

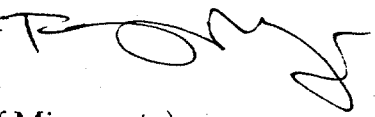


Interdepartmental Correspondence

18 December 2001

TO: Marsha L. Landolt
Dean and Vice Provost, The Graduate School

FROM: Department of Speech and Hearing Sciences Review Committee
Frederick J. Newmeyer (Linguistics, UW), Chair
Judith Ramey (Technical Communication, UW)
Edwin Rubel (Otolaryngology, etc., UW)
Arlene Carney (Communication Disorders, U of Minnesota)
Bruce Tomblin (Speech Pathology and Audiology, U of Iowa)

A handwritten signature in black ink, appearing to be 'F. Newmeyer', is written over the name of the chair of the committee.

Attached you will find the final report of the Speech and Hearing Sciences Review Committee. This report has been endorsed by all members of the Committee.

If you have any questions, please call the Committee Chair at 543-2046 or e-mail him at fjn@u.washington.edu.

PROGRAM REVIEW: DEPARTMENT OF SPEECH AND HEARING SCIENCES

University of Washington
Autumn 2001

The Department of Speech and Hearing Sciences Review Committee was formed to assess the quality of the degree programs of the Department of Speech and Hearing Sciences, to provide constructive criticism for improving or strengthening these programs, and to suggest how the College of Arts and Sciences can assist the Department in fulfilling its mission.

The following report has been endorsed by all members of the Review Committee: Professors Frederick J. Newmeyer (Linguistics, UW), Chair; Judith Ramey (Technical Communication, UW); Edwin Rubel (Otolaryngology, etc., UW); Arlene Carney (Communication Disorders, U of Minnesota); Bruce Tomblin (Speech Pathology and Audiology, U of Iowa).

I. SUMMARY OF THE PROCESS

In September of 2001, the members of the Review Committee were provided with copious reading materials, including the Department's detailed *Self-Study*, past review committee reports, and other documents relevant to the Committee's mission. The internal members of the Committee met twice in October with representatives of the Graduate School to be apprised of the general goals of departmental 10-year reviews, procedures to be followed in the course of the review, and the more mundane issues of scheduling and coordination. After a preparatory dinner on Sunday evening, October 28th at which all five members of the committee were present along with Heidi Tilghman of the Graduate School, virtually all of Monday, October 29th and Tuesday, October 30th were devoted to interviewing members of the Department. In the course of these two days, the Committee met with all five non-emeritus full professors, four of the five non-emeritus associate professors, the two assistant professors, a senior lecturer and a lecturer, five members of the staff, and with interested undergraduate, masters, and doctoral students. One lecturer submitted her opinions of the Department in writing. In addition, the Committee received a tour of the facilities. The site visit terminated with exit interviews with deans, provosts, and their assistants from the Graduate School, the College of Arts and Sciences, Academic Planning, and Undergraduate Education.

All members of the Committee felt that the entire process was enjoyable as well as enlightening, and would like to thank the members of the Department (in particular Chair Stoel-Gammon and Associate Chair Olswang) for their efficient

preparation of the materials and their helpful cooperation during the site visit. We are also grateful to the Graduate School itself (in particular, to Heidi Tilghman, the Assistant to Dean Slattery) for making our task go as smoothly as possible.

II. GENERAL ASSESSMENT OF THE DEPARTMENT

The Department of Speech and Hearing Sciences at the University of Washington enjoys a (well-deserved) outstanding reputation, both for its research contributions and its clinical training programs. The most direct documentation for this claim is to be found in its national rankings. The *U. S. News and World Report* ranks its graduate program in Speech-Language Pathology as number two in the country and its graduate program in Audiology as number four. Most of the faculty members are at or are close to the forefront of their specialties; indeed, one member (Professor Kuhl) has recently served as President of the Acoustical Society of America, as well as having been showered with other honors. The graduates of the Department have achieved a high level of visibility as well; their Ph D's are to be found on the faculties of most American departments involved in research in Speech-Language Pathology and/or Audiology and their MS graduates fill the majority of statewide positions in school districts and hospitals.

