if I have a question, they reply right away, or if I need to speak to anybody, the zoom links are available." Karla talked about feeling like faculty and staff helping her feel like she belonged, describing "Their charisma and the sense of passion they carried with leading us and caring about us." Karla also commented on the importance of having diverse faculty, saying

> I think, having professors like Professor Salazar (Latina faculty), you know, professors that identify as minorities. Seeing someone in that position, or higher up or you know someone that's kind of in that position already as that professional, I think that was that door for me like, 'I see her, you know, I see her, and I want to follow her ways', you know? I love this field so I'm like, 'Wow! I want to learn more about you and what you're doing and how you got involved'.

While a specific question about representation was not asked, students identified this aspect as one area that impacted most of them and their feelings of belonging. Rigo shared, "I know that, because of professor Salazar (Latina faculty member), I have felt welcomed." The

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sentiment of the importance of representative faculty was echoed by many students. The power of being able to see someone that they connected with made them feel as if they belonged, and even as if they could not only survive, but thrive. This echoed across multiple interviews. When speaking of her undergraduate program, Amna shared, "We had a lot of minority professors and I kind of felt like I could do it, I could become them." The aspirational capital that was amplified by having faculty of color was a common theme in many students' reflections. Amna continued, "Seeing her as a woman of color, being able to relate to her, seeing that she has made it this far and continues to make it that far, that gives me the motivation to do the same as well." Amna's optimism that was highlighted by simply engaging with a faculty member that she could identify was a powerful finding.

This was not the case across all programs or for all students. Sofia commented on feeling a lack of representation at her university, saying, "Not having a Latina bilingual SLP in the program is also another factor [why she didn't feel connected to the program]". She said "I think most professors were bilingual, but not Spanish bilingual so I felt like I couldn't really ask them about their journey." Her desire for representative mentors influenced her feeling of welcome and ability to connect with her program, and as a result, she did not feel a strong sense of belonging. Quantitative data showed evidence that these types of supports matter. Outside of strong study habits (an internal trait), the top two areas that survey participants ranked as moderately or extremely important to their academic success were faculty mentors and feeling like they belong. Nearly every student was in agreement: 95% of students reported that they felt that academics were best supported when they felt a bond with faculty and with their community.

Fortunately, 73% of the survey participants felt very or extremely supported by faculty mentors. And yet 27% did not feel supported by their faculty. This was similar to the discussion within the interviews. While some students commented on their appreciation of faculty and how they made them feel welcomed and supported, some faculty made them feel as if they did not belong within the field. Carmen had an advisor that explicitly told her she did not belong.

> I was a transfer student and I didn't do well in my first year that I had to retake to my classes and so, when I would tell my advisor like 'hey I'm not doing so well, I understand the material it's just like when it comes to test I'm not doing so well.' She actually told me that maybe I should switch majors so that is always, like, in the back of my mind.

The hurt in her statement was palpable. She recognized other professors and their positive impact, expanding, "there was actually some professors that reached out to me and getting their support was enough for me to kind of ignore that one advisor, but it's still like her stuff; her words stuck with me."

Others shared their open wounds, reflecting back comments of hurt and pain. One survey participant commented on the feeling of overwhelm when they transferred into a large university and lamented the lack of support. "I did not find professors in my field to be approachable, nor were they accommodating." When speaking of a health struggle and trying to reach out, this participant cited them as "dismissive." Since students have to ask those professors for letters of recommendation, having experiences such as this can impact their future trajectories.

With regard to peer interaction, some students found their groups while others felt isolated. From survey data, one survey participant mentioned, "Having peers really helped

me feel like I belonged in the major and made me feel like I wasn't alone." Alice also identified strong peer connections, saying "peers in class that were also applying to similar schools, it was extremely helpful to contact them, read each other's personal statements, look at each other's resumes." Conversely, not all students developed a close network of friends. Some students struggled with establishing community. Sofia identified a feeling of competitiveness that made it difficult to fit in. "Getting connected with peers is the most trouble I've had that made me not feel so connected. Like everybody's very competitive, and they're not so easy to approach." Likewise, Carmen mentioned that she had difficulty connecting in her senior year, "I think it was more of a competition for this last year". Maria felt like it was "ok" but identified some feeling of isolation. She talked about cohorts forming smaller groups: "within our cohorts, even though we're still small, some people even gather in smaller groups. I felt like others would get left behind, even sometimes I felt like a little aside." She quickly followed up with her own ways of addressing that situation, "I usually like, try to talk to everybody just 'cuz I can feel included and so others can feel included". She took the initiative in a space where she did not feel included, doing her best to include others. Her willingness to create community was a strength that she had not yet identified as a key trait that could benefit her in her future professional path.

Knowledge

Some didn't fully understand the path to speech-language pathology, or what to do once they entered. Yolanda shared, "When I learned about this major, at first I didn't realize that you have to go to the master's program to get your credential so I thought I was just getting your BA and that was it." Sofia explained her feelings in the transfer from community

college, "Everything was very quick paced, very fast. It felt like I didn't know where to start." In Rigo's family, he noted that since they didn't have higher education experience, navigating the entire educational system was a challenge. His family were committed to providing him opportunities to advance his education, especially since they had not had the opportunity. He highlighted the regret that his parents felt when supporting him with filling out financial aid forms. Speaking about his parents, he shared,

> They have told us constantly that they had wished they had gone to college because…they feel bad every time that we have to sit down to do FAFSA or to do an application and we're stuck and we don't know what to do, or what we're supposed to be entering in, and I know that they…they have told us that they feel guilty that they don't understand and they don't know what to do either. Because they didn't go to college.

Alice's parents also did not graduate high school and she shared a similar experience, saying "It's been a little bit harder for me to find resources and to talk to people who have gone through the experience." She identified this lack of knowledge as impacting her sense of belonging. Since other peers appeared to have that knowledge, her outsider status made her feel as if she wasn't living up to expectations, despite being a university scholar and researcher. This feeling of being uninformed led her to say that her perceived lack of knowledge, "sometimes made me feel like I am not at the level where I should be." This phenomenon was echoed in Ramirez' (2011) work on Latinx students' experience in applying to graduate school.

Students who participated in the survey shared similar experiences. In particular, students who commuted or cited outside responsibilities commented on the lack of ability to take advantage of resources that may have been provided. One student who cited outside responsibilities as a cause for limiting their navigation of the application process shared, "I

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felt completely lost on how to navigate the entire process." Experiences of isolation and doubt have been shown to cause stress (Roos & Schreck, 2019), and that lost feeling could impact their desire to apply to graduate school at all.

Discovery.

As they continued on their educational path, they discovered resources, supports, and uncovered aspects of the hidden curriculum. Carmen learned that office hours were actually there to support students after a faculty member actively asked her to attend. She told the story of struggling on an exam and how much she valued that this professor reached out. "The professor reached out to me personally and noticed like 'Hey I see that you didn't do so well. Let's just talk about like what could have happened and how I can help you.'" This professor walked her through the notes, learned that she had test anxiety, and gave suggestions for how to quell the stress in future exams. "We were able to build a connection there as well, then I found that office hours weren't as scary as they seem to be." The key aspect of this engagement was both the knowledge that Carmen gained, and the aspect that the professor initiated a caring, positive interaction when Carmen was in a vulnerable position. That confidence carried her past the voices that told her she did not belong, allowing her to retake courses and improve her grades.

Alice credited her peer group with her grad school admission success, saying "Honestly if it weren't for that I don't know if I would have gotten into the school that I got into." Likewise, Rigo shared, "I have been close with two other people in our major and because of them, they have helped me through this entire process of like applications and just being by my side is the support system." Those students who felt as if they had a community of peer

support noted it to be a network that helped carry them past waves of self-doubt, lack of knowledge of the system, and many other challenges that they faced as they prepared to apply to graduate school.

Yolanda discovered her own potential, saying, "It's not something common in my family, somebody's going to college, so even getting your masters was like 'I don't think that's achievable.'" She then went on to talk about her success in classes, learning more about the classes, and falling in love with the major. Now she says, "I think I could do it. Like it's something that I'm passionate about and, especially, knowing what more emphasized field I wanted to be in with bilingualism, I feel like I can do a change in the field." Amna mentioned that she was encouraged by a faculty member to apply. "When talking to one of my professors she told me to definitely apply and not be scared of the process." Without that push, she may have decided to wait a year, or might have chosen a less stressful path toward a different career. Both internal and external cues were important in the self-determination to apply to graduate school, and Amna's comment was a strong reminder that sometimes, small gestures can make all the difference.

Post-Graduation Pathways

Since the survey was collected prior to students hearing back about graduation, quantitative data pointed to potential considerations about post-graduation pathways in the moment as they were making those decisions. Of the 50 participants, 42% were definitely applying to graduate school. Students could select more than one choice, and some did, indicating that they were 'hedging' their options. While a majority of respondents were planning at some point to apply to graduate school in speech-language pathology, 20%

planned to apply to a related school, nearly all Audiology. Only one student was not planning to apply to graduate school at all, and self-reported a 2.4 GPA, which could have influenced her decision since most programs require a 3.0 minimum GPA. She said, "I've been in school for too long and need a break."

For the interview participants, the paths that each student was planning to take after graduation tended to follow along two paths. The 'traditional' path involved applying to graduate school in their senior year. Seven of nine participants followed the traditional path initially. Five of the seven were accepted into graduate school. Another path was to take a year or two off. Their perspective was that they needed to gain more knowledge, experience, and/or financial security before applying. Connected to this second group was a group that specifically had decided they needed to work now and moved into the Speech-Language Pathology Assistant (SLPA) pathway or other paths. There were interconnections between the groups. One of the participants who initially planned to apply to graduate school missed the deadline and ended up applying for SLPA programs instead. Another was initially waitlisted and planned to travel the second path until she was admitted into the graduate program. A third was waitlisted, and ultimately denied. Along the way, throughout the process, those same themes of belonging, knowing, and discovery were woven into the conversation.

Belonging

As it came time to decide to apply to graduate school, some looked at messaging around them and determined that graduate school wasn't the right path for them at the time. Sofia decided to become a SLPA, "because I felt I wasn't ready for grad school. I wanted to get

some experience." When digging deeper, she noted that she felt different from her peers and commented on one big perceived gap. "Networking. I didn't have connections to SLPs or the clinics, or anything like that and I felt like that was a big part of getting into grad school is getting references, recommendations, and all that. I feel like most of them (peers) are already into the field in some way." Carmen mentioned that she also felt like she was unable to create those connections due to work obligations.

