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Clinical Proficiency Levels Expected
at the End of the Second and Third Years in an Au.D. Program

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Doctor of Audiology

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(ABSTRACT)

This is a retrospective study utilizing data compiled over the past two years during the formative assessment process by the University of South Florida (USF) Department of Communication Sciences and Disorders (CSD) in the development of the new audiology clinical doctoral (Au.D.) program. Final adoption of the new certification standards in audiology was received in 1997 and several Au.D. programs have been implemented since that time. This study responds to the requirements of appropriate assessment and documentation of clinical skill acquisition across the academic and clinical training program.

The purpose of this review was to complete a qualitative analysis of the data gathered previously to determine indicators of clinical competency specific to the USF Au.D. program. This study focused on determining minimal knowledge and clinical skills that should be acquired at the end of the second and third years relative to competencies outlined in Standard IV-D: Evaluation and Standard IV-E: Treatment. Expectations relative to skills that audiology students should possess at designated points in the educational process are pertinent to developing effective tools for assessing clinical performance.

Two focus group discussion sessions were held. One group included USF audiology academic and clinical faculty and the other group was composed of external practicing audiologists who provide supervision for audiology students in extern assignments. Participation was on a voluntary basis and anonymity was maintained. A guided discussion format was followed to obtain information about their expectations for student clinical competency levels at the end of the second and third years of study. The analysis of the data set included a review and summary of comments and ratings completed by the participants. The summary provided a highlight of key points, trends, and similarities/differences in the ratings provided by the two groups.

The scope of practice in audiology has expanded rapidly over the past 10 years. Unlike basic pure tone and speech audiometric testing that characterized the practice of audiology in the early 1960's, recent technological advances have resulted in major expansion of available diagnostic and remedial services. Newly trained audiologists require an increased knowledge base and advanced clinical skills to meet the growing demands of the profession. Consequently, significant concern has developed that the traditional two year master's degree program can no longer adequately prepare students to meet these challenges (Loavenbruck, 1993; Van Vilet, Berkey, Marion, & Robinson, 1992; Windmill, 1993). Upgrading the educational requirements for audiology became a central area of discussion.

The issue of the professional doctorate in audiology and advancing the entry degree to the doctoral level has been debated for many years. In 1986, the Executive Board of the American Speech, Language, Hearing Association (ASHA) appointed a Task Force on Audiology to review the direction of ASHA related to the practice of audiology and ASHA's long range plan. In addition to several recommendations related to raising certification standards and the quality of undergraduate and graduate education, it was recommended that the professional doctorate become the entry level degree by 1998 (ASHA, 1988). Many professional organizations and practitioners have long supported the replacement of the master's degree with the Au.D. as the entry-level degree (AAA, 1991; ASHA, 1991; Caccavo, 1992; Goldstein, 1989; Loavenbuck, 1993; Van Vliet, 1992). New audiology entry-level standards were officially endorsed on October 10, 1995, when the ASHA Council on Professional Standards (Standards Council) voted to require a doctoral degree (ASHA, 1995).

Development of specific certification guidelines was germane to the upgrade of the degree requirements for audiology. In 1994, ASHA commissioned the Educational Testing Service (ETS) to conduct an independent job analysis (ASHA, 1996). The purpose of the study was to describe knowledge and skills necessary for newly certified audiologists to provide state-of-the-art

audiological practice. Initially, representatives of ASHA selected a panel of 14 subject-matter experts. The criteria for selection included that the individuals were recognized experts in audiology, were selected from a diverse range of work settings, had the ability to work cooperatively together, and represented diversity in gender, race/ethnicity, and geographic region. Additionally, 1976 was the median year in which the members obtained the Certificate of Clinical Competence. The 14 member expert panel was responsible for defining a set of task statements and knowledge areas that identified the performance domain of the newly certified audiologist. This information served as the content of the job analysis survey.

After pilot testing, a final version of the survey was then mailed to over 4,000 individuals, which included practicing audiologists, educators, and clinical fellowship supervisors. The practitioners ($N = 3,612$) were randomly selected from the ASHA database, with the inclusion of certain guidelines. The sample included only certified audiologists, which was over represented by newly certified audiologists (CCC within the past five years), and represented a variety of practice settings, gender, race/ethnicity, and geographic regions. The ASHA database was also used to select the group of educators ($N = 260$; 130 academic program directors and 130 clinical program directors) and the group of clinical-fellowship supervisors ($N = 420$).

Completion of the survey required that the participants make three judgments. First, the level of importance of each clinical activity statement and knowledge area for newly certified audiologists was rated. A six-point rating scale was utilized which ranged from (0) - (*activity not performed*) to (5) - (*activity very important*). Next, the participants were asked to determine where in the academic and clinical training program they learned to perform a clinical activity or acquired a knowledge area. The five choice areas were school--classroom, school--practicum, clinical fellowship, on the job (after certification), and continuing education (after certification). Finally, they were asked to determine at what point in the training program the clinical activities and knowledge areas should be learned relative to the above five choice areas.

A total of 1,540 surveys were returned. The response rates for each targeted group were 37% of practitioners (1,331), 32% of educators (83), and 30% of clinical-fellowship supervisors (126). The data analysis of the survey results delineated which clinical activities and knowledge areas were judged to be part of the performance domain for entry-level audiologists. Only one clinical activity statement (#11 - "Evaluate and document changes in the functional status of neural tissue or structures during operative procedures") was identified as not being part of the performance domain. All of the knowledge areas were identified as part of the performance domain. These results strongly support the job-relevancy of the performance domain for newly certified audiologists previously defined by the expert panel.

The results indicated a high level of agreement between each group regarding the level of importance of the clinical activity statements and knowledge areas. The level of agreement within each of the three respondent groups for the two areas ranged from 89% to 97%. In addition, interesting similarities and discrepancies among the respondents were revealed regarding where they believed clinical activities and knowledge areas were learned and where they should be acquired. Educators were not in agreement with the practitioners or the clinical fellowship supervisors. The educators believed that 91-96% of the clinical activities and knowledge areas were learned and acquired where they should be learned and acquired. In contrast, practitioners believed that only 45 - 48% of the clinical activities and knowledge areas were learned and acquired where they should be learned and acquired. Clinical fellowship supervisors believed that only 38 - 39% of the clinical activities and knowledge areas were learned and acquired where they should be learned and acquired. Further, the practitioners and clinical fellowship supervisors believed that many of the clinical activities and knowledge areas should be learned earlier in the educational process and the university programs should take a more prominent role in the training of audiologists.

The implications of these findings were fundamental to the process of

modifying the certification standards that were last implemented in 1992. The newly proposed certification standards received final adoption by the Standards Council in September 1997 (ASHA, 1997). The major differences between the 1992 standards and the new 1997 standards included the requirement of a doctoral degree, elimination of the nine month clinical fellowship, shift to competency-based or skills outcomes training model, and required ongoing formative assessments of student outcomes. This study responds to the requirements of appropriate assessment and documentation of clinical skill acquisition across the academic and clinical training program.

The current competency/skills based certification requirements have resulted in significant changes in the educational training model for audiology. As programs are developing new curriculum designs, additional emphasis must be placed on the integration and strengthening of academic and clinical training. Innovative educational training models are imperative to insure that students obtain required knowledge and skills.

Current research fails to provide evidence regarding educational training models, which are most effective in developing competent and skilled graduates in audiology. A dearth of research information is available about audiology education. This lack of information has become more apparent as programs are expanding and attempting to improve training strategies. Isolated classroom instruction and traditional clinical training models are not sufficient to facilitate critical thinking and self-directed learning necessary for advanced skill development.

Tharpe, Rassi, & Biswus (1995) suggested that the educational model utilized in the field of medicine could be adapted for audiology education. Several parallels exist between audiology education programs and medical schools that support the use of the medical model as a framework for educational methodology. First, audiology and medical school curricula combine the use of classroom instruction, laboratory experience, and clinical training. While classroom instruction develops the theoretical and conceptual knowledge base, the laboratory experience provides sequential and programmed practice of

various concepts and procedures. Application, integration, and refinement of knowledge and skills take place during the clinical experience.

Another important parallel between the profession of audiology and medicine is that as practitioners, there is a responsibility to diagnose, treat, and manage a vast array of patient disorders in a field with an expanding body of research and technological advances. Cunningham (1992) suggested that significant learning opportunities exist outside the classroom via clinical conferences, journal clubs, teaching staff conferences, rounds, and grand rounds, which are typical components of medical education programs. Frequent contact and varied learning situations with all levels of the academic faculty are essential for reinforcing concepts, improving understanding of critical issues, and fostering confidence and independence. Consequently, the student views the teacher as a practitioner with sustained learning and teaching objectives. The recognition of life long learning goals is important for the development of professional responsibility, personal commitment, and self-directed learning skills that are essential for audiologists and medical practitioners (Tharpe, 1995).

An innovative, nontraditional educational approach utilized in medical education is known as problem-based learning. This teaching-learning method has been either partially or fully integrated into the medical curriculum in several medical schools (Barrows, 1983; Neufeld & Barrows, 1974; Silber, Williams, & Paiva, 1978). Problem-based learning emphasizes the development of problem solving, self-directed learning and independent, critical thinking skills (Barrows, 1993). Unlike the traditional lecture format where students are first given a body of information about a patient problem or disorder, problem-based learning instruction presents the problem first. To work through the problem, the student must research areas necessary to gain an understanding of the problem. Student learning is individualized and relevant, and already known concepts are reinforced. Problem-based learning is typically organized into small groups with a faculty facilitator.

Although problem-based learning is a useful training tool applicable to audiology, its use is not being advocated in isolation (Tharpe, 1995). Problem-

based learning activities can be integrated into several components of the Au.D. curriculum. The clinical laboratory, weekly professional group meetings, interactive classroom instruction, grand rounds, and expansion or follow-up of actual clinic problems during wrap-up sessions provide many opportunities for problem-based learning instruction.