In short, we do not see the slightest reason to recommend anything but a continuation of the BS, MS, and Ph D degree programs, with a subsequent review in ten years.

The field of speech and hearing science research, itself, however, seems less than fully healthy. Whereas in most academic fields, there are dozens of seekers of each open position and some Ph D's spend several years in attempting to land their first academic position (or give up entirely), there are actually 175 open academic positions in speech and hearing sciences, with not nearly enough new Ph D's to fill them. Indeed, the number of Ph D's granted nationally has been declining. Symptomatic is the fact that the UW Department has two unfilled positions. There seem to be several major factors behind this state of affairs. First, work in industry or in public or private clinics is an increasingly attractive draw for degree recipients in the field, partly explaining why academic positions are so hard to fill. Second, many students interested in research in areas covered by speech and hearing science departments opt for graduate programs in psychology, linguistics, or neuroscience instead, where the percentage of students with purely clinical interests is much lower. And third, as noted in the *Self-Study*, most current doctoral programs (the UW program excepted) do not address the issues of central interest to those attracted to the field — issues directly related to clinical treatment and evaluation of its efficacy. At this point in time, however, we see no cause for concern insofar as the state of the field as a whole might impact our evaluation of the UW Department.

Given that our report is overwhelmingly positive in nature, we have decided against a final section devoted to outlining the various measures that the

Department might or should take to improve its quality. Rather, in the course of the discussions within each section, we point to areas where fine-tuning might be desirable.

The following three subsections appraise the undergraduate, masters, and doctoral programs respectively.

A. THE UNDERGRADUATE PROGRAM

The undergraduate students are very happy with the programs offered them, the advising and direction they receive, and the general inclusiveness, supportiveness, and collegiality of the Department. The curriculum's topical coverage is good; however, the two tracks (a general academic track and a speech and hearing sciences and disorders track) differ by only two courses, which raises a question about the justification for offering two different curricula. The number of undergraduates has grown over the last few years; some concerns were expressed by faculty about the increasing size of undergraduate classes and percentage of instruction delivered by TAs, but these developments were seen as by-products of growth to be monitored for possible negative effects on quality rather than as current problems.

The Department is working to provide more access for nonmajors, an effort applauded by our Committee. Currently, the main (if not only) course available to nonmajors is 'Communication and Its Disorders'. Offering more access to pre-majors and nonmajors would benefit the interdisciplinarity of the unit and possibly attract students to the major or graduate programs.

At present, although research opportunities at the undergraduate level exist, the undergraduate curriculum is so tightly scripted that few students can get involved in research early on. The Committee feels that undergraduate students should be pointed in the direction of research opportunities from the very beginning of their undergraduate careers. Undergraduate student financial support for such involvement should also be improved; several programs on campus (for instance, the Mary Gates Scholarship program) were mentioned as possible resources for this effort. Student opportunities for involvement in research in the summer can also be developed. The students themselves asked for more opportunities to take part in research and for more interaction with professional practice outside of the Department.

B. THE MASTERS PROGRAMS

The Department offers two master of science (MS) degrees, one in Speech-Language Pathology and one in Audiology. Both degree programs combine coursework in the scientific bases of the professions and clinical education in which students work with clients/patients under the direct supervision of clinical staff. We have already called attention to the superb rankings of these

programs. Both MS programs are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (ASHA). Graduates of the two programs are eligible for the Certificate of Clinical Competence upon completion of the degree, the passing of a national examination, and the completion of a full-time nine-month clinical fellowship.

Both curricula in Speech-Language Pathology and Audiology have a list of required courses for all students; they also contain a list of elective classes in which students can enroll. Speech-Language Pathology students must take one elective course outside the department; Audiology students take electives within the department. Approximately 75% of MS students take comprehensive examinations as their culminating academic experience; the remaining 25% complete master's theses.

Appendix G to the *Self-Study* contains forms that allow students and advisors to insure that all departmental, university, and ASHA requirements are met. These forms are comprehensive and clear. They contain requirements both for didactic coursework and for completion of clinical education. The curriculum covers all areas within the scope of practice of both professions. Elective courses are not offered every year as are the required courses.

