

# Undergraduate Research in CSD Programs: A Solution to the PhD Shortage?

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The professions of speech-language pathology and audiology are experiencing a critical shortage of doctoral-level trained professionals that, in the foreseeable future, will undermine the academic foundation of training programs. Ultimately, this will result in an erosion of our knowledge base and our ability to educate future professionals, and will negatively impact the consumers of our services. This situation appears to have its roots in the recent significant enrollment decline in undergraduate programs, which showed a 51.7% decrease in 1998–1999 (Creaghead, 2002). The reasons for this substantial decline in undergraduate enrollment are not clear, but the bottom line is that we must act now to alleviate this situation before the field sustains irreparable damage.

A number of remedies that potentially may attract

**ABSTRACT:** A possible solution to the doctoral shortage in our field may be to actively involve undergraduates in research. To this end, a survey was sent to Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) member programs. The survey was designed to elicit responses as to the prevalence and types of undergraduate research opportunities in CSD programs. Results were encouraging in that 67% of the responding programs provided undergraduate research experiences, and 64% indicated that such experience may entice students to pursue doctoral-level studies.

**KEY WORDS:** research, survey, undergraduates, PhD

students to major in our field have been discussed (Creaghead, 2002; Scott & Wilcox, 2002). Among these, actively involving undergraduates in research has been suggested with some frequency. The benefits of undergraduate research may include, among others, providing opportunities for student–faculty collaboration; giving students a sense of responsibility, accomplishment, and pride of ownership; and planting the seeds for a lifelong passion for inquiry and scholarship (Klimas, 2003; Williams & Fagelson, 2003). Exposure and involvement in research at the undergraduate level may kindle the excitement of discovery and may serve as a catalyst to stimulate interest in pursuing a career in teaching and scholarship. Enthusiasm for an academic career must be fostered at the earliest possible opportunity in a student's program of study—the undergraduate level. This, of course, involves a commitment on the part of training programs and their faculties. All types and levels of CSD programs have a stake in the doctoral shortage, and all must be part of the solution (Scott & Wilcox, 2002).

What is the current prevalence of undergraduate research opportunities/experiences among speech and hearing science programs throughout the country? How many CSD programs provide such an opportunity, and what is the nature of the scholarship their students are engaged in? To answer these as well as other questions, the authors, a senior speech-language pathology major and his faculty mentor, queried Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) member programs by means of a survey.

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## METHODS

### Procedures

An eight-item survey (see Appendix) was distributed via e-mail to all CAPCSD member program representatives as listed in the current directory of that organization. The purpose of the survey was given in a brief introductory statement. Respondents were asked to reply to the questions by e-mail and were encouraged to make any additional comments.

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## RESULTS

Of the 270 electronically distributed surveys, 80 usable responses were obtained, which constituted an almost 30% return rate. The responses, as well as comments to each item of the survey, were as follows:

1. Does undergraduate research experience serve as an effective catalyst for students to pursue doctoral-level studies?

Yes: 64% (51)

No: 23% (18)

Maybe: 13% (11)

Those who said “no” or “maybe” felt that a student is either motivated to pursue a doctorate or not, and that undergraduate research would have little or no bearing on that student’s decision. Also, some felt that the difference in earnings versus the time in school and workload does not entice many people to pursue a PhD.

2. Does your department currently offer a program through which undergraduate students can get involved in research projects?

Yes: 67% (54)

No: 33% (26)

3. Is this program funded? If so, how?

Yes: 50% (40)

No: 50% (40)

Approximately 50% of the “yes” answers noted that most funding is provided by mentoring faculty members. Some grants are available through the American Speech-Language-Hearing Association, SILO grants, SCICU grants, or the McNair program. One program set up a \$1000 competition, funded by the faculty, in hopes of getting more students interested in research. One suggestion from some of the “no” respondents was to give academic credit hours in lieu of a paid research experience.

4. If you have such a program, how many students have participated in it over the past 2 years?

Mode: 2

Mean: 6.48

Range: 1–22

5. If you currently do *not* offer such a program, do you plan to institute one within the foreseeable future? If so, how soon?

Eighty-nine percent of those who responded to this question said no due to a lack of funding or a believed lack of interest on the part of students wishing to partake in such a program. Some have programs available at the graduate level but have no interest in starting one at the undergraduate level. Of those who said that they were going to institute such a program, the starting date ranged between 1 and 3 years.

