Building a Pipeline of Bilingual SLPs to Serve Dual Language Learners: an Inclusive Model of Interprofessional Education

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Abstract
Speech-language pathology graduate programs do not reflect equity across racial and ethnic groups. Training programs must adopt an anti-racist stance and intentionally and strategically plan for equity and inclusion of students and professionals who are Black, Indigenous and Persons of Color (BIPOC). Retention of minoritized students must be supported by inclusion efforts. The authors review systems of support essential to the recruitment and retention of BIPOC students in graduate programs. Through funding support from a grant, the authors developed a model of training bilingual SLP students to work with dual language learners through an inclusive model of interprofessional education. Finally, the authors conclude with a discussion of questions faculty should consider to create institutional change. The authors are hopeful that this article provides SLP programs a best practice framework to build a diverse pipeline of speech-language pathologists better equipped to deliver effective culturally and linguistically responsive interventions for the clients served within our field and across our transdisciplinary work.

Keywords
interprofessional education, bilingual, BIPOC students, inclusion

Cover Page Footnote
The authors would like to thank the students, teachers, families, administrators at the local elementary school and the advisory board for being partners in this journey, sharing their expertise, and pushing us all to do better. In addition, the authors would like to thank the Directors of the Schools of Speech, Language, and Hearing Sciences and Counseling and School Psychology at San Diego State University for their support of the project.

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Recent conversations within the field of speech-language pathology (SLP) have uncovered an urgent need for intentionally and strategically developing practices that are equitable and inclusive to support our students and professionals who are from racially minoritized backgrounds. The goal of this paper is to share a holistic framework for supporting a particular subset of such students, those who identify as Latinx. To accomplish this, we discuss the lack of diverse representation in SLP programs and review systems of support that are equity-focused to improve recruitment and retention practices for students from racially minoritized backgrounds. Then, we highlight a unique interprofessional education (IPE) program designed to recruit, retain, and educate Spanish-English bilingual and bicultural graduate clinicians. The model builds in equity through systems of support and uses inclusive teaching practices. Following a description of the program, we outline questions to encourage other programs to enhance their diversity, equity, and inclusion efforts and conclude with steps programs can implement as they continue to evaluate and develop larger efforts.

Lack of diversity in SLP programs

Approximately 92 percent of the American Speech-Language-Hearing Association’s (ASHA) constituents identify as coming from white/Caucasian/European American cultures (ASHA, 2019a). The low percentage of racially and ethnically diverse certified speech-language pathologists (SLPs) has been subject of much discussion in recent years as it relates to our ability to adequately address the needs and interests of those we serve. Presently, SLPs do not reflect the growing diversity across racial and ethnic groups in the United States (ASHA, 2019b; Ryan, 2013). Research shows that the U.S. population will continue to diversify in the coming decades (Colby & Ortman, 2015). In addition to racial and ethnic diversity, the number of speakers of a language other than English is projected to increase for a number of languages, with Spanish speakers projected to be the largest group (Ryan, 2013).

When discussions begin about how to solve this problem, much attention and effort is given to how to recruit and cultivate a diverse student body (Fuse et al., 2018; Saenz et al., 1998). This is a necessary place to start given that only 29.5% of students enrolled in undergraduate programs and even fewer in graduate programs, 21.3%, are from racially minoritized backgrounds (ASHA, 2019b). It is simply not enough to recruit students from racially minoritized backgrounds. Rather, intentional encouragement of more bilingual and bicultural individuals from diverse cultural, linguistic, and socio-economic circumstances is highly needed within the field of SLP. Doing so creates a pipeline of clinicians equipped to meaningfully serve youth who present with a range of needs. Retention of minoritized students must be supported by inclusion efforts. Specifically, programs must highlight and celebrate cultural assets among Dual Language Learners (DLL; Robinson-Zañartu et al., 2019). Efforts are needed to dismantle internal and external factors that might serve as barriers to pursuing a career as an SLP. Internal factors include low sense of self-efficacy, experiences of learned-helplessness, generational differences, contrasting familial values, familial obligations, among others. External influences include limited financial support; minimal exposure or access to SLP prerequisite courses; and lack of learning/study skills provided by programs to support success. Additional examples of external influences include limited networks that recruit undergraduate bilingual students from minoritized backgrounds and systemic experiences of racial gaslighting. Without support, minoritized students face far lower odds of graduating than their privileged peers, increasing the probability that they will struggle to afford a higher education, and face significant academic obstacles (see American Psychological...
Efforts towards inclusion of students from racially minoritized backgrounds must prioritize the intentional provision of systems of support, ideally beginning in their undergraduate career to optimize chances of applying and gaining acceptance into graduate programs.