The Committee met with a group of approximately 16 master's students in both Speech-Language Pathology and Audiology. Their responses to the program overall were exceptionally positive. They commented on the excellence of the clinical supervisors and the clinic director, Nancy Alarcon. They also reported great satisfaction with the quality of teaching and with the content of their classes. Students were aware of the high ranking of the Department and commented on the importance of those rankings in leading to their decision to attend the University of Washington.

Students also expressed concerns with several aspects of the program, including:

- The limited opportunities to complete a clinical practicum in external placements.
- The requirement that they choose their clinical path in Speech-Language Pathology (medical track or more school-based track) at the onset of the program at orientation, when many of them are unsure of what they want to do.
- The need/desire of many students to have a counseling course as a necessary part of the curriculum. This course has an excellent reputation, but it is offered only in summer session, which precludes some students from enrolling in it.
- The need/desire of many speech-language pathology students to have a course in Augmentative Communication that is offered every year.
- The need for a faculty member in the area of Voice and the need for more diverse clinical experiences in the voice area. Currently, the voice practicum focuses on transgender voice and does not give students enough experience with more frequent voice disorders.

- The need for coursework in the area of cochlear implants for Audiology students.
- The need for better video capabilities in the Clinic to improve clinical education.

Despite expressing these concerns, the students presented a positive point of view to the Committee and conveyed overall satisfaction with the quality of their education.

The faculty expressed concern over the lack of funding for master's students. Funding priorities are for Ph D students as teaching and research assistants. A number of excellent master's applicants have chosen to attend other programs because of better opportunities for funding. The Department lists the provision of tuition waivers for top MS candidates as one of the specific ways in which the College or University could assist them; one of their most important goals is to increase funding to attract these top students. The Committee concurs that this is an important goal to maintain the high quality of MS students in the program.

The master's programs in both Speech-Language Pathology and Audiology are strong and vital graduate programs with cutting-edge curricula, outstanding organization, and excellent clinical education. Students are highly satisfied with their choice of the University of Washington. Graduates of the program successfully compete for professional positions in the community and across the nation.

C. THE DOCTORAL PROGRAM

The Ph D program currently has 32 students enrolled, with an additional nine accepted for next year. Over the past decade the number of Ph D's awarded per year has ranged from one to eight. The orientation of the program is the preparation for a career in research and teaching. All students in the program are required to be involved in supervised research by the end of their first year in the program and to have completed a pre-dissertation research project by the end of their second year. Students in the program are also required to have teaching experience, normally by co-teaching a course or working as a TA.

As far as the quality of Ph D students is concerned, the 1990 Review Committee report noted that 'there is a perception among the faculty that the quality of the applicants is not as high as it should be'. We take it as a good sign that this concern was not repeated by the faculty members that we interviewed. The average GRE scores of the graduate students as a whole seems quite low to us, but since the figures provided did not separate out MS from Ph D students, we have no way of knowing what the average of the latter might be. In any event, Ph D's in the Department seem successful at obtaining employment. Of the last ten Ph D's awarded, four of the recipients have positions at four-year colleges and universities, three have nonacademic professional positions, two hold post-docs, and one is employed at an elementary or secondary school.

The ten or so Ph D students that we interviewed were unanimous in their glowing praise for the Department and the Ph D program. They spoke of the welcoming atmosphere, the good camaraderie, and the rigorous training that they receive. Such complaints that they voiced all dealt with problems of 'infrastructure' — the sorry state of Eagleson Hall, the lack of offices, and so on. More of that below.

III. THE DEPARTMENT IN ITS RESEARCH AND CLINICAL ASPECTS

The research activities of the faculty members in the Department of Speech and Hearing Sciences fall naturally into three areas, namely, Speech Pathology, Audiology, and Basic Processes of Speech, Hearing, and Language. Each faculty member associates with an 'interest group' representing this area. These areas will be discussed in subsections A, B, and C respectively. Subsection D discusses the Clinic and E the Center for Mind, Brain and Learning.

