

**DEPARTMENT OF AUDIOLOGY & SPEECH-LANGUAGE PATHOLOGY
ACADEMIC DEPARTMENT REVIEW**

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DEPARTMENT OF AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY ACADEMIC DEPARTMENT REVIEW

The purpose of this report is to summarize the findings and recommendations of the review of the Department of Audiology and Speech-Language Pathology in the David O. McKay School of Education. The members of the internal review committee have conducted interviews with the department chair, faculty members, groups of graduate and undergraduate students, and the college dean. External reviewers conducted an on-site visit that included a similar interview schedule. The review team also considered department self-study documents, and the written reports of the external reviewers, and an external reader of student work.

I. OVERVIEW

The discipline of Audiology and Speech-Language Pathology involves hearing, hearing loss, speech, language, and speech and language disorders. Department programs prepare students to:

1. Aid those with speech and language disorders to communicate better.
2. Educate and counsel the hearing impaired.
3. Have knowledge and skills in the use of hearing aids.

As noted by the external reviewers, “the scope and 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 technology and research advances have transformed Audiology practice into a highly specialized endeavor requiring unprecedented knowledge and skills” (see Appendix A). As a result of the national changes in requirements to practice audiology, including a doctoral-level degree for certification, the department has had to reconsider its graduate program offerings. The master’s program in audiology has been furloughed, a decision similar to that reached by a number of other smaller programs in Audiology and Speech-Language Pathology, according to the external reviewers, while the master’s program in Speech-Language Pathology remains intact.

Another major change in 1998 was to reorganize the two separate undergraduate degrees of Audiology and Speech-Language Pathology into a combined, single undergraduate degree. Guided by the University mission statement, the faculty, led by the chair, have negotiated the transition goals. Offering a specialized undergraduate and graduate program, the department has earned national recognition based on strong leadership and clear organization. The curriculum is complete and the department easily earned American Speech-Language-Hearing Association (ASHA) accreditation.

While the department does specify specific goals and objectives in the area of student learning, no specific department- or faculty-directed mission statement, goals, or objectives were mentioned in the self-assessment document. The review team was left to surmise the intents of

the faculty, students, and staff toward meeting the institutional requirements for peer-reviewed research, good pedagogy, and service to the university and extended communities.

Prior to 1997, the department existed as a program in the Educational Psychology Department. Based on the recommendations of a 1996 self-study report, it became an independent department in the David O. McKay School of Education in 1997. Audiology and speech-language pathology were then combined into one undergraduate BS degree, and one FTE was transferred from audiology to speech-language pathology to compensate for an area of shortage.

A commitment to excellence has led the department to raise the bar on its own standards. While the American Speech-Language-Hearing Association requires passing scores in the 20th percentile of the Praxis examination for clinical certification, the department requires passing scores to be in the 75th percentile for both audiology and speech-language pathology MS degrees. As a result, department graduate students have consistently topped the median on their national board examinations for the past five years.

While the potential faculty pool is extremely limited, the department has succeeded in replacing retiring faculty with energetic new people who show strong research agendas. The total faculty work well as a unit and have been able to move the department from an atmosphere of conflict to one of congeniality. Department faculty have served as committee members in three other departments at BYU and have collaborated with the University of California-Irvine and Southampton University in England. Three faculty members are Fellows of the American Speech-Language-Hearing Association.

The department has begun to incorporate new technology in its teaching with a web-based introductory course, but needs to do more in that area (e.g., pursuit of new technology in teaching and research). Considering some negative student comments, a more formal evaluation of the web-based introductory course should be pursued. Such evaluation could provide intervention in the web-based instructional design and implementation. It would be well worth the effort because of its introductory nature to the discipline for many undergraduate students. Undergraduate class size for the department seems somewhat heavy, especially in the undergraduate lower-division classes, which may interfere with the ability of students to get adequate personalized attention.

II. FACULTY

The full-time professorial faculty of the department is comprised of five full professors, one associate professor, and one assistant professor, all of whom hold doctoral degrees (Table 1). In addition, there are two full-time professional track faculty, both of whom hold an MS degree, and who direct the audiology and speech-language clinics, respectively. They are assisted by three part-time clinical supervisors. The external review team stated that part-time instructors and clinical supervisors seem very connected. One professorial FTE is open and there is an ongoing search to fill this position as soon as a suitable candidate in the area of Speech-Language Pathology appears. The department has not yet been able to attract the right candidate.

This “potential faculty pool” problem will undoubtedly increase in the future. The nurturing of potential faculty needs careful consideration.

Table 1
Faculty by Rank, Gender, and Research Interest

Faculty	Number in Rank	Gender	Research Interests
Professor	5	2F 3M	Child Language Disorders Child Language Disorders Child Language Disorders Audiology Audiology
Associate Professor	1	M	Language Acquisition
Assistant Professor	1	M	Voice and Motor Speech Disorders

The new hires have added diversity concerning the obtaining of their terminal degrees (Table 2A). An increase in fellowships and leaves by faculty members in the future could add significantly to diversity (Table 2, B-D).

