

**Division of Speech and Hearing Sciences**  
**Department of Allied Health Sciences**  
**University of North Carolina at Chapel Hill**

**Graduate Program Review, February 14-15, 2002**

**Report of External Review Team**

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**PROGRAM OVERVIEW**

The Division of Speech and Hearing Sciences (DSHS) is part of the Department of Allied Health Sciences in the School of Medicine. The primary mission of DSHS has been the preparation of Master's students who are prepared to work as speech-language pathologists (SLPs) or as audiologists. The graduate programs have been in operation since 1969. For the period of 1997 to 2000, DSHS enrolled an average of about 40 students in its Master's program. Other Master's programs in the Department are in occupational therapy, physical therapy, and rehabilitation counseling. The

division offers only four courses at the undergraduate level, and these are intended largely to prepare students who may apply to the Master's program.

The teaching mission, and perhaps the culture of the Division, will change substantially in the fall of 2002 when DSHS launches two new doctoral programs, the Doctor of Audiology (Au.D.) and the Ph.D. The former is a response to a national move toward a doctorate as the clinical entry degree in audiology (as discussed in more detail later in this report). These two new programs are being developed with essentially no additional resources. Although the Master's degree in audiology will be phased out as the Au.D is established, the latter requires more resources than the former and is not a simple substitute in curricular planning or faculty workload. In the future, DSHS will offer the Master's degree in SLP, the Au.D. in audiology, and the Ph.D. focusing on communication disorders in early childhood. The Department offers only one other Ph.D., an interdisciplinary program in Movement Science, based in the Division of Physical Therapy.

Workforce studies indicate that the statewide need for SLPs will be essentially flat but that some growth will occur in the need for audiologists. These projections cannot be made with complete certainty, however, as some studies at the national level have projected an increased need for SLPs in response to increases in the aging population and the high incidence of communication disorders in children who receive aggressive medical care for life-threatening conditions. The need for Ph.D. graduates in communicative disorders is strong. In fact, a joint committee has been formed by the American Speech-Language-Hearing Association (ASHA) and the Council of Academic Programs in Communication Sciences and Disorders (CAPSD) to address a situation

that has been called a crisis in Ph.D. preparation. With respect to need, there could hardly be a better time for the inauguration of a Ph.D. program.

DSHS is well positioned in its interdisciplinary activities, and it is clear that the members of the division have established productive relationships with other units on the UNC campus and with various community agencies. These relationships are important, even critical, to the division's ability to accomplish its teaching and research missions. Particularly notable are the division's collaborations with the Frank Porter Graham Child Development Center, the UNC Clinical Center for Development and Learning, UNC hospitals, and UNC Dental School's Craniofacial team. These are resources of very high quality. The personnel are talented and productive, and the facilities are well-equipped.

Previous evaluations of DSHS were conducted in 1992 (Graduate School Self-Study/Site Visit) and in 1994 (ASHA/CAA Accreditation Site Visit). These evaluations identified several important strengths and also made recommendations for program enhancement. Recommendations common to the two evaluations were in the general areas of: (1) improvements in research programs, (2) strengthening of the neurogenics area, and (3) development of a hearing aid dispensing program. The Division has responded positively to the recommendations and, within the limits of its resources, has made substantial progress.

## **CURRICULUM**

### **Au.D Curriculum**

To provide students with the best possible background in basic and clinical sciences related to hearing and hearing disorders, the University of North Carolina proposes that the current master's level training program in audiology be updated to a professional doctorate in audiology (Au.D). The primary objective of the Au.D program is to produce audiologists who are functionally competent to provide a wide array of diagnostic and rehabilitative services associated with the practice of audiology. To this end, the curriculum plan for the Au.D does offer a wide array of clinical courses that should prepare audiologists to become adequate clinicians. The curriculum is consistent with the mission of the program and with the understanding of the current and future needs of the profession. The location of the audiology program within an allied health medical center complex will no doubt offer significant clinical experiences for students and offer a diverse patient population—the program does a good job of interfacing both service and academic goals. The sequence of courses is set up so that fundamental classes are provided as early as possible in the students' training to provide an adequate foundation for building clinical skills. Moreover, it appears that clinical experience is implemented relatively early in the program. Although students will obtain clinical experience at an early point in their academic careers, they also will be introduced to other topics in the classroom prior to actual clinical experience in those areas. Topics related to advanced clinical skills and professional issues (business and financial management in health care settings) will be covered in the coursework near the end of the program.