A. SPEECH PATHOLOGY

The largest interest group in the Department is Speech Pathology. It includes one Full Professor (Olswang), three Associate Professors (Carpenter, Coggins, and Rogers), and seven lecturers. There are additional tenure track positions in speech pathology, now vacant, which the Department has unsuccessfully attempted to fill. One is concerned with motor speech disorders, the other voice disorders. Each of these represents a specialty area within medical speech pathology and leaves this area with only one tenure track faculty member (Rogers) whose research and teaching addresses these areas. The Department is currently searching again for someone in voice, but has relaxed the clinical requirements. The motor speech position has been redefined such that this will now be devoted to a person who will be suitable for a joint position in the Department and in CMBL, and so this person is not likely to be in clinical speech pathology. Even with a successful search for the voice position, this will leave the speech pathology group somewhat weak in the tenure track ranks. The Department is fortunate to have an excellent group of lecturers available to provide both classroom and clinical teaching in areas not represented within the tenure track faculty. For instance, stuttering, and dysphagia are areas fully covered by lecturers. Additionally, the University and local communities provide a wealth of expertise that the Department can draw upon. Thus, the Department has provided and should be able to continue to provide a solid base of instruction for MS students in speech pathology. The lecturer-based strategy of filling these instructional needs may be necessary given the very limited current supply of academic speech-language pathologists.

This unit serves a central and critical role in the Department's teaching and research missions. Several signs indicate that the program has been succeeding in

these missions. Certainly, the fact that the speech-language program within the department is ranked number 2 in the country is a clear sign of success. The curriculum provided by the faculty in this area is current and clearly is attracting top notch graduate students. Additionally, these students indicated a high level of satisfaction with the classroom, clinical, and laboratory educational experiences. The faculty in this area have been particularly active in seeking funds to develop new methods for teaching supported by technology. The research productivity of the tenure track faculty in this area has also been good. Professor Olswang has recently obtained funding for her collaboration with investigators at the University of Kansas on communication among individuals with severe developmental disabilities. This work exemplifies the group's focus on clinical intervention research and it is possible that such a concentration of such expertise could result in an increased amount of funded research.

B. AUDIOLOGY

Three professors in the Department affiliate with the interest group in Audiology, as well as three lecturers. The former are Professor Folsom and Assistant Professors Souza and Tremblay. Professor Folsom has participated as a principal investigator in the previous program project grant through Otolaryngology (with Professor Rubel as overall project P.I.) and in a multi-center clinical trial through Otolaryngology (with Professor Susan Norton as overall project P.I.). He has recently been the P.I. of two foundation grants ending in 2001. Assistant Professor Souza has established a strong publication record and has been the P.I. of several foundation grants. Similarly, Assistant Professor Tremblay is the P.I. of an R03 award from NIH and has made a strong start in publications following a post-doctoral experience at House Ear Institute.

The central issue facing these faculty members (and one of the central issues facing the Department as a whole) is the new professional doctorate in audiology. The Council on Professional Standards in Speech-Language Pathology and Audiology, the standard-setting body of the American Speech-Language-Hearing Association (ASHA), determines the nature of the graduate degree and educational requirements necessary for eligibility for the Certificate of Clinical Competence in either Speech-Language Pathology or Audiology. These national standards impact the curricula of graduate programs in Speech and Hearing Sciences across the country. The Council has mandated that the entry-level degree in Audiology must be at the doctoral level, instead of at the masters' level, as in the current standard. The title of the doctoral degree is not specified. It may either be a Ph D or a professional doctoral degree (e.g. Sc D). The profession of Audiology currently favors the title of Doctor of Audiology (Au D).

This requirement for a mandatory doctoral degree goes into effect January 1, 2012. However, on January 1, 2007, each applicant must have a 'recognized graduate degree' (either a doctoral or master's degree) and 75 post-baccalaureate semester credits (approximately 100 quarter credits). Because it would take at

least three years (or about nine quarters) to complete the necessary credits, students entering the graduate program in Audiology in fall 2003 or fall 2004 must meet the new standards.

