THE PH.D. SHORTAGE IN COMMUNICATION SCIENCES AND DISORDERS

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The information that we will be presenting comes from a survey conducted by a Task Force on the Doctoral Shortage, sponsored by Special Interest Division 10. The division created the task force as we discussed how to move from a position of predicting, worrying about, and living with unfilled faculty positions to one of sharing information and strategies to combat the shortage of doctoral graduates in Communication Sciences and Disorders. The Task Force designed a survey to ask questions not only about demographics and changing trends, but also what strategies and program offerings were being used to attract and keep doctoral students. Janet Koehnke chaired the task force; members were Anne Cordes Bothe, Elaine Frank, Julie Scherz, and Sharon Stewart. I served as Division 10 Steering Committee liaison.

Surveys were emailed to 60 programs offering a doctoral degree. Seventeen (28%) were returned; one program reported their degree was not active at this time. None of the responding programs offered distance education. While the return rate would be considered good for some surveys, it causes us to use caution in the interpretation of our results. We realize that the timing for our survey (closely following the survey sent by the Joint Ad Hoc Committee on the shortage of Ph.D. Students and Faculty in Communication Sciences and Disorders) and the open-ended questions may have prevented a greater return rate.

To set the context of a doctoral shortage more firmly, I would like to review some prior Council of Academic Program in Communication Sciences and Disorders' (CAPCSD) presentations and predictions. In the early to mid-1990s, Council Proceedings reflect our growing awareness and concern for the shortage. Mills (1996) reported the results of the Council's 1994-95 survey and stated that the longitudinal

survey data, experiences in our various places of work, and a brief glimpse at some national demographic data predictions “tell us very boldly, ‘Yes we have a critical shortage of doctoral personnel coming to academia, and the problem is complex and pervades all aspects of the profession’.” He went on to say that the first step is recognition, and that we have taken it. The second step, he advocated, was to identify the causative factors. It seems to me that we are still muddling around a bit on this second step.

Wilcox (1998) made two recommendations in "Replacing the Professorate": (1) to adjust admissions' criteria at every academic level to prioritize diversity and research interests, and (2) to increase faculty research opportunities at all colleges and universities. Hochberg (1990) argued for restructure at the undergraduate curricular level to reinvent communication sciences and disorders as a laboratory science. He challenged conference attendees to bring theory and scholarship to the forefront at the very onset of our students’ introduction to the discipline. Smit (1996) addressed the crisis in doctoral education with four recommendations: (1) plant seeds constantly, (2) grow your own, (3) import the raw materials, and (4) import the finished product.

I could add surveys, presentations, and publications; but I would like you to remember these comments and to ask yourselves, what have we done during the past decade to solve this problem? And I challenge all of you to begin finding solutions. Now I will move on to the information gleaned from Division 10’s survey.

Programs responding to the survey were fairly evenly demographically represented with the following numbers from the geographic regions below:

- 2 - New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)
- 4 - Middle Atlantic (Pennsylvania, New Jersey, New York)
- 1 - East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin)

- 3 - West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota)
- 3 - South Atlantic (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington DC, West Virginia)
- 1 - East South Central (Alabama, Kentucky, Mississippi, Tennessee)
- 0 - West South Central (Arkansas, Louisiana, Oklahoma, Texas)
- 1 - Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming)
- 1 - Pacific (California, Oregon, Washington)
- 0- Alaska/Hawaii

We first asked what areas of emphasis are offered for doctoral study and the number of years the degrees have existed. Areas chosen were audiology, speech-language pathology, speech and hearing sciences, and other (which included normal processes and the Au.D.). None of the reporting programs offered a doctoral degree through distance education. Table 1 displays the number of programs responding (of 16), the range and mean number of years the area of emphasis has been offered.

Table 1. Areas of Emphasis Offered for Doctoral Study

Area of Emphasis	Number reported	Years	Mean
Audiology	12/16	1-44 years	26
Speech-Language Pathology	14/16	4-44 years	26
Speech and Hearing Science	10/16	10-44 years	33
Normal Processes	1/16	30 years	
Au.D.	To begin Fall 2002		

Of the 16 reporting programs, 5 programs were for full time students, 1 part time, and 10 programs reported both full and part time students. The numbers of students currently enrolled are shown in Table 2.

Table 2. Numbers of Students Currently Enrolled

Area of Emphasis	Range of # Enrolled	Mean # Enrolled
SLP/Full Time	1-13	5.7
SLP/Part Time	1-12	3.2
Audiology/Full Time	1-12	5.0
Audiology/Part Time	1-3	1.75
Normal Processes	16	

We also asked for employment settings after graduation and the estimated number of graduates over the past two and seven years, but will not report those data today due to the small number of responses to the survey. Instead, I would like to share the survey responses to other, more open-ended questions.

We asked about recruiting methods used to attract doctoral students and asked that programs list the advertising, campus visits, financial incentives, and other methods used. The methods and number of programs that reported using them are as follows:

Advertising

- Website – 13
- Brochure – 7
- Recruit at ASHA Convention and through ASHA ads – 7
- Faculty presentations at various conferences – 3
- Word-of-mouth (i.e., reputation) – 2
- ASHA Guide to Graduate Studies – 2
- CAPCSD conference – 1
- Leadership Personnel Training Grant Advertisements – 1
- "Very little done" – 1

Campus Visits

- Program faculty visited other institutions across the country – 3
- Program faculty visited other institutions in the tri-state area – 1
- Rarely, but a couple of visits – 2
- None (or no answer) – 10

Financial Incentives

- Scholarships and research assistantships – 15
- None – 1

Note: Support ranged from some support for a limited time, to full support of tuition waiver plus an approximately $22,000 stipend per year. Many programs commented on the variety of sources used to pull together financial incentives.