For those that did choose to apply, several students reviewed program websites and attended Open Houses to learn more about programs and fit. Rigo identified what he was looking for in a program. He commented on his growth and recognition for diversity, saying "Growing up in high school, my school was majority White and so when I finally went to this university, it was just like, a huge kind of awakening for me, because I was around culturally diverse people." He did not want to go back to a space where he felt unwelcome, different, or unsafe, and took it into account as he decided on grad school. "I need diversity so that I can feel included, like mentally, and that I feel safe myself." Rigo talked about attending panels from other schools and seeing a lack of diversity. "I noticed with other universities that I was attending open houses that they were kind of- when asked questions about diversity and stuff- it seemed very like…walking on eggshells." This played a major role in him deciding where to apply and where to attend graduate school.

Likewise, Aurora said she looked at the culture of the program to determine if it was a good fit for her. "I thought about the culture of the program and, like their values and missions and all that." She talked about going to an Open House that left her feeling unwelcome, and upset for potential students and clients. In the Open House, she shared that

an entire slide was devoted to informing students that if they had an 'accent', they would have to enroll in accent modification. She wanted to express her concern about the focus on a 'standard' that was so racially and socially bound, but that open house did not allow for open chat, so she left. "It's not like they were really going to receive any feedback from us, so I was like I just left." She added that initially that particular school had been a high value school for her, but that experience concerned her so much that she removed it from consideration. She mentioned that both the slide, as well as the unwillingness to receive open feedback from prospective students bothered her. The fact that the school had such an oppressive view of language in the current climate that professionally had claimed to embrace diversity (ASHA n.d.-g) was discordant and made her uncomfortable. She shared,

> That speaks volumes to me because, you go on their site, they have like '2020 was like the year of accepting different cultures' and like 'social justice' and I'm like 'Okay', but then you go to the Open House [and they say] if you have a heavy accent that isn't standard American English is going to need to be modified before you start working with clients.

Aurora went on to say, "it's like the small asterisk at the bottom, in like 0.5 print, "You need to speak White to go here." She shared her own experiences as a Black student and spaces where she knew she belonged and places where she did not feel welcome at all, and while she was not bilingual, she recognized that 'accent' was a proxy for behaviors that could harm people of color.

Aurora questioned how programs that forced students to enroll in accent modification could provide culturally appropriate services, expressing pain as she considered the experience that a person who they deemed linguistically inappropriate might feel in that setting. When asked how she might have felt going to that school, she commented that two

years would feel like twenty. As she thought through the deeper emotions and reactions, she identified her biggest concern. "I can only imagine the people who will be overlooked." She highlighted that she was not only referring to the students, but also the clients. Aurora imagined herself in that setting and as she worried for perspective clients, she shared her impression of how that university was training students, and providing services, saying "they'll probably have certain perceptions of them" and how they might be dismissive of those clients, leading to substandard or culturally insensitive care.

Aurora's example and projections were connected by Sofia, who had experienced that disregard for her speech patterns. Sofia shared that one concern that limited her confidence in applying to grad school was her way of speaking, saying "I feel like my accent will maybe get in the way of helping others properly." When asked about the origin of this perception, she said "People I know have commented on my accent. Even though it's not strong, it's noticeable. And that's making me think, maybe I should work on my pronunciations better."

Safety and Fit

For students who were looking at several schools, some eliminated programs based on concerns for safety, racism, or general fit. Alice talked about the decision of which schools to apply for, sharing discussions she had held with peers who identified as Black, Latinx, or Asian. They held concerns about their fit in certain schools, so despite their research showing excellent opportunities and programs, some schools were not very diverse and the weight of being one of the only students in a particular demographic was heavy. She named it as daunting, explaining, "There's always a risk of being looked at differently or there could be

some preconceived notions pushed against you and so all those things can definitely contribute to making someone feel alienated and maybe feeling like they don't belong."

Rigo likewise shared similar sentiments, saying, "the main thing I was kind of concerned with was…I felt limited to the places that I could apply to" commenting that while excellent schools exist across the country, "I had to take off a bunch from my list or just look at the area and kind of decide if I would feel safe as a Latinx person there."

Aurora also engaged in personal research on belonging and fit, sharing that she belonged to a subreddit where students anonymously shared about their personal experiences. "When I was looking for programs, I was like I don't want to go to programs that probably aren't big on like multiculturalism, or they just say like oh yeah we accept everyone, but they're not really showing that." She explained what she learned from those subreddits. "People would say that they absolutely hated their grad school." She gave specific examples of what she had learned on that website:

> Those who are minorities who go to a predominantly White institution, they talked about the microaggressions that they face, how professors ignored them in favor of their peers, how they would place them in less favorable clinical placements. Anytime they would ask a question, they would make them feel like they were dumb or something and then their peers would kind of engage in that behavior too because, like that's what their leaders are showing them.

The anger and frustration that Aurora expressed on behalf of her peers was palpable. She felt that those experiences were demeaning, harmful, and not appropriate for the profession and departments who were responsible for educating SLPs in an ethical manner. She felt that she had to do the research to find out which universities were going to be a good fit, and which might cause her distress and be lacking in the kind of education that she was seeking.

Aurora's anger over simply a potential option for graduate school showed the impact of racist policies.

Knowing.

Amna, when talking about applying to graduate school, identified that the process itself was a barrier, daunting, and overwhelming. "I think the biggest thing was that I had no idea what I was doing. And I just didn't know how the whole process went and I just thought I wasn't going to get in." Many students reported that they didn't have a guide or family with experience in applying to graduate school. Yolanda shared that one of her barriers was "just not having much knowledge about applying to the master's program." Rigo said, "I felt very lost throughout it all trying to figure it out. No one in my family has gotten their Masters, besides my cousin, but her process was completely different." Karla had a similar experience, saying "Nobody in my family, except for one cousin has experienced this process. So it was really just kind of me figuring it out. I only applied to two schools, and it was very stressful." That stress that Karla highlighted was correlated with previous studies (Roos & Schreck, 2019) and while stress was not a question asked on the Qualtrics survey, many students did highlight mental health, stress, and related terms in their open-ended responses regarding the process of applying for graduate school.

Many students documented the process that their program offered for support in application to graduate school, but people responded differently in how supported they felt by those options. Yolanda shared, "We had resources and meetings and different sessions that were held to guide you how to apply to the Master's program." However, she felt like with everything being virtual due to Covid, she didn't feel as connected as she would have

with face-to-face meetings, saying, "[it] would have been more comforting taking those steps and the application process if we had that connection." Aurora talked about workshops that were offered, and additional assistance, saying "I didn't always talk, but I did know that they were there if I needed them." This mattered because it helped her feel as if the department was willing to support her; however, the remainder of those comments may lead to a discussion on how supports should be provided and how student outreach might look.

Rigo likewise recognized that there was support and also indicated that he would have liked support with the mechanics of applying. "I did attend a lot of the informational meetings, also the writing workshops, but I think there could have been more help with the overall application process", referring to his family and the unfamiliarity with the college system in general. This sentiment was similar across students who had no close family experience with college.

Discovering

Students reflected on their own personal experience, as well as the experiences of their peers in the decisions for post bachelor's experiences. Rigo talked about his analysis of the process and the reliance of admissions committees on numbers, stating, "I have always been a person that can showcase myself better than what my grades or numbers are, especially something like the GRE." Maria discovered the challenges of logistics for grad school admissions, sharing her own experience. She described her cost as 'not much' because she only applied to two schools, but then went on to describe what was involved in just those two applications. "You have to do two processes to apply [CalStateApply] and then the second

process [CSDCAS]. It was so much paperwork that they're asking you to do, and then to pay for them, the transcripts, and then the GRE."

As she reflected on the process and how she might move forward, Maria identified that finances had played a role and would continue to play a role in her decisions about when and where to apply to graduate school. In addition to thinking about her children's young age, she mentioned, trying to accumulate some money, "so that I can pay for it…making sure I have some money for back up." Likewise, Alice talked about finances in deciding where she could afford to go. She started off by not focusing on numbers and just set her dreams and vision in the direction that her research led her. Once it was time to actually make decisions, things changed. She shared:

> You know reality kind of sets in and you start to really look at the numbers and the price tag of not just the school itself and the tuition but you know living expenses and you realize that it's not as achievable, as you thought it was going to be.

As Aurora was talking through the factors pushing back when she was deciding about applying to graduate school, she highlighted a sense of imposter syndrome. She reported feeling like, "Oh I'm going to be exposed soon and like everybody's just gonna know that maybe I don't belong here and like yeah sometimes those thoughts creep up, but of course I always fight through that." Her resilience and inspirational capital served her in those moments of doubt, and her ability to pick herself up when sad or worried moved her forward in the application process. Aurora also commented on finances and her self-doubt that creeped in, and she shared an inner monologue that she wrestled with early in the process. "'Okay, how would you be able to pay for these things?', because you know I work and I like me, I support myself pretty much so it's just like, 'oh no can I support myself $20,000

wise?'" But she sat down, did her finances, and determined that she was ready, which helped her rebuild confidence and move forward.

Rigo shared that some of his peers were impacted by finances, test requirements, and the process in general. Referring to the cost, he shared, "that in itself is a huge part as to why students of color and minority populations aren't going to Grad school because sometimes those applications are expensive and they add up." He also mentioned the stress of the process and timelines related to applying to graduate school. Maria likewise shared that some friends didn't apply at all, saying, "I understand people want to do a year off and then go into that because trying to do that, while you're in school, finishing your last semesters, your last year, is just too much going on all at once." She closed by stating, "it's a heartache".

The Gauntlet

The process of applying to graduate school has been described as frustrating, heartbreaking, and confusing. The gauntlet refers to the arduous process of applying to graduate schools in the CSD field, and how it is perceived, specifically by students who don't have family members who have gone through the same process. Students run a gauntlet, defined as enduring "a series of problems, threats, or criticisms" (McGraw-Hill, n.d.) when they apply to grad school. The aspects of the application process are arduous, can be a challenge, and are mired in bias. The process typically involves requesting letters of recommendation, writing a statement of purpose, completing the GRE and submitting scores, and a submission of a transcript for GPA analysis. Each of those steps can lead to confusion, frustration, shame, and fear. Below are some of the experiences that students shared.