The faculty of the Department of Speech and Hearing Sciences plan to offer the Au D (or whatever it ends up being called) to meet the new Audiology standards. During the site visit, the three Audiology faculty described the preliminary outline of the degree as requiring 9 quarters (as opposed to 7 quarters for the MS). (However, on page 28 of the *Self-Study* document, the program is described as potentially having four years.) The number of students would increase as the length of the program increases. The curriculum for the Au D would be expanded from the current (and recently updated) MS curriculum through the addition of cross-disciplinary courses in areas such as business, gerontology, or neuroscience, as well as in additional courses in Audiology. It will include a mandatory research project that would have a clinical focus, such as on clinical outcomes. The need for additional hours of clinical contact also requires the expansion of external practicum and internship opportunities. The faculty of the Department anticipate that they will require an additional line in Audiology to meet the needs of the new program. Whether this line could be incremental or come from future faculty retirements has not been decided.

The MS program in Audiology is recognized nationally as one of the top graduate training programs in the United States. In order to meet the new Audiology standards and to remain competitive in the recruitment of the best students, the department ranks the establishment of the Au D program as one of its important goals for the next five to seven years. The Department requests the support of the College and University to implement this program. The Committee concurs with the important goal of the department to develop the Au D, both to meet the new standards and to maintain its leadership position in the professional education of audiologists. Within the next two to three years, Au D programs will open at many Research I universities.

The current MS degree is already a professional degree granted through the College of Arts and Sciences. The Au D would simply be a more advanced professional degree at the doctoral level for students who wish to become clinical practitioners. The faculty will continue to offer a Ph D for students who intend to pursue careers in research and teaching in academic or research settings. The current MS program would be phased out, although no specific timeline was provided. The Audiology faculty presented a unified view of the new degree; they are supported by faculty in the Basic Processes and Speech Pathology interest groups.

C. BASIC PROCESSES OF SPEECH, HEARING, AND LANGUAGE

This faculty interest group is also referred to as the 'Speech Science Interest Group' in Appendix I4 to the *Self-Study*. Its members include Professors Kuhl,

Stoel-Gammon, and Werner and Associate Professors Burns and Moore. All faculty in this group have published in the area of communication or hearing development, although Professor Burns has concentrated more on adults. Their educational backgrounds are diverse, ranging from speech and hearing sciences proper to developmental psychology and linguistics. They collaborate with faculty in other departments at the University of Washington and other universities, including psychology, linguistics, and otolaryngology.

As a group, these faculty have been successful historically in securing funding from external sources, particularly the National Institutes of Health (NIH). Professor Kuhl has an international reputation in the area of developmental speech perception and a long history of funding. She is currently the co-director of the Center for Mind, Brain, and Learning (see below), but continues to have a primary appointment in the department of Speech and Hearing Sciences. Professors Werner and Moore have individual grants (R01) from NIH. Although Professor Burns does not have current NIH funding, he has had support from NIH in the recent past. Professor Stoel-Gammon participated in an NIH program project grant through the Department of Otolaryngology (along with Burns, Kuhl, Werner, and Folsom), which ended several years ago. These faculty maintain active research programs, teach undergraduate and graduate courses, and advise doctoral students.

The Committee noted that the level of grant funding has decreased in the past few years, since a few grants have not been renewed. There will be additional decreases in external funding when Professor Kuhl moves her grants to CMBL for administration. The decrease in grant funding impacts graduate student support and release-recapture funds for the Department. Nevertheless, this group of faculty is an excellent ensemble of scholars who have made, and continue to make, significant intellectual contributions to the University.