Table 2
Qualifications and Terminal Degrees of Faculty

A. Institution Granting Terminal Degree:	Number of Degrees		
	Doctor	Master	Other
University of Washington (DM)	1		
University of Utah (RC, BB, MF)	3		
Brigham Young University (LR, NB)		2	
University of Pittsburgh (BC)	1		
University of Colorado, Boulder (CD)	1		
Purdue University (RH)	1		
B. Post-Doctoral Fellowships and other significant leaves taken by the current faculty:			Cumulate Number of Years
Post Doctoral Fellow, Johns Hopkins University, 1983			1
Post Doctoral Fellow, U. of California, Los Angeles, 1972			1
Visiting Professor, Leningrad State University, 1990			0.3
Visiting Professor, U. of Goteborg, 1975			0.3
Developmental Leave, Brigham Young University, 1998			0.3
Developmental Leave, Brigham Young University, 1999			0.3
C. Percentage of the Current Faculty who Participated in the Above Leaves and Fellowships			44%
D. Cumulate Years of Leave Taken by this Faculty During the Last Five Years			0.9

The ongoing search to fill the present FTE and future slots will remain difficult because of the competition among several universities for the few qualified candidates. This challenge reflects a national problem, created by the fact that very few PhD graduates are headed for academia. The resulting shortage in faculty has increased the workload of the remaining faculty,

but not beyond their abilities, knowledge, or clinical experience. The balance of faculty between Audiology and Speech-Language Pathology seems acceptable, especially when the furlough of the MS in Audiology is considered.

Teaching loads average two courses per semester and five courses taught per year (Table 3). The majority of courses are three semester hours. This seems very acceptable as faculty productivity is on the rise. We do sense a concern with undergraduate class size being too large (lower division classes averaged 93 in 1999; Table 3C). This may negatively affect teaching effectiveness.

The student/faculty ratio does show the faculty are working hard (Table 4). The undergraduate ratio seems acceptable. The graduate ratio, however, seems high, especially considering the thesis requirement. The furloughing of the MS in Audiology may have a favorable effect to bring this ratio down.

Table 3
Synopsis of Department Teaching Load and Cost

A. Numbers of Majors Enrolled in Fall Semester Courses					
	Fall 95	Fall 96	Fall 97	Fall 98	Fall 99
Undergraduate	289	263	234	232	220
Graduate	87	69	47	37	32
Total	376	332	281	269	252

B. Numbers of Degrees Granted					
	95-96	96-97	97-98	98-99	99-00
Undergraduate	108	90	80	75	76
Graduate	16	11	16	17	16
Total	124	101	96	92	92

C. Average Class Size					
	Fall 95	Fall 96	Fall 97	Fall 98	Fall 99
Lower Division	*	*	84	58	93
Upper Division	*	*	44	43	54
Total Undergrad	*	*	55	47	62
Total Graduate	*	*	5	5	3

D. Numbers of Hours, Students, and Percent Lower Division per Full-Time Faculty							
	Fall 95	Fall 96	Fall 97	Fall 98	Fall 99	College Norm	BYU Norm
CCH/FTE Faculty	6.3	5.7	6.2	4.2	4.5	5.1	5.0
Students/FTE Faculty	15	14	28	25	26	22	21
SCH/FTE Faculty	155	119	158	114	125	122	200
% Lower Division/FTE	*	*	100%	100%	50%	*	77%

Table 4
Undergraduate Student to Faculty Ratio

	1997	1998	1999
Undergraduate students	223	216	249
Undergraduate student/faculty ratio	26	24	27.6
Graduate students	43	37	32

Graduate student/faculty ratio	9.4	7.4	6.4
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Students who were interviewed responded very positively about the quality of teaching in the department. Reported teaching evaluations (Tables 5 and 6) have declined from 6.44 in 1997 to 5.54 in 1999. However, very little department-wide teacher evaluation had taken place prior to 1999, and no peer evaluation was conducted.

Table 5
Percentage of Course Sections and Faculty Teaching Evaluated

A. Number of Sections Taught on an Annual Basis by the Department

	95-96	96-97	97-98	98-99	99-00	College Norm	BYU Norm
Department Sections	*	*	51	51	52	*	*

B. Percentage of Course Sections and Faculty/Instructor Teaching Evaluated by Students

	95-96	96-97	97-98	98-99	99-00	College Norm	BYU Norm
Sections	*	*	4%	6%	38%	*	*
Faculty/Instructors	*	*	22%	22%	100%	*	*

C. Percentage of Sections and Faculty/Instructor Teaching Evaluated by Peers

	95-96	96-97	97-98	98-99	99-00	College Norm	BYU Norm
Sections	0%	0%	0%	0%	0%	*	*
Faculty/Instructors	0%	0%	0%	0%	0%	*	*

D. Percentage of Sections and Faculty/Instructor Teaching Evaluated by Other Methods

	1995	1996	1997	1998	1999	College Norm	BYU Norm
Sections	0%	0%	0%	0%	0%	*	*
Faculty/Instructors	0%	0%	0%	0%	0%	*	*

E. Percentage of Courses and Faculty not Evaluated by Any Method During Last Three Years:

	1997-1999
Sections	0%
Faculty/Instructors	0%

Table 6
Overall Teaching Evaluation Ratings on a 1 (low) to 7 (high) Scale

	1995	1996	1997	1998	1999
Dept. Mean	*	*	6.44	5.71	5.54
College Mean	*	*	*	5.95	5.93
Univ. Mean	5.66	5.70	5.72	5.72	5.75

Faculty service assignments (Table 7) involve each faculty member having one committee assignment per year. Considering this department is very active in serving the community through the school system, this is acceptable. New faculty are not assigned to a committee in order to aid in their development.