**Systems of support**

While a host of systems of support benefit student success, we review below three major areas of support emerged from our program data as supporting student experiences: meaningful educational experiences, role models and emotional support, and financial support. Specifically, our informal survey data revealed that Latinx students were more likely to apply to programs where they would have educational experiences that included working with DLLs and engaging with diverse faculty and mentors. Further, they indicated that financial support for graduate education was critical, resulting in a more diverse applicant pool for our programs.

**Meaningful Educational Experiences.** Participation in high-impact practices, educational activities that engage students in active learning, have been shown to have strong positive effects for student learning (National Survey of Student Engagement, 2007). In particular, educational experiences that emphasize civic engagement and create space for students to give back to their communities. In return, the quality of students’ experiences, learning, retention, and success improve, particularly for underserved students (Kuh, 2008; Witham, et al. 2015). Moreover, students report that it is important for them to see themselves reflected in the curriculum and the faculty to which they are exposed to create a sense of belonging and inclusiveness (U.S. Department of Education, 2016).

**Role Models and Emotional Support.** The inclusion of diverse role models has been identified as an important factor in the academic success of students in speech-language pathology (SLP) graduate programs (Ginsberg, 2018; Saenz et al., 1998). In interviewing African American and/or Black students enrolled in graduate SLP programs, Ginsberg (2018) reported that one of the main concerns of students was the inability to connect with African American/Black mentors, both within a department and in related fields. Students in this study reported a desire to form relationships with faculty to create visibility and foster connections beyond a student’s primary advisor (Ginsberg, 2018). Santos and Reigadas (2002) found that Latinx students with mentors of congruent backgrounds report better satisfaction with their mentorship program and better self-efficacy than non-matched peers as measured by student rating scales. Similarly, Campbell and Campbell (2007) found that students of diverse ethnic backgrounds with a same ethnic background mentor reported better academic productivity when compared to non-matching peers as measured by the number of total units completed. Other studies with students of diverse backgrounds have highlighted the importance of a relationship based in moral support, emotional assistance, preferred learning style, or communication style (Campbell & Campbell, 2007; Treviño et al., 2014). At the same time, it is important to note that research on cross-cultural mentoring has found that shared values may be more important for a successful relationship between the mentor and student than shared cultural background (Crutcher, 2014). Not only are these emotional support systems key in student support, but they greatly affect the rates at which students are accepted into and retained in graduate programs (Crisp & Cruz, 2009; Fuse et al., 2018).
Financial Support. Successful institutions also make financial support available to close the need gap for economically disadvantaged students (Chang et al., 2014). Often, there is an overlap between students who are at an economic disadvantage and students who come from racially minoritized groups (Long & Riley, 2007). Even before acceptance into a program, financial considerations limit graduate program options available to racially minoritized students (Perez & Gong, 2005). Likewise, other research has highlighted the positive impact of financial aid on racially minoritized students’ retention rates (Chen & DesJardins, 2010). Not surprising, within Communication Sciences and Disorders programs, financial support through application fee waivers and tuition support packages are one of the biggest factors positively impacting student success (Fuse et al., 2018).

Cross systemic efforts to support student success among these domains is clearly warranted. The subsequent section highlights ways in which integrating collaboration efforts, such as through IPE, can optimize student career trajectories among bilingual students with minoritized cultural and linguistic identities.

IPE to support culturally and linguistically diverse (CLD) clients

IPE is often conceptualized as collaborative education across disciplines in order to achieve clinical competence that is not limited to one discipline (Friberg et al., 2013). One of the foundations of IPE is providing best practices for clients and their communities. Importantly, serving CLD populations means collaborating with professionals so that SLPs can respond appropriately to the unique needs of CLD students (Rosa-Lugo et al., 2017). In addition, organizations have made the effort to integrate culturally responsive practices into their definitions of IPE. The Interprofessional Education Collaborative (2016) provides four core competencies aimed at preparing future professionals for enhanced team-based care – Values and Ethics, Roles and Responsibilities, Interprofessional Communication, and Team and Teamwork with eight to eleven sub-competencies per competency. Of particular interest is the Core Competency of Values and Ethics sub-competency 3 which states: “[embracing] the cultural diversity and individual differences that characterize patients, populations, and the health team” (p. 11) is a component of values and ethics for interprofessional practice. Thus, in working with CLD populations, IPE is essential in implementing culturally responsive and evidence-based practices, which ultimately affect educational outcomes for these populations (Rosa-Lugo et al., 2017).

