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# Enhancing PhD Preparation through Shared Ideas across CSD Program

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## Enhancing PhD Preparation through Shared Ideas across CSD Program

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#### Session 1492: Enhancing PhD Preparation Through Shared Ideas Across CSD Programs

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**Disclosures:** Elizabeth Crais (Financial: No financial relationships to disclose; Non-financial: Dr. Crais is a member of ASHA's Academic Affairs Board that completed the current study); Lynne Hewitt (Financial: No financial relationships to disclose; Non-financial: Dr. Hewitt is a member of ASHA's Academic Affairs Board that completed the current study); Jennifer Lister(Financial: No financial relationships to disclose; Non-financial: Dr. Hewitt is a member of ASHA's Academic Affairs Board that completed the current study); Jennifer Lister(Financial: No financial relationships to disclose; Non-financial: Dr. Lister is a member of ASHA's Academic Affairs Board that completed the current study); Ruth Bentler (Financial: No financial relationships to disclose, Non-financial: Dr. Bentler is a member of ASHA's Academic Affairs Board that completed the current study).

**Objectives:** Learners will be able to: 1. Discuss reasons for doctoral shortages across CSD programs. 2. Describe identified strategies for successful doctoral recruitment, retention, and program completion. 3. Identify components of their own programs that could benefit from modification.

**Issues Facing CSD Programs:** *CSD Education Survey National Aggregate Data Report (2014-2015)*: 1. Need for CSD faculty exceeds output from CSD programs; 2. 29% of openings went unfilled in 2014-2015; 3. Just about 3/4 (74%) full-time faculty openings filled with PhD faculty (65% with CSD PhD, 8% PhD from other disciplines,12% AuD,14% MS); & 4. 15% filled with part-time personnel with or without a research doctorate.

**Issues Facing CSD Programs:** 1. Percent filled capacity in PhD programs remained stable 2008-2014 at an average of 42%, but most recent year (2014-2015) 62% (hopefully a new trend?); 2. Median number of entering students/program = 2 PhD in Audiology, 3 in SLP, and 2 in Speech Sciences CSD; 3. Total PhD enrollment shows some fluctuation from year to year, but has averaged around 900 in the last 6 years; 4. (*CSD Educational Trend Results From 2008-2009 to 2014-2015; CSD Education Survey National Aggregate Data Report, 2014-2015*).

**Good News for CSD PhD Programs:** 1. Although 50% of doctoral students across all fields do not complete programs & most leave in the first year (Gilliam & Kritsonis, 2006); 2. 97% complete in CSD; 3. Percentage of CSD research doctoral graduates pursuing a faculty position as first employment fluctuated from 41.1% in 2010-2011 to 31.6% in 2013-2014 to 45% in 2014-2015, but research positions doubled and postdocs increased by 1/3; 4. 2014-2015, 42/45 available post-doc positions filled.

**Good News for PhD Programs:** 1. Graduation numbers although steady through 2010-2011 (mean = 124), have risen last 4 years (mean = 161); 2. Regarding PhD Faculty workforce: Percent of early career PhD Faculty increased from 7%, in 2002, to 21% in 2014\*; 3: The percent of PhD Faculty aged 61 and over increased from 23%, in 2002, to 36% in 2014.\* (\*Source: The ASHA Leader, August 2015, Vol. 20, 32. doi:10.1044/leader.AAG.20082015.32)

**Rationale for Current Study:** 1. Positive changes encouraging, but still less than 50% CSD PhD graduates choose academia; 2. Charge ASHA BOD: Identify & showcase an array of PhD educational models that prepare future scientists in CSD; 3. Interested in PhD Coordinator's perspectives on their PhD programs (facilitators/challenges); & 4. Provide guidance to current PhD programs.