Table 7
Faculty Administrative and Committee Assignments, 1999

		Dept. Total	Dept. Average
University, College, & Dept.	Administrative Assignments	3	.33
	University Committee Assignments	2	.22
	College Committee Assignments	1	.11
	Dept. Committee and Other Department Assignments	4	.44
	Dissertation Committee Chair		
	Master's Thesis Committee Chair	17	1.89
	Master's Thesis Committee Member	34	3.78
	Project Committee Chair		
	Project Committee Member		
	Senior or Honors Thesis Advisor		
	TOTAL IN CATEGORY	61	6.78
Professional	Committee Member of Professional Organization	23	2.56
	Officer in Professional Organization	1	.11
	Editor of Professional Journal		
	TOTAL IN CATEGORY	24	2.67
Comm.	Government Organization		
	Professional Service in the Community	3	.33
	Other Community Service		
	TOTAL IN CATEGORY	3	.33

The department chair is regarded favorably by both faculty and students. He adds breadth to the program by inviting several faculty members to participate in guest lectures during the year. In association with the American Academy of Pediatrics, he has helped develop programs for hearing health care in Poland and Vietnam; during their participation, undergraduate and graduate students had the opportunity to see pathologies they would never be exposed to in the United States. The acting clinical director in audiology and the clinical director in speech pathology both feel that they receive support from the department and the chair.

The department's program seems positively regarded across the state, and faculty feel supported in their research. Strong internal financial support for research has resulted in less incentive to seek external funding, but faculty are encouraged to apply for federal grants. Goals and objectives should establish and prioritize activities by faculty to seek this funding (Table 8).

Table 8
Research Proposals to External Agencies

	93-94	94-95	95-96	96-97	97-98
Percentage of Faculty Submitting Proposals	*	*	*	0%	0%
Number of Proposals Submitted	*	*	*	0	0
Numbers of Proposals and Contracts Funded	*	*	*	0	1
Total Dollar Amount Received (in thousands)	*	*	*	\$0	\$10

In addition, the industry provides funding incentives to certain audiology faculty members whose research hasn't yet led to publication, although the potential is there. There is a definite educational component available. There is evidence that some faculty members are more focused on external activity and could provide more service to the BYU community.

The current number of publications produced by the faculty is less than what should be expected, probably because five members of the faculty are relatively new (Table 9). One full professor, who was new last year, brought a grant with her and is extremely enthusiastic about continuing her research, even though she is now working with undergraduate students rather than the more experienced graduate students she was working with in her previous assignment. One faculty member recognized that his productivity has been low, and vowed to do better. Overall, as the department more specifically defines how research fits into the department goals, a positive increase in productivity is imminent.

Table 9
Productivity and Activity Indexes

	1994	1995	1996	1997	1998
Productivity Index					
Department Mean	*	*	*	1.00	1.14
College Mean	1.94	1.29	1.98	1.06	1.85
University Mean	1.82	2.10	1.98	2.25	2.47
Activity Index					
Department Mean	*	*	*	0.43	0.71
College Mean	0.58	0.59	0.60	0.46	0.60
University Mean	0.59	0.61	0.60	0.60	0.67

External reviewers said that “several of the current SLP faculty have strong records of research, extensive publication lists and a history of service to the field.” Three full professors have been selected as Fellows of the American Speech-Language Hearing Association, a prestigious honor. The senior faculty have been successful in obtaining external funds and should be urged to continue to seek outside support for their research programs. The junior faculty have had research experience prior to joining the BYU faculty and, with support from the department and university, should be successful in obtaining grants from the local and national funding organizations.

The external reviewers indicated that the resumes of the two tenure-track faculty in audiology are uneven. One member is very active professionally, serving on numerous committees, publishing frequently, directing numerous students both in the department and across campus, and serving prominently at the regional, national, and international levels. The record of the other faculty member, while strong, is less prominent; nevertheless, the member expressed willingness to become more involved in publishable research rather than concentrating on the consulting work that has been his primary endeavor.

The greatest current challenges for the department are to recruit new faculty and to decide upon a continued furlough or to phase out the master's degree in Audiology. The Speech-

Language Pathology section is looking to broaden the teaching and research interests of the department through hiring a new faculty member in an area such as aphasia or neurogenic disorders.

The faculty are dedicated, feel blessed to teach and research at this university, and are aware that their work makes a difference in the quality of life for people who suffer from speech and hearing disabilities. Faculty from the two sections of the department work very well together, and all express high collegiality. All faculty members express excellent support from the department chair, and the faculty practice an open-door policy for both students and colleagues.

III. STUDENTS

Undergraduate Students

The external review team stated that students seem very enthusiastic about their education. Professors are supportive and readily available. The team was impressed with the undergraduate research trainships.

The undergraduate students struggle with:

- Inability to see the “big picture” from the beginning of their studies, which makes it difficult for them to appreciate how individual courses fit into the overall framework
- Infrequent availability of compulsory courses in the discipline, the result of such a small number of faculty
- Inadequate access to computers
- Lack of adequate space in classrooms in the Taylor Building, forcing students to attend classes in other buildings and making it difficult to get to classes on time
- Lack of clear objectives and adequate discussion of tests in some classes
- Lack of formal information about undergraduate research opportunities in the department
- Large class size, inability to interact

With the large student-to-faculty ratio, the faculty have turned to web-based learning for one course, with the intent to do more with technology. The web-based course has received an award from the Office of Research and Creative Activities.

One problem that undergraduate students in the department expressed is the inconsistent advisement offered by the McKay School of Education. Two students had graduation delayed by a full year because advisors did not correctly anticipate the infrequent availability of compulsory courses in the department. There is a need to offer compulsory courses more than once a year and to assign an individual located in the Taylor Building specific advising responsibilities for the department.