IPE as a Meaningful Academic Experience

A robust IPE experience provides one example of a meaningful academic experience. The need to train SLPs who can work across disciplines is essential for effective, competent, and culturally responsive services. While most of the IPE literature is based on healthcare delivery models, Pfeiffer and colleagues (2019) note that increasing collaborative learning opportunities in CSD graduate programs will greatly enhance the skills needed by school-based SLPs to meet the complex demands of the students they serve.

Transdisciplinary teams (see Choi & Pak, 2006) bring unique perspectives and training in IPE. As equal members of a team, professionals, for example SLPs and school psychologists (SPs), can
collaborate and build on the experience and expertise of one another to implement best practices. For school-age students from CLD backgrounds, transdisciplinary teams are essential for culturally responsive practices (Scanlan & Zisselsberger, 2015). Additionally, more members of a team mean more potential mentors. Given the frequent and beneficial collaboration with SPs on transdisciplinary teams, it is important to highlight that school psychology is also tasked with parallel calls to attend to significant personnel shortages and increase representation from diverse cultural and linguistic backgrounds. In their analysis of the workforce pipeline in school psychology, Morrison et al. (2020) urge graduate program admission teams to conduct targeted and personalized recruitment strategies among individuals with minoritized cultural identities to ensure the needs of struggling CLD students in schools are met.

**Training Bilingual SLPs to Support Dual Language Learners (DLLs)**

To prepare a pipeline of competent bilingual SLPs to serve DLLs, SLP programs must value our students who possess sufficient depth in the primary language and culture to engage in meaningful and valid interactions with families and students and effectively consult about, assess, and treat DLLs with communication impairments.

As noted by Fabiano-Smith (2020), most graduate students in SLP programs are trained to assess and treat monolingual English-speaking children with little to no coursework in bilingualism. In contrast, the SLP graduate program at our institution has been committed to bilingual education through an infused curriculum model, combined with required coursework in bilingualism for all students. We have also offered a bilingual certificate program as part of the training for bilingual SLP students for 20+ years. We acknowledge that more is needed to best serve both our graduate students and the clients they ultimately serve as bilingual service providers. From this intentional commitment, a model of IPE collaboration to train bilingual and bicultural graduate students in SLP and SP who were committed to serving DLLs evolved. In an effort to holistically support the very students we wanted to recruit, we submitted and were awarded a Personnel Preparation Grant from the U.S. Office of Special Education Programs.

**Project PUEDE! (Partnering to Unify Education Services for Dual Language and English Learners, DLL/EL)**

Advancing diversity, equity, inclusion, and belonging requires consideration of each program’s needs and goals first. From that point, programs can adopt responsive strategies. We share our project framework in hopes of inspiring other programs to develop intentional clinical experiences that support graduate students of color. Details of our Project PUEDE! are shared below in Tables 1 and 2.
Table 1

Advancing Diversity, Equity, Inclusion through Project PUEDE!

<table>
<thead>
<tr>
<th>Goal</th>
<th>Definition</th>
<th>PUEDE! realization</th>
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<tbody>
<tr>
<td>Diversity</td>
<td>Representation of various identities and differences</td>
<td>Increase the number of well-trained bilingual and bicultural clinicians who are equipped with the tools needed to create change in the schools that serve DLLs</td>
</tr>
<tr>
<td>Equity</td>
<td>Processes to ensuring everyone has access to opportunities and resources</td>
<td>Infuse systems of support</td>
</tr>
<tr>
<td>Inclusion</td>
<td>Inviting the contribution and participation of all</td>
<td>Create an IPE experience that values students’ varied identities, experiences and backgrounds and creates a learning environment where students see themselves reflected and valued</td>
</tr>
</tbody>
</table>

Our project is an on-going collaboration across the SLP and school psychology programs and is led by a culturally, linguistically and professionally diverse leadership team. The PUEDE! project scholars include six Spanish-English bilingual speech-language pathology and six Spanish-English bilingual school psychology students each year. Students remain on the project for a two-year cycle. Selection for the project is holistic and based on an application that includes a reflection on Spanish language proficiency and essay prompts centered around their commitment to supporting high needs youth, depth and breadth of knowledge base with Latinx DLLs, and experience with collaboration. Students need not identify as a Latinx to participate, although our non-Latinx applicants have demonstrated significant experience with Latinx cultures. Table 2 outlines the systems of support provided, IPE areas addressed, and specific activities our students participate as part of Project PUEDE!.