A listing of the overall strengths and projected challenges/needs for the program with regard to curriculum is proffered below.

Strengths:

- The Au.D curriculum builds on an already strong academic program in audiology.
- The curriculum includes coursework that embraces some of the newer developments in audiology including professional issues in ethics, health systems and financial management, balance mechanisms and vestibular assessment, cochlear implants in children, and advanced auditory-verbal therapy.
- The curriculum offers a wide array of clinical courses.
- The availability of strong basic science and clinical faculty within the University of North Carolina provides the potential for a solid infrastructure on which to build a doctoral-level audiology training program.
- In an attempt to provide a higher level of clinical preparation required for doctoral-level training, the audiology faculty have established very close ties to other clinical professions and to the medical school. In fact, the division has access to some truly outstanding basic and clinical scientists who are willing to support the program by teaching courses in the curriculum and by providing clinical opportunities to students.

Challenges/Needs:

- It would be desirable to enhance the curriculum by adding three to four additional courses in the basic sciences (e.g., medical neuroscience, gross anatomy, microbiology, pharmacology, neurobiology). The majority of these additional

courses could be taken in other divisions or departments outside of the audiology program and would benefit the students by providing an interdisciplinary component to the program.

- When one considers the numbers of doctoral-level faculty in audiology within the division and the fact that two new doctoral programs are to be implemented in the fall, the workload for audiology faculty seems overwhelming—hence, the importance of developing supplemental courses to the curriculum from other divisions and departments. Moreover, it will be advantageous for the faculty to take full advantage of such talents as Drs. Hall and Robbins.
- The Au.D Program will require the development of a clinical facility for students to obtain their basic practicum experiences. It is not possible to develop a viable, state-of-the-art Au.D program without having one's own clinical facility. This is essential to the development of a patient base that is needed, not only to train professional doctorates, but also to obtain research data for the Ph.D program.
- The program may wish to develop criteria for identifying appropriate practicum sites to be used by the program for student placement.
- The program needs to develop a structured practicum sequence to be followed by students.
- The Division may want to consider additional approaches that can be used to supplement the learning process beyond the traditional classroom and practicum opportunities. Examples may include: a guest lecture series, the implementation of problem-based learning, distance learning, and the utilization of some of the

educational opportunities proffered through the Department of Otolaryngology (e.g., grand rounds, clinical rotations).

- The program may wish to review the skills and competencies outlined by ASHA to practice the profession and then check to ensure that each competency has been addressed within the proposed curriculum.

### **The Ph.D. Curriculum**

As mentioned in the opening section of this report, there is strong evidence of a national shortage in Ph.D. personnel in the fields of speech-language pathology and audiology. The two major professional organizations in the field (ASHA and CAPCSD) have joined forces to develop solutions for the undergeneration of Ph.D. graduates. It is likely that the Division will prepare highly trained doctoral students in the area of communicative disorders in children, and it is also likely that these graduates will find suitable employment as faculty members. Three subspecialties are identified for the Ph.D.: Infant and Toddler Specialization, Autism Specialization, and Hearing Impairment Specialization. The plan to begin the Ph.D. program with a specialty in children's communication disorders is prudent, especially given that (a) no new resources will be given to the Division to support the Ph.D. program and (b) most faculty have only limited experience with doctoral students. (or for that matter, with master's theses). The specialty focus builds effectively on current faculty strength and also seems well suited to likely employment possibilities for the graduates.

Another advantage of the Ph.D. program is that it should enhance research activities within the Division. High quality doctoral students should bring an appetite for research experiences and the faculty should find considerable fulfillment in working with

these students. But a successful Ph.D. program also requires a substantial investment of faculty time and energy. Faculty may find themselves challenged to mentor Ph.D. students as they meet their other responsibilities, which are heavy and will not decrease.

#### Strengths:

- The preeminent strength of the Ph.D. program is a stable and competent faculty who have demonstrated their ability for scholarly productivity despite heavy teaching and committee obligations.
- The faculty are inspired and determined to move the Division to new levels of teaching and research.
- The faculty have developed interactions with other units that will be a strong foundation for a doctoral program.
- The Department of Allied Health Sciences has the talent and other resources to buttress the new Ph.D. program.
- The focus of the new Ph.D. program is broad enough to attract students but narrow enough to avoid taxing the limited resources of the Division.