These and other innovative approaches to educational training have been incorporated into the Au.D. program at the University of South Florida (USF). Curriculum, laboratory, and clinical training components have been developed and refined to relate to development of specific knowledge and skills required by the current standards for certification. Providing students with a wide range of learning opportunities aid in accomplishing the goal of producing well-trained, competent audiologists.

While it appears that progress is being made in the educational training component, appropriate assessment techniques of student competency are necessary. Periodic formative assessments of students' acquisition and development of knowledge and clinical skills are required by the current certification standard. It is recommended that the measurements include written, oral, and practical areas and evaluate critical thinking, decision making, and problem-solving skills (ASHA, 1997).

The purpose of this study is to determine minimal knowledge and skill levels that should be acquired at the end of the second and third years in an Au.D. program specific to competencies outlined in Standard IV-D: Evaluation and Standard IV-E: Treatment. In reference to the USF Au.D. training program, the end of the second and third years are critical points in the educational process. After one year of academic coursework and an integrated clinical laboratory experience, students begin their clinical practicum training in the USF clinic in the second year. Therefore, assessment of clinical proficiency at the end of the second year is reflective of the coursework, laboratory, and clinical training experiences specifically provided within the USF curriculum. Minimal clinical competency levels at the end of the third year are influenced by knowledge and skills that are further developed during one year of clinical

practicum completed at a variety of external placements approved by the University. The data collected in this study will be useful in establishing minimal competency levels for these two major landmarks in the training process. Criteria related to the depth and breadth of understanding expected within various knowledge and performance areas of the standard will be determined.

The data will be used later to develop a reliable and valid formative assessment tool. Current evaluation scales are ineffective in monitoring and documenting students' acquisition of expanded knowledge and clinical skills required by the new certification standards. Additionally, there are no formative clinical assessment tools available at the national level. Consequently, efficient and appropriate tools for monitoring, evaluating, and grading student performance are needed. Development of a reliable assessment tool will provide a means of benchmarking professional development compared to accepted standards.

In summary, several study outcomes are anticipated as a result of completing this project. First, the data will be useful in determining minimal clinical competency levels expected at the end of the second and third years in an Au.D. program. This information can then be utilized to establish guidelines for progression of clinical competencies and serve as a means for increasing the objectivity in the evaluation of student performance. Second, this study may also be useful in creating a framework for student evaluation by utilizing a continuum of development, which corresponds to the USF curriculum. Third, this study may provide a model for other academic programs to utilize in program and curriculum analysis and in the development of a formative clinical assessment tool appropriate for each individual program. Finally, by serving as a model for other Au.D. programs, a major benefit of this study could be increased continuity between accredited programs.

Method

Several years of research and planning for program and curriculum development for the Au.D. program were required prior to final approval by the State of Florida Board of Regents. The current USF Au.D. program provides an

extensive curriculum offering state-of-the-art academic and clinical educational opportunities. Prior to the implementation of the program, the initial phase of formative assessment of the academic area began with a comprehensive review of course content to insure that the objectives related to current ASHA knowledge and skill outcomes were being met. This systematic study of the courses delineated which competencies were targeted within specific courses. This process identified the need to update current courses and develop new courses to reflect trends in clinical practice and technological advances in the profession.

As part of the formative evaluation of the program, a comprehensive summary table was created which organized the ASHA competencies from Standard IV-D: Evaluation and IV-E: Treatment and information specific to the USF Au.D. program into a working format. This “Timeline of Training” cross-referenced USF academic courses, USF clinical laboratory, USF practicum, and USF externship experiences across each semester for year one through year three relative to when each occurred within the training program. The USF “Timeline of Training” was provided to the two focus groups. The group members reviewed the information prior to the discussion meeting. This generated the data set, which was utilized in the current study. (Specific information about the “Timeline of Training” can be obtained by contacting the author).

In ASHA’s job analysis (ASHA, 1996), survey ratings between these two groups were compared for similarities and differences. According to Anderson (1990), the use of focus groups was preferred over other methods of data collection such as questionnaires and interviews. Questionnaires provide no opportunity for input other than that from the respondent. The use of interviews provides some opportunity for clarification and additional input, but not to the extent of a focus group. Therefore, utilization of the focus group format was the preferred method of data collection.

In summary, the design of this study was categorized as a descriptive study incorporating phenomenological inquiry using qualitative methods to define

and describe the issues in a context-specific setting. The analysis of the data followed the procedures outlined by Kruger (1988, 1998). Content analysis procedures included the review of field notes, audiotapes, and transcripts to identify trends and key points in the existing data. Further, this study followed job analysis methods similar to those used by the ASHA study.

Participants

A focus group discussion method was utilized in two phases. The information generated from the two groups of participants was used for this study. All participants were invited as volunteers. Group 1 consisted of seven USF academic and clinical faculty who are involved in classroom teaching, program and course development, and clinical training and supervision in audiology. This group was composed of three Ph.D. academic faculty members and four clinical faculty members (one Ph.D. and three current Au.D. candidates). Years of experience in teaching and supervision ranged from 2 – 30 years. This group was referred to as educators. The meeting date, location, and group participants were finalized and confirmation letters were sent.

Focus Group 2 included seven practicing audiologists from a variety of settings who have supervised audiology students in an externship or clinical fellowship experience. Participants in Group 2 were referred to as practicing audiologists. The group was composed of audiologists with the following educational backgrounds: one Ph.D., one Au.D., four Au.D. candidates, and one master's level. Years of experience in the field of audiology ranged from 8 – 29 years. These practicing audiologists had current or previous experience in Veteran's Administration hospitals, state and private hospitals, pediatric and adult specialty clinics, and private practice settings. Supervisory experience among the practicing audiologists ranged from 2 – 21 years supervising students in an externship or clinical fellowship experience. In addition, each audiologist had recent supervisory experience within the past two years. These qualifications assured a broad range of supervisory experience with a variety of students at different levels within their practicum experience, as well as familiarity with current supervisory requirements in conjunction with ASHA and

USF guidelines. The practicing audiologists were contacted initially by telephone to provide a brief description of the formative evaluation, the purpose of the study, and to determine interest in taking part in the process. After confirming the date and location, confirmation letters were sent to each participant.

Materials

Several materials were organized and developed for the focus groups. An information packet was sent to each member of the focus group. Contents of the packet for Focus Group 1 included an information letter (Appendix A), USF Au.D. Course Sequence (Appendix B), USF Au.D. Course Description (Appendix C), a preliminary rating scale, ASHA's 1997 Certification Standards, USF "Timeline of Training", a copy of the current USF Practicum Evaluation Form (Appendix E), and *Outcomes Measurement in Universities* (Rassi, 1998). Focus Group 2 participants were sent a confirmation letter (Appendix F) and packet similar to Group 1, with the addition of a campus map and parking permit.

The contents of the information packet were organized in an effort to provide each participant with current information relative to ASHA competencies and program standards to establish common understanding and purpose. Each focus group participant, particularly those from external sites, was required to become familiar with the USF curriculum and sequencing of various course offerings. Understanding this information was pertinent to the participants' ability to make appropriate judgments regarding minimal competency levels expected at certain points in the USF academic program.

Clinical performance rating scale descriptors, adapted from Rassi and Hancock (1993), were utilized to develop a preliminary six-point rating scale. Initially, the scale was reviewed by Focus Group 1 participants to obtain a consensus regarding its appropriateness for the task. The preliminary six-point skill/competency level rating scale, incorporating the following descriptors, was utilized when judging the minimal expected competency levels:

- * 1-- Absent: Competency/skill not present
- * 2--Emerging: Competency/skill emerging

- * 3--Inconsistent: Competency/skill inconsistent
- * 4--Present: Competency/skill present but needs further development
- * 5--Developed: Competency/skill developed but needs further refinement and/or consistency
- * 6--Consistent: Competency/skill well-developed and consist

Procedure

Both phases of this study utilized the information generated from the focus group methods, which were part of USF's formative evaluation of the Au.D. program. Krueger (1988) identified three steps of the focus group process which provide guidance for implementation: conceptualizing the study, conducting the focus group discussions, and analyzing and reporting the results of the data. This method of gathering qualitative data provided a means for an interactive exchange of ideas, sharing of information, and in-depth discussion of critical issues relative to development of clinical competency.

Conceptualization of this study was developed in an effort to address the need for appropriate formative assessment tools for the USF Au.D. program components and student learning outcomes. The background information, purpose, and anticipated outcomes of this study were discussed in the previous section. The target population for this study included educators and practitioners with experience supervising audiology graduate students as core participants in the educational process.

Prior to both focus group meetings, each participant was instructed to review all information contained in the packet. The information letter identified the rationale of the research project, goals of the focus group, and a general description of the focus group discussion process. The focus groups utilized guided discussions (Appendix G and H), that drew on the participants' knowledge and expertise in audiology.

The ultimate goal of the focus groups was to determine the minimal competency levels expected at the end of the second and third years of training for each skill area. Variables influencing student competency and skill

development by the end of the second and third years included which courses are offered, course content, course sequencing, instructional format and teaching strategies, clinical training and experience, and independent student research and study. The unique composition of each focus group was anticipated to reveal differences in the expectations related to clinical skills in various areas. These differences were documented and reviewed in the discussion of the data.

The major goals of Focus Group 1 included: reviewing, modifying, and/or approving a currently available rating scale or creating a new scale; reviewing and approving the organization and clarity of the outlined targeted skill areas utilizing the ASHA competencies; and rating the minimal competency levels expected at the end of year two and year three. Guided discussions were facilitated to answer questions and clarify information. Ratings were accepted by obtaining a consensus from the group.