The overarching goal of Project PUEDE! is to learn and practice highly effective school-based interprofessional collaboration, within our Community of Practice, in the service of Spanish-speaking DLLs which can then be transferred into future practice and leadership activities within and across our professions. To accomplish this, we aim to recruit, retain, and graduate bilingual and bicultural SLPs and SPs fully prepared for interdisciplinary work with DLL/EL with high-intensity needs. To date, we have graduated six bilingual SLP and six SP prepared to serve DLLs with an additional six SLP and six SP scholars currently enrolled. The scholars all speak Spanish fluently and 83% identify as Latinx; the others have either worked extensively in Latin America or had lived experiences in Latinx communities. All graduates are currently employed in the professions for which they were trained in high needs districts serving percentages of DLL/EL students ranging from 40% to 90%. All graduates have passed the California Subject Examination for Teachers (CSET) Spanish examination.
Table 2

*Project PUEDE!*

<table>
<thead>
<tr>
<th>Systems of Support</th>
<th>IPE</th>
<th>PUEDE!</th>
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<tbody>
<tr>
<td><strong>Meaningful Educational Experiences</strong></td>
<td>Shared coursework</td>
<td>Three-hour specialty seminars are held weekly and led by interdisciplinary faculty teaching teams with a focus on supporting DLLs; PUEDE! Seminars count toward elective coursework. Foundations of interdisciplinary service delivery topics include knowledge of models and methods of instructional and curricular practices with DLLs, inclusion models and assistive technology; research and evidence-based strategies for youth with high needs with culturally relevant adaptations; parent and family engagement; in-depth understanding of the cultures from which our students come.</td>
</tr>
<tr>
<td>Shared clinical practicum in local community</td>
<td>Scholars meet weekly for an entire school day to engage in specialized practice at a local elementary school facilitated by an interdisciplinary team with bilingual supervision. Scholars conduct evidence-based interdisciplinary assessment and provide evidence-based intense and responsive interventions. Scholars participate in additional diagnostic experiences with the school district’s Bilingual Support Network.</td>
<td></td>
</tr>
<tr>
<td><strong>Mentors and Emotional Support</strong></td>
<td>Transdisciplinary team</td>
<td>Role models for this project include academic faculty, advisors, clinical supervisors, and a PhD student who are committed to improving practices in the schools for DLLs (58% Latinx; 86% bilingual). Members of the Bilingual Support Network, a transdisciplinary team in action within the school district that includes SLPs, SPs, teachers, and other support personnel, also serve as mentors (100% bilingual).</td>
</tr>
<tr>
<td>Shared Professional Development</td>
<td>Scholars and faculty attend institutes and one professional conference (SLP or SP) together per year.</td>
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<tr>
<td>Cultural Humility</td>
<td>Scholars set personal goals to enhance their bilingual and bicultural communication skills (e.g., Spanish language skills in class and clinical experiences; cultural awareness working with Latinx populations).</td>
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<tr>
<td>Collaboration and consultation skills</td>
<td>Self-evaluation of collaboration and consultation skills with qualitative supporting data.</td>
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<tr>
<td><strong>Financial Support</strong></td>
<td>Support allows for time for shared experiences</td>
<td>Stipends cover the costs of tuition, fees, books; offset living expenses; and support attendance at professional conferences. In return, scholars commit to working in schools that serve DLLs for a minimum of four years.</td>
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</table>
Further, we offer the specialization in bilingual transdisciplinary preparation via shared coursework, joint assignments and collaborative clinical experiences (see Table 2). Performance measures from electronic portfolio submissions documented competencies in all areas. Development of the IPE relationships was supported and documented through the use of a bi-monthly reflection facilitated by the last author and through written documentation. Data will continue to be collected from current and former students on the impact of Project PUEDE! on scholars’ career development, including their use of interprofessional practice and community engagement.

The intersectionality of support systems for the scholars and the IPE experience are the key ingredients to the success of Project PUEDE!. Our belief is that when we employ an equity-minded approach and recognize the value that bilingual, bicultural SLPs bring to our profession, and adequately support them, we will recruit and retain more students from racially minoritized backgrounds. In return, our clinicians will be better equipped to bring awareness of the critical systemic variables that influence DLLs.