6. What type(s) of research are your undergraduates engaged in?

A wide variety of answers was given to this question. Most common were “assisting a faculty member in research” (27%) and “collecting data” (27%). Others included taking on a research project from start to finish, including giving a presentation; attending conferences; conducting web-based research; writing a thesis; and performing clerical/data entry work.

7. Would you be interested in knowing the results of this survey?

Yes: 95% (76)

No: 5% (4)

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## DISCUSSION

Based on the results of this survey, it is encouraging that the majority of the respondents (67%) indicated that their program offers research experience to undergraduate students and that they see the experience as a catalyst for students to pursue a doctoral-level education (64%). Although only 50% of these programs were funded, the comments reflect a genuine commitment on the part of faculty to contribute to the viability of student research. The most frequent reply to number of students participating was 2, although one program had as many as 22. Expanding research opportunities to more students seems to be in order which, of course, depends on program size, faculty interest, and funding sources. The vast majority (89%) of the programs that currently do not offer research involvement to their students do not plan to do so in the future. This is somewhat discouraging, and perhaps administrators and faculty of these programs should be encouraged to reexamine this issue. The results of this survey, which 95% of the respondents were interested in receiving, may facilitate this process. Finally, the vast number of the types of research undergraduates are engaged in appears to be in assisting faculty members (27%) and data collection (27%). Thirteen percent of the responses indicated that the student was involved from start to finish of a study, which is commendable. Students who design, fully execute, and disseminate a research project learn to appreciate the excitement of discovery and the rewards of scholarship.

We are encouraged by the responses to the survey, which basically reflect a positive attitude of CSD programs toward the merits of undergraduate research. Those who do

not presently have such a program should reconsider and perhaps take the initial step toward implementation, if only on an experimental basis. We fully realize that student research is not the only solution to the critical shortage of doctoral-level trained professionals in our field, but it could be a promising step in the right direction.

We deem it appropriate to conclude this paper with a statement by the CSD senior who coauthored it. It reflects the opinions expressed by other undergraduate students mentored in research by the faculty author:

I am a senior at Kent State University in the School of Speech Pathology and Audiology, and recently took part in a survey that asked department heads of other universities their thoughts on whether or not undergraduate research projects would lead to an increase in students pursuing their PhDs. As a student who contemplates how much education I will pursue, I found the assignment of interest, and believe that partaking in this assignment has brought me closer to deciding to pursue a doctorate degree. It was a good experience for me, to get "hands on" with a research project, and most interestingly to me, it was a project pertaining to research.

Despite receiving mixed opinions on whether a research project at the undergraduate level would be of any consequence, it is my opinion that it has indeed furthered my interest in research. I am not saying that this project alone has been the sole determiner for me, but it has served as a catalyst for wanting to be involved in the pursuit of future projects. I feel that there must be some interest on the student's part originally; this sort of project would probably not influence someone who has no desire to go further than a bachelor's or master's degree.

However, in summation I believe that research projects at the undergraduate level could certainly make the difference to someone who is "on the fence," and propel some students to go further in regards to their education.

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## APPENDIX. SURVEY

Dear Colleague,

As you know, our profession is experiencing a significant shortage of doctoral-level trained personnel. The impact of this lack of current and potential faculty members will have profound negative consequences on the research base of the profession and the survival of speech and hearing science programs. It has been postulated that exposing undergraduates to a mentored research experience may entice some of them to ultimately pursue a career in higher education.

We have constructed a brief survey designed to obtain data on the prevalence and types of undergraduate research experience available in training programs. Please take a few moments and respond to the questions below and make additional comments as you deem fit. We are looking forward to your reply.

Thank you!

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### Undergraduate Research Survey

Please respond to the following questions by replying to this e-mail.

1. In your opinion, does an undergraduate research experience serve as an effective catalyst for students to pursue doctoral-level graduate studies?
2. Does your department currently offer a program through which undergraduate students can get involved in research projects?
3. Is this program funded? If so, how?
4. If you have such a program, approximately how many students have participated in it over the past 2 years?
5. If you currently do **not** offer such a program, do you plan to institute one within the foreseeable future? If so, how soon?
6. What type(s) of research are your undergraduates engaged in (survey, case studies, empirical research, etc.)?
7. Would you be interested in knowing the results of this survey?
8. Additional comments:

THANK YOU!