**Methodology for the Study:** AAB members: 1. Selected methodology: Interview of PhD Coordinators; 2. Developed question set; 3. Used iterative review and refine approach; 4. Gained input from the ASHA SAB, CAPCSD, and survey experts; 5. Guiding principle not to duplicate annual HES Survey; 6. Interview template set up in Survey Monkey, 7. Interviewed 73/76 ASHA PhD Coordinators; 8. Gathered qualitative information on each program; 9. Interviews conducted February to April, 2016;

**Interview Question Focus:** 1. Important factors in the admission process; 2. Successful admission strategies; 3. Successful retention activities; 4. Information about coursework, teaching and research activities; 5. Unique features; 6. Strategies to encourage students to take faculty and/or postdoctoral positions.

**Results:** Recruitment & Admissions: Highest ranked = Availability of research mentor; 88% of programs assign mentor before admission; Next top five factors (aggregating very important and moderately important): 1. Recommendation letter; 2. Personal statement/writing sample; 3. Identification of research area at admission; 4. GPA; & 5. GRE scores.

**Recruitment & Admissions Factors considered somewhat or not important:** 1. Identified career plans at admission; 2. CSD major; 3. CCCs obtained; 4. Citizenship status; & 5. Mixed ratings: 1. Completion of a research project or thesis; 2. Prior completion of a master's/AuD degree; 3. Availability of funding at admission; 4. Prior research experience.

Successful Recruitment & Admission Strategies (most to least frequently used): 1. Making personal contact (rapid response to emails, good communication throughout admission process, holding open house/recruitment fair, having booths/tables at conferences, encouraging visits/interviews, having students attend classes, faculty demonstrating positive and encouraging attitudes about PhD education); 2. Recruiting from within (encouraging undergraduate & graduate students [MS & AuD] to participate in research; requiring all MS students to complete research activities); 3. Streamlined, integrated, and creative programs (BA/PhD tracks; combined MS/PhD & AuD/PhD programs; part-time study; more flexibility; and interdisciplinary programs); 4. Networking and visibility of faculty in national & international venues; 5. Pursuing funding sources for students (e.g., research or

training grant funding); 6. Implementation of special activities targeting specific groups (e.g., T35 summer research programs, training grants on specific content area).

**Barriers to Recruitment & Admissions** (most to least frequently encountered): 1. Two biggest barriers = availability of funding and a qualified applicant pool; 2. Readiness of some applicants to meet the demands and rigor of PhD program; 3. Faculty/mentor availability; 4. Geography; & 5. Life circumstances of students (leave existing position; balance family, marriage, spousal careers, and part-time jobs)

**Retention Issues:** 65/73 programs reported students leaving program before completion (But we did not specify a time frame attrition). For comparison: *Communication Sciences and Disorders Education Survey National Aggregate Data Report for 2014-2015*, 23/71 responding programs had 29 PhD students leave before completion that year. When compared to "first year" PhD enrollees (176) and number of graduates (156) across programs in the same academic year, the loss of 29 students becomes more significant. Also consider the student and faculty "resources" spent.

**Reasons for Attrition (most to least frequent):** 1. Family/personal (marriage, pregnancy, moving, other family commitments); 2. Student's fit with the program and/or mentor (changing career goals, lack of a good match with mentor, or departure of mentor without adequate replacement); 3. Did not understand what doctoral study entailed. Inadequate academic progress; 4. Physical or mental health; 5. Finances; & 6. Other issues (inadequate advisement).

**Strategies for Reducing Attrition (most to least frequently used):** 1. Increased support mechanisms (e.g., peer, mentor, university-based); 2. Better communication of expectations & what being an academic researcher entails provided at admissions & throughout the program; 3. Enhanced admission process & attention to the student/mentor match; 4. Increased use of guidelines/annual reviews to make sure students are on track & receive regular feedback; 5. Program flexibility (some have shifted to part-time, whereas others have shifted away from part-time as full-time enrollment resulted in higher completion rates); & 6. Increased funding opportunities.

**Grant Writing and Teaching Courses:** 39/73 programs require grant writing course; 35/73 require teaching course. Several others who do not require coursework require students to complete workshops on teaching, engage in a variety of teaching activities, and/or participate in mentoring students. Only 15 programs reported training students for academic life through coursework; usual exposure is seminar series. One example: "[We offer] a variety of 1-credit support courses that undergird the doctoral experience and prepare students for the demands of their careers. Courses include Research Practicum, Dissertation Writing, Social and Professional Ethics, Grant Writing, Scientific Writing, Technology & Applications, & Academic Career Preparation."