After the initial focus group, the data was reviewed and summarized. These data were then utilized during the second focus group. The procedure utilized for Focus Group 2 was different from the initial group. The practicing audiologists were not asked to rate the end of the second year competencies. It was believed that the educators maintained the major responsibility for student progress during the first two years of the Au.D. program. At this point in the educational training process, student knowledge and skill acquisition were predominately the result of internal USF academic, laboratory, and clinical instruction.

Consequently, the initial goal of Focus Group 2 was to review and provide feedback regarding the end of the second year ratings assigned by the educators. An important aspect in the discussion process was documentation of agreement and discrepancies of the practicing audiologists' opinions relative to the end of the second year competency ratings of the educators. The next goal of Focus Group 2 was to rate minimal competency levels at the end of the third year. After obtaining a group consensus rating from the practicing audiologists for their end of the third year ratings, the end of the third year ratings given

previously by the educators were revealed and discussed. The moderator and the assistant moderator provided clarification of information and reported rationales for ratings, when necessary. A final consensus rating was obtained, if changes in the initial ratings were requested. The final goal of this group was to discuss possible application of these minimal competency levels to formative and summative student evaluations, to discuss the relationship of these expected levels to assigning a clinical grade, and to discuss the development of a Competency Assessment Tool.

Procedures outlined by Krueger (1988, 1998) were utilized for organizing and reporting the data. The methods used for capturing data during each focus group included a written transcript (detailed, but not verbatim) of the session, recording of field notes by the assistant moderator, notation of specific responses and competency ratings by the moderator on an overhead transparency, individual written comments from the participants, and audiotapes of each session. A combination of information gathered by these methods provided the raw data utilized in the summary of the results. While exact quotes by the participants are not provided, descriptive statements and observations were periodically read back to the group for verification and correction.

A debriefing session was held immediately following the session between the moderator and assistant moderator to review the field notes, individual competency ratings, and group comments. The goals of each session were accomplished and sufficient data were generated for each targeted skill area. All data forms were collected and organized, and the quality of the audiotape was verified. These organizational methods were necessary to insure the integrity of the data. The final data were reviewed and summarized highlighting key points and trends.

Results

Focus Group 1

Focus Group 1, which was composed of the educators, met on two separate dates due to very lengthy discussions of several basic concepts and underlying assumptions at the beginning of the session. One aspect of the early

discussion dealt with the group's decision to provide separate ratings for "skills of performance" and "skills of interpretation" within certain competency areas. Although separation of these two skill areas was not indicated as part of ASHA's 1997 Certification Standard, the educators recognized that appropriate assessment of clinical proficiency relies upon the ability to clearly identify what aspect of the target skill is progressing and where additional instruction or training may be needed. The most fundamental aspect of clinical skill development begins with simple performance skills relative to proper instrumentation, providing clear instructions, and performing basic test procedures, followed by the ability to properly interpret the individual test results.

The group consented that a broad academic knowledge base was the presumed foundation that a student brings into the clinical setting and was required prior to the development of clinical skills. The hierarchy of clinical skill development begins with rudimentary performance abilities followed by the development of more advanced interpretation skills. Understanding the individual test results was fundamental to developing a repertoire of skills necessary for the interpretation of the overall test battery. Ultimately, integration of the individual results with other pertinent data was required and was viewed as a higher level skill. Individually assessing performance and interpretation skills in certain competency areas was agreed to be most appropriate. Therefore, performance and interpretation skills in the areas of evaluation and treatment at the end of the second and third years were to be rated separately. An example of a blank rating worksheet was provided to each participant to be utilized for individual notes during the rating process (Appendix I).

The next step was to review and discuss the currently available rating scale and determine whether it provided an appropriate means of evaluating the various levels of clinical competency. Initially, the six-point scale and descriptors were accepted without modification. However, it was later suggested that the scale be modified to add a "0" starting point referring to the absence of the competency/skill. The group agreed to the proposed change and the modified six-point scale was used throughout the rating process (Appendix D).

The next step included rating the individual ASHA competencies related to evaluation, followed by those associated with treatment. The ASHA competencies that were reorganized into a working format were initially reviewed for clarity and specificity. The educators were asked to reword, delete, or accept the presented competency statement prior to rating each. As instructed, the group provided several suggestions for modifying the initial competencies that expanded upon or simplified many of the original competency statements from the ASHA Standards. Discussions that followed facilitated sharing of viewpoints regarding the various aspects of skill development in conjunction with the particular academic and clinical experiences provided at that point in time. The participants developed rationales for the proposed rating levels and eventually achieved a group consensus for each final rating.

For the purpose of this study, a total of 35 different competencies within the area of evaluation and 13 competencies within the area of treatment were defined and considered for rating by the educators. In comparison, ASHA's original list contained 18 evaluation competencies and 19 treatment competencies. During Focus Group 1, further examination and discussion of each evaluation and treatment competency revealed that certain competencies could not be separated into component skills of performance and skills of interpretation and were more appropriately defined by one classification or the other. In those instances, the group rated the competency in only one skill category for each year.

The end of the second year competencies that were rated only by Focus Group 1, the educators, indicated a broad range in the minimal expected levels in evaluation and treatment (Appendix J). For the performance skills in the area of evaluation, 13 out of 31 skills rated in this category were at the highest level "5" (consistent), six skills at level "4" (developed), five skills at level "3" (present), and seven skills at level "2" (emerging). Several of these performance skills rated at a "5" level were in basic evaluation areas, such as "Obtaining a case history," "Otoscopy," "Speech audiometry," and "Tympanometry." Performance skills which received the lowest ratings were in specialized or more advanced

areas including “Cerumen removal,” “ENG testing,” “Balance evaluation,” “Auditory processing evaluation,” “VRA/BOA,” and “Aural rehabilitation evaluation/children.” As the group progressed through the ratings in this area, there was a high degree of consensus among the group members. When relating academic, lab, and clinical components, there was a strong level of agreement regarding skill level progression in this area.

There were 24 evaluation skills of interpretation rated for the end of the second year. Overall, these ratings were lower than those given for performance skills. Five skills were rated at level “5” (consistent), four skills at level “4” (developed), six skills at level “3” (present), six skills at level “2” (emerging), and one skill at level “1” (inconsistent). Although interpretation skills were generally rated with a lower competency level, the higher ratings corresponded to more basic areas and the lower ratings were given for advanced areas, similar to performance skill ratings. During the rating process, more discussion was generated among the educators in defining these expected skill levels. It was agreed that the abilities of the student to understand the subtleties of the test results or situation influenced the development of interpretation skills. Consequently, strong agreement was obtained at lower rating levels for many areas.

The end of the second year performance and interpretation skills in the treatment area were rated significantly lower than skills in the evaluation area. A total of 12 skills of performance and 4 skills of interpretation were rated. The 12 performance skills received ratings including three at the “4” (developed) level, one at the “3” (present) level, seven at the “2” (emerging) level, and one at the “1” (inconsistent) level. The four treatment skills of interpretation indicated two ratings at the “3” (present) level and two ratings at level “2” (emerging). These lower ratings may be most influenced by the limited number of treatment practicum experiences provided by the USF program by the end of the second year.

After completing the end of the second year ratings, the next task was to proceed to the end of the third year competency ratings. The end of the third

year ratings by the educators for performance skills in the area of evaluation revealed 17 skills at a “5” (consistent) level, six skills at a “4” (developed) level, seven skills at a “3” (present) level, and one skill at a “2” (emerging) level. In comparison to the end of the second year ratings, an increase of four performance skills improved to the highest competency level and only one performance skill (Aural rehabilitation evaluation/children) remained at a “2” (emerging) level. Interpretation skills received ratings of 12 at a “5” (consistent) level, four skills at level “4” (developed), six skills at level “3” (present), and two skills at level “2” (emerging). As compared to end of the second year ratings, five additional performance skills were rated at the highest competency level and similar improvement was noted on the number of previously lower rated skills with only two skills at a level “2” (emerging), including Aural rehabilitation evaluation/children. The degree of improvement noted for the end of the third year competency ratings in this area reflected the experience gained after a full year of external clinical practicum refining basic skills, as well as more advanced academic courses and seminars.

Ratings for the end of the third year performance skills in the treatment area revealed one skill rated at the “5” (consistent) level, two skills at the “4” (developed) level, six skills at the “3” (present) level, two skills at the “2” (emerging) level, and one skill at the “1” (inconsistent) level. When comparing these ratings to the end of the second year ratings, ratings generally improved one to two levels with the majority of skills progressing from a level “2” (emerging) to level “3” (present) or “4” (developed). Treatment area interpretation skills indicated one skill at level “5” (consistent), one skill at level “3” (present), two skills at level “2” (emerging). Very little advancement was noted in these ratings in comparison to the end of the second year ratings, with the exception of one skill area “Real ear measurement/functional gain” which progressed from a level “3” (present) to a level “5” (consistent). The group agreed that after the basic performance techniques are learned for real ear and functional gain measurements, the opportunities for performing the task and interpreting the data relative to individual patients are significantly increased

during the externship assignments during year three. This increased exposure to fitting amplification and verifying fitting goals leads to skill progression. However, the overall performance and interpretation skills in the area of treatment show significantly slower advancement than evaluation skills over the first three years according to ratings provided by the educators. Throughout the discussion, the educators indicated that the lower expected treatment skill levels were largely due to limited training opportunities in the many clinic settings.

Focus Group 2

The practicing audiologists recruited for Focus Group 2 convened about six months following Focus Group 1. The session commenced with an in-depth introduction, which revealed the rationale for the formative assessment and this research project, goals of the session, explanation of forms and worksheets, the rating scale and the procedures to be followed. General information about the previous focus group with the educators was also briefly discussed.