Letters of Recommendation

Carmen did not apply to graduate school, but had hopes to apply in the future. She cited letters of recommendation as a concern for her. "Another thing that kind of concerns me is my letters of recommendation because we were in school during pandemic and I didn't really get to like create those relationships." Since she had to work and was not on campus, she felt like she had no avenue for support in developing relationships and building the social capital needed to receive letters of recommendation. She shared that when she checked in with her advisor, that she was not supported. "When I asked my advisor like 'hey am I still able to ask for letters of rec', she told me no because they're retired so it's kind of like okay I'm down to my last three options." After meeting with the person who was expected to support her, Carmen was left feeling more alone and unsure of her prospects.

Karla commented that she knew she just had to ask faculty, but since she had just transferred and barely established relationships, she was hesitant. "They knew me but they didn't really know the person I was and I hadn't had enough time to really, you know, get to meet them and work with them." She did research to figure out how to ask. "I looked it up online; how to write [ask for] letters of recommendation. I got the template, tried to figure it out the best I could, and I sent the emails." Sofia, when asked how she felt asking for letters of recommendation, answered in one word, "nerve wracking". When asked to expand what made it stressful for her, she shared, "I wasn't connected to them, so I couldn't really ask." She had mentioned that she believed that a big part of the grad school applications was references, but since she wasn't applying to grad school, she did not ask any faculty or follow

up. When asked about future plans, she didn't know how she was going to connect with faculty to request letters in the future.

Statement of Purpose

When asked about their concerns, considerations, etc. most students did not list the statement of purpose as a major stressor, but Alice made an astute observation in the application process. She was asked to edit some statements from students who were also applying to grad school. When speaking of her peers of color, and considering privilege, she referred to her observed differences in writing style.

> Sometimes when you're reading it, you notice well there's this mistake and there's that mistake and sometimes you read it, and think, why didn't anyone teach you that this is something that you don't do. I'm not thinking badly about them, I'm thinking about the system.

She commented on the hidden curriculum, unspoken rules and what she saw in her peers, saying referring to the level of writing versus what she understood graduate admissions committees looked for. "Whereas when I read the work of people who might have come from more privileged backgrounds, you know you do see that you see more of that advanced mature writing." Alice centered the issue around previous educational opportunities and experiences, sharing, "You can just tell that there was like a difference in upbringing and a difference in teaching that they received." She reflected on the expected norms for writing, and lamented the disparity in experiences and training that each student received leading up to the graduate school process.

GRE

Sofia commented, "I didn't know what that [the GRE] was when I first came in." Rigo shared his perspective of the limitations of the GRE saying, "the test is very expensive and

also does not show or measure the actual ability of our students to continue in a graduate program." He identified just the specter of the test as stress inducing. "Just the pressure of having to take the GRE as another standardized test; I've never been someone that's been good at standardized tests and I know the history behind it being historically racist." Alice shared the sentiment, saying "it's more likely that people who have the resources have the ability to be successful in it [GRE]."

Rigo talked about how he felt after taking the test. "I felt that I did not do well on them, but as soon as I had gotten my scores on it, I knew for a fact that I wasn't going to take it again." He shared that it caused him to second guess his capacity for grad school. "I remember feeling very let down on myself and I had even reevaluated my schools because I didn't feel that I was worthy of applying to some of the schools, even though they didn't even require it." He identified the impact of even taking the GRE, "it just really set me back". Even though Rigo had all of the qualifications required to be admitted to graduate school, one test made a difference in his self-confidence and feeling of belonging.

Aurora and Karla both appreciated the circumstances that paused the GRE requirement. Aurora said, "the beauty of Covid is that multiple schools waived the GRE. I did not apply to any school that was looking at the GRE so that was something I did not have to worry about." Carmen hadn't taken the GRE yet, holding out hope that programs would continue to not require it in the future. "If it's required, I guess I would take it, but I know I do have test anxiety, so I feel like it kind of would not help me out as much anyways." Rigo also reflected on his experiences with the GRE, saying, "I personally don't do good on tests. I've never done good on standardized tests and I actually did score very low on the GRE." He

felt that it would have impacted the perception of him as a student, saying, "they would have seen me as a score rather than what I can do to continue in a program." While his previous comments were inward reflecting, this comment was squarely focused on external perceptions, and as Boles (2018), Farley (2020) and others noted, his perceptions of admissions were grounded in truth.

GPA

Students reported feeling mixed emotions about GPA. Even many students who felt relatively confident in their GPA still reported experiencing stress our doubt over the semesters prior to entering the major. Yolanda shared, "I did have a qualifying GPA but I don't think it was the strongest one[factor]." Amna shared that coming from a competitive high school helped her with GPA, but "I just didn't know that the GPA average for my program was so high, and those that were admitted the GPA is usually really high." Many transfer students, or students who changed majors shared concerns about earlier academic decisions impacting their ability to get into graduate school.

Karla reflected on her community college experience and struggles. "I came in with a 2.5. I really made grad school happen. I knew I needed that 3.0 so I made sure to get the 4.0 that I needed during the semesters [I was here]". Yolanda shared a similar feeling, as she was a young mom and adjusting to college, which impacted her grades in community college. "It's a little scary to be compared to other applicants…hopefully it's enough." Carmen was also a transfer student, but found that she struggled at the university. She struggled to make the transition from community college to university and had to retake classes. She continued to worry about the impact of those repeated classes. Aurora talked about shifting her priorities,

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and how that impacted her grades. "I wasn't the best student because I just did not care about the coursework. So my grades kind of reflected that." She talked about her conflicting feelings. "I know what I'm worth, but that [lower gpa] was kind of in the back of my mind." Rigo, referring to ASHA Ed Find website (https://www.asha.org/edfind/) which is the ASHA official site to find data on CSD schools, said "I found that I was constantly comparing my GPA and GRE scores…always in a pessimistic manner." He commented that it created fear in considering where he could apply.

One survey participant echoed some of the topics that were shared regarding the GPA. "Obligations of family, school, plus work have caused my GPA to suffer. Although I have all A's and B's in major courses, I fear I won't be accepted into grad school and will pay application fees for nothing." This student's comment evidenced the interweaving of barriers, showing GPA was tied into concerns about finances. While there were four externally facing challenges that are regularly discussed in the literature on graduate school admissions, a fifth one lurking behind the whole process was finances.

Cost

An additional constraint underlying nearly everyone's grad school experience was cost. Both the cost to apply, as well as the cost to attend. Most graduate programs in speech-language pathology have full-time unpaid internships in their final year, which can make it hard for students to work. Amna was able to make the finances work but she shared, "I have a friend that didn't apply to the graduate program because she's like, "I can't afford it" so she's taking a year or two years off to work." This was a common perspective of the students who did not end up attending graduate school. She went on to say, "So yeah it's like we get

delayed on our path because of financial obligations." Of the 50 survey respondents, for those who were on the fence, or even those who were applying to graduate school, finances were the primary consideration, followed by concern over grades. One survey participant described her experience as a student. "I work full time, go to school full time, have children, have low SES and first gen student." She mentioned that her school had clubs with requirements of both time and money, and that her obligations did not allow for that, which she feared would hinder her ability to get into graduate school. She shared, "I have no time to volunteer, it's a huge burden. I am exhausted and can't even afford the gas money to get to these volunteer sites." This student recognized that their lack of ability to participate in school clubs was going to impact their ability to make connections, gain valuable experience, and this barrier would negatively impact their chances of admission to graduate school.

Rigo summed up the overall expenses of the application process, saying, "The entire process is not cheap. Having to pay for the GRE is $200 and then applications range from $50 to- I paid $130 for one of them- those were definitely not cheap." He shared that due to seeking out knowledge from previous students, he learned about the cost, and saved up for a year to be able to afford his applications. That was an area that he highlighted as impacting and pushing out more diverse students, saying:

> That in itself is a huge part as to why students of color and minority populations aren't going to grad school because sometimes those applications are expensive and they add up. And the entire process of applying for grad school is not only tedious but expensive, we have to pay for tests and the applications twice or multiple times if you're applying to different schools and that can have an effect on students.

The Wall

Four of the interview participants did not begin graduate school in Fall 2021, but all four planned to head to graduate school at a later time. The wall for them was too high, for a multitude of reasons, which will be explained in this section. They took a variety of paths, from enrolling in a SLPA program, to working for school districts, to working for AmeriCorps. Three of the four students participated in our closing gatherings. Those students reflected on their paths and again, the common themes came up.

Belonging

As Sofia was making her way through the program, she looked around and noticed that students seemed to have more knowledge and experience than her and it made her question her skills. She talked about a professor who helped change her trajectory. "Professor Li was one of our professors, and she explained to us that they made a SLPA program in the department and that undergrads can apply after graduation." The excitement in her voice continued, "she was telling us all the positives of being a SLPA versus going straight into grad school." She explained that she had been overwhelmed with the requirement to go onto graduate school. "Before that I thought I had to go straight into grad school and there wasn't a middle ground." Professor Li's talk on SLPA program made Sofia feel more comfortable with potential paths other than directly to graduate school.

Carmen took a job within her community. "I decided it would be better for me to stay at home and help my own community", she shared. That theme permeated all discussions, her wanting to support her community and she felt that the best path for her ultimately was to continue on to graduate school to be able to be an SLP. She decided to apply to graduate

school for the 2022 academic year, saying "I'm kinda just proving to myself that I can make it to graduate school, that I've put in the work, I'm doing what I need to do. That I belong in the major pretty much." It was evident that she was still reflecting on her advising experience where she was told she didn't belong in the major.

Maria started a SLPA program, and commented on a lack of connection. "You don't really communicate with the instructor." She continued, "I message the instructor and she doesn't reply back." On lack of connection, she says "I think it would be nice to get support from one another, in the class, but it's kind of hard when everything is online." Maria identified a lack of belonging in her program, a sense of isolation, and expressed a desire for connection that didn't exist. She still had a desire to enter into graduate school, but had pushed her expected timeline back, as she saw a more immediate path for a career that wouldn't impact her children as much. Even though she felt a lack of connection in the program, she still felt she had made the right decision for herself and her family.