D. THE CLINIC

The Department operates a speech and hearing clinic that serves as a teaching laboratory for its professional students in Audiology and Speech-Language Pathology. The Clinic is housed in a relatively new building adjacent to Eagleson Hall that is shared with the School of Social Work. The physical plant of the Clinic consists of a client waiting room, receptionist and file area, some computer and clinical media rooms, along with 17 individual therapy rooms and two larger rooms for group work, all with adjoining observation rooms. The audiology clinic is housed in the basement and provides space for diagnostic and hearing aid services. The committee toured these facilities and also interviewed the Director of the Clinic and some of the lecturers who teach there. The Clinic is vital and central facility in the Department. The Clinic has the advantage of serving a large urban area and therefore its client base is strong, allowing it to have both the number and diversity of clinical cases needed to meet this teaching demand. Currently, the Clinic provides between 600 and 800 clinical sessions per quarter or more than 80 hours per week. As is the case with many University

clinics, the departmental Clinic does not attempt to recoup its costs through the fees it collects. While this practice allows it to be even more attractive to clients, a negative consequence is that the Department must commit considerable resources to underwriting the Clinic operations. Although there are no plans to increase revenue via clinical fees, the Director did indicate that she and her staff were beginning to work with the development office to identify philanthropic sources of funding. Given the community service provided by the Clinic and the size of the community served, it would seem that this could lead to a broader funding base.

The faculty have chosen to do most of the clinical teaching provided to the graduate students here rather than placing students out in community service settings for more of their clinical education. External placement only occurs in the last quarter of the students' graduate program. This decision was justified on the grounds that the departmental clinic allows the faculty to teach clinical problem solving and approaches to intervention without having to compromise these due to the demands of efficiency often required in the "real world." This decision is admirable; however, it comes at a substantial cost to the Department. As noted above, the Clinic and the clinical education conducted therein is very expensive and currently the Department is directing much of the "release and recapture" funds from research grants to the Clinic. Additionally, there may be value in exposing students to the richness as well as the constraints found in community service settings. As noted earlier, the students expressed a desire for a more diverse clinical experience in such areas as voice and cochlear implants and these could be provided by external placements. Thus, the Department needs to carefully weigh the costs and benefits of their policy to use this Clinic as the principal clinical teaching environment.

The space and facilities of the Clinic are for the most part very good. The building has appropriate accessibility for disabled clients and, due to its location on the edge of campus, can be reached fairly easily by all clients. The Department has worked out a discounted arrangement for client parking in a nearby commercial lot and the Clinic generously pays this fee. This kind of generosity is rare in most health services. The interior space is very well maintained and offers a pleasant environment for clients, students, and staff. The University recently provided new furniture, as the old furniture was becoming dangerous for clients. With regard to equipment, the audiology clinic has state of the art equipment for hearing assessment and the students and staff in speech-language pathology were provided with a fine array of materials and technology for their diagnostic and treatment programs. As noted above, most of its space is devoted to small rooms that can be used for individual therapy, rather than larger rooms that could be used for groups or classroom based programs such as a preschool communication classroom. Service models in school settings have been turning toward classroom based approaches and therefore there may be need to restructure the Clinic programs and physical space to provide opportunities for larger group services.

The administrative leadership provided by Nancy Alarcon was found to be

excellent. She is well respected by the faculty, clinical staff, and students. The documents provided with the *Self-Study* show that the Clinic operations are well defined and no doubt reflect its overall quality of organization.

E. THE CENTER FOR MIND, BRAIN, AND LEARNING

The Center for Mind, Brain, and Learning (CMBL) is a new entity that will certainly have an impact on the Department. CMBL is to be a privately funded research facility at the University of Washington concerned with cognitive neuroscience. It will provide a new physical plant away from the University campus for laboratories of its investigators, who will be funded half-time by CMBL. The remaining half of their appointments will be tenure track positions within various departments on campus, including (but not limited to) the Department of Speech and Hearing Science. Thus, the participating departments will have substantial recurring release and recapture funds available for internal use. The Department will not be able to expand its tenure track faculty with this release money, though it could be used to attract doctoral students and visiting faculty. Thus, there is little doubt that CMBL will improve the amount and quality of research in this area at the University and the Department of Speech and Hearing Sciences. In particular, CMBL will allow the Department to attract top notch cognitive scientists, particularly in the areas of speech and language and thus it may enrich the faculty and provide wonderful opportunities for attracting and training doctoral students.