Prior to beginning the rating process, the practicing audiologists were presented with the end of the second year minimal competency ratings decided upon by the educators. Gaining an awareness of the educator's ratings established a point of reference for the practicing audiologists prior to their rating the expected levels at the end of the third year. In general, the practicing audiologists had limited comments regarding the educator's end of the second year ratings and felt they were justifiable based upon supporting documentation. However, there were three ratings which they felt were rated higher than appropriate in the area of evaluation. Performance skills/air and bone conduction testing" and "Air conduction masking" and interpretation skills/"Tympanometry" were all rated at the "5" (consistent) level for the end of the second year by the educators. The moderator provided the rationale for the educators' decision for a rating level "5" (consistent) for "Air and bone conduction testing" which was based on improved instruction and training for this skill in the first year Clinical Lab course. A stronger level of agreement was then obtained with the educators' rating for "Air and bone conduction testing" however, the

practicing audiologists felt a “4” (developed) level for “Air conduction masking” and a “3” (present) level for “Tympanometry” were more appropriate ratings for these areas. They felt that the intricacies involved with performing air conduction masking and the more advanced level of understanding required for interpreting multi-frequency tympanometry and pediatric issues would justify lower expected skill levels.

The next step required the practicing audiologists to rate the end of the third year competency levels. After reaching a consensus, the educator’s end of the third year ratings were then revealed to the group. If differences were noted, the participants requested discussion or clarification of information. In some cases, the final agreed upon rating was changed.

Of the 31 evaluation related competencies, the end of the third year ratings for skills of performance received 18 skills at a “5” (consistent) level, 6 skills at a “4” (developed) level, 5 skills at a “3” (present) level and 2 skills at a “2” (emerging) level. These ratings were comparable to those provided by the educators. Specific differences noted were with performance skills “Summarize results and recommendations in reports and chart notes” and “Troubleshooting/ Instrumentation” which the practicing audiologists felt should be one skill level higher (“5” and “4” respectively). In the other instance, “Evoked potentials” was rated one level lower (“2”) than the educators (“3”) provided. The differences noted in the higher expected levels by the practicing audiologists for “Summarize results and recommendations in reports and chart notes” and “Troubleshooting/ Instrumentation” were related to the high degree of importance of these two areas to efficient office and patient management and reliability of test results, as well as intensive student training in these areas after a year in extern settings. The lower expected rating in “Evoked potentials” was reflective of the limited exposure to later evoked potentials that students would likely encounter in most extern settings.

Ratings for the end of the third year skills of interpretation in the area of evaluation indicated 10 skills at a “5” (consistent) level, 7 skills at a “4”

(developed) level, 4 skills at a “3” (present) level, and 3 skills at a “2” (emerging) level. Again, a high level of similarity in the ratings was noted between the educators and practicing audiologists. In the four instances where minor differences were noted, “Play audiometry” was rated one level higher (“4”) and “Obtaining case history”, “Tympanometry”, and “Evoked potentials” were rated one level lower (“4”, “4”, and “2” respectively) by the practicing audiologists in comparison to the educators.

Although the practicing audiologists represented a variety of settings where some provided very specialized services for adults or children, collectively they felt that the expected skill level for “Play audiometry” should be at least one level higher than the educators rated. It was suggested that each student should have an extern assignment that was predominately pediatric by the end of the third year which would improve skills. In regard to the lower expected levels for “Tympanometry” and “Evoked potentials,” justification was similar to that discussed previously for the lower end of the second year ratings for these two areas agreed upon by the group. Discussion of expected interpretation skills for “Obtaining a case history” by the end of the third year initially resulted in a split group decision. A portion of the group agreed with the educators and provided a level “5” rating, and the other members believed a “4” level was more appropriate. The participants from the multi-specialty and pediatric settings were supportive of the lower “4” level due to the opinion that interpretation of more involved medical and developmental case history information and possible related audiological problems would come only after several years of experience. At that point, the other group members agreed and a final group consensus was obtained for a level “4” rating.

Performance and interpretation skills related to treatment were the final areas rated. Performance skills received 4 ratings at a “5” (consistent) level, 6 skills at a “4” (developed) level, and 2 skills at a “2” (emerging) level. These ratings are distinctly different from those provided by the educators. Overall, the practicing audiologists rated these expected skills much higher and the majority of their ratings were at the “4” (developed) or “5” (consistent) level. Conversely,

the educators rated the majority of these skills at a “3” level or lower. There was strong agreement among the practicing audiologists that students should have obtained higher skill levels by the end of the third year than ratings provided by the educators, particularly due to the three day extern assignments each semester and the increased emphasis in training relative to treatment issues in most settings.

Interpretation skills in the treatment area received 2 ratings at a “5” (consistent) level, 1 rating at a “4” (developed) level, and 1 rating at a “2” (emerging) level. Also, it is important to note that two areas (“Develop culturally sensitive and age-appropriate management strategies and treatment plan” and “Assess efficacy of interventions in aural rehabilitation”) were rated two levels higher (“4” and “5” respectively) by the practicing audiologists. The group members were unaware that specific information and training were incorporated in the curriculum that emphasized issues related to cultural sensitivity in the clinical setting and they felt this was a significant enhancement of the Au.D. curriculum. Although the total number of skills rated in this area is very small, the apparent trend is higher expected skill levels by the practicing audiologists than the educators. As stated previously, the practicing audiologists strongly agreed that higher skill levels should be expected in this area. Table 1 and Table 2 show the distribution of ratings for the evaluation and treatment competencies for both focus groups.

Discussion

The planned goals of both focus groups were achieved by the conclusion of the sessions. The interactions between the participants from both groups were very positive and a very collegial exchange of information and ideas occurred. The participants in both groups provided clarification and insight related to their respective areas of specialty when needed. The more vocal group members often solicited input from the more quiet members before reaching a consensus. Throughout the work sessions, they remained focused on the task and were competent with regard to separating the ideal from reality in identifying factors that influenced their competency ratings.

The educators provided additional observations about the focus group discussion process and the relevance of the goals of this research project. The exchange of information and ideas in a guided discussion format facilitated better cohesion between academic and clinical faculty in understanding how to integrate their respective goals and objectives. By undergoing this process, it was anticipated that higher levels of consistency would occur in evaluating student clinical performance between academic and clinical faculty. The participants reported to have gained a better understanding of pertinent academic and practicum training goals required by the new certification standards that will enhance the academic and clinical program outcomes. Also, at the conclusion of Focus Group 2, the practicing audiologists discussed some of the differences and similarities between the ratings, possible application of these data to development of a competency assessment tool, and the relationship of these expected levels to assigning a clinical grade at the end of each semester.

The data analyzed in this study revealed several important similarities and differences in the ratings of the minimal competencies between the Focus Groups. The educators rated the end of the second year competencies only. However, when reviewed by the practicing audiologists, they expressed a high level of agreement with the ratings of the educators. Higher ratings were given for performance and interpretation skills in the area of evaluation that were considered to be rudimentary in clinical skill development. In addition, all performance and interpretation skills for treatment were rated significantly lower than the evaluation area.

The significance of obtaining a high level of agreement between the two groups for the end of the second year ratings is extremely important to this study for several reasons. If these ratings reflect the minimal competency levels that students would possess when they initiate their first externship experience and the practicing audiologists agreed that these competency levels define appropriate beginning skill levels, then these data suggested that the USF Au.D. program has effectively met its academic and clinical training goals during the

first two years. It is beneficial to clarify the role of the academic program throughout the first two years, as well as the point from which the extern clinical training experience should advance the students' clinical competency levels. The University extern site coordinator must carefully make assignments relative to student training needs and work closely with the off-campus supervisors to provide this information and verify that those needs are met. Increased awareness and understanding of the students' expected competency levels could enhance support for the USF program by the off-campus supervisors and

Table 1

Distribution of Ratings for Evaluation Competencies by Educators (FG1) and Practicing Audiologists (FG2)

Ratings of Evaluation Competencies (N=35)	Skills of Performance (N=31)			Skills of Interpretation (N=24)		
	Year 2 FG1	Year 3 FG1	Year 3 FG2	Year 2 FG1	Year 3 FG1	Year 3 FG2
Level 5 - Skill well-developed & consistent	13	17	18	7	12	10
Level 4 - Skill developed but needs further refinement &/or consistency	6	6	6	4	4	7
Level 3 - Skill present but needs further development	5	7	5	6	6	4
Level 2 - Skill emerging	7	1	2	6	2	3
Level 1 - Skill inconsistent	0	0	0	1	0	0
Level 0 - Skill not evident	0	0	0	0	0	0

Table 2

Distribution of Ratings for Treatment Competencies by Educators (FG1) and Practicing Audiologists (FG2)

Ratings of Evaluation Competencies (N=35)	Skills of Performance (N=12)			Skills of Interpretation (N=4)		
	Year 2 FG1	Year 3 FG1	Year 3 FG2	Year 2 FG1	Year 3 FG1	Year 3 FG2
Level 5 - Skill well-developed & consistent	0	1	4	0	1	2
Level 4 - Skill developed but needs further refinement &/or consistency	3	2	6	0	0	1
Level 3 - Skill present but needs further development	1	6	0	2	1	0
Level 2 - Skill emerging	7	2	2	2	2	1
Level 1 - Skill inconsistent	1	1	0	0	0	0
Level 0 - Skill not evident	0	0	0	0	0	0

develop consistent evaluation strategies. Certainly, particular extern sites are more appropriate as first assignments as compared to others that are better suited for more experienced students. These factors must be considered before assignments are finalized.

The data also revealed another important similarity between the groups for the end of the third year ratings. Again, the ratings provided for performance and interpretation skills in the area of evaluation showed a high level of agreement. Many of the individual skills in these areas were rated the same and the skills that received varied ratings were different by only one level, either higher or lower. Although the practicing audiologists were aware of the educators' end of the third year ratings prior to coming to a final consensus, only two of their initial ratings changed after receiving this information. For example, the initial rating given for "Perform cerumen removal" was a level "4". However, after reviewing the educators' rating of level "3" and considering that most extern sites are not providing this service, agreement was obtained for a level "3" rating. These ratings reflect the minimal competencies after completing one year of clinical training within the USF clinic and a year of clinical training in various externship assignments (year three in the USF Au.D. program). Both groups appeared to have similar expectations for the development of clinical skills after two years of clinical training.