Knowing

Carmen again brought up the concern over cost as she prepared to apply to graduate school, but had saved up money to allow her to apply to up to six programs. She decided to look for programs that focused on bilingualism. She also began to research out of state schools, as she commented on her concern over her GPA. Sofia recognized that a school-based job would help her along her path and took that job while applying for a SLPA program. She had already begun to think through what she needed to do to apply for graduate school. Maria cemented her decision to wait for grad school until her children were older, and all graduate school decisions were going to be based on her family fit.

Discovering

Sofia reflected on her education, the many twists and turns that she took, and said that in retrospect, she might have stayed longer in the program instead of rushing through, which might have helped her GPA. Her job at a school solidified her plans to apply for grad school in the future. "It made me realize that I want to get into the field already." Carmen identified one professor that had made a significant positive impact, and as she asked him for a letter of recommendation, she got even more than the letter. "He gave me more advice on how to proceed with letters of rec; more than my advisor did. So it was like, 'thank you for that' instead of what my advisor told me." She shared that she has maintained some of her contacts who are in grad school, but hadn't reached out to other friends. In reflecting on her undergraduate experience, Maria suggested "I probably could have asked for more support", but she went on to add her discovery, "that non-support just helped me kind of notice that I can still do it without the support."

Beyond The Wall

Five of the participants did begin graduate school in Fall 2021, and they were interviewed to see how the transition went, as well as to gather recommendations for programs and advice for students. Broadly every grad student interviewed was succeeding, despite feeling overwhelmed. They shared their thoughts and experiences of being in grad school, both the positive and the negative.

Belonging

Rigo mentioned an identity crisis before even starting the program. He mentioned feelings of pride and excitement, but also "questioning: did I make the right decision, am I

doing the right steps, would I even be good for the program? like I was just having a whole bunch of different emotions." Karla shared similar feelings upon starting the program, saying, "I definitely felt a sense that, like I doubted myself, didn't think I belonged. I didn't think I was going to be able to live up to meeting the challenges that everyone was saying to get ready for." These academically strong students still felt as if they didn't belong in the program, despite being admitted, making it past the gauntlet, and earning a place in their graduate school.

Upon meeting peers and faculty, each student had differing feelings about how they fit into the program. Aurora felt very welcomed, and in her cohort, felt like "most of the people in the program come from minority backgrounds and stuff so we can just relate our experience." She talked about learning about each other's personal identity in class and that created a connection. Likewise, Rigo commented on having a diverse group of peers. "We stand out because we are students of color and we are minorities within the program and in general in speech language pathology has really helped us a lot." He gave specific examples, "when discussing certain topics, we don't feel like we have to hold back. We have a voice when we can come together and talk to each other; we have personal experiences that others might not have." Rigo found his community within other students of color in his program and drew both solace and joy from those friendships.

Amna identified that for her, there were significant shifts from the undergraduate to the graduate program, even though she remained at the same university. She started by talking about peer interaction. "The aura of the graduate program's a little different. It feels like there's little groups. Within undergraduate it felt somewhat more welcoming; everyone felt a

little more united, but within the graduate program there's groups that have been established." Amna highlighted a feeling of competition that might have crept in from undergraduate school, as well as a sense of cliquishness. She identified that not only had the student diversity changed, she also felt as if faculty diversity had changed from undergraduate school to graduate school. "I know [our school] is diverse for our field, but I don't have any professors that are minorities." She reflected on the difference between the two programs, saying, "I really liked the undergraduate program because we had a lot of minority professors and I felt like I could do it, I could become them." When asked about how that impacted her, she elaborated:

"I think they're just like, if I can see someone that looks like me in our leadership role, then I know that I'm also capable of getting there. But then, all of a sudden, I see this switch where I no longer see these professors in graduate courses…it's confusing, like I don't understand it."

Knowing

Everyone in graduate school reported feeling both knowledgeable and unknowledgeable at the same time. Karla said "It's been a lot of new and different challenges than I was expecting." She identified classes and workload as being constant and heavy, but she was prepared, as many people had told her "A lot of people telling me, get ready, get ready." Amna was surprised at the workload and feelings of overwhelm. "I think it's a lot, and you can't really ever catch up. Something just keeps following", but clarified that it was the overall experience that was heavy, as the academic content was what she expected. Alice echoed similar sentiments, "getting used to this new amount of work I have to do and the

time planning I have to do, which is different than undergrad." All students talked about the significant shift that happened from undergraduate to graduate school and highlighted a feeling of being underprepared.

Aurora shared that when she started the semester, she had a feeling "like I didn't know anything." even though she was actively doing well in her classes. She had an especially hard week where a large number of assignments were due and had a moment of wanting to quit, saying that in that moment she said to herself, "like I'm feeling very, 'just never go back to class right now' but I mean clearly I still went back and like I persevered and I got through." That feeling began to pass as she started seeing strong scores in her classes.

Imposter Syndrome

Many students spoke about feeling as if they didn't belong, as if other students were having an easier time, and that shared feeling was reflected in their stories. Karla commented on entering into class discussions where peers would give an answer and she would think, "oh wow that's a great response why didn't I think of that." Or, related to an assignment, "I bet you they're having a much more easier time doing it."   Alice shared similar sentiments, saying "I see other students can seem like they're doing a lot better in terms of like stress level or like they're able to handle more of the assignments." She said that her perception of others made her look internally and question her place in the program. "Maybe I wasn't meant to be accepted". She added that the feelings she had were similar in conversations with other peers.

Rigo talked about fear not fitting in "There is always the stereotype of an SLP being essentially a white female." Alice mentioned a school that she had considered attending, she

followed the program and listened to student perspectives. "The student population is largely homogeneous to white; this includes the faculty as well." She shared the fear that in that setting, she might have felt more out of place. She reflected on her current CSU experience, saying "I see other people who look a bit more like me and have backgrounds are more similar to mine." She mentioned ethnicity, but also class and work obligations in grad school. "It does feel more comforting to know 'so they're here, I can do it too' and it really does help to know that there's people who understand you." Her concerns regarding race, ethnicity, social class, external responsibilities and a system that wasn't designed for them were buffered by having peers with similar experiences. That was a key aspect of many participant responses.

Discovering

Karla realized that those assumptions related to identity and imposter syndrome were not helpful and decided to combat it by sharing her feelings. "I've been very honest with my peers going into class saying 'hey like are you having a hard time as well because I'm having a difficult time, like is it just me?'" She found that by sharing her vulnerability, others opened up as well and it helped not only her, but her peers. "We'll laugh about it now and go, 'no no we're all like struggling with that' so that's been [helpful] for me, acknowledging that it's an issue that I don't need to sit in." Karla's willingness to address her insecurity out loud with peers was a strength that benefitted her and her cohort.

Aurora, when thinking about the pressures and belonging, shared, "I try to follow a more mindful approach, like positive affirmation, and then I compare myself to just like even two years ago; I always do this." She spent time reflecting on her progress over the years and that

helped her cope with what she labeled imposter syndrome. "I'm like, 'there's no way I can't be proud of myself' so anytime I have negative thoughts I be like; I look in the mirror, and I'm like 'Aurora, just stop. You know you're being dramatic right now.'" Her determination, strength, and resilience allowed her to continue to thrive, despite the many obstacles in her path.

Rigo reached a realization about his pride in his heritage. He described growing up and being in spaces that caused him to want to reject his heritage because it was different from his peers. He shared his experience on the power of a diverse college community, identifying that he had become more accepting of himself. "This is something that makes you different but it's something that it's beautiful and culture is beautiful. I'm more happy, and I think that has come from attending a school that has such a diverse population."

Looking Past the Horizon

Students all shared thoughts related to how the programs could improve, and gave deeply personal advice for incoming students. Both in the Qualtrics survey and in the interviews, students had excellent recommendations for the department. These recommendations were grouped into how people were welcomed into the program, what the admissions process could be, and how to better support all students by changing the culture of the program. Finally, they ended with beautiful, inspiring, uplifting supportive advice for future students. I described it as a love letter.

Recommendations

Every student had suggestions or ideas for programs that would increase feelings of belonging, knowledge of supports, and increase self-discovery.

Welcome

Carmen suggested that it would be really helpful for programs to reach out before students arrived or just as they were arriving on campus. She mentioned that her school had a transfer event later in the semester "And I felt like that was a little too late, because everybody had already created their own little groups and you try to find a study buddy, like, everybody had their own people that they would go to." She also recommended a group for students of color and suggested that she would have benefitted from a group like that. Amna also recommended early intervention for students who are already at the university, saying "if our department had reached out to us like sophomore year, I think it would have made the process a little easier." Students shared that they wanted explicit outreach, as early as possible, and for programs to help create a sense of welcome and community.

Admissions

Amna reminded us of students who don't have footsteps to follow. "Because I don't know anyone in graduate programs; my parents didn't go to school here; I think you do need that role model. She mentioned feeling lost and suggested how soon she would have liked to have support, and specific guidance she would have appreciated, wanting the department to say, "Hey it's a really competitive process. You guys need to start working on your resumes and make sure your grades are really high." and requesting it early, "not just junior year when we started our major classes, because if I hadn't spoken to my SLP about the level of competitiveness, I don't think I would have got into graduate programs." Amna was able to reflect back and pinpoint how she gained the knowledge to be able to navigate the system

and advocated for a more transparent and early sharing of information with regard to the admissions process.

Rigo would have liked more departmental support with the whole admissions process, saying, "I really didn't have much to add anybody to ask besides my friends who are also applying". He also suggested that because cost is a determining factor, offering waivers would be a support that could make all the difference for some students "our department was offering to pay for that, and that in itself had relieved [some stress]." He also recommended eliminating the GRE, "because the test is very expensive and also does not show or measure the actual ability of our students."

Culture of the Program

Themes around the feeling and structure of the program were common in recommendations. Sofia had simple, concrete recommendations. "More counseling, more advising. Making it mandatory would be good as well." She also asked for a specific course on diversity. "Having a class specifically for diversity would be helpful as well." Rigo and Amna both talked about the importance of not only a diverse group of students, but also diverse faculty. Rigo acknowledged the challenge of hiring diverse faculty, but still included it as a priority, explaining, "I know that I saw Professor Salazar as representation" He reflected on conversations recognizing the homogeneity of the field, she stood out to him, and he reacted to that, internalizing her successes as a path for him.