In order to capitalize on CMBL, the Department will be required to conform to the objectives of CMBL with regard to the domains of research addressed by their faculty who also hold appointments in CMBL. This may result in some difficult decisions for the Department as it attempts to balance its responsibility for the direction of scholarship and teaching with the opportunities afforded by CMBL. It will also be important for both the Department and CMBL to develop ways in which the additional vigor that CMBL could inject into the Department does not instead result in a loss of vitality to the Department. The danger is that CMBL, as with any separate center, could become sufficiently attractive to a segment of the Department that a significant fraction of the most productive faculty and graduate students no longer have a presence in the Department. The physical distance between the two will increase the potential for this danger. Plans to establish structures and programs within the Department and within CMBL should be implemented to protect against this. As these discussions are held, there also may need to be thought given to manner in which the credit for grants written by faculty holding appointments in CMBL is dealt with within the University. Grant activity is always an important indicator of the research activity of a department. If much of the grant activity of the faculty in Speech and Hearing Science appears only within CMBL, the Department's standing within the College and University may be affected. Some form of sharing of credit, if not indirect costs, may need to be developed.

IV. ADDITIONAL ISSUES

This final section takes on a variety of issues that do not fit neatly into those discussed above: mentoring and retention of junior faculty (§A), funding for research and teaching (§B), salaries (§C), facilities and equipment (§D), and departmental administration and staffing (§E).

A. MENTORING AND RETENTION OF JUNIOR FACULTY

The Committee discussed junior faculty mentoring with the two assistant professors in the Department, Pamela Souza and Kelly Tremblay. In both cases these junior faculty members spontaneously and effusively spoke about the outstanding mentoring they had enjoyed from the senior faculty. Each junior faculty member is assigned a pair of faculty mentors when they join the Department. They meet with mentors at least monthly to review goals and progress, and mentors read and comment on grant proposals. Both the faculty mentors and the junior faculty appear to take this process very seriously and the junior faculty are extremely satisfied with it.

By external standards the mentoring system appears to be working as well. Professors Souza and Tremblay have good teaching evaluations and each has gained some outside support (see the section below on Funding for Research and Training).

The retention of junior faculty members seems reasonably good. Of the faculty hired in the past five years, one left the UW for a position in a competing department (Iowa) and two have been retained, although both have been approached numerous times by other departments. As noted throughout this report, the spirit and enthusiasm in the Department is very high, and the junior faculty feel they are supported well by colleagues both within and outside the Department. That being said, it will be very difficult if not impossible to retain junior faculty or to recruit new junior faculty at the present salary levels. They simply fall too far below what productive professionals in this area can command at other academic institutions, in medical settings or in industry.

B. FUNDING FOR RESEARCH AND TRAINING

Overall, the funding level of the Department could be considered good, but not great. On the positive side, the Department has successfully competed for renewal of a NIH Training Grant which supports six doctoral students per year. This grant is now funded for years 11 – 16. It is interdisciplinary, including faculty mentors from Otolaryngology, the Bloedel Center, Zoology, Orthodontics, Psychology, and Electrical Engineering, but is housed in Speech and Hearing Sciences. In addition, the departmental Ph D students have competed effectively for the new NIH/NIDCD Individual Predoctoral Fellowship Awards (F31's). Three such awards have been obtained recently.

The Department also received a UW Tools for Transformation Initiative grant. These funds have been used very effectively for upgrading teaching and communications within the Department.

External (particularly federal) grant funding is relatively sparse. Of the ten tenured faculty members in the Department, only Professors Kuhl, Moore and Werner are P.I.'s on major ongoing (R01-type) funding from federal agencies that are administered through the UW and. Kuhl's grants will be switched to CMBL. In addition, Professor Olswang has NIH research funding by subcontract with another institution, and several faculty have small foundation grants. The two Assistant Professors have been active in obtaining small grants (R03's from NIH), RRF Awards and other foundation grants. Their track record is excellent, but the Committee feels that junior faculty should be encouraged earlier to seek R01 type funding. Several middle level and senior faculty have never had major grant funding or have allowed it to lapse and are not likely to regain that momentum. To their credit, several of these faculty acknowledge that to support the overall goals of the Department they will have to carry a larger teaching role. Finally, several faculty members (Kuhl, Werner, Moore, Stoel-Gammon, and Tremblay) are funded by CMBL for a study of hearing and speech development. This funding will be beneficial, but is dependent entirely on Kuhl's priorities.