Graduate Students

The department currently has six audiology and eight speech-language pathology graduate students; all but one are women (see Appendix B). The nine graduate students we interviewed considered themselves fortunate to be in the graduate program. Two students are in the audiology program, and the other seven are in the speech-language pathology program. The graduate students seem to be of very high quality. Graduating students who are not accepted into an audiology or speech-language pathology program are encouraged to investigate post-baccalaureate certification in special education as an alternative.

Some graduate students agreed that the workload in speech-language pathology is more intense, involving much more clinical work than the audiology program. The speech-language pathology program at BYU is one of only a few in the nation that require a thesis; the students would like the thesis option dropped in favor of more clinical experience, which they consider to be the most important component of their program. The faculty, however, strongly favor retaining the thesis component of the degree.

One of the quality markers for the department's graduate students is how well they perform on the national board examination compared to graduating MS students nationwide. The national median score for audiology is 640, and the national median score for speech-language pathology is 670 (Table 10). During the last five years for which scores are available, students at BYU demonstrated better than average proficiency.

Table 10
Median Praxis Scores of Graduating MS Students from BYU

	1995	1996	1997	1998	1999
Audiology	640	650	670	670	675
Speech-Language Pathology	730	675	722	740	720

The graduate students feel they benefit from:

- The excellent faculty in the department
- The two new department faculty
- The small size of the department, which allows for more intense individual instruction and experience
- The length and personalized advising of the courses and clinical hours
- The quality and accessibility of equipment and their clinical exposure
- The excellent connection between courses and clinical experience

The graduate students struggle with:

- Lack of clinical experience as undergraduates, putting them in a disadvantaged position as graduate students
- Library holdings, which were adequate but scattered
- Lack of study space, with cramped cubicles in a small, windowless room
- Poor lighting in the therapy rooms and the inability to adjust illumination levels
- Phasing out of the MS degree in audiology, which they feel will be a loss to the entire program
- Lack of faculty prepared in adult language disorders

- Difficulty in computer accessibility

Because the Taylor Building was once a functioning pre-school, the area outside the graduate study area is a playground; today, however, the equipment is obsolete, dangerous, and no longer used. Students suggested that by removing the playground, enough room could be created to expand the department facilities. Regardless of whether that option is feasible, the department needs to do whatever can be managed to upgrade the quality of the graduate facilities.

Under the direction of a faculty member, the department produces a graduate brochure, which outlines the requirements and the general procedures for the master's program including courses, thesis, and clinical work. Before any changes or additions to this brochure can be made they have to be approved by the graduate-directing faculty. Undergraduate and graduate handbooks are available to guide students through the respective programs.

Where research and writing contribution has been made, graduate students are included as co-authors in publications arising from research work in the department, and they often have the opportunity of attending and presenting work at conferences.

IV. DEGREE PROGRAMS AND SERVICES

Graduate Degree Programs

Currently, there is a dearth of doctoral graduates in the fields of audiology and speech-language pathology, and university positions for qualified candidates are plentiful. The nurturing of potential faculty needs careful consideration and is not unrelated to the graduate programs in the department.

The MS degree in audiology is on hold, largely because of three factors:

1. There are not currently enough qualified faculty to supervise the students and to teach the courses.
2. Only a small number of students traditionally opt to enter the program.
3. The national governing board has determined that by 2012 the minimum qualification for professional audiologists will be a doctoral degree (either a PhD or an AUD), and the department is not planning to offer a doctoral degree in the immediate future.

The last MS in audiology student was admitted last year (2000). One new faculty member maintains that the master's program in audiology has not been terminated because "we don't know what's going to happen with the terminal degree." Some disagreement over phasing-out the master's audiology program exists within the department. One faculty member called the AUD, which will be required for the practice of audiology by 2012, a "glorified master's program." Another faculty member called the AUD "useless" because it is based solely on clinical experience and does not require any research. What *is* readily apparent is that students who attain only a bachelor's degree will likely not become audiologists, because few

opportunities are open to those without advanced degrees. There are no current plans to offer a doctorate in Audiology.

It is essential that the department maintain an excellent undergraduate program and continue to aid the entry of desirous graduate students into high-level audiology doctoral programs elsewhere. The employment picture for those with graduate degrees is very bright at the present.

The MS degree in speech-language pathology is a quality program that will not be affected by the decision to “freeze” the MS degree in audiology. The speech-language pathology program is one of only a small number of programs in the nation to require a thesis as well as completion of clinical and course requirements. Acceptance to the graduate program at BYU is extremely competitive; only one in five who apply is accepted. Unsuccessful applicants who want to pursue MS degrees are usually able to get accepted at other schools.

The external reviewer of student work seemed very impressed by the quality of the six theses reviewed (see Appendix C). She commented that questions were relevant, the studies were data-based, well written and organized, and assembled in a journal article format. The reviewer was particularly impressed with “a rich research mentoring experience” and the theses under review reflected “well on the quality of the graduate program.” The reviewer’s concluding remarks discussed “the faculty’s strong values about scholarship” and concluded with “the Department...is meeting well the objectives of preparing students to conduct research and communicate findings to peers and cooperating professionals and instilling in them the professional value to maintain currency in the discipline through ongoing, independent study.” This statement is a very strong vote of confidence for this graduate program.

Undergraduate Degree Programs

The undergraduate program combines aspects of both audiology and speech-language pathology, which provides students with a broad and balanced education in the field. Students are required to take courses in physics, anatomy, statistics, sign language, and communications in addition to specific courses in the department. Because the degree course is becoming so popular, increasing enrollments are taxing the available facilities in the Taylor Building, and the largest classes are being moved to other locations on campus.