> She was one that was striving and is obviously successful…and it was for me it was more so, like seeing the representation of knowing like okay. She could do it, I could do it as well, and it's going to be fine. There's going to be bumps obviously but it'll be fine in the end and you'll be like her, and then you can hopefully sometime turn around and be the representation for others as well.

A Love Letter to Future Students

The story that was shared from students to students was one of passion, dedication, perseverance, and hope. This last part of this chapter is dedicated to each of you, each new student who is entering into the CSD program, with dreams of becoming a speech-language pathologist. From a pragmatic perspective, nearly every person suggested saving up for grad school. Yolanda also had words of encouraging future students to not be scared to come out of their comfort zones. "I for sure have come out of my comfort zone since I started my college career of trying new things." She stated, while it might be good for your application, there was an additional benefit, "Not just to stand out in your application, but just for you to have new experiences and new things that you can bring with you to help in your field and help yourself as well." Yolanda highlighted that many of the factors that benefit a candidate for admission also benefitted the students as well.

Alice shared,

> I feel that many future SLPs, especially those who may identify as Latino, they are more likely to experience some of the background issues such as finances or maybe a lack of understanding in certain educational aspects that may hinder them from going further into a grad program or PhD program.

To those people, she had specific suggestions, primarily encouraging students to ask questions. She recommended "directly asking questions to the chair of departments, or maybe the people who work in offices, admissions, to advocate for themselves and directly reach out to these people in order to know how to better hone their application."

Recognizing that not all students are aware of the processes involved with applying to grad school, unspoken expectations of connections to faculty, she finished by adding, "I would recommend for students who are planning on going into Grad school or heading into

this path, I would recommend that they build connections with the faculty because it's such a strong tool to have." Rigo had similar advice, telling students not to be afraid to ask faculty for help, acknowledging that he struggled with that when he first started and wished he had taken more advantage of relationships with faculty. "The professors in our major definitely do love talking to the students and they love to hear what you've been up to, or what you're interested in." Rigo had positive relationships with his faculty, but initially was hesitant to reach out, not feeling as if he was deserving of the time. After developing relationships with faculty he grew to recognize that he was valued within his department and that faculty did welcome him.

Likewise, Aurora offered, "any opportunity the department may provide you, whether it's financial or educational, even if they're just helping you write an email." She summarized by saying "Really be an active participant in your department, your class, everything. Because you really do get out what you put in." She also recommended students find their community. "Try to find a community. I feel like that really helps." She talked about a Black grad student meet up and how she was able to relate to her Black peers on a different level. "Just find a community, even if it's not like within your program, maybe like a surrounding program in the college or maybe just other Grad students in general, like, even if they're in business or something like that." Aurora's suggestion of finding an affinity group allowed her to have a space where she felt a sense of belonging.

Amna wanted students of color to stand up and take roles of leadership, "because we don't see ourselves in those roles, or we lack representation- become the representation to try to become that position." She talked about students and their future dreams, that with a lack

of representation, people can experience imposter syndrome, "If you want to become a professor and you're like the one minority out of 10 white people, but make yourself uncomfortable and try to do that role and take leadership roles within the department."

When applying to graduate school, Alice suggested that students researching programs look at all aspects of programs, listen to faculty, and look for multiple points of view. She projected a potential concern if a student went to a program that wasn't a good fit, ending up in "a program that looks good on paper, but maybe it's just not what you were expecting or the faculty is not as connected to their students." Attending open houses, evaluating program websites, internet searches for feedback were all ways for students to triangulate data to find a good fit. Rigo reminded students that help is all around.

> Build those relationships with people around you. I know that our field is very competitive and sometimes people can be cutthroat and not wanting to share information, but there are people who are wanting to help you, and when you make those relationships, they will be there to help you for everything.

Rigo's statement was heartfelt and encouraged students to seek out the gems within the program, find those students who could help to create community. Finally, Maria ended with a strong conviction of support for future students, sharing her message of hope and inspiration:

> There will be obstacles in the way, but you just have to kind of learn how to jump through them or go around them, go under them, whatever it takes. There's no limitation on what you can do, besides yourself. You set your limits, you are your barrier. You are your wall, you just have to break through your own wall so that way you can succeed in what you want to accomplish. Even if you have 20 packs, carrying 20 bags, 20 different things at once, if you want to do it, you can do it.

These students contributed their experiences, their joys and fears, challenges and successes, all in service of improving the diversity of the profession, in order to create a better

tomorrow for the community. This last section was directed toward future students, and I address this to you, that future students. I can imagine Maria, as she offered that parting wisdom, cheering you on. In fact, I know all of these students are rooting for you. I can't wait to see what you will do.

Learning From Their Voices

This journey began with a summary of the field of speech-language pathology, offering a timeline of where the field has been as well as the current status of the profession, which continues to be stubbornly homogeneous. In 2022, the country continues to lack sufficient speech-language pathologists to serve the population (EDD, n.d.), and California is one of the most in-need states (ASHA, 2019). While the profession increases in membership each year (ASHA, 2022a) the professionals practicing across the nation continue to be primarily White, with very few practitioners who identify as non-White. This is a problem because a lack of diversity in the fields of healthcare and education lead to harmful outcomes for all, but most starkly for people of color, underrepresented, and historically marginalized populations. While the field has focused on this lack of diversity for decades (ASHA, 2017), change has yet to come, despite the initiatives and programs that have been implemented [e.g., ASHA Minority Student Leadership Program].

That has led to a small but growing area of research to try to understand why graduate programs continue to enroll primarily White students (Abdelaziz et al., 2021; Girolamo & Ghali, 2021; Kovacs, 2022; Newkirk-Turner & Hudson, 2021) despite greater diversity in undergraduate programs. This is not an SLP-only phenomenon, it exists commonly, especially in fields related to health professions (Capers IV et al., 2017; Chrousos & Mentis, 2020). When viewed through a CRT and Community Cultural Wealth framework (Yosso, 2005), it makes sense that these systems are valuing White cultural wealth, and 'codes of power' (Delpit, 1998), which leads to disparities in outcomes. The 'gauntlet' that students have to run when deciding to apply to graduate school closes the door to many students. As

we have seen in the previous chapter, between GPA, GRE, letters of recommendation, and statements of purpose, students are often faced with challenges in meeting these requirements, especially if they do not have sufficient navigational or social capital yet built up within systems of higher education (Winkle-Wagner & McCoy, 2016). Even if they put the whole application package together, they may face bias in the review process (Attiyeh & Attiyeh, 1997; Squire, 2020). As a result, those populations are not well represented within the major. Since 1998, an increasing number of studies have tried to look at why this lack of representation continues to persist (Boles, 2018; Forrest & Naremore, 1998; Halberstam & Redstone, 2005, Kjelgaard & Guarino, 2012); however, most focused on quantitative data like GPA, GRE scores, or interviewed students who made it past the wall, into grad school. In order to analyze the issue, a complementary lens that focuses on students is warranted.

Looking Through a Different Lens

The growing body of literature in the field of CSD tended to either focus on graduate students, using retrospective analysis, or grouped all levels of students into one study (Boles, 2018; Fuse & Bergen, 2018; Sylvan et al., 2020). This study contributed to the conversation by engaging in critical discussions while students were in the midst of determining their path post BA. By using converging methodologies to triangulate data on the experiences with an emphasis on seniors, in their final year of CSD programs, and by asking them to share their thoughts, this study had a specific target that helped guide the discussion on actionable steps that programs could consider in order to improve outcomes for students of color. A larger group, with representation from Northern, Central, and Southern California CSUs was invited to participate via survey and a smaller group based on self-identified race/ethnicity

was invited to participate in a series of semi-structured interviews. By interviewing students across multiple points in their trajectory, this study was able to validate consistency in responses among the participants in order to better amplify those voices. The interpretive methodology, and use of *trenzas* was particularly salient in increasing the voice of those students who were not always included in previous studies; those who decided not to go to graduate school or were not admitted, and wove their experiences with those who were admitted into strands of commonality, giving a tensile strength to the data in order to form a cohesive braid. Of the nine participants who engaged in interviews, four were not headed to graduate school, and their voices were undeniably powerful in corroborating some of the barriers that programs create, leaving students feeling as if they don't belong. Table 6 summarizes the purpose and scope of the dissertation:

Table 6
Summary of Dissertation

Problem	Purpose of the Study	Research Question
• Lack of diversity in the field is unjust • Lack of diversity leads to poor healthcare and educational outcomes. • Despite discussion since 1969, diversity in this field remains stubbornly White.	• Listen to student voices • Learn what barriers exist to applying to graduate school • Identify supports that helped them belong, learn, and succeed.	• How are students navigating their place in CSD programs? • What supports and constraints influence decisions about grad school? • How can we better support our students of color?

To answer those questions, we listened to the students themselves. While some specific ideas changed over time, the spirit of what they shared remained the same across time, leading to a reliability that could be transferrable to public university programs.

Finding Wisdom in Their Experiences

This study focused on analyzing both perceptions about supports and barriers, as well as recommendations for both programs and students. Key findings are presented as the strands of each research question. Specifically, research question three asked about strategies, and those findings lead into implications. The two questions related to student perception and supports and barriers will be introduced within their themes. The first question focused on student experience, and highlights of what made them feel welcomed or excluded will be presented. In the second question, findings will be reported within the data sets of supports and barriers. The third question weaves student data with implications and recommendations for departments.

How do underrepresented students exist in CSD spaces: how do they perceive their sense of belonging when they join the department?

Connections

Undergraduate students entered CSD programs with joy, pride, and aspiration. They usually came in with a great deal of community cultural wealth that wasn't always acknowledged. When they entered, each student had their own specific areas of interest but all looked for connections. Students, especially transfer students talked about desiring opportunities to form communities within their program. Those who were able to build social capital referred to their peers and friends as crucial in making it through the program. As we heard from Alice, "Honestly, if it weren't for them, I don't know if I would have gotten into

the schools that I got into so I really credit those friends for being there." Those who did not establish those social connections identified the lack of community as a key area missing in their university experience, as Sofia shared, when she said, "getting connected with my peers is the most trouble I've had that made me not feel so connected." That lack of community led to lack of confidence. Faculty, department staff, and peers all played a role in their sense of belonging, and actions spoke louder than words. Students mentioned that explicit faculty engagement and inclusive syllabi statements, positive and affirming advising, and quick responses to questions all helped. Specifically, those that experienced a positive engagement mentioned the charisma of faculty making them feel as if they were in a positive, welcoming environment, and that they were cared for.