Intensity of Teaching Experiences: 85% of programs students typically serve as TA (43% require it); 60% co-teach a course (31% require it); 61% independently teach a course (26% require it).

**Interdisciplinary Opportunities:** 96% programs students take interdisciplinary courses; 86% work on interdis research projects; 84% attend interdis colloquia; 14% co-teach with interdis faculty and/or students. Other Interdisciplinary Opportunities: 57/73 (78%) of programs require PhD students to take courses outside depart. Of 16 programs that do not require outside courses, 14 reported that 93% of their students do so. Varying levels of interdisciplinary experiences (ordered from more intensive to less intensive), programs that: all courses interdisciplinary, have merged CSD program with another discipline, have a concentration in an area, have cross-disciplinary training grants, offer one or more courses students from other disciplines take. Students participate in meetings, conferences, lecture series, writing groups, journal groups, and directed readings.

Unique Program Characteristics (most to least common): 1. Interdisciplinary experiences embedded within program; 2. Offer specialized research experiences (e.g., multiple lab rotations with multiple mentors, positive value of availability of clinical populations, emphasis on clinical research); 3. Innovative curricular approach (e.g., offering specialized training in grant writing, proseminars & professional courses explicitly designed to prepare students for scholarly careers in general, or teaching); 4. Access to medical facilities & institutions; 5. Faculty characteristics.

**Challenges (most to least reported):** Top two = availability of funding and a qualified applicant pool Consortium logistics; 3. Clinical certification challenges; 4. Time to degree completion; 5. Geographic region posing barriers to student recruitment; 6. Expectations of university administrators; 7. Student retention; 8. Limited opportunities for research; 9. Lack of research infrastructure; 10. Bachelor's to doctoral program logistical challenges

**Other Unique Characteristics:** Asked if had joint program (study did not define joint degree, so responses may be varied).19 (26%) reported a joint program (6 characterized as joint degree and 3 as dual degree). Examples: AuD/PhD; MS/PhD; MD/PhD; degree involving another discipline; degree via distance at a remote campus.

9 (12.3%) reported planning one (collaborations with health professions, linguistics, or medicine; bridge program for the AuD/PhD or MS/PhD; possible cross institutional joint program; two clinical doctoral programs). A few programs noted "low productivity" issue with smaller # of graduates, therefore considering joining with other PhD programs on campus or other institutions.

**Successful Strategies for Encouraging Academic or Post-Doctoral Positions:** 1. Collaborating with students; 2. Advising and informing students of academic positions; 3. Faculty mentoring and modeling; 4. Using networking strategies; 5. Culture or expectation of program (17 programs noted all graduates go into academia); 6. Training grant expectations = academic position; & 7. Focus on faculty modeling work-life balance & positive quality of life achieved in academia.

**Successful Strategies for Encouraging Academic or Post-Doctoral Positions:** 1. Collaborating with other universities during PhD training (e.g., joint distance forums, connecting students at conferences); 2. Involvement in teaching opportunities early in

program; 3. Interaction with PhD alumni who return to campus (or Skype) for Q&A sessions with doctoral students; 4. Offering Life in the Academy course or a certificate program in Preparing Future Faculty; & 5. Encouraging involvement in career development programs (e.g., ASHA's Lessons for Success)

**Summary and AAB Recommendations.** Recruitment and Admission Summary: Doctoral education is fulfilling & worthwhile process for faculty, students, & programs, but also time consuming and costly. Although higher than in previous years, 62% capacity for first year enrollment (2014-2015) is still concerning. AAB Recommendations: Emphasis placed on timely & personal contact & multiple interactions with prospective students before admission. Program/mentor inform prospective students of expectations, timelines, & benchmarks of PhD study. Mentor provide timely & ongoing communication with potential students both within and outside institution. Program/mentor provide applicants with detailed information to make informed decisions about research-doctoral study. Programs utilize ASHA resources (e.g., Reward Yourself with a Career as a College Professor brochure) & programs to aid recruitment (e.g., the Students Preparing for Academic and Research Careers [SPARC] Award, the Audiology/Hearing Science Research Travel Award [ARTA], the Student Research Travel Award [SRTA], and the PROmoting the next GENeration of Researchers [PROGENY] award).