Career opportunities are somewhat limited for students who finish with a BA or BS degree and do not pursue a graduate degree in audiology or speech-language pathology—a fact that is not emphasized enough to undergraduate students who may be anticipating career plans based on a bachelor’s degree.

One innovative aspect of the undergraduate program is the web-based introductory course, Introduction to Audiology and Speech-Language Pathology (ASLP 133). The course offers two semester hours of credit and follows the university’s academic calendar. Students are required to complete the materials within a semester of registration for the course, which is presented in twelve lessons that correspond to the twelve chapters of the course text, *Communication and Communication Disorders: A Clinical Introduction*.

Online connections to web sites as well as audio and video clips supplied on CD augment the discussion materials, which originate from a server at the university. The 85 web sites that are part of the course were selected from more than 1,000 possible sites for their detail and their commitment to providing the most current information available. The video clips provide high-quality professional material that is easily accessed from the student's own computer. Photographs and audio clips are built into each lesson. For example, in one lesson a student is presented with four simulated hearing losses—audible over the student's own earphones—while simultaneously viewing representative audiograms and reading typical case history material.

Each lesson concludes with a brief online, open-book, multiple-choice quiz; student responses are immediately scored, and incorrect choices are corrected and explained. The final examination is proctored at the BYU Testing Center. Grades for the course are based on quiz grades, the final exam grade, and student responses to discussion questions attached to each of the lessons. The instructor is available by e-mail to offer advice, explanation, and general instructions.

Services

The department provides speech, language, and hearing services to the public on a fee-for-service basis. In addition, the audiology program provides an industrial hearing program for the university and hearing evaluations for students from the David O. McKay School of Education interning in the public schools.

V. UNIVERSITY PROGRAMS INVOLVEMENT

The department's primary undergraduate involvement in a university initiative has centered on the online introductory course discussed in the previous section. After a critical review demonstrated the need to improve the course, the department took the opportunity to revise both the content and structure of the course. The department's commitment to provide an online course is in direct harmony with the university's initiative to move more courses and programs to the Internet.

Faculty members often serve on thesis committees for other university departments, including Engineering, Music, and Food Science and Nutrition. The department has also provided research facilities to several other departments, including Engineering, Music, Linguistics, Physics, and Food Science and Nutrition. Students from Engineering have taken coursework from the Department of Audiology and Speech-Language Pathology.

VI. FACILITIES AND RESOURCES

Most of the activity for the department takes place in the John Taylor Building. The building houses all the department's graduate classes, clinical space, office space, and the department library; in addition, most laboratory space is in the building, as are some of the undergraduate classes. There are student activities, however, in other areas of campus distant from the Taylor building. For example, academic advising is done in the McKay building. As a

result, some students and faculty perceive that the department is isolated from the rest of the BYU community. Ninth East may create a psychological barrier that promotes a feeling of distance. Some remodeling of the Taylor Building has been approved, but there are currently no plans for a student area.

Three classrooms in the Taylor Building are regularly scheduled for department classes: Room 177 seats 60, Room 171 seats 40, and Room 125 seats 15. Other rooms in the Taylor Building are used for the department's small graduate classes. Enrollment in some undergraduate courses has become so large that some of the department classes have to be scheduled in various locations around campus. Undergraduate students in the department complain about the scattered locations of their classes. Some maintain that the distance between classes makes it difficult to consistently arrive at class on time.

The department faculty and staff offices are located on the lower level of the Taylor Building. The department's part-time speech-language pathology clinical supervisors share a single, larger office. All of these offices have full Internet and campus intranet connections.

Clinical space and facilities are located on the lower level of the Taylor Building. Centralized computer-based client information systems are provided in the Comprehensive Clinic and are accessed in the student computer labs. Most of the speech-language pathology clinic rooms feature one-way glass observation facilities fitted with microphones for observation but only for remote recording (audio and video). The type of monitoring used in these clinic rooms is inefficient and obsolete and needs to be updated to take advantage of new media technology and to prepare for future distance learning initiatives. In addition, the rooms are very small and poorly lighted; most are adequate for client-clinician interaction, but are insufficient for the other activities that need to take place there. Three large and one small audiology suite are equipped with state-of-the-art clinical instrumentation and are networked to the program's own client tracking and records management file server system. All four of these sound suites have been installed within the past five years.

The Materials and Records Center, a separate resource room in the Taylor Building, is shared by all the Comprehensive Clinic programs that are housed in the building. The center has full-time staff coverage throughout the day and evening so that students can check out materials and access client files. Strict client confidentiality is maintained.

Lab space in the Taylor Building is in high demand and is getting more crowded, so the department's instrumentation is scattered throughout the building. Each of the lab facilities is a multiple-use area, and each is also used for clinical assessments and teaching. While some of the department's equipment is aging, the program is generally well-equipped; as new research-focused faculty have joined the department, there has been some needed renovation in some of the department's equipment.

In addition to the space in the Taylor Building, the department also uses research equipment and facilities in other campus departments where collaborating faculty are housed. These include the large anechoic chamber in the Eyring Science Center and the signal processing laboratories in the College of Engineering.

In addition to the Harold B. Lee Library, a level-four research collection is available to students of the department. This research collection includes the major published source materials required for dissertations and independent research and aims to support teaching at the master's degree level. Besides purchasing books, the library subscribes to all the major audiology and speech-language pathology journals. The library has been praised by both external reviewers and the faculty and staff of other universities.