Representation

Students looked for representation within their cohorts, on campus, and with their faculty. The students mentioned that just having professors that looked like them, or that they identified with in some way, was a powerful tool in making them feel like they belonged, and that a lack of diverse faculty created a sense of loss, or being on the outside. For instance, Rigo highlighted one professor who he connected with who encouraged him. He described what she meant to him and how he looked to her as a model for him "There's going to be bumps obviously but it'll be fine in the end and you'll be like her, and then you can hopefully sometime turn around and be the representation for others as well." His sense of optimism and resilience was echoed by many other students who felt they had a faculty member to look up to.

Pushing Back on the Status Quo

  All nine students showed some resistance to maintaining the status quo, highlighting their critique of the current state of the profession. Many students made reference to the current lack of bilingual speech-language pathologists, while others named the lack of racial and ethnic diversity as problematic. However, they all identified the value that they as culturally and linguistically diverse people could bring to the profession. For example, Aurora, who shared how some programs made her feel like, "you need to speak White to go here" recognized the problematic perspective that existed in some programs and felt that her very presence could make a difference.

Do I Belong?

  When deciding if they were ready to apply for graduate school, many students took their cues from the messaging around them. Nearly every student identified at least one faculty member who provided words of encouragement and those students who had more positive relationships with faculty were more likely to feel ready to apply, knowing that they could ask those professors for letters of recommendation. Those students who lacked faculty relationships or had negative relationships with faculty were more likely to feel as if they were not ready to apply for graduate school. Informational sessions and open houses were seen as both helpful, and as potential filters for students to decide if they would belong in that graduate program. For some participants, the process of comparing their GPA or their GRE scores to averages listed in the grad school websites caused them to doubt their ability to make it into grad programs or feel like they belong.

For those students who participated in department meetings that discussed post-graduation plans, messaging mattered. For each student, the implications of the message varied. For example, some students valued messaging that presumed that all students would move onto graduate school, saying it made them feel that they didn't have to question their place in the program. For others, like Karla, it created a great deal of stress, as she shared, saying "I felt that if I had a gap year it was like the end of the world" and they worried about being 'failures' if they did not get into graduate school right after graduation.

How do students navigate the CSD system: what are the supports and constraints that influence if and where they apply to graduate school?

Many of the participants shared that their experiences leading up to thinking about graduate school influenced decisions about what they might do. How they were made to feel welcome and whether they built relationships with faculty and peers played a major role in their plans on applying to graduate school. The students listed a number of supports, as well as constraints that influenced what they chose to do after graduation.

Supports

Every student entered their respective university with linguistic capital, aspirational capital, and familial capital in spades. Even those students who did not grow up speaking a second language were knowledgeable about different ways of communicating, or even using English. These forms of capital helped them persevere in spaces where they didn't always have the 'right' kind of capital (Yosso, 2005) or knowledge. Students talked about the power of faculty helping them navigate the system. An encouraging word to those thinking of applying, or initiation of communication when students struggled academically, were types of interactions that helped support student success. This was confirmed by students who

completed the survey, with 73% feeling either extremely or very supported by faculty mentors. Over 92% of survey participants felt that peer groups mattered, and in interviews, those who felt like they had a strong peer support group also reported feeling like the program was more manageable. Many students identified a feeling of competitiveness or competition among the students, since they all were aware that there were many more applicants than spots.

Some programs offered support sessions, and many students listed those as helpful, although the level of perceived support varied from participant to participant. One program offered fee waivers for the CSU portion of the process, a step that students viewed as helpful in the midst of all the expenses related to application to graduate school. Nearly every student documented the 'blessing' of having the GRE paused due to covid. Those that took the GRE and did not do well were comforted that the removal of the requirement meant that it wasn't going to take away from their application package. Those who did not take the GRE felt a financial and stress-based ease of the burdens involved in studying for and paying for the GRE.

Constraints

Students gave a clear and honest accounting of the challenges that they faced in the process of determining their future path. Some of the challenges that students identified came from a lack of knowledge hidden within the university system. Sometimes students did not know what they didn't know. Being in a new space, unaware of resources and steps needed to apply to graduate school caused tremendous stress. Many students lacked previous examples to navigate the application process, and felt alone in knowing what to do, when to

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do it, and how to go about it. As Amna shared, "The biggest thing was that I had no idea what I was doing and I just didn't know how the process went, and I just thought I wasn't going to get in." Some of those same aspects of capital that were valuable outside of the university limited their ability to thrive with the structure of a university setting that was built for a 'traditional' college student who did not have family obligations, children, housing to pay for, and could focus their time solely on navigating university life.

Most participants did not have family members who had gone through the experience of applying to graduate school, and the university system did not always lay out a clear path. From initial thoughts on qualifications and preparation, through acceptance and financial aid, those students did not feel prepared. Some students talked about not knowing at the outset about the high GPA expected in grad school applications. Others mentioned not even knowing what the GRE was. Still others talked about nervousness in asking for letters of recommendation, and concern about forming relationships with faculty. And finally, while not a primary topic of discussion in the interviews, Alice did bring up the fact that statements of purpose were expected to be written in a format that valued a 'standard' English grammar and style, which often impacted students who were raised in homes that spoke or wrote using different format.

Because of many of these factors, many students spoke of feeling as if they did not belong, they were not deserving of a spot, or that they were not ready. That sense of imposter syndrome (Chrousos & Mentis, 2020) influenced how they viewed their own work, as well as how they perceived their peers, many of whom were also applying to graduate school. Most students reported feeling like everyone else around them knew more, was more deserving, or

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had better scores, more connections, more resources. Connected to that concern was a fear of feeling like they did not belong, or that they are the only one, that they might be treated differently was mentioned by several students as they decided where to apply to graduate school. The current demographics of a program influenced where they might feel comfortable. This can create a self-injurious cycle of homogeneity.

Transfer students talked about the sudden shift from community college to university life, and the myriad changes in norms, expectations, and resources that shook their educational foundation. Some students talked about having a lower GPA in community college, especially those who were not sure what career they wanted to pursue or who started off in a major that was not the right fit for them. They spoke of the uphill climb that they endured in trying to get a 'good enough' GPA to be considered for admission. Others spoke of the drastic shift that they experienced and the sense of overwhelm upon arriving in a new space. Finally, students reported that they felt that those who were already at the university were ahead of them in terms of navigational awareness, social capital, and preparation for university life.

For those students who investigated graduate schools, websites, application guides, and open houses were insightful. Spaces that embraced diversity on their websites sometimes stumbled over words and discussion on cultural diversity and self-assessment when asked questions or in live spaces, contradicting their written statements. That created a sense of contradiction, which can be unsettling for potential students.

Finally, finances were a consistent barrier identified by nearly every student. It was the most frequently cited concern reported in the survey, and all of the interview participants touched

on it in one way or another. Outside jobs limited their ability to participate in group clubs and

events that could have increased their navigational capital. Resources were considered and

allocated differently in graduate programs. The cost of staying in their undergraduate

program, then applying for, and potentially attending graduate school were all factors

commonly counted as stressors and limiting options for graduate school opportunities.

What could be done to better support underrepresented undergraduate
CSU students as they navigate this system so that we increase their
presence in graduate school?

The participants had a multitude of offerings to provide programs that are truly invested

in supporting underrepresented students. The implications of the study are enveloped in this

final research question, and can be separated into those three strands from the methodological

framing. The *trenzas* that were weaved together in their stories can be separated into three

strands: belonging, knowing and discovering.

On Belonging

Students came in with pride, humility, and a strong desire to be grounded in their

community. Programs should recognize and value the multitude of wealth that their students

bring into the program; wealth that has been lacking in the CSD field as a whole.

Recognizing and celebrating diversity in multiple ways and methods is important. Creating

opportunities for bilingual students to utilize or amplify their capital would be a support that

could show them not only that they belong, but that they are needed in the field.

Building community was identified as a key support that nearly all students identified as key.

One limitation of this study was that it involved seniors in California who spent most of their

CSD educational careers in distance learning, and students acknowledged that the distance

may have impacted these relationships, but they did begin their program in person, and commented on their experiences. Those that felt that community was created and fostered by the department reported greater sense of connection and those that did not reported more isolation, so this concept of creating space for community building should be considered. Of note, although many students were involved in their CSD chapter of National Student Speech Language Hearing Association (NSSLHA), this did not appear to be a strong support for sense of belonging and community. Instead, it was viewed as a resource, one that was not always accessible to students who had greater responsibilities outside of college. Those who were able to participate appreciated it, but those who were not able to participate felt that this created more of a gap between students as they prepared to apply for graduate school. Some students talked about their student group having students 'earn' points by attending events or purchasing materials, which created a greater gap between students. Department supported cohort models and social gatherings prior to the first day of school, followed by social opportunities throughout the semester would have made a difference for many students.

Specifically, transfer students experienced additional constraints that required tremendous resilience to maintain afloat in school. Departments can reach out to feeder community colleges to provide outreach and support before transfer students enter into the program, then provide orientation and training to students when they enter, with a focus on the specific resources that students enrolled in CSD departments benefit from.

Finally, the concept of 'imposter syndrome' was identified multiple times, frequently by that title. Some students suggested that having open discussions about the feelings that historically minoritized groups experience would have been a powerful tool to dismantle the

feelings of not belonging. While many studies have looked at what individuals can do to minimize these feelings, more recent critical commentary has highlighted the fact that imposter syndrome tends to stem from external systems that do not allow students to see themselves as fitting in, and the responsibility for addressing this should not fall solely to the recipient of that discordant experience. Instead, scholars suggest that the very systems that cause these feelings need to address their own failures and support students without placing the blame on the person who feels that 'imposter syndrome' (Mullangi & Jagsi, 2019; Ryner, 2016). This process can include both spaces for students to commune, as well as introspective analysis where departments can do a deep dive into practices that may not support students that exist outside of the 'traditional' student stereotype.