Significant differences were obtained between the groups when rating the end of the third year performance and interpretation skills in the area of treatment. The practicing audiologists tended to rate all of these skills higher than the educators, by at least one level for performance skills and two levels higher for interpretation skills. During the rating process, the practicing audiologists provided various rationales justifying the ratings provided. The area of treatment related to various aspects of aural rehabilitation. Their perceived emphasis in treatment due to the critical importance to the patient and consequently, a critical factor in their professional service provision influenced the higher skill levels rated by the practicing audiologists. Efficacy of therapeutic interventions and outcome issues must be carefully documented

and assessed as required by employers, insurance companies and other third-party payers, and service contractors. They felt that unquestionably higher competency levels would be developed by the end of the third year and they had very strong feelings regarding the importance of expecting higher competency levels for the students.

From the discussions, the ratings in the treatment area may have been influenced by fundamentally different definitions of what is considered to encompass aural rehabilitation. The educators maintain a traditional university/training model with a clear separation between diagnostics and treatment. For example, auditory training, speechreading, speech and language treatment for children, and cochlear implant treatment tend to be isolated and trained separately, to some extent, in the university clinic. Because of these factors, students may have limited exposure in many of these areas by the end of the third year, which impacted the ratings provided by the educators. However, the practicing audiologists consider treatment services to be embedded in their overall service model. Emphasis on hearing aid orientation, communication strategies, comprehensive counseling, ongoing follow-up, and collaboration with other service providers for monitoring and referral needs are considered to be the essential elements of the treatment process for the practitioners. Other differences in the ratings may be due to the educators being less familiar with unique practice setting issues, as well as practitioners being less familiar with all the factors related to university educational training models and course/clinical content.

Conclusions

Several key points emerged as the participants proceeded through the rating process. First, the participants acknowledged that all ratings provided are significantly influenced by the overall USF Au.D. program of study and externship specialties and limitations. Additionally, the contribution of the externship experience to the student's clinical development would ultimately reflect current community standards and expertise. Secondly, it was recognized that not all competencies would be at the highest level by the end of the third

year. Many advanced or specialized skill areas may not progress beyond an “2” emerging level due to limited exposure or opportunities. Therefore, the below “5” (consistent) rating level will be the acceptable criteria for judging whether the student has achieved the appropriate skill level. Thirdly, the practicing audiologists felt that a great deal of re-education of all externship supervisors regarding implementation of the new certification standards will be necessary. The university programs will be responsible for organizing and disseminating information to their affiliated extern settings and supervisors to ensure proper formative and summative assessment of students’ clinical skills. Ultimately, this study reflects a continuum of professional development incorporating all of the above factors.

The minimal competency ratings collected in this study can be used later to develop a clinical competency assessment tool to be used throughout the course of the student’s clinical training in a variety of clinical settings. The high level of agreement between the ratings provided by the educators and practicing audiologists, with the exception of the treatment area, suggests that these minimal expected competency levels for the end of the second and third years provide reasonable and appropriate levels to develop guidelines for clinical skill progression. Further investigation of minimal expected treatment skill levels at the end of the third year may be necessary to develop better consensus between the two groups. This can be accomplished by a follow-up written summary of the final results to the educators for review and comments, highlighting the significant differences noted in their ratings in the treatment area in comparison to the practicing audiologists.

Of important note, when comparing the results of this study to the results of the ASHA study, was the high level of agreement between the educators and the practicing audiologists regarding the expected skill levels in the evaluation area at the end of the second and third years. Again, this confirms the importance of the first two years of the educational process for which the University has major responsibility. In contrast, the ASHA study revealed that the practitioners and clinical fellowship supervisors strongly disagreed with the

educators that students acquired knowledge and clinical skills when and where they should acquire them. These current data would suggest that the USF Au.D. program provides a strong academic and clinical education with a high level of continuity between educational contexts which is necessary and appropriate for meeting new clinical standards.

The focus group participants agreed that these data could be utilized in determining clinical grades at the end of a clinical experience. If a student achieves the minimal expected competency skill ratings or above for all competencies, the implication for grading is that the student should receive a passing grade of “A” or “B”. The need to differentiate between “A” versus “B” performance can not be quantified within the current rating scale. Consequently, further discussion included suggestions such as expunging the letter grading system and utilizing a “Pass/Fail” grading system or maintaining the letter grade with an added narrative component to be the determining factor in assigning an “A” or “B”.

The most favorable alternative was the addition of a narrative evaluation to the letter grade system, which would provide qualitative information for justification of a passing “B”, or “A” grade. The narrative evaluation would give pertinent information about other aspects of student performance related to interpersonal skills, level of effort, self-motivation, initiative, and areas of strengths and weaknesses. Other modifications were suggested which included development of an acceptable rating range for interim standards necessary to assess performance during intervening semesters. In addition, each skill area should have an indicator for “not observable” or “not applicable” in the event that a clinical assignment does not provide sufficient opportunities or exposure to certain skill areas.

There are several implications for using these results by academic programs as well as benefits to the profession at large. The methods outlined in this study can provide guidance to other Au.D. programs to determine minimal expected competency ratings based on their unique academic and clinical

training components. Appropriate formative and summative clinical assessment strategies can then be developed for a specific program. Programs will have the ability to provide improved tracking of student performance and clinical progress throughout the educational process. Another important aspect related to program and student management is the potential efficiency in identifying the clinical experience needs of each student and assisting in appropriate clinical/externship placement.

Ultimately, dissemination of the results obtained in this study may provide benefits to the profession. In view of the need to research and establish effective assessment tools in audiology in reference to the new certification standards, this study can be utilized as a prototype for developing a national model for Au.D. programs. An enhancement in the collaboration between educators and practicing audiologists/extern supervisors will occur with planning and monitoring activities required for successful transition to the new training goals and objectives. Additionally, this study can serve as a model for training externship supervisors on the current certification standard and the changes in the training and assessment requirements.

In summary, this study was successful in establishing minimal expected competency levels for the end of the second and third years in an Au.D. program. Many other issues were discussed for refining and validating the results of this study as well as the essential aspects for development of an effective competency assessment tool. Further investigation would provide an opportunity to re-evaluate the minimal competency levels after one year to determine whether any changes are appropriate. One of the major needs in audiology that this study does not address is collaborative efforts between university programs to establish effective evaluation and training methods that can be utilized within several programs. Suggestions from the focus group participants included that an additional phase for the data gathering process could include designing a written survey to be utilized on a broader local or national level or teleconferencing future sessions.

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APPENDICES

- APPENDIX A. FOCUS GROUP 1 RECRUITMENT AND CONFIRMATION LETTER
- APPENDIX B. USF Au.D. COURSE SEQUENCE
- APPENDIX C. USF Au.D. COURSE DESCRIPTION
- APPENDIX D. RATING SCALE
- APPENDIX E. USF PRACTICUM EVALUATION FORM

APPENDIX F.	FOCUS GROUP 2 RECRUITMENT AND CONFIRMATION LETTER
APPENDIX G.	FOCUS GROUP 1 QUESTIONING ROUTE
APPENDIX H.	FOCUS GROUP 2 QUESTIONING ROUTE
APPENDIX I.	EVALUATION AND TREATMENT COMPETENCIES (BLANK)
APPENDIX J.	MINIMAL EXPECTED SKILL RATINGS FOR EVALUATION AND TREATMENT COMPETENCIES
APPENDIX K.	DEMOGRAPHIC SURVEY
APPENDIX L.	PARTICIPANT EVALUATION OF FOCUS GROUP
APPENDIX M.	CURRICULUM VITA

APPENDIX A. FOCUS GROUP 1 RECRUITMENT AND CONFIRMATION LETTER

University of South Florida
Tampa, FL 33620

Dear ,

Thank you for agreeing to participate in the focus group on Thursday, March 9, 2000, from 5:00 p.m. until 8:00 p.m. The meeting will be held in SVC 2080 at USF. A light dinner and snacks will be provided.

My research is an effort to identify the level of clinical proficiency which is expected at

Karen J. Richardson

the end of the second and third year in an Au.D. program. Identification of these specific competency levels will provide a means for monitoring and evaluating student performance, curriculum design, and academic and clinical course content and sequencing.

As the profession of audiology moved forward with upgrading the entry degree to the doctoral level, ASHA adopted new standards for certification outlining general knowledge and skill areas in September 1997. The lack of information related to specific competencies expected at various points within the training program necessitates a broad-based information gathering process in two phases. As educators, you have been selected to participate in the first phase of a two phased study. A second focus group will include practicing audiologists who have supervised students in an externship or clinical fellowship experience.

In preparation for the information gathering process, I have included the most relevant articles and documents for your review. Your experience and expertise in academic and clinical training are the most valuable contributions to this process; however, please utilize these resources as needed to prepare for the focus group. Remember to bring them with you when you attend the meeting. You may also bring other materials which you think might be helpful.

The focus group will utilize guided discussions which will draw on your experiences and knowledge of the topic. In these discussions, we will develop a rating scale and then rate the minimal competency levels expected at the end of the second and third year of training for each skill area. Your input will provide information that only you can contribute to the success of this project. Thank you in advance for your participation.