The university also participates in several cooperative programs that allow students and faculty to use materials housed in other state institutions and major research libraries throughout the United States. These include interlibrary loan services, the Utah College Library Council, the Research Libraries Group, and the Center for Research Libraries.

The study facilities for the graduate students in the department are woefully inadequate. The facilities currently consist of a small, windowless room with eight cramped cubicles; each cubicle is shared by four people and is equipped with a desk and locker. The graduate students need more space, better lighting, more convenient access to computers, and an area where they can meet together.

VI. SUMMARY

Strengths

- There is excellent collegiality among the faculty and staff; this is reflected in the attitude of the students toward the faculty.
- Several faculty members are productive scholars and are well-respected nationally.
- There is great demand nationally for graduates and postgraduates in this discipline, and BYU students are very competitive.
- The faculty respect the department chair; departmental decisions are arrived at democratically and by general consensus.
- The faculty are committed to undergraduate and graduate teaching.
- The clinical and research equipment supplied and the support given for research are excellent. Library holdings are adequate for present programs.
- The department receives strong support from the Dean of the School of Education.
- The move to consolidate the two undergraduate degrees into a single degree program is a very positive one.

Issues and Challenges

- The size of the faculty (9 full-time and 3 part-time) creates problems when it comes to covering all the required undergraduate and graduate classes, as well as the supervision and mentoring that is part of a good graduate program.
- The physical location of the John Taylor building creates challenges for some students who have to travel fairly long distances between classes, and there is a feeling that the Audiology and Speech and Language Pathology students (and faculty) are somewhat divorced from the rest of the campus.
- The department has to make some important decisions regarding its audiology graduate program in the immediate or near future—which decisions may impact its national status in the discipline and negatively affect its ability to recruit new audiology faculty in the future.
- A major challenge is to hire a faculty member in neurogenic or stuttering disorders, or similar training.
- Obtaining external funding for their research program is a continuing challenge.
- Undergraduate student advisement is a challenge.
- The department does not have sufficient space in the Taylor Building and adequate study rooms for graduate students. The adjacent playground outside is dangerous.

VII. RECOMMENDATIONS

- Strive to accomplish the goals that were set out by the last Graduate Council report (1997) [see *Self-Assessment Document*, p. 199] and which have not been achieved, namely:
 - a. Actively seek for more external funding and to improve the financial support to the graduate students;
 - b. Set up a more formal symposium or colloquium program so that scholars from outside the university can come and address the faculty and students;
 - c. Strive with the college and university to improve the physical facilities and space requirements—especially for graduate students.
- Develop a departmental mission statement with a reasonable number of succinct, quantifiable goals and objectives for the department (e.g., research, pedagogy, and citizenship expectations). This would provide a road map for the allocation of now available faculty and other resources.

- Evaluate faculty using institutional instruments and other measures (e.g., peer review). These evaluations will serve the faculty in their efforts toward continuing status and advancement. They will also guide the overall departmental planning process.
- Find creative ways to solve the problems created by high undergraduate student enrollments.
- Develop further projects using instructional technology to enhance and extend faculty resources, using instructional technology guidelines such as formative research to discover the needs to be met, the instructional objectives of the project, and evaluation methods for pedagogical quality and student changes in cognitive and/or affective learning. Student satisfaction with the mediated course should be measured as one dimension of the instructional value of the mediated course(s).
- Appoint a faculty or staff member to give guidance to students regarding courses and graduation requirements. There is a need for uniform course information and a standardized student advisement system.
- Continue to furlough the MS in Audiology and monitor national developments until a decision can be made to retain or discontinue the program.
- Create an improved method of planned recruiting. Cultivate PhD candidates by sponsoring the most promising students and fostering their development.

APPENDICES

External Review
Department of Audiology and Speech-Language Pathology
Brigham Young University
January 29-30, 2001

Maurice Mendel, Ph.D.
University of Memphis

Carol Stoel-Gammon, Ph.D.
University of Washington

The following report is the external review of the Department of Audiology and Speech-Language Pathology at Brigham Young University conducted by Drs. Mendel and Stoel-Gammon on January 29-30, 2001.

FORWARD: New Directions in Audiology

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.

The topic of the graduate training in the area of audiology has been discussed in national conventions, topical conferences, and university faculty meetings throughout the country, and written about 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. 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 regard it 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 are 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 (ASHA); 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 council. Pursuant to the 1992 resolution, the ASHA Council 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 Council on Post-Secondary Accreditation, now the Council for Higher Education Accreditation, granted authority to the ASHA Educational Standards Board (now the Council on Academic Accreditation) to accredit clinical and professional doctoral 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 Council, 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 Council 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. The new standards state that transitional standards will be in effect from January 1, 2007, through January 1, 2012, at which time applicants for certification must have a doctoral degree.

This change in degree requirement for certification in Audiology by the American Speech-Language-Hearing Association serves as the background for the department's decision to suspend admissions to the master's program in Audiology in Fall, 2001. This decision is similar to that reached by a number of other smaller programs in Audiology and Speech-Language Pathology in the United States that do not have the resources or abilities to provide doctoral level education in Audiology. Many of these other programs are struggling with the decision about whether to offer doctoral programs in Audiology in the future, or to become master's level programs in Speech-Language Pathology only. In the late 1990's there were approximately 110 master's degree programs in Audiology, compared to approximately 240 in Speech-Language

Pathology. At the present time, there are approximately 12 professional doctoral degree programs in audiology, with the majority providing the Doctor of Audiology (Au.D.) degree. Many additional Au.D. degree programs are in various stages of planning.