#### Challenges/Needs

- The faculty are inexperienced in directing Ph.D. dissertations (not one was directed by a Division faculty member for the period of 1997-2001).
- The specialization areas of Infant and Toddler Specialization, Autism Specialization, and Hearing Impairment may be narrower than needed for the new Ph.D. program. It is not clear that any of these specializations are actually essential, especially given that the sample Ph.D. curricula are



composed largely of Master's level courses (Appendix C of the Self Study Report). Given the limited number of doctoral courses and the lack of new resources to support the Ph.D. program, it may be advisable to construct a broad curriculum in communication disorders in early childhood and let the dissertation, independent studies, and guided research provide the specialty training.

- As noted elsewhere in this report, the Division faculty have very limited extramural grant support of research. An important goal is to increase the level of extramural support, to enhance research productivity, to supplement the facilities and equipment needed for research, to support the training of Ph.D. students, and to serve as a model of grant preparation and conduct of research for students enrolled in the Division.

### **Overall Assessment of the Faculty**

The Division faculty provides a solid base for these programs. Audiology and speech-language pathology faculty enjoy an excellent cooperative relationship. The Chair of the program, Dr. Jack Roush, is nationally recognized for his administrative prowess, his scholarly productivity, and his leadership within the audiology community. Other faculty in the Division are also outstanding and have excellent reputations at the national level. Together, the faculty have considerable potential for conducting research and for growing their research programs.

Strengths:

- The Division has strong leadership and a cohesive and broadly based faculty.

- The Graduate Program in Audiology and Speech-Language Pathology is nationally recognized, in large part, because of the high quality of their faculty. According to students, faculty are readily accessible and are considered good teachers.
- There appears to be excellent mentoring in the division—that is, senior faculty work well with younger faculty to assist them in decision-making relative to teaching, research, and professional activities.
- The clinical faculty involved in administering the speech and hearing clinics, arranging practicum sites, and supervising students are outstanding. Again, the students enthusiastically endorse the clinical staff members of the division.

#### Challenges/Needs

- Future additions to the faculty, especially in audiology, will be important to the long-term success of the two doctoral programs.
- There is a need to identify a single faculty member to serve as the go-to person for the Au.D Program.
- The faculty need a focused effort on attracting extramural funds to support students. A variety of public and private sources need to be considered. This will be necessary to attract high quality students in the numbers that will be necessary to justify the program. Revenues from an expanded clinical service could be a possible source for funding of students in the future.
- When both doctoral programs are implemented in the fall there will be considerable pressures placed on the audiology faculty to fulfill the varied

responsibilities associated with these programs. Again, the need to consider additional faculty for the future seems desirable.

- It is recommended that the program develop additional incentives for existing clinical supervisors to pursue the Au.D.
- Research funding from the faculty as a whole is minimal. Faculty will need to develop a strategic plan for identifying specific goals and objectives of a research program and then develop strategies for achieving those goals.

## **STUDENTS**

### **Discussion Session with Current and Former Students**

The External Review Team met with approximately twenty current and former students from the Division of Speech and Hearing Sciences. There was good representation from students in both the audiology and speech and language pathology (SLP) programs. The open discussion addressed a wide range of topics, ranging from student satisfaction with their educational track to specific aspects of their curriculum.

The students and alumni were overwhelmingly positive about their educational experiences in the Division of Speech and Health Sciences. The students were enthusiastic, articulate, engaging, and perceptive. When they were asked to identify the strengths in their program, several themes emerged consistently during the discussion. These included:

- Faculty are the major strength of the program.
- Advising and mentoring for students are readily available and valued.

- The wide variety of experiences available in the various practica is excellent.
- There is a nice balance between assigned and selected practicum experiences.
- Students receive clinical “hands on” experiences in their first semester of study.
- Strong support is available for students who are balancing families with graduate study.
- Alumni felt they competed very well in the job market.
- Students felt their voice was heard and valued by faculty.

When asked to identify areas for improvement, only a few areas emerged. These were:

- SLP students would like to have a full-time clinical experience during their last term of study, similar to what the audiology students have had; this would be highly valued and would help with finding first positions in the marketplace.
- The 3-track system, or emphasis areas, in SLP was viewed as problematic; students would prefer greater flexibility in selecting courses across emphasis areas to prepare for a variety of practice roles and opportunities. Some students expressed confusion and anxiety about the selection of a track early in their Master's program.
- Students would like to have more content on counseling.
- Audiology students identified the need for a capstone course.
- Audiology students suggested that some coursework was not appropriately sequenced.

