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SIGnatures: Undergrad Today, CSD PhD Tomorrow

Special Interest Group 10, Issues in Higher Education

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What can we do to develop more undergraduate students as researchers? Expand our models of undergraduate research and send the students to our meetings, such as ASHA's annual convention.

It goes without saying that we need to maximize research productivity in communication sciences and disorders to grow the evidence base for our practice. However, this task is not easy because of the shortage of doctoral-prepared CSD scholars, as noted in a 2008 joint report of ASHA and the Council on Academic Programs in Communication Sciences and Disorders.

The professions need to recruit more students into doctoral training—to meet current and future teaching demands in CSD departments and to conduct research to inform evidence-based practice and improve client outcomes. Indeed, ASHA has stated that developing new researchers should be a top priority.

In an effort to fill this need, CSD faculty often try drawing more graduate students into the doctoral pipeline by involving them in research projects. Student-produced and faculty-mentored thesis and capstone projects often become published work, potentially putting students on a research path.

However, not enough of our graduate students are interested in doing research. Why? Potential student researchers may not recognize the rewards of doing research. To some, it may seem pretentious to envision themselves in the role of researcher.

One possible way to address this issue is to get students started earlier with research—in their undergraduate years. Indeed, research indicates that conducting research as an undergraduate can act as a catalyst for pursuing doctoral-level studies (see sources online).

Beyond this outcome, undergraduate research experiences benefit students in other ways, research indicates, by:

- Bolstering their comprehension of content within courses.

- Helping them develop collaborative relationships with faculty.
- Increasing their understanding of specific areas of interest within CSD.

- Developing their aptitude for conducting data-based research.

Traditional mentoring and beyond

In the past, undergraduate research has been done as small individual projects conducted by a select few outstanding juniors or seniors. These projects are expected to be original, independent research—completed in one year under the mentorship of a faculty adviser. They typically include proposing a research question, designing a research study, obtaining Institutional Review Board approval, collecting and analyzing data, and writing up the research results.

Although the sole mentorship model is certainly effective, there are a broad range of other opportunities for involving undergraduates in research—ways that allow more students to participate and consume less of their time. In these models, students often contribute to only a part of a research study. A faculty member's research program often involves large studies that can be assigned to students and done well with appropriate training and oversight. And when undergraduates contribute to team efforts, they can begin individual projects earlier than usual—sometimes as early as the freshman or sophomore year.

Specific ways undergraduates can contribute to larger, ongoing projects are:

- **Conduct a literature review and write a summary** to aid in the eventual write-up of the project. This process helps undergraduates gain experience searching for, reading and interpreting published research.
- **Perform prescribed tasks in data collection or analysis.** Through these tasks, undergraduates can help graduate students complete their thesis work, and at the same time receive mentoring.
- **Replicate studies.** Students can select or be assigned a published paper and address the same question, conducting either an exact replication with the same procedures or proposing some variations to the design. Through such a practice, students are relieved of the burden of finding an original research topic but still get to learn about design, experimental procedures, data analysis, data interpretation and writing up the project.

Experienced researchers often think that data collection and measurement can be dull. However, early-stage students often do not share that view and are instead pleased to join the team and learn from experienced researchers. Undergraduates can benefit from attending laboratory meetings or just being in a laboratory where they meet others and discuss ongoing research projects. They should also be encouraged to attend the research team's social functions and go to meetings and conferences and help present poster sessions.

ASHA's push for undergrads

Speaking of conferences, ASHA's annual convention has seen a notable increase in undergraduate researcher attendance—a result of ASHA programs such as PROmoting the next

GENeration of Researchers, or PROGENY. This program promotes undergraduate research by providing students with mentorship and support to drive continued research efforts. Undergraduate researchers are eligible if they are first authors on convention poster presentations. Once signed up, they pair with a faculty researcher, who attends the student's poster presentation, participates in discussions of the student's research project, and provides information about academic and research career options in the field. Thirty-eight students participated in this program in 2012, including:

- **Lauren Zanfardino** (Iona College), "The Use & Subsequent Efficacy of MLU in Clinical Choices."
- **Leah Craft, Holly Forst** and **Rebecca Schulz** (University of Wisconsin-Eau Claire), "Instructional Strategies for Facilitating Literacy in Children Diagnosed With Autism."
- **Hilary Sandberg** (Old Dominion University), "Rehabilitation of Listening in Noise: A Case Study in Aphasia."
- **Brittany Frazer** (Bowling Green State University), "Phonation vs. Collision Threshold Pressure: A Modeling Study."
- **Kathryn Young** (Bloomsburg University of Pennsylvania), "Greetings: Video Social Stories Via iPad for Children With Autism."

For a comprehensive list of recent PROGENY participants and their research projects, go to the PROGENY page.

Undergraduate students also are eligible for other ASHA programs, including the Students Preparing for Academic and Research Careers Award and the Student Research Travel Award. Undergraduate research provides exciting learning opportunities for students and can vary and enhance the teaching approaches of undergraduate faculty. Undergraduate research experiences will continue to be enriched through faculty collaboration and discussion about new ideas, greater support, and additional strategies for undergraduate research mentoring.

Author Notes

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Additional Resources

We recommend

Where Have All The PhDs Gone?
Susan Boswell, The ASHA Leader, 2001

NIH Initiatives Seek to Enhance Biomedical Workforce, Big Data Capabilities

Apply Now for a Mentored Teaching and Research Award

The ASHA Leader, 2019

Apply Now for a Mentored Teaching and Research Award

The ASHA Leader, 2018

Apply for a Mentored Teaching and Research Award

The ASHA Leader, 2020

Academic-Research Career Mentorship Enrollment Opens Aug. 4

The ASHA Leader, 2016

GenomeWeb, 2012

Writing 'between-the-six': Mentorship, distance and the co-construction of dissertation research

Jessica Célèste Kee et al., Visual Inquiry, 2016

Exhibiting co-mentorship: An exploration of a mentor/mentee relationship in academe

Dianna Huxhold et al., Visual Inquiry, 2016

Regenring… visual lives

Taylor et al., Journal of Writing in Creative Practice, 2018

Exact Sciences to Acquire Genomic Health for $2.8B; Q2 Revenues Rise 94 Percent

Precision Oncology News, 2019