DEPARTMENT PROFILE

Major changes that have occurred in the Department of Audiology and Speech-Language Pathology at Brigham Young University since the most recent Graduate Council Report in January, 1997, include:

Becoming an independent department in the David O. McKay School of Education in March, 1997.

Establishment of a system of governance for the Department.

Reorganization of the separate undergraduate degrees in Audiology and in Speech-Language Pathology into a single undergraduate degree program in Audiology and Speech-Language Pathology in 1998.

Major changes in the makeup of the faculty in the Department with five faculty leaving since 1998.

Introduction of the first Web-based course, ASLP 133, "Introduction to Speech-Language Pathology and Audiology" in Fall, 1999.

Suspension of admissions to the master's program in Audiology in Fall, 2001.

FACULTY

The seven full-time, tenure-track faculty in the department all have the PhD degree. Dr. Harris was not available at the time of the external site visit. An eighth position is vacant. One of the tenure-track faculty (Brinton) serves as Dean of Graduate Studies, so that her availability in the department is on a limited basis. Two of the tenure-track faculty have been in the program since the 1980's, three joined the program in 1990 or 91, and two arrived in 2000. There are two full-time professional track faculty, both of whom hold the master's degree (one is director of the audiology clinic, and the other director of the speech-language pathology clinic), and both of whom have held their current appointments for less than two years. In addition, there are three part-time clinical supervisors.

Five of the seven tenure-track faculty have active publication and professional association records. Three are Fellows of the American Speech-Language-Hearing Association. Three of the seven tenure-track faculty received their doctorates from one institution, the University of Utah, while each of the others completed their degree at a different university. This leads to a faculty which is more diverse in background and training than was formerly the case in the

Department. The tenure-track faculty teach two courses during each of the longer terms, and one course in each of the shorter terms. There is currently an attempt to reduce the teaching load by one course per year, to allow more time for other professional activities.

Evaluation of SLP faculty:

The Department has five professors in the area of speech-language pathology, four of whom are tenured (three Full Professors; one Associate Professor). Dr. Brinton, one of the Full Professors, currently serves as Dean of Graduate Studies and thus plays a limited role in the Department. The only untenured faculty joined the Department in June 2000 as an Assistant Professor; a search is on-going for one more tenure-track faculty. The addition of this faculty member will broaden the interest areas of the faculty; currently, faculty in the area of "child language" predominate.

Several of the current faculty have strong records of research, extensive publication lists and a history of service to the field. All three Full Professors have been selected as Fellows of the American Speech-Language-Hearing Association, an honor that is quite prestigious. The senior faculty have been successful in obtaining external funds and should be urged to continue to seek outside support for their research programs. The most junior faculty has had extensive research experience prior to joining the BYU faculty and, with support from the Department and University, should be successful in obtaining grants from local and national funding organizations.

Evaluation of Audiology faculty:

The resumes of the two tenure-track faculty in audiology are uneven. One member is very active professionally, serving on numerous committees, publishing frequently, directing numerous students both in the department and across campus, and serving prominently at the regional, national and international levels. The record of the other faculty member, while strong, is less prominent.

STUDENTS

Undergraduate students: The Department has an open major and places no restrictions on the number of undergraduate majors. From 1995-1999, the total number of majors ranged from 220-289 and the number of degrees granted per year from 75-108. Average class size in Fall, 1999 was 93 students in lower division classes and 54 students in upper division courses. These figures are notably higher than those of Fall, 1998 when the average classes were 58 (lower division) and 43 (upper division). Given that the Department became an independent unit of the School of Education in 1997, trends regarding number of majors and class size are just emerging.

The external reviewers met with approximately 20 undergraduate students. On the whole, these students were enthusiastic about the education they were receiving. Undergraduates noted that professors were readily available for discussion outside of class and were supportive of those wishing to pursue graduate studies. The Undergraduate Research Traineeships provide unique

opportunities for students to become actively involved in a professor's research program. These research opportunities also allowed students to take advantage of state-of-the-art equipment in the research labs. About one-third of the students indicated an interest in pursuing graduate studies in audiology or speech-language pathology and two or three said they hoped to go on for a doctoral degree.

The group of undergraduate students voiced relatively few concerns. Some noted problems with course sequencing and once-a-year course offerings compounded by a lack of availability (space) for enrolling in some classes. One commented on the large enrollment in some courses creating problems for close interaction in the classroom. Furthermore, several students noted a lack of uniformity in course information provided by counselors in the advising office. In some cases, students stated that they were required to remain at BYU an extra year because they had not taken courses in the necessary sequence.

Finally, although students noted they were aware that space was at a premium, they stated that would love to have a place where they could convene during the day, i.e., a student "lounge" of some sort.

Graduate students: Admission to the MS graduate program is quite competitive. Graduate students in the Department are of high quality with GPAs and GRE scores comparable to those of students from competitive programs across the country. In 1999-2000, the Department accepted 22% of those who applied (11 of 49); over 90% of applicants and acceptances were female, a ratio that is typical at other universities. Graduate enrollment is limited by the number of graduate faculty, with a faculty-student ratio of 1:6. When the open faculty position is filled, graduate enrollment in speech-language pathology will increase.

The external reviewers met with approximately 20 master's level graduate students, some pursuing a degree in speech-language pathology, others in audiology. As with the group of undergraduates, these students were enthusiastic about the coursework and clinical practica that comprise their graduate program. They praised the availability of professors, the "phenomenal" quality of the equipment and the research opportunities afforded them, especially the research linked to the thesis, a requirement of the master's program. They felt the department provides good financial support through scholarships.