Sincerely,

Karen J. Richardson, M.A.
Au.D. Candidate

APPENDIX B. USF Au.D. COURSE SEQUENCE

University of South Florida

Department of Communication Science & Disorders
Course Sequence for AuD program

<u>New Students</u>		
YEAR I: 40 Credits		
Sem I – Fall	Sem II – Spring	Sem III – Summer
SPA 5303 Auditory Physiology (3)	SPA 6128 Speech Perception and Hearing Loss (3)	SPA 6305 Pediatric Audiology (3)
SPA 5120 Psychoacoustics (3)	SPA 6318 Medical Audiology (3)	SPA 5345 Principle Ampl. I (3)
SPA 6390 Perspectives in Audiology (2)	SPA 5328 Audiological Rehab (3)	SPA 5506 Clinical LAB III (4)
SPA 6930 Mathematics SLP&A (2)	SPA 5132 Instrumentation (2)	
SPA 5506 Clinical LAB I (4)	SPA 5506 Clinical LAB II (4)	
Credits 14	15	10
YEAR II: 41 Credits		
Sem I – Fall	Sem II – Spring	Sem III – Summer
SPA 6345 Principle Ampl. II (3)	SPA 6324 Educational Aud. (3)	SPA 6805 Research Procedures (3)
SPA 6354 Hearing Conservation (3)	SPA 6317 Vestibular Eval. & Tx (3)	SPA 7931 Adv. Electrophysio. (3)
SPA 6314 Electrophysiology (3)	SPA 7931 Pharmacology (3)	SPA 6505 Clinic III (5)
SPA 6505 Clinic I (5)	SPA 6505 Clinic II (5)	SPA 6505 SLP Clinic or Cerumen Management or AR (1)
SPA 6505 SLP Clinic or Cerumen Management or AR (1)	SPA 6505 SLP Clinic or Cerumen Management or AR (1)	
Credits 15	15	12
YEAR III: 30 Credits		
Sem I – Fall	Sem II – Spring	Sem III – Summer
SPA 6360 Audiology Business & Practice Management (3)	SPA 6553 Adv. Differential Dx (3)	SPA 7931 PRP Seminar III (3)
SPA 7931 Adv. Aud. Rehab. (3)	SPA 7931 Adv. Sensory Aids (3)	SPA 6930 PRP Project (1-6)
SPA 7931 PRP Seminar I (3)	SPA 7931 PRP Seminar II (3)	SPA 6505 Clerkship III (3)
SPA 6505 Clerkship I (3)	SPA 6505 Clerkship II (3)	
Credits 12	12	7-12
YEAR IV: 18 Credits		
Sem I – Fall	Sem II – Spring	<i>Note that the Externship needs to equal 9 months of full-time experience</i>
SPA 6505 Externship I (5)	SPA 6505 Externship II (5)	
SPA 6930 PRP Project** (1-6)	SPA 6930 PRP Project** (1-6)	
Credits 6-11	6-11	

TOTAL PROGRAM CREDITS: 127

** If needed

Other Requirements:

1. Students will be given exams at the end of both first and second year prior to entering the following year:

First year exam – Didactic based on course work.

Second year exam – Didactic and practical based on course work and clinic.

2. Prior to entering Externships (Year 4) students must pass a designated national Audiology Examination.

APPENDIX C. USF Au.D. COURSE DESCRIPTIONS

University of South Florida

Au.D. Course Descriptions

SPA 5120 Psychoacoustics (NEW COURSE)

Perception of auditory stimuli in normal and impaired ears.

(3 credits)

SPA 5132 Instrumentation

Basic principles of signals and systems used in Audiology.

(2 credits)

SPA 5303 Auditory Anatomy & Physiology (TITLE CHANGE)

Anatomy & physiology of the peripheral and central auditory system.

Physiological measurements related to physiology: immittance, otoacoustic emissions.

(3 credits)

SPA 5328 Rehabilitative Audiology for Adults (TITLE CHANGE)

Assessment and treatment: Auditory skills, speechreading, and communication.

Issues in geriatric management. Other rehabilitative procedures for adults.

(3 credits)

SPA 5506 Clinical LABS I, II, III

Laboratory exercises in the use of audiological equipment/techniques as they relate to semester course work.

(1 –12 Variable Credits)

SPA 6128 Speech Perception & Hearing Loss (TITLE CHANGE)

Sound and acoustics. Speech perception of deaf and hard-of-hearing, implications for speech and language development. Role of speech audiometry in clinical assessment.

(3 credits)

SPA 6305 Pediatric Audiology

Etiologies and manifestations of hearing loss within a pediatric population.

Survey of procedures used in early identification and quantified measurement of hearing loss in young and non-communicative children.

(3 credits)

APPENDIX C. Continued

SPA 6314 Electrophysiology (TITLE CHANGE)

Comprehensive survey of theoretical and applied auditory physiological measures including evoked neural responses, otoacoustic emissions and the role these measures have in the audiologic test battery.

(3 credits)

SPA 6317 Vestibular Evaluation and Treatment (TITLE CHANGE)

Assessment and treatment options in disorders of the vestibular system.

(3 credits)

SPA 6318 Medical Audiology (TITLE CHANGE)

Medically related aspects of audiologic practice, including assessment of disorders of the peripheral and central auditory systems and the vestibular system. Management within a medical setting.

(3 credits)

SPA 6324 Educational Audiology (NEW COURSE)

Management, education placement, remediation strategies and counseling for children with hearing losses and their families

(3 credits)

SPA 6345 Principles of Amplification I (TITLE CHANGE)

Applied and theoretical principles in hearing aid selection, verification, and validation procedures.

(3 credits)

SPA 6348 Principles of Amplification II (NEW COURSE)

Digital hearing aids, special circuits, difficult-to-fit patients, Assistive Devices, Implantable Devices.

(3 credits)

SPA 6349 Advanced Study of Sensory Aids for the Hearing Impaired (NEW COURSE)

Current issues in hearing aids, cochlear implants and other sensory aids for the hearing impaired.

(3 credits)

SPA 6354 Hearing Conservation

Public and consumer education. Hearing conservation models. Identification and screening models. Federal/state regulations. Worker's compensation issues.

(3 credits)

APPENDIX C. Continued

SPA 6360 Audiology Business and Practice Management

Topics related to the professional practice of audiology including quality assurance, practice management, reimbursement, audiologic jurisprudence, professional ethics, and the planning, organization, financing and delivery of hearing health services.

(3 credits)

SPA 6390 Perspectives in Audiology (NEW COURSE)

History, scope of practice, and current trends in audiology. Interprofessional relationships and responsibilities. Personal and interpersonal dynamics.
(2 credits)

SPA 6505 Dx I

Practical experience in speech-language screening.
(1 credit)

SPA 6505 Cerumen Management

Practical experience in cerumen management.
(1 credit)

SPA 6505 Aural Rehabilitation

Practical experience in aural rehabilitation.
(1 credit)

SPA 6505 Clinic I, II, III

Participation in audiology practicum in the University clinic.
(1 – 12 Variable Credits)

SPA 6505 Clerkships

Participation in audiology practicum in a variety of clinical settings.
(1 –12 Variable Credits)

SPA 6505 Externships

Participation in audiology practicum in an intensive full time experience.
(1 – 12 Variable Credits)

SPA 6553 Advanced Differential Diagnostic

The administration, evaluation, and reporting of advanced diagnostic techniques.
(3 credits)

APPENDIX C. Continued

SPA 6554 Advanced Differential Treatment

Treatment issues related to cochlear implant, tinnitus, and advanced counseling techniques.
(3 credits)

SPA 6805 Research Procedures

Advanced research and experimental design techniques employed in clinical and laboratory settings in speech-language pathology and audiology.
(3 credits)

SPA 6930 Mathematics SLP & A

Fundamental mathematical concepts presented in meaningful, practical, and interesting ways. Students will develop a solid foundation in the mathematical concepts underlying CSD and apply those concepts to solve practical or clinical problems.

(3 credits)

SPA 7931 Pharmacology (NEW COURSE)

Issues related to microbiology and pharmacology specific to the practice of audiology.

(3 credits)

SPA 7931 Advanced Electrophysiology

Addresses advanced clinical and theoretical issues of electrophysiological assessment.

(3 credits)

SPA 7931 Advanced Sensory Aids

Addresses issues of hearing aids, cochlear implants, and tactile aids.

(3 credits)

SPA 7931 PRP Seminar I, II, III

Addresses central research and clinical issues related to the diagnosis and treatment of communication disorders

(3 credits)

SPA Professional Research Project

A professional research project in the student's area of interest.

(1 – 12 Variable Credits)

APPENDIX D. RATING SCALE

Rating Scale

Consistent

Competency/skill well-developed and consistent

5

Developed

Competency/skill developed but needs refinement and/or consistency

4

Present

Competency/skill present but needs further development

3

<u>Emerging</u> Competency/skill emerging	2
<u>Inconsistent</u> Competency/skill inconsistent	1
<u>Absent</u> Competency/skill not evident	0

APPENDIX E. USF PRACTICUM EVALUATION FORM

UNIVERSITY OF SOUTH FLORIDA
 DEPARTMENT OF COMMUNICATION SCIENCES AND DISORDERS
 CLINICAL GRADING SYSTEM - AUDIOLOGY

CLINICIAN _____ TERM _____ FINAL
 GRADE _____

SUPERVISOR _____
 PRACTICUM _____

PRACTICA COMPLETED _____ # CLOCK HOURS _____ SUPPORT LEVEL: BEG. ___
 INT. ___ ADV. ___

AREA	MIDTERM AREA GRADE	FINAL AREA GRADE	MIDTER M WEIGHT	FINAL WEIGHT	MIDTER M	FINAL
CLINICAL PROCEDURES						
PRE-ASSESSMENT						
ASSESSMENT						
WRITTEN DOCUMENTATION						
INTERVIEWING/ COUNSELING PROCEDURES						
CLINICAL PROBLEM SOLVING						

Scale: A+ = 98-100 B+ = 88-89 C+ = 78-79 D = below 69 A = 93-97 B = 83-87 C = 73-77 A- = 90-92 B- = 80-82 C- = 70-72	Subtotal		
	Other		
	GRADE		