- Some students expressed concern that they were required to take too many courses to meet degree requirements.

Overall, the discussion with students and alumni was very positive and supported the data presented in the Self Study Report.

### **Review of Student Data from Report**

Student data presented in the Self-Study Report indicate that student applicant pools are solid and competitive. The major quantitative indicators are strong in terms of undergraduate GPA and GRE scores. There is a nice blend of resident and non-resident students in each cohort and they received their undergraduate education at a variety of public and private institutions. The quality of both applicants and enrolled students remains consistently high.

The Division faces the common challenge of having to increase diversity in both the applicant pool and enrolled students. The diversity challenge includes both students from underrepresented racial and ethnic minorities as well as gender. The number of students from underrepresented groups remains consistently small. It is recommended that the faculty develop a strategic plan with several specific strategies and initiatives to address diversification of the student body. Both short and long-range strategies are required. Specific short-term strategies suggested include intensive marketing and recruitment initiatives at historically black colleges and universities (HBCUs) in North Carolina, development of one or two partnerships with HBCUs that can serve as a feeder institution for applications to the Division, and intensive recruitment initiatives with undergraduate students of color and males at Chapel Hill and NC State. These strategic initiatives could be extended in the Southeast U.S. after a couple of years.

While all disciplines face these same challenges, the strengths of the academic offerings and the attractiveness of the career opportunities should provide advantages in the recruitment market for students from underrepresented groups.

## **LEADERSHIP, ADMINISTRATIVE SUPPORT, FACILITIES AND EQUIPMENT, INSTITUTIONAL RELATIONSHIPS**

One of the strengths of the Division is that it has strong and effective leadership through its Director, Dr. Roush, and through the Chair of the Department, Dr. Lee McLean. Both of these individuals are forward-looking, resourceful, and highly committed to the faculty, staff, and students. The administrative talent augurs a strong future tied to carefully specified goals. Administrative support appears to be strong and is well justified by the effective and efficient management of the Division and the Department.

Facilities and equipment are adequate to support the current activities of the Division, although these may be stretched to meet the needs of the two new doctoral programs. A particular concern is the planned closing of the Division's Speech and Hearing Clinic as the Division moves to the new facility. It is a powerful advantage for a training program in speech-language pathology and audiology to have its own clinic, and any decision to abolish an in-house clinic should be made only after a thorough examination of the likely consequences.

## **THE FUTURE**

### **The New Doctor of Audiology Degree (Au.D.): A Perspective**

The scope of practice in audiology has expanded substantially since the 1960's when the master's degree was established as the entry level degree. The rate of this expansion has accelerated over the past decade as technological and research advances have transformed audiology practice into a highly specialized endeavor requiring unprecedented levels of knowledge and skill.

In response to the many internal and external forces, university preparation programs have made attempts to modify their curricular offerings accordingly. However, because of the finite time frame of a two-year master's degree program, the addition of more coursework and practicum opportunities has been limited. Consequently, the preparedness of graduates has become a major concern of many professionals in the field. Both the depth and the breadth of educational preparation have been called into question, leading many individuals and professional organizations to the conclusion that a master's education is no longer adequate.

In national conventions, topical conferences, and university faculty meetings throughout the country; in published articles, editorials, essays, surveys, list serve exchanges, and professional discussions at every level; in all these forums, the debate over whether to upgrade audiology education and its culminating clinical degree has dominated the dialogue. For more than a decade students, recent graduates, experienced professionals, and educators have been engaged in this discussion. As might be expected concerning an issue of this magnitude and complexity, some individuals in the field remain unpersuaded that such sweeping change is desirable or

necessary; other persons regarded as essential to the future of the profession and still others are equivocal about the matter. Notwithstanding this broad range of individual viewpoints, every major audiology professional organization has supported or officially endorsed the doctorate as the entry-level degree requirement. Included in this group is the Academy of Dispensing Audiologists, the organization that spearheaded the Au.D. movement; the Academy of Rehabilitative Audiology; the American Academy of Audiology and its many state affiliates; the Military Audiology Association; the American Speech-Language-Hearing Association; and the Educational Audiology Association. The Department of Veteran's Affairs, the largest employer of audiologists has also offered tangible support for the entry-level doctorate through funding and training initiatives.