The only concerns were the paucity of faculty in some areas (adult language disorders) and the lack of student lounge. The faculty are currently searching in the area of adult neurogenic disorders; a new hire in this area will broaden the department's expertise in this area.

CURRICULUM

At present, the ASLP Department offers a BS degree and two MS degrees, one in audiology, the other in speech-language pathology. With the recent decision that the doctorate (Doctor of Audiology) will become the entry-level degree requirement (by

2012), the Department has decided to suspend its MS program in Audiology.

The Undergraduate major requires a total of 54 credit hours in addition to the general education requirements of the university. Undergraduate courses focus on the nature of speech, language and hearing in children and adults and the nature, assessment and treatment of their disorders. In the current catalogue, the undergraduate degree is described as "a preprofessional program leading to a master's degree." Given the competitive nature of admission to master's programs, both at BYU and elsewhere, the Department should consider modifying the above statement, noting that the undergraduate degree is also a good foundation for graduate studies in education, or special education, English as a Second Language (TESOL), as well as in occupational and physical therapy.

The MS curriculum involves basic science and clinical coursework, and a series of clinical practica either in the university clinic or in external sites (typically schools and hospitals). The MS degree is designed to meet all requirements for certification by the American Speech-Language Hearing Association, the professional organization that oversees professional standards in the field. A minimum of 375 clinical hours are required by ASHA and for BYU graduation. The master's curriculum is strong and BYU graduates score well on the ASHA NTE Praxis exam, a written comprehensive exam taken in the second year.

The ASLP program at BYU differs from most programs in the country by requiring that all MS students complete a thesis. The graduate handbook describes the thesis as a "research project which represents an original contribution to the knowledge of the field." Students work closely with faculty in selecting a topic and performing the research. The thesis defense involves a public presentation after which committee members ask questions about the study and the written document. The task of performing original research, writing up the finding and making a presentation to others in the field represents a unique learning opportunity for students in the ASLP graduate program.

STAFF, RESOURCES, AND FACILITIES:

The staff to operate the program appears adequate, and will be improved, once the vacant doctoral faculty position is filled. As indicated in the self-study report, the decision to close the master's program in audiology freed up one position which was shifted to the speech-language pathology program, resulting in the addition of six master's students. The addition of the faculty member in the area of adult neurogenic disorders should continue this trend. Clinical staff appears adequate with the two full-time professional track faculty, and the three part-time clinical supervisors. It is difficult to determine how the provision of clinical services will be affected by the closing of the master's degree program in audiology. This appears to be an area that will need to be closely monitored to determine future direction. Another area of strength within the program appears to be the secretarial support available from the Department Secretary and her part-time assistants. The organization of student records, for example, the opportunity for students to receive up to the minute information on clinical clock hours, and other materials

was commendable.

Faculty offices, clinical and teaching laboratories, and research facilities for the department are located in the John Taylor Building. Research and clinical equipment are clearly state of the art. A renovation of the clinical corridor within the Building promises to add more modern clinical observation facilities and additional research space. One question to be determined is whether the clinical services in audiology will diminish to the point where space that is currently used for audiology clinical services might be reconfigured for speech-language pathology clinical services.

Students indicated a desire for space that could be used as a student lounge. Computer support appeared adequate, although somewhat lacking for space for expansion.

Faculty and graduate students indicate that library holdings are very adequate, although holdings are located in various places and on several floors of the library.

SUMMARY

STRENGTHS:

The faculty of the Department represent one of its major strengths. Our discussions with members of the faculty show that they share a clear vision of the future of the Department; they are committed to teaching at the undergraduate and graduate levels and understand the importance of establishing (for the newer faculty) and maintaining (for the more senior faculty) research programs that allow them to mentor students and obtain external funding. There was a strong sense of community among the faculty, with shared goals, and a sense of being included in the decision making process for the future of the program.

The decision to consolidate the undergraduate program into a single degree program appears to have worked successfully. Good students are being recruited into both the undergraduate and graduate program.

Other strengths include the quality of the students; availability of state-of-the art equipment; good library resources; and strong administrative support from the Dean of Education.

CHALLENGES:

As stated in the Self-Assessment Document (p.2), faculty recognize the need to "capture outside funding from state and federal agencies, as well as research foundations." The recent hires of Dromey (Assistant Professor) and Culatta (Full Professor) should strengthen the research efforts of the Department. A good hire in the area of adult neurogenic disorders could further strengthen research opportunities.

The importance of filling the open position in adult neurogenics has been stressed throughout this report. This position is key to providing balance in the program between child oriented and adult oriented materials. The need for this new faculty member to strengthen research and external funding also has been stressed.

The long-term effect of closing the master's program in audiology has yet to be determined. It is possible that maintaining/recruiting audiology faculty will be difficult in the absence of a graduate audiology program. While careful thought went into the decision to close the master's program in audiology, it will be important to monitor the future need for doctoral education in audiology within the state and for students enrolled in the program, to determine whether a new degree program will become necessary.

The department should continue to investigate the possibility of offering a new master of science in communicative disorders program

The need for physical space continues.

RECOMMENDATIONS

1. All faculty are encouraged to seek external funding for their research programs
2. The Department should pursue the use of new technology in teaching and research
3. The Department should standardize and augment the advising system for undergraduate majors
4. The Department should monitor developments that may require adding a doctoral program in audiology.