Student's Signature (Midterm): _____
 Date: _____

Student's Signature (Final): _____
 Date: _____

APPENDIX E. Continued

Student's Name _____

Evaluation Key

9.8-10 = A+ 8.8-8.9 = B+ 7.8-7.9 = C+ 6.0-6.9 = D N.O = Not Observed
 9.3-9.7 = A 8.3-8.7 = B 7.3-7.7 = C Below 6.0 = F N.A. = Not Applicable
 9.0-9.2 = A- 8.0-8.2 = B- 7.0-7.2 = C-

CLINICAL PROCEDURES

MIDTERM FINAL

Professional Development Punctuality; Dress; Attendance; Notice of cancellations; Respects confidentiality; Arranges room; Adheres to ASHA Code of Ethics		
Peer/Supervisor Interactions Cooperates with team members; Interacts professionally; Initiates discussion; Reacts appropriately to conflicting viewpoints; Presents positive attitude toward supervision; Requests assistance		
Client/Clinician Interactions Relates comfortably to clients; Focuses on client's needs; Maintains treatment/diagnostic focus; Responds to verbal & nonverbal cues		
TOTAL		

Comments: _____

PRE-ASSESSMENT

MIDTERM FINAL

Pre-Assessment Demonstrates knowledge of file; Presents oral summary; Provides rationale for tests; Exhibits familiarity with test; Confirms appointments; Checks instrumentation; Observational ability		
--	--	--

Comments: _____

APPENDIX E. Continued

Student's Name _____

Evaluation Key

9.8-10 = A+ 8.8-8.9 = B+ 7.8-7.9 = C+ 6.0-6.9 = D N.O = Not Observed
 9.3-9.7 = A 8.3-8.7 = B 7.3-7.7 = C Below 6.0 = F N.A. = Not Applicable
 9.0-9.2 = A- 8.0-8.2 = B- 7.0-7.2 = C-

ASSESSMENT

Skills related to specific areas listed below: Clear instructions; Use of instrumentation; Time management; Feedback; Test modifications when needed; Test selection; Determination of reliability; Interpretation; Recommendations

	MIDTERM	FINAL
Conventional Audiometry Pure tone audiometry, speech audiometry, immittance, masking, otoscopy		
Pediatric Assessment BOA, VRA, TROCA, play audiometry, speech audiometry		
Hearing Aid Evaluation Earmold impressions, earmolds, electroacoustic analysis, style/circuit selection, real ear measurements, fitting/orientation/follow-up		
Advanced Areas Auditory Brainstem Response (ABR) Measurement		
Neonatal Hearing Screening		
Cochlear Implant Assessment/Management		
Vestibular Assessment		
Assistive Listening Devices		
Otoacoustic Emission Testing		
TOTAL		

Comments: _____

APPENDIX E. Continued

Student's Name _____

Evaluation Key

9.8-10 = A+ 8.8-8.9 = B+ 7.8-7.9 = C+ 6.0-6.9 = D N.O = Not Observed
 9.3-9.7 = A 8.3-8.7 = B 7.3-7.7 = C Below 6.0 = F N.A. = Not Applicable
 9.0-9.2 = A- 8.0-8.2 = B- 7.0-7.2 = C-

WRITTEN DOCUMENTATION	MIDTERM	FINAL
Professional Writing Style Complete; Accurate; Pertinent; Clear; Grammatically correct; Comprehensive summaries		
Corrections/Punctuality Requests clarification; Incorporates corrections; Submits assignments punctually		
Written Interpretation Interprets test results; Interprets observational data		
Treatment Plans Objectives; Criteria; Materials; Procedures; Previous results; Maintenance of files		
SOAP Notes Concise; Accurate		
TOTAL		

Comments: _____

INTERVIEWING/COUNSELING PROCEDURES	MIDTERM	FINAL
Preparation Selection of information; Selection of questions; Use of visual supplements		
Presentation Accuracy; Honesty; Tact; Timing; Rate; Vocabulary; Pertinent information; Clear explanations		
Response Probes for additional information; Conveys information when not completely understood; Fields questions; Discriminates when to listen and when to talk; Reacts professionally		
TOTAL		

Comments: _____

APPENDIX E. Continued

Student's Name _____

Karen J. Richardson

Evaluation Key

9.8-10 = A+
9.3-9.7 = A
9.0-9.2 = A-

8.8-8.9 = B+
8.3-8.7 = B
8.0-8.2 = B-

7.8-7.9 = C+
7.3-7.7 = C
7.0-7.2 = C-

6.0-6.9 = D
Below 6.0 = F

N.O = Not Observed
N.A. = Not Applicable

CLINICAL PROBLEM SOLVING	MIDTERM	FINAL
Academic Knowledge Applies academic information previously learned; Obtains additional information from supplemental reading or observation		
Response to Supervisor Evaluation Uses supervisor evaluation to modify behavior; Maximizes strengths and improves areas of relative weakness; Implements suggestions and improvements agreed upon		
Self-Evaluation Identifies strengths and weaknesses of own clinical performance; Independently forms and implements plans to improve clinical performance		
TOTAL		

Comments: _____

APPENDIX F. FOCUS GROUP 2 RECRUITMENT AND CONFIRMATION LETTER

J. D.
Tampa, FL 33620

Karen J. Richardson

Dear J,

Thank you for agreeing to participate in the focus group on Friday, November 3, 2000 from 1:00 p.m. until 4:30 p.m. The meeting will be held at the University of South Florida in BEH 201. A parking pass and a campus map with directions to the building are enclosed. A light lunch, drinks, and snacks will be provided.

My research is an effort to identify the level of clinical proficiency, which is expected at the end of the second and third year in an Au.D. program. Identification of these specific competency levels will provide a means for monitoring and evaluating student performance, curriculum design, and academic and clinical course content and sequencing.

As the profession of audiology moved forward with upgrading the entry degree to the doctoral level, ASHA adopted new standards for certification outlining general knowledge and skill areas in September 1997. The lack of information related to specific competencies expected at various points within the training program necessitates a broad-based information gathering process in two phases. An initial focus group included academic and clinical faculty directly involved with program and course design and classroom and clinic instruction within the university setting. You have been selected to participate in the second focus group, which will include practicing audiologists who have supervised students in an externship or clinical fellowship experience.

In preparation for the information gathering process, I have included the most relevant articles and documents for your review. Your knowledge and expertise in a broad range of practice settings are the most valuable contributions to this process; however, please utilize these resources as needed to prepare for the focus group. **Remember to bring them with you when you attend the meeting. You may also bring other materials, which you think might be helpful.**

The focus group will utilize guided discussions which will draw on your experiences and knowledge of the topic. In these discussions, we will use a rating scale (adapted from Rassi, 1998) to rate the minimal competency levels expected at the end of the second and third year of training for each skill area. Your input will provide information that only you can contribute to the success of this project. Thank you in advance for your participation.

Sincerely,

Karen J. Richardson, M.A.
Au.D. Candidate

APPENDIX G. FOCUS GROUP 1 QUESTIONING ROUTE

1. Based upon your experience with the development of audiology evaluation skills, do you think it is necessary to separate “skills of performance” vs. “skills of interpretation” for each testing technique? Should these two areas receive separate ratings?

Probes:

- a) How do you define these two skill areas?
 - b) Is there a hierarchy of skill development?
 - c) Do you view one area as more important than the other?
2. What type of rating scale and descriptors would most appropriately delineate the level of proficiency of each skill area?

Probes:

- a) What numerical rating should be used?
 - b) What skill descriptors should be used?
 - c) How should the corresponding level of supervisory support be defined?
 - d) Can the same scale be used at each clinical level?
3. Consider the Summary Table listing modified competency statements based on ASHA's 1997 Certification Standards. (Selected competencies were reworded, combined or summarized for clarity and specificity).

Probes:

- a) Do the modified statements accurately reflect the targeted skill area?
 - b) Do any of the present statements need to be reworded?
 - c) Do additional statements need to be added?
 - d) Are there any statements that need to be deleted?
4. Rate each skill area to determine the level of performance and level of interpretation (if appropriate) to be attained after the second and third year.

Probes:

- a) Consider the USF curriculum, course content, course sequencing, practicum, and other methods of training.
5. Consider particular skills that are not "mastered" at the end of the third year. What minimal level of performance is expected at the end of the fourth year?

Probes:

- a) Should the program require certain types of experiences in the Internship during the fourth year?
- b) Are there any alternative courses that should be considered?

APPENDIX H. FOCUS GROUP 2 QUESTIONING ROUTE

1. Moderator will review and encourage feedback to ratings provided by Focus Group 1 of the expected level of competency for each skill after the second year.