In the course of deliberations carried out by organizational governing boards and committees, significant turning points were reached in 1992 and 1993 when successive resolutions in support of the entry-level doctorate were passed by the American Speech-Language-Hearing Association's legislative counsel. Pursuant to the 1992 resolution, the ASHA Counsel on Professional Standards modified professional certification standards to permit holders of graduate degrees including clinical and professional doctorates to be awarded the Certificate of Clinical Competence in Audiology. In addition, the Counsel on Post-Secondary Accreditation, now the Counsel for Higher Education Accreditation, granted authority to the ASHA Educational Standards Board to accredit clinical and professional doctorate programs. These actions enabled universities to begin offering entry-level doctoral programs with the assurance that their programs could be accredited and their graduates certified. In a



key move, ASHA, on behalf of the Standards Counsel, commissioned the Educational Testing Service to conduct a comprehensive skills validation study for the profession of audiology. The contents of this job analysis survey were based on the input of subject matter experts in the field, then designed to find out what entry-level practitioners need to know and be able to do in order to carry out their job responsibilities independently. The results of this outcome-based study were compelling. In brief, three groups of survey respondents (educators, supervisors of clinical fellows, and practicing audiologists) agreed on what knowledge and skills are important for independent entry-level practice. These groups agreed also that the knowledge and skills they identified as being important should be learned in school not after graduation.

After considering these data along with other information collected, the ASHA Standards Counsel announced its decision to modify audiology certification standards. Specifically, a doctoral-level degree for certificate applicants would be required while practitioners holding a valid certificate could continue to practice with a master's degree. New standards were subsequently drafted, published for widespread peer review, discussed in convention forums, and adopted in September 1997. Hence, the need and rationale for the development of a professional doctor of audiology program is clearly justified. Moreover, in our view, the University of North Carolina program presents a good plan for implementing such a degree.

### **The Ph.D. Program**

This new program carries potential benefits to the Division and the Department, but it also will increase the burden on a faculty that is already shouldering a substantial workload. The Ph.D. program should enhance research activities within the Division,

given that high quality doctoral students bring an appetite for research experiences and the faculty should find considerable fulfillment in working with these students. But a successful Ph.D. program also requires a large investment of faculty time and energy. Faculty may find themselves challenged to mentor Ph.D. students as they meet their other responsibilities, which are heavy and will not decrease.

The preeminent strength of the Ph.D. program is a stable and competent faculty who have demonstrated their ability for scholarly productivity despite heavy teaching and committee obligations. They also have developed interactions with other units that will be a strong foundation for a doctoral program. The primary challenges are: developing a program without new resources, instilling a culture of doctoral education, and designing a curriculum that ensures suitable breadth and quality.

### **The Master's Program in Speech-Language Pathology**

The Master's program in Speech-Language Pathology is well established and apparently smoothly running. This is a major advantage as the Division develops two new doctoral programs. But academic programs always require close attention from faculty and even though the Master's program will not be substantially altered in the near future, this program will continue to demand a large commitment from the faculty. As mentioned earlier in this report, the loss of the clinic could prove to be damaging to the Division as it seeks to meet its obligations in preparing students. Although some programs in SLP and audiology manage to do without an in-house clinic, their success depends critically on external resources that are controlled by other parties.

## **Outlook: A Summary View**

The Division outlines a number of areas of accomplishments and develops areas in need of future development. Some of the more important future developments include the need to develop more extramural funding, the need for the development of a clinical facility, the development of formative assessment tools consistent with the new accreditation standards, the need for greater diversity within the student body, and the expansion of the adult neurogenic area. All of these objectives are worthy and important, however, there is major concern about their ability to achieve so many objectives given the implementation of two major programs without adding faculty to the division. Moreover, it appears that the division has not had any major strategic planning session that specifically outlines goals and objectives to be accomplished over the next five to seven years and strategies to achieve these goals. Such a plan is critical to the development of the future.

Nevertheless, there is room for optimism within this fine program. The faculty are talented, energetic, enthusiastic, and willing to go far beyond the traditional workload to make their program better. The future seems very bright.

Respectfully submitted

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(For the External Review Team)