Other (each mentioned by only one program)

- Reduced tuition for supervising

- Opportunities to teach and supervise
- Mentoring program – students admitted only if an appropriate mentor is available
- Stuttering Foundation funding
- Campus visits by students
- Numerous e-mail communications, and interactions during presentations.

The next portion of the survey highlighted barriers to recruiting students. We began by asking respondents to describe institutional barriers. Responses fell into three categories: faculty, funding, and student issues.

Faculty Issues

- Small faculty – there are limited areas of research that can be supervised – 3
- Limited time of faculty – 2
- Weak faculty, lack of experience with research and scholarship; lack of effort in building a decent doctoral program, no selection criteria – 1

Funding Issues

- Funding – 5
- Funding for advertising, time for recruiting – 5
- Lack of lab resources – 1
- Lack of resources to allow students to visit – 1
- Recruiting is a problem due to lack of funds or time – 1

Student Issues

- Students' time commitment and family issues – 1
- Types of students – 1

Student-centered barriers were described more fully in the next question that asked specifically for those types of barriers encountered when recruiting students.

Student-centered Barriers

- Primarily financial – 11
- Time commitment required – 5
- Child care, family issues – 4
- Geographic – 3
- Cost of visit – 1
- Doctoral stipends below what they can earn as clinicians – 1
- Students are not stellar academically. A large number of students are foreign and want full support. Some want distance learning, we do not provide – 1
- Students accepted and then do not attend – 1
- Lack of interest in a research career – 1
- Part time students selected without criteria are weak and border on failure – 1
- Apprehension about their ability to meet academic challenges of doctoral study – 1
- Ties to family and significant others – 1

Next, once recruited, what causes students to stay in a program to completion, or what are the factors that cause them to quit.

Factors related to student completion of a doctoral program

- Commitment to completing the degree – 6
- Mentor relationship – 4
- Interest in departmental research – 4

- Support from faculty and peers – 4
- Interest in an academic position upon graduation – 3
- Dedicated faculty – 2
- Flexible scheduling – 2
- Better employment prospects – 1
- Family support – 1
- Excellent reputation of the faculty – 1
- Peer pressure – 1
- Camaraderie –1

Factors related to students' dropping out of a doctoral program

- Financial – 3
- Family issues – 3
- To attend medical school – 2
- Thought a Ph.D. was an advanced master's degree – 1
- Weren't really motivated to pursue research as a career option – 1
- Unsuccessful on comps – 1
- Competing life circumstances – 1
- Family illness –1
- Counseled out – 1
- Spouse transferred – 1
- Change in goals – 1
- Taking a job before dissertation completion – 1

When asked what respondents considered to be the single most important issue that must be addressed to increase the ability of programs to attract and retain doctoral students, 9 of the 16 respondents replied, "funding." Two other respondents listed high quality mentoring, and one answered, "a larger pool of students wishing to pursue doctoral education."

Respondents had several ideas for how ASHA funding should be spent to maximize our ability to attract and retain doctoral students in the professions, with stipends mentioned most frequently. Other ideas included travel funding, special meetings, mentoring programs, and collaborative initiatives between ASHA, CAPCSD, Special Interest Division 10, and universities.

We also asked program respondents to describe any innovative techniques or strategies they use that they believe contribute to the success of their doctoral programs. They included the following:

- Strong faculty interaction with students.
- Reduced tuition for supervising (costs students only $5.00/credit hour for a limited number of courses per year).
- Leadership Preparation grant from OSERS.
- Flexibility in designing programs.
- Strong and research-oriented faculty.
- Encouraging multi-disciplinary programs.
- Involvement in research throughout the program.
- Emphasis on applied research and evidence-based practice.
- Faculty (and program) visibility at national meetings enhances and promotes the University, school, and its programs.
- Faculty grants and publications promote the program.
- We encourage students with clinical interest to do clinical research.

Finally, we asked respondents to provide any other ideas or information they thought would be useful to the task force in our attempt to understand the factors underlying the doctoral shortage in speech-language pathology and audiology. The answers are reproduced as quotes below.

Perhaps more attention needs to be paid to the Assistant Professor

> situation (such as poor salaries, heavy loads, tremendous stress). Prospective doctoral students sometimes wonder if the Ph.D. is really worth it. Another suggestion came from an Assistant Professor in our program as a suggestion to editors of our journals. She said that perhaps editors could be kinder and gentler for new assistant professors, and provide some mentoring support.
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> Many of our doctoral students are being attracted to jobs outside of academia. Business and industry have become real employment options after graduation. I am not sure how to counteract this trend. Is the appeal of academic life less than what it used to be?
>
> Students with Ph.D. potential need to be identified when they are undergraduates or in their first year in graduate school, and strongly mentored at that point.
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> By and large, the doctoral students graduating from Communication Disorders programs are not sufficiently strong as researchers to compete successfully for NIH funding. This limits their potential for careers in academia. We should make clinical certification more accessible to students in related fields like psychology, engineering, neurosciences, etc. and replenish our faculties by drawing upon this potentially stronger pool of researchers.
>
> The CFY is a problem in that it interrupts graduate training and creates an unnatural division between the Master's and Ph.D.

That concludes the information from our survey. I would like to thank the programs that responded and gave us information and food for thought. I would also like to propose that we now focus on action and find ways each program can maximize doctoral education.