If the Department is going to maintain or increase its national stature, considerable energy and resources will have to be devoted toward the following:

- Encouraging and rewarding the faculty that are regularly obtaining stable research support.
- Further encouragement of the successful junior faculty.
- Making it a major priority to hire faculty who are likely to develop major research programs for open faculty positions now and in the near future.

C. SALARIES

A major challenge to the University administration must be determining a way to strengthen the salary commitment to the regular faculty in this Department. This is a critical time for several reasons. As noted in the Department's *Self-Study* and in this report, there are very few Ph D's being produced in this field throughout the country, and only a minority of these have research training adequate to obtain research funding. Furthermore, few choose to participate in postdoctoral research training. Thus, the available junior faculty pool in this field is very small, especially the pool of people we want to recruit to a major research institution. Two recent searches for new faculty failed entirely due to a failure to find suitable candidates. These facts make it imperative that the UW offer competitive salaries to faculty recruits and that we retain our best young faculty with competitive salaries *before* they get enticed away by other research universities. *Outstanding young faculty are unusually rare in this field at this time.*

The salaries of the regular faculty in the Department are well below the average for rank in the Division of Natural Science, sometimes by more than 25%. It appears that only two faculty members (plus the chair) in the entire Department are at or above the division average, and these are due to recent negotiations in response to competitive offers. One of the most productive junior faculty members is at about the 30th percentile for UW Division of Natural Sciences faculty and several associate and full professors are below the 20th percentile. These salary figures are particularly noteworthy when considering the junior faculty and rising middle level faculty, who are heavily sought after by other schools. Such facts must be coupled with the following:

- When the UW salaries are compared with the other 13 leading departments in the country, ours fall 10% to 20% below the averages, depending on rank.
- A comparison of the cost of living in Seattle to the locations of the ten leading departments revealed that in all but one the cost of living is 10% to 20% less (the average is 85% of the Seattle cost of living).

These figures show that in a field where it is very difficult to find faculty of the caliber we seek at the UW, we are *grossly* underpaying our brightest young scientists, even by academic standards. In addition, if these people decide to leave academia, they can double their UW salaries. This analysis suggests that the future of the Department is precarious. On the other hand, if we can retain our productive young people and put together very competitive offers for new hires, the UW can easily be at the very top of institutions in this field.

D. FACILITIES AND EQUIPMENT

The technical equipment in use in the clinical and research facilities and programs is good. There are plenty of sound rooms and lots of high quality Tucker-Davis equipment. The Chair of the Department, however, expressed concern about the age of some of the equipment and facilities. The recent award of a Tools for Transformation grant has enabled the Department to create a computer and media laboratory to support the development of web-based informational resources, training materials, and research reference tools and databases. This is a very positive development for the Department.

The clinical space in the building next door to Eagleson Hall appears adequate for the departmental need. Eagleson Hall itself needs retrofitting and upgrades so that routine levels of computing and internet access can be provided to faculty, staff, and students. (The committee was informed that no internet access is currently possible on the third floor of the building.)

E. DEPARTMENTAL ADMINISTRATION AND STAFFING

The faculty administrators (Carol Stoel-Gammon, Chair, and Lesley Olswang, Associate Chair and Graduate Program Coordinator) appear to be doing a

superb job. The faculty, staff, and students uniformly approve their vision and goals for the Department, as well as their performance.

The computing staff and office administrative staff appear to understand the departmental mission and needs extremely well and view themselves as valued players in the overall team effort to meet departmental goals and needs. They appear very resourceful in solving problems and maintaining the Department's focus on quality service.

The advising effort (on the part of both faculty and staff) is personalized, intensive, and detailed. If anything, it may command more effort than necessary to achieve the Department's goals. We suggest that the Department could pull back somewhat on the one-on-one intensive counseling and other student services and still maintain a high quality of student experience, while at the same time freeing up attention and resources to meet other needs. For instance, the Department may be able to put more information on the Web site and transfer some day-to-day responsibility for planning and tracking to the students themselves.