On Knowing

This was another major area, and one where students gave very concrete recommendations. As cost was a major barrier toward the decision to apply to graduate school, considering creative ways to support students should be an area where departments can partner with colleges and university support. The field has been acknowledged as one that has experienced a significant shortage, so much so that in 2019, the California legislature committed $750,000 to increasing the number of speech-language pathologists that CSU programs graduated (Holden, 2019). Eight CSU programs applied for and were granted funds to increase the pipeline (CSU, 2021). Programs like this focused on increasing a diverse pipeline could provide supports. Even though CSU programs are not institutions focused on high research activity, connecting with research programs to support emerging research assistant jobs could provide work for students on campus. Research assistant positions are

often offered to graduate students, but developing smaller administrative research-based roles that can be taken on by undergraduate students could decrease their financial burdens and increase their marketability as they apply to graduate school. Creating a program or developing systems where students are tapped into various forms of financial aid including scholarships (which are not always housed in a university financial aid office) would help. Finally, programs should know what the cost is to students to apply to their program. Considering CSDCAS application plus CalState Apply, plus any transcript fees (which are greater for students who have attended more than one college), as well as any tests or other requirements. Often, programs do not know how much students have to pay just for the privilege of being considered for a spot in the graduate program.

Finally, uncover the hidden resources, knowledge, and support. Much like fish in water, departments are so ingrained in how they do things that they forget that each step requires some level of knowledge. Knowing what is coming, making clear the hidden curriculum of topics such as forming relationships with faculty, knowing when to think about applying to graduate school and what those steps look like will create pathways. Explicitly stating values, rubrics, and considerations at the outset will support students so that instead of a wall, students experience a yellow brick road. Unlock those mysteries; create spaces where students can share knowledge.

On Discovering

Departments can spend time learning about students, tapping into faculty to help students better recognize the wealth that they bring. So many participants had personal experiences with speech therapy that could be tapped into within classes, reinforcing their belief that

those experiences bring value and meaning to coursework. Others had lived experiences that

could have influenced how their peers viewed people from different languages, cultures, and

beliefs. Many students had navigational capital and even though they did not have models,

they knew enough about how the system worked, or had mentors to guide them, and were

able to overcome the challenges. For those that did not have that same knowledge of the

system, many discovered resources or support very late in the program, adding to their belief

that they were not the right fit. Departments are responsible for helping students realize that

imposter syndrome tends to be felt by many minoritized groups and that the problem is not

them, it is the system. Departments can help students gain their ability to navigate systems,

access resources, and keep moving forward, toward their dreams.

Implications for Programs

This study informs the practice of administrators and leaders in the field of speech-

language pathology, notably public universities that draw racially and ethnically diverse

students with tremendous wealth. The implications in Table 7 are recommendations that are

gathered from the voices of the students, summarized from the findings, and set against the

backdrop of an increasing body of literature looking at success for underrepresented

undergraduate students entering into graduate school.

Table 7

Suggestions for Mediating Barriers for Undergraduate Students

Belonging	Knowing	Discovering
Recognize the capital that students bring	Conduct a 'cost audit' to consider all-in cost to apply	Learn from students
Create community before classes start	Provide information early and often	Tap into student experience
Do not rely exclusively on student organizations to create community	Look for funding opportunities to decrease financial stressors	Provide information, break down silos
Introspective analysis to mitigate causes of 'imposter syndrome'	Share options and opportunities beyond graduate school	Help students discover their capital and frame it as a strength

Limitations

The first inimitable limitation was the Covid-19 pandemic. Students experienced different levels of stress, some could have been under greater financial pressure due to family loss of income, or their personal loss of income. Departments changed processes and procedures, which could have played into some of the students' responses. It is hard to parse what of the data was influenced by online schooling, as most of the participants had one semester fully in person, and in their second semester, all CSU programs ceased meeting in person. All of the students in the study spent their entire senior year online. While this may have impacted some of the sense of belongingness, stress has been a pre-Covid factor that influences feelings of belonging in some students (Roos & Schreck, 2019).

The study also only included four of the 12 programs in CSD across the CSU system. The demographic was self-selected, and the group skewed heavily toward Latinx, which may have influenced patterns and results, although the observations made were similar across ethnic and racial groups. By including additional programs, the data may have been more generalizable, but one third of the programs still allows for transferability of the data, and ideas for consideration.

By combining students who applied with students who did not apply, the data may not have been as strong in terms of support for one particular group. Future research could separate the two groups to look for patterns between groups. Finally, the interviews began after some students knew if they had been accepted into graduate programs, which may have influenced their perspectives. Students who were accepted may have had a more positive perspective since they had 'made it through' and students who were not accepted may have already begun to shift their viewpoint since they knew they were not going to graduate school that fall.

Recommendations for Future Research

This research built upon previous scholars and advocates who have studied ways of increasing diversity within the profession. Saenz et al. (1998) were among the first to systematically measure affordances and constraints experienced by CSD students, while they were students. A similar study was conducted in 2018 by Akiko Fuse and Michael Bergen for students after they had graduated. Thomas Kovacs (2022) encouraged departments to conduct a retrospective review by which programs could self-evaluate their methods. Brianne Roos and Janet Schreck (2019) conducted a mixed methods convergent parallel design to

look at causes of stress in undergraduate programs. This study sought to build on aspects of each of these key studies by developing a survey focused on CSU students, looking at affordances and constraints for students, considering sources of stress, and adding a dimension of time, so that prospective research could be triangulated with retrospective thoughts from the same students, after the proverbial dust had settled.

Diversity

It is my hope that this research contributes to a growing body of work focused on increasing the pace at which students from diverse backgrounds enter into the field of speech-language pathology. This particular study consisted of four CSU CSD programs. Future directions could, with chancellor's office support, include all CSU CSD programs. This study included all marginalized voices, but there could be value in studying one identity at a time. Latinx, Black, Native American, LGBTQ+, and disabled populations would bring a great deal of wisdom and learnings to the research. Additionally, separating the groups by status - interviewing only students who chose not to apply, interviewing students who were not accepted, might generate different data that can inform processes.

Timing

A longitudinal study, across two years would be powerful to help develop visibility into longer term trajectories. Following a different timeline, specifically interviewing them across their senior year could result in different data as well. Beginning when most students enter into CSD programs, in their junior year, following those students across time and potentially developing focus groups could be powerful and create a community that could help amplify the benefit of the research. Starting earlier could also allow researchers to

follow students who transfer out of the major and identify who might be being pushed out before they even get to the grad school application process.

Action Research

The students gave very actionable suggestions. A powerful line of research would involve implementing those actions and studying the results, similar to Saenz et al. (1998). Each action in Table 7 would take an investment of time and resources. With twelve programs, each program could investigate a set of these recommendations and conduct their own study. Kovacs (2022) recommends each program look at its own data. Building off of his model, programs could take retrospective data, compare it to future data after implementation of a program in an ABA model of experimentation. Could the CSU system invest in strategies that were suggested, or looking at other medical and educational models to invest in campuses who want to implement systems to increase diversity?

Beyond: Pushing the Boundaries

This study focused on the student perspective during and after the process of applying for graduate school, and heard from both students who applied, and those who didn't, students who got in, and those who did not. Those four groups provided powerful concepts that programs can dig into as they analyze their own practices and procedures. Students are in a power dynamic in their programs. They may not often feel comfortable sharing their concerns. This study addressed some areas where departments themselves may not be able to capture honest, critical data. When considering the future of the profession, too often the voices of those who 'made it' are highlighted. While those students should be celebrated, the fact that they traversed a bumpier path should not. Programs focused on increasing the

diversity if the profession in a meaningful way need to listen to the voices of those students who quietly bowed out, stepped aside, or stepped away. This research gave voice to students who made it over the wall, and students who are still *luchando* (struggling, striving), allowing them to complement each other. Their shared stories allow us to look for affordances that elevated both groups, and find the bricks, the constraints that slowed them down or made them question their place in this field. Let's weave their stories together, combine their wisdom and reinvent our methods in CSD departments. Let's work together to change the face of the profession.

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Survey

Communication Sciences and Disorders Survey

Q1 **Title of Research Study:** Supports and Barriers to Admission to Graduate School in Speech-Language Pathology Marcella McCollum, Lecturer, EdD candidate
 Eduardo Muñoz-Muñoz, Assistant Professor San José State University

 What we want to know:
 This study seeks to examine the supports and barriers that may impact diversity in graduate school in speech-language pathology. We are interested in understanding the perspectives of college seniors in communication sciences and disorders and related fields. Please be assured that your responses will be kept completely confidential.

 What you would do:
 You will be asked to answer a series of questions related to your background, then to your experience at your university and in your department. This voluntary study should take you around 10 minutes to complete. There is no financial compensation, but your participation will help support students interested in speech-language pathology. You can stop at any point without any consequences. If you would like to contact the sponsor of the study to discuss this research, please e-mail Eduardo Muñoz-Muñoz at eduardo.munoz-munoz@sjsu.edu If you have complaints about this research, you can contact the program director, Brad Porfilio at bradley.porfilio@sjsu.edu For questions about participants' rights or if you feel you have been harmed in any way by your participation in this study, please contact Dr. Pamela Stacks, Associate Vice President of the Office of Research, San Jose State University, at 408-924-2479.
 How to get started:
 By clicking the button below, you agree to this voluntary study, acknowledge that you are 18 years of age, and that you can stop at any time for any reason. Please keep this information for your records and do not write any information that could identify you on the survey.

 Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

 At the end of this survey, you will be asked if you are interested in participating in additional interviews. If you agree, you will be sent to a separate survey where you will give your contact information. The link will be separate in order to preserve your anonymity on this survey.

Q2 I agree to participate in this study.
Q3 What university do you attend?
Q4 What is your status as a student?