**Retention Summary:** Although CSD PhD programs have close to 97% completion rate, understanding why students leave programs before completion is important. One third of doctoral students who leave PhD programs do so because of a lack of "fit" with the program or mentor. Less than half CSD programs rated very or moderately important knowing about prospective student's career plans in admissions. AAB Recommendations: Emphasis on discerning prospective student's plans may help in reducing attrition. Increase motivation of students & enhance support they receive from mentor/s and other faculty. Have consistent mechanisms for monitoring student progress & providing feedback throughout a student's program of study. Programs foster participation in ASHA's mentoring programs designed to aid PhD student retention (e.g., Mentoring Academic-Research Careers [MARC] and Pathways).

**Teaching Summary:** Only about half of programs require a teaching course. Although most students serve as TAs and 1/2 teach independently, required by less than ½ & ¼ programs, respectively. AAB Recommendations: Analyze amount & type of teaching preparation provided to students to best prepare them for academic positions. Have high quality teaching experiences to enhance graduate's abilities to teach effectively & efficiently, thereby enabling them to focus attention & time on their other job responsibilities (e.g., lab set up, research, & grants). Programs foster PhD student & new faculty participation in ASHA programs that foster teaching preparation (e.g., Advancing Academic and Research Careers [AARC], Mentoring Academic-Research Careers [MARC], & membership in Special Interest Group 10: Issues in Higher Education).

**Encouraging Academic or Post-Doctoral Positions Summary:** Promoting academic positions was common. However, less than ½ CSD graduates go on to academic positions. Promoting post-doctoral positions was less common. 22% of graduates take post-doctoral positions. AAB Recommendations: Examine own strategies for preparing & encouraging graduates to obtain & be successful in academic positions. Provide detailed & consistent information about academic careers. Encourage prospective & existing PhD students to participate in ASHA award, mentoring and research education programs.

**Grant Writing Summary:** Just over half of programs require a grant writing course. Increasing demands for grant productivity for CSD graduates who take academic and/or research positions. AAB Recommendations: Consider amount & type of grant writing experiences provided to students to ensure quality preparation. Consider range of options including formal grant-writing course or other innovative approaches & ASHA sponsored programs for grant writing (e.g., Lessons for Success, Pathways, Clinical Practice Research Institute) & grant review training (Grant Review and Reviewer Training). Likely programs should not rely solely on transmission by student's mentor.

Interdisciplinary & Unique Features Summary: Interdisciplinary experiences are valued & frequent. Range of unique aspects reported across programs. AAB Recommendations: Examine current opportunities for students to engage with professionals across disciplinary boundaries. Create systematic & meaningful interdisciplinary opportunities to prepare graduates to seek out &work successfully with colleagues across disciplines.

**References:** CSD Educational Trend Results from 2008-2009 to 2013-2014) http://www.asha.org/Academic/HES/CSD-Education-Survey-Data- Reports; Council of Academic Programs in Communication Sciences and Disorders and American Speech-Language-Hearing Association. (2015). *CSD Education Survey National Aggregate Data Report: 2013–2014 academic year.*; Council of Academic Programs in Communication Sciences and Disorders and American Speech-Language-Hearing Association. (2016). *CSD Education Survey National Aggregate Data Report: 2014–2015 academic year.*; Gilliam, J., & Kritsonis, W. (2006). National implications: The hidden nature of doctoral student attrition. *National Journal for Publishing and Mentoring Doctoral Student Research, vol, 3, #6.*; Gray, (ASHA). Higher Education Practices That Promote PhD Completion. http://www.asha.org/.../Higher-Education-Practices-That-Promote-PhD-Completion/; Nelson, C., & Lovitts, B. E. (2008). *Program environment: 10 ways to keep graduate students from quitting.* www.phdcompletion.org/promising/environmentNelson.asp.

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