Probes:

- a. Do you feel these levels are representative of end of the second year

- performance?
- b. Which rating levels are too low? Too high?
2. Moderator will summarize academic, clinical lab and in-house clinical experiences during the first and second years.
 3. Participants will rate each skill area to determine the level of performance skills and interpretation skills expected at the end of year two and three.
Probes:
 - a. Consider the USF curriculum, course content, course sequencing, practicum, and other methods of training
 4. Moderator will reveal ratings provided by Focus Group 1 after consensus obtained. Comments will be elicited regarding agreement or disagreement with educators' ratings.
Probes:
 - a. Do you feel these level are representative of end of the third year performance?
 - b. Which rating levels are too low? Too high?
 - c. Are any changes in the ratings recommended?
 - d. Obtain a final consensus.
 5. Summary of session goals and trends
 6. Application of this information to assigning clinical grades
Probes:
 - a. Are these data applicable to determining clinical grades?
 - b. How should it be utilized?
 7. Final group comments and completion of evaluation forms

APPENDIX I. EVALUATION AND TREATMENT COMPETENCIES (BLANK)

Evaluation Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG 1	FG1	FG 2	FG1	FG1	FG2
D1. Interpersonal skills with patients, families, supervisor, and other professionals						
D2. Review of history, test data, and referral information for pre-evaluation planning						
D3. Obtain a case history						
D4. Otoscopy						
D5. Perform cerumen removal				Interpretation expected during otoscopy		
D6 -10a. Select culturally sensitive and clinically appropriate measures				Interpretation embedded in performance		
D6 -10b. Air and bone conduction testing						
D6 -10c. Masking procedures						
1. Air conduction				Interpretation embedded in performance		
2. Bone conduction				Interpretation embedded in performance		
3. Speech audiometry				Interpretation embedded in performance		
D6 -10d. Speech audiometry						
D6 -10e. Immittance measures						
1. Tympanometry						
2. Acoustic reflex threshold testing						
3. Reflex decay testing						

APPENDIX I. Continued

Evaluation Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG 1	FG 1	FG 2	FG1	FG1	FG2
D6 -10f. Pediatric evaluation						
1. VRA/BOA						
2. Play audiometry performance and interpretation in this area requires a degree of "wiseness"; they need to be able to interpret the situation, the child, and the results.						
D6 -10g. Diagnostic evaluation						
1. Otoacoustic emissions						
2. ABR/EcochG						
3. ENG						
4. Balance Evaluation						
5. Evoked potentials						
D6 -10h. CAP evaluation						
D6 -10i. Aural rehabilitation	Select & administer appropriate tools					
1. Adults						
2. Children						
D6 - 10j. Determination of need for hearing aid/cochlear implant/assistive listening device	Interpretation only					
D6 - 10k. Understand guidelines and protocols for managing a hearing screening program for pre-school, school-age, and elderly individuals						

APPENDIX I. Continued

Evaluation Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG1	FG1	FG 2	FG1	FG1	FG2
D12. Integrate all test results and pertinent case data	Interpretation only					
D13. Recommendations and referrals						
1. Interpret recommendations and referrals	Interpretation only					
2. Provide counseling to facilitate understanding of results and recommendations				Performance related to counseling		
3. Summarize results and recommendations in reports and chart notes				Performance related to report writing		
D11 & 15. Document procedures/results and maintain records				Performance related to documentation		
D17 & 18. Instrumentation						
1. Demonstrate proper use of equipment				Performance only		
2. Perform calibration procedures				Performance only		
3. Determine acceptable calibration standards	Interpretation only					
4. Troubleshooting				Interpretation embedded in performance		

APPENDIX I. Continued

Treatment Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG1	FG1	FG2	FG1	FG1	FG2
E2 & 5. Develop culturally sensitive and age-appropriate management strategies and treatment plan						
E6. Collaborate with other service providers in case coordination				Interpretation embedded in performance		
E7-9. Hearing aids/assistive listening devices						
1. Hearing aid/earmold selection and fitting				Interpretation - D6-10j		
2. Real ear measurement/functional gain						
3. Hearing aid/earmold maintenance and modifications				Performance only		
4. Assistive listening devices				Interpretation - D6-10j		
5. Cochlear implants				Interpretation - D6-10j		
E10. Implement aural rehabilitation				Performance only		
E11. Monitor and summarize progress and outcomes in aural rehabilitation				Interpretation embedded in performance		
E12a. Assess efficacy of interventions in aural rehabilitation	Interpretation only					
Treatment Competencies	Performance			Interpretation		

APPENDIX I. Continued

	Skills			Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG1	FG1	FG2	FG1	FG1	FG2
E12b. Coordinate intervention program of vestibular disorders						
	Limited opportunity to assess/ implement			Limited opportunity to assess/ implement		
E3, 4 & 17. Counseling patients and families in aural rehabilitation				Performance related to counseling		
E15. Document treatment procedures and results				Performance related to documentation		

APPENDIX J. MINIMAL EXPECTED SKILL RATINGS FOR EVALUATION AND TREATMENT COMPETENCIES

Evaluation Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG 1	FG1	FG 2	FG1	FG1	FG2
D1. Interpersonal skills with patients, families, supervisor, and other professionals	5	5	5	5	5	5
D2. Review of history, test data, and referral information for pre-evaluation planning	4	5	5	4	5	5
D3. Obtain a case history	5	5	5	3	5	4
D4. Otoscopy	5	5	5	3	4	4
D5. Perform cerumen removal	3	3	3	Interpretation expected during otoscopy		
D6 -10a. Select culturally sensitive and clinically appropriate measures	3	4	4	Interpretation embedded in performance		
D6 -10b. Air and bone conduction testing	5	5	5	5	5	5
D6 -10c. Masking procedures						
1. Air conduction	5 (FG2- 4)	5	5	Interpretation embedded in performance		
2. Bone conduction	4	5	5	Interpretation embedded in performance		
3. Speech audiometry	5	5	5	Interpretation embedded in performance		
D6 -10d. Speech audiometry	5	5	5	5	5	5
D6 -10e. Immittance measures						
1. Tympanometry	5	5	5	5 (FG2-3)	5	4
2. Acoustic reflex threshold testing	5	5	5	4	5	5
3. Reflex decay testing	5	5	5	5	5	5

APPENDIX J. Continued

Evaluation Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG 1	FG 1	FG 2	FG1	FG1	FG2
D6 -10f. Pediatric evaluation						
1. VRA/BOA	2	3	3	1	2	2
2. Play audiometry - performance and interpretation in this area requires a degree of "wiseness"; they need to be able to interpret the situation, the child, and the results.	3	4	4	2	3	4
D6 -10g. Diagnostic evaluation						
1. Otoacoustic emissions	4	5	5	4	5	5
2. ABR/EcochG	3	4	4	3	4	4
3. ENG	2	3	3	2	3	3
4. Balance Evaluation	2	3	3	2	3	3
5. Evoked potentials	2	3	2	2	3	2
D6 -10h. CAP evaluation	2	3	3	2	3	3
D6 -10i. Aural rehabilitation	Select & administer appropriate tools					
1. Adults	4	4	4	3	3	3
2. Children	2	2	2	2	2	2
D6 - 10j. Determination of need for hearing aid/cochlear implant/assistive listening device	Interpretation only			4	5	5
D6 - 10k. Understand guidelines and protocols for managing a hearing screening program for pre-school, school-age, and elderly individuals	5	5	5	5	5	5

APPENDIX J. Continued

Evaluation Competencies	Performance Skills			Interpretation Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG1	FG1	FG 2	FG1	FG1	FG2
D12. Integrate all test results and pertinent case data	Interpretation only			3	4	4
D13. Recommendations and referrals						
1. Interpret recommendations and referrals	Interpretation only			3	4	4
2. Provide counseling to facilitate understanding of results and recommendations	3	4	4	Performance related to counseling		
3. Summarize results and recommendations in reports and chart notes	4	4	5	Performance related to report writing		
D11 & 15. Document procedures/results and maintain records	4	5	5	Performance related to documentation		
D17 & 18. Instrumentation						
1. Demonstrate proper use of equipment	5	5	5	Performance only		
2. Perform calibration procedures	5	5	5	Performance only		
3. Determine acceptable calibration standards	Interpretation only			5	5	5
4. Troubleshooting	2	3	4	Interpretation embedded in performance		

APPENDIX J. Continued

Treatment Competencies	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG1	FG1	FG2	FG1	FG1	FG2
E2 & 5. Develop culturally sensitive and age-appropriate management strategies and treatment plan	2	2	4	2	2	4
E6. Collaborate with other service providers in case coordination	2	3	5	Interpretation embedded in performance		
E7-9. Hearing aids/assistive listening devices						
1. Hearing aid/earmold selection and fitting	2	3	4	Interpretation - D6-10j		
2. Real ear measurement/functional gain	4	5	5	3	5	5
3. Hearing aid/earmold maintenance and modifications	2	3	5	Performance only		
4. Assistive listening devices	2	3	4	Interpretation - D6-10j		
5. Cochlear implants	2	3	2	Interpretation - D6-10j		
E10. Implement aural rehabilitation	3	3	4	Performance only		
E11. Monitor and summarize progress and outcomes in aural rehabilitation	4	4	4	Interpretation embedded in performance		
E12a. Assess efficacy of interventions in aural rehabilitation	Interpretation only			3	3	5
Treatment Competencies	Performance			Interpretation		

APPENDIX J. Continued

	Skills			Skills		
	Year 2	Year 3	Year 3	Year 2	Year 3	Year 3
	FG1	FG1	FG2	FG1	FG1	FG2
E12b. Coordinate intervention program of vestibular disorders	1	1	2	2	2	2
	Limited opportunity to assess/ implement			Limited opportunity to assess/ implement		
E3, 4 & 17. Counseling patients and families in aural rehabilitation	2	2	4	Performance related to counseling		
E15. Document treatment procedures and results	4	4	5	Performance related to documentation		

APPENDIX K. DEMOGRAPHIC SURVEY

Please complete the following demographic information by checking all that apply to you:

Current place of practice: University Public/Private School
 Hospital Private Practice
 Other _____

Previous settings of practice: University Public/Private School
 Hospital Private Practice
 Other _____

Area(s) of specialization: Pediatric audiology Electrocochleography
 Auditory evoked potentials Aural Rehabilitation
 Hearing Conservation Amplification
 Assistive Listening Devices
 Central Auditory Assessment
 Cochlear Implant Evaluation and Rehabilitation
 Balance Assessment and Treatment
 Other _____

Number of years experience as an audiologist: _____ Year CCC awarded: _____

Experienced in supervision of: Graduate students in a University setting
 Graduate students in a field setting/externship
 CFY
 Audiology personnel
 Number of students supervised per year
 Number of years providing supervision

Highest degree awarded: MS/MA Ph.D. Ed.D./Ed.S. Au.D. _____

Gender: Male Female

Ethnicity: African American Asian Hispanic
 American Indian Caucasian

Member of ASHA: Yes No Number of years as a member

APPENDIX K. PARTICIPANT EVALUATION FORM