Creating Change
To actively remove barriers and end systemic racism in our profession, we must ask tough questions and create change at all levels. We must do more. While holistic programming like PUEDE! is progress, we recognize that it is not simply enough to create an interprofessional experience and support six students a year if we are to create large-scale change in our programs. Moreover, many SLP programs may not have the resources needed to implement such intensive programs. Nonetheless, it is essential that programs ask questions, examine data, and evaluate practices for lasting change that work for them. In Table 3, we share questions that SLP programs may immediately ask to improve diversity, equity, and inclusive practices (adapted from a report from the U.S. Department of Education [2016] focused on advancing diversity and inclusion in higher education). Using these questions, institutions may begin a process of self-reflection. The answers given to each of these questions represent an opportunity to implement changes in their SLP programs.

Speech-language pathology programs have an opportunity to reflect, examine data, try something new, make mistakes, re-evaluate, and do better. Meaningful change will take time. Ideally, active and intentional engagement in this process will ultimately result in better educational outcomes for students from racially minoritized backgrounds. Additional advantages include contributing to a more robust and representative population of SLPs and effective culturally and linguistically responsive interventions for the clients served within our field and across our transdisciplinary work.
Table 3

*Questions to Advance Diversity and Inclusion*

<table>
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<tr>
<th>Focus Area</th>
<th>Considerations</th>
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<tbody>
<tr>
<td>Student Body Diversity and Inclusion</td>
<td>How is the commitment reflected in the institutional or departmental mission statement and strategic plans?</td>
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<td></td>
<td>Does the program consistently examine data, set goals, and evaluate progress?</td>
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<tr>
<td>Institutional Diversity</td>
<td>How diverse is the faculty and administration?</td>
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<td></td>
<td>How are curriculum decisions made?</td>
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<td></td>
<td>Is the curriculum infused with readings and assignments that reflect a commitment to diversity or simply an elective class?</td>
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<td></td>
<td>Do faculty practice inclusive and equity-minded teaching practices?</td>
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<td></td>
<td>Are faculty aware of the equity gaps that exist within their own classes?</td>
</tr>
<tr>
<td>Campus Climate and Inclusivity</td>
<td>How far along are leadership, faculty, staff, and students on their journeys of cultural humility? Is this a regular discussion at faculty meetings?</td>
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<td></td>
<td>Are there mentoring opportunities available for students?</td>
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<td></td>
<td>Do students connect with opportunities outside of the program?</td>
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<tr>
<td>Program Values</td>
<td>What do the clinical opportunities reflect?</td>
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<td></td>
<td>Are all students given placements in diverse communities?</td>
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<td></td>
<td>Do students of color have the opportunity to be supervised by clinicians who look like them?</td>
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<td></td>
<td>Do students receive training in how to work with interpreters?</td>
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<td></td>
<td>Does faculty research include participants from culturally and linguistically diverse (CLD) backgrounds?</td>
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<tr>
<td></td>
<td>Are students engaged in these discussions?</td>
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</table>
Concluding Remarks

To create change, faculty, staff, and administrators must shape an inclusive culture that allows for asking tough questions and evaluating practices to improve diversity and develop equity-minded practices. Creating an intensive, grant-funded project like PUEDE! will not flourish immediately. However, opportunities exist for graduate programs today to foster change. We invite programs to ask questions, listen, examine their own data, evaluate their own data, and engage in action. Programs looking to build in more systems of support could consider matching students with mentors outside of the SLP program (e.g., alumni, professional association mentoring programs), collaborate with entities across campus that can increase students’ systems of support, provide application and tuition assistance, and evaluate the curriculum to enhance the cultural responsiveness of training. Suggested activities include requiring implicit bias training for faculty, staff, and students, requiring coursework in anti-racist practices and cultural humility, circulation of reading lists that reflect diverse topics and non-white authors in all courses, and ensure all students participate in diverse clinical experiences and learn how to work with interpreters. Longer term goals should focus on addressing the questions in Table 3 and could include examining admissions criteria, increasing diversity among faculty and administration, redesigning curriculum, and routinely implement ongoing evaluation of practices. We share our model in hopes of encouraging others to expand their efforts and intentionally build diversity, equity, and inclusion into our SLP educational practices.

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The authors would like to thank the students, teachers, families, administrators at the local elementary school, and the advisory board for being partners in this journey, sharing their expertise, and pushing us all to do better. In addition, the authors would like to thank the Directors of the Schools of Speech, Language, and Hearing Sciences and Counseling and School Psychology at our university for their support of the project.

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