Q5 Are you a student studying in the field of communicative disorders and sciences, communication sciences and disorders, speech-language and hearing sciences, or a related field?
Q6 How old are you?
Q7 Regarding gender: How do you identify?
Q8 Regarding ethnicity: How do you identify?
Q9 What is your prior college experience?
Q10 Utilizing US Census terms, please check all boxes that apply to you.
Q11 Please select all the categories that apply to you:
Q12 Were you raised speaking a language other than English?
Q14 What is your family income (total household income)?
Q15 What are your current living arrangements?
Q16 How many individuals live in your household?
Q17 Not including yourself, what was the highest education level in your household growing up?
Q18 Based on the previous question, what was that person's relationship to you? List as many people with that education level as needed.
Q19 Indicate how your schooling costs are paid. This includes tuition, fees, books, room and board, transportation, etc. Each item should have a percentage and should add up to 100%. For example, 25% loans + 75% work=100% of my schooling costs.
parent/family: spouse: work: grants, scholarships, fellowships: loans: work study:
Q20 How would you rate the academic intensity of the program?
Q21 How important do you think the following factors are in supporting academic success **in general**?

	Not at all	Slightly	Moderately	Extremely
feeling like I belong in this	○	○	○	○
academic preparation for	○	○	○	○
student success programs	○	○	○	○
strong study habits (6)	○	○	○	○
faculty mentors (2)	○	○	○	○
peer mentors (3)	○	○	○	○
social peer supports (8)	○	○	○	○
family role models (4)	○	○	○	○
social family supports (9)	○	○	○	○
financial support (7)	○	○	○	○

Q22 How supported have you **personally** felt in these areas?

	Not at all supported	Somewhat Supported	Very Supported	Extremely Supported
feeling like I belong in this	○	○	○	○
academic preparation for	○	○	○	○
student success programs	○	○	○	○
faculty mentors (2)	○	○	○	○
peer mentors (3)	○	○	○	○
social peer supports (8)	○	○	○	○
family role models (4)	○	○	○	○
social family supports (9)	○	○	○	○
financial support (7)	○	○	○	○

Q43 What strengths do you feel that you bring to the field?

Q23 What factors (if any) have hindered your academic success in this program?

	Did not hinder (1)	May have hindered (2)	Hindered Somewhat (3)	Definitely Hindered (4)
lack of feeling like I	○	○	○	○
lack of support from	○	○	○	○

my academic	○	○	○	○
difficulty with study	○	○	○	○
difficulty taking tests	○	○	○	○
lack of support from	○	○	○	○
time to study (8)	○	○	○	○
lack of financial	○	○	○	○
lack of role models	○	○	○	○
family obligations	○	○	○	○

Q24 Besides these factors, what other factors impact your academic success?

Q25 What is your current GPA?

Q38 Have you received a C+ or lower in any of your major related courses?

Q26 What are your plans after graduation? (Select as many as apply)

Q44 You intend to apply to a related graduate school. What do you plan to study?

Q41 What are some of the considerations impacting your decisions?
Q27 How many schools do you plan to apply to?
Q28 What factors will impact how many schools you apply to?
Q29 From your perspective, how you would support undergraduate students who want to go to graduate school in speech-language pathology? Be as specific and creative as you can.

Q30 Would you be willing to share your perspective in either a focus group with other CSD seniors or in an individual interview?

Appendix B

Interview Questions

Script: Thank you for participating in this research, we really appreciate your time. We want to know about your experience and insights, and learn from you. As mentioned in the survey, we are investigating how students perceive their experiences as undergraduate students in communication sciences and disorders and related majors. You are being asked to participate in these interviews because your perceptions will help us better understand supports and barriers that might exist in determining who goes to graduate school, and what paths students take after their undergraduate bachelor's degree in communication disorders and sciences.

ROUND I

Interview Questions	Probes
Tell me about your program and decision to enter into this major.	• Do you feel supported in your program? • What factors impact your feelings of support (or lack of support) within the program? • Did any personal connection impact your decision to enter the major? • Has that impacted how you have felt throughout the program?
What are your plans after graduation?	• **If applying to graduate school** - what are some factors that motivated you to apply to graduate school? Were there any issues that caused you to consider not applying? Do you feel like the department is supporting you in being successful in the application process? How are you feeling about the application/ applications you submitted? • **If not sure or not applying**: tell me some of the things that have influenced your thoughts in terms of future plans. Were there any issues that caused you to consider not applying to graduate school? What were they? Do you feel like the department is supporting you in being successful after graduation? • Letters of recommendation - • **If anything else:** tell me about the factors that caused you to choose that path?

What factors are influencing your thought process related to post-graduation	• **If they don't mention GRE or GPA, follow up with** -
	  o Did GPA influence your decision to apply to graduate school?
	  o Did the GRE influence your decision?

plans?	• Do finances play into your thoughts about after graduation? • Are there any personal factors that are influencing your decision to (insert their plan here)? • **If they aren't applying to graduate school:** is there anything that would have made you more likely to apply to graduate school?
How has your home/family life influenced this decision (insert their stated decision), if at all?	• Did your family influence your decision to get a Bachelor's degree in this field? • How does your family feel about your major and you getting a Bachelor's degree in CSD? • How did they support you through the program?
How has your experience at your institution influenced this decision?	• What kinds of supports have you felt that they have provided? • Is there anything that they could have done to make you feel more supported? • Were you able to create friendships/supports among your peers? ○ Did that impact your thoughts about what you might do after graduation?
Is there anything related to your undergraduate program, your studies, or your plans post graduation that you want to share with me that would help us better support future students?	
Thank you so much for providing us with your experiences and sharing your wisdom with us. We want to continue to learn from you - would you be willing to be interviewed as we get closer to graduation to see how you are feeling and if anything has changed?	

ROUND II

Interview Question	Probes
So since we last spoke, any updates on your plans after graduation?	(*if they applied to graduate school*) - How many schools did you apply to? What were those results/which schools were a match? (*if they were admitted*) - What school did you decide to attend? (*if they applied and were not admitted)* What do you think impacted the admissions process (*please delve into this*)? Do you plan to reapply next year? What will you do in the meantime?
What impacted your	*Looking for family, job, finances, school, etc. anything that*

decision? *(if they have updated plans since you last spoke)*	*may have changed the way that they thought*
How are you feeling about your decision?	*I'm looking for any backward look - any reflections on their decision, so questions like:* Looking at all of the options available to you, do you wonder what a different decision might have looked like? Why do you think you chose your path as opposed to those other paths? *If they comment on a thought, follow up with* why or what makes you think that?
Can you tell me more about the factors that may have influenced your decisions?	Did finances impact your plans? Was there anyone at your school that influenced your plans (positive or negative)? Was there anyone at home that influenced your plans? *Followed by...*tell me more about that
What are you most looking forward to (your future plans/next year)?	
Do you have any concerns about the next year?	Tell me more. Any financial concerns? Any concerns about future employment?
Do you have any peers who applied but did not get in?	What factors do you think may have played into that?

Is there anything related to your undergraduate program, your studies, or your plans post graduation that you want to share with me that would help us better support future students?	
Thank you so much for providing us with your experiences and sharing your wisdom with us. We want to continue to learn from you - would you be willing to be interviewed one last time in a few months to see how you are feeling and if anything has changed?	

ROUND III

Interview Question	Probes
Tell me about your summer. What did you	Just a warm up question and on occasion

do this summer?	may yield info on perceived supports
What are you doing now?	*(If they are in grad school)* How is school going? Does it feel different (or How does it feel different)? *(if they are not in grad school)* - Tell me about your XXX (job, schooling, etc). How did you come to that XXX(job, program, etc)? How long have you been there?
**If they are not in grad school...	*What are your thoughts in terms of future plans?* *Do you see a path for you related to your bachelor's degree?*
***If they are in grad school..	*How do you feel about your decision to enter grad school?* *Are you feeling like you fit in?* (In terms of CRT) - *Do you see people like you there?*
For both:	*I'm looking for any backward look - any reflections on their decision, so questions like:* Looking at all of the options available to you, do you wonder what a different decision might have looked like? Why do you think you chose your path as opposed to those other paths? *If they comment on a thought, follow up with* why or what makes you think that?
If they are planning to apply to graduate school in the future: What are some of the factors that may influence your decisions?	Did finances impact your plans? Was there anyone at your school that influenced your plans (positive or negative)? *Was there anything about that person (race, gender, positionality) that resonated with your identity?* Was there anyone at home that influenced your plans?

	*Followed by...*tell me more about that *If you hear hesitation, concern, etc…* What are the pieces that are weighing on you that you believe will impact your ability to get into grad school?
Was there any one person that was most impactful in your decision? What were the things that you felt may have limited you or made you question your space in the program?	If yes, can you give me some examples of the types of things that they said that stood out to you? **Research** says that sometimes students of color feel 'imposter syndrome' -what do you think about that? Did you feel that in your program? (for grad students) - Do you feel like that now?
What are you most looking forward to (your future plans/next year)?	
Do you have any concerns about the next year?	Tell me more. Any financial concerns? Any concerns about future employment?
Now that you've graduated, and you're done with all your classes and you've had a few months to reflect, can you think in terms of supports or in terms of experiences - anything that influenced your decisions?	
Is there anything related to your undergraduate program, your studies, or your plans post graduation that you want to share with me that would help us better support future students?	
Thank you so much for providing us with your experiences and sharing your wisdom with us. This is the final interview for this round of research. May we contact you in the future to follow up?	

Recruitment Flyer

Appendix D

IRB Approval

SJSU SAN JOSÉ STATE UNIVERSITY

Office of Research
Division of
Research and Innovation

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SAN JOSE STATE UNIVERSITY
HUMAN SUBJECTS INSTITUTIONAL REVIEW BOARD

IRB Notice of Approval

Date of Approval: 11/20/2020

Study Title: Supports and Barriers into Entry to Graduate School in Speech-Language Pathology

Primary Investigator(s): Dr. Eduardo Muñoz-Muñoz

Student(s): Marcella McCollum

Other SJSU Team Members:

Funding Source: None

IRB Protocol Tracking Number: 20275

Type of Review

☒ Exempt Registration: Category of approval §46.104(d)(2iii)
☐ Expedited Review: Category of approval §46.110(a)()
☐ Full Review
☐ Modifications
☐ Continuing Review

Special Conditions
☒ Waiver of signed consent approved (for survey)
☐ Waiver of some or all elements of informed consent approved
☐ Risk determination for device:
☐ Other:

Continuing Review
☒ Is not required. Principal Investigator must file a status report with the Office of Research one year from the approval date on this notice to communicate whether the research activity is ongoing. Failure to file a status report will result in closure of the protocol and destruction of the protocol file after three years.