

Future Directions In The Education Of Speech-Language Pathologists

Jerry Carney
Council on Professional Standards

Sharon Goldsmith
Senior Advisor for Standards and Credentialing
ASHA

INTRODUCTION

Today, I plan to present to you information from the Skills Validation Study conducted by the Standards Council and the Council on Academic Accreditation of ASHA. Before I present the data from the study, I would like to review briefly for you the process which will be used by the Speech-Language Pathology Subcommittee for revising the standards. We could spend the entire session discussing the process but I hope you will allow me to cover this information very quickly so that we can get to the Skills Validation Study. The plan for revising the standards is included in the following outline of the overview of the plan for reviewing the standards for the CCC-SLP. (Note: for this publication, I omitted the Timelines, Person(s) Responsible and the Status.)

OVERVIEW OF PLAN FOR REVIEWING STANDARDS FOR CCC-SLP

POSSIBLE STEPS

Establish action plan goal to determine the academic, clinical practicum and other requirements for the acquisition of critical knowledge and skills necessary for entry-level, independent practice of speech-language pathology.

Action Plan

- Skills validation study for practice of SLP (practice and curriculum analysis)
 - Information review of existing materials:
 - Internal sources: position statements, scope of practice, preferred practice patterns, SID newsletters, etc.
 - External Sources: publications of CAPCSD, ARPOs, etc.
 - Influence of external factors (health care reform, demographic factors, JCAHO and other reimbursement regulations, PEW commission on certification, and state licensure regulations)
 - Legal implications
2. Determine additional information needed for discussions and future actions
- Additional literature searches
 - Effects of managed care on health care environment
 - Additional ARPO interface (e.g., ANCDs, Supervisors, State Licensing Boards, Public School Caucus, NCATE, etc.)

- Academic Feasibility Study
- Employer (non SLP supervisors), data (surveys, focus groups, etc)
- Consumer data (focus groups)
- Future of speech-language pathology (focus groups)
 - Practice Setting Panel Meeting
 - ASHA Leadership Conference
 - Multicultural Issues Board
 - Board of Division Coordinators
- Directions in licensing
- Directions in speech-language credentialing

As you can see, the evaluation and revision of standards for certification is a rather complex and thorough process. We plan to have the revised standards ready for approval by the Standards Council at our meeting in November and then send the proposed standards out for public comment. I hope you will participate in the process. Now let's turn our attention to the results of the Skills Validation Study.

II SKILLS VALIDATION STUDY

BACKGROUND

In 1997, the Council on Professional Standards (Standards Council) commissioned the Educational Testing Service to conduct an independent practice analysis study of the profession of speech-language pathology. This study was similar to the study conducted in 1994 for the profession of audiology. Today, I am going to present various aspects of the study which will be part of the information used by the Standards Council for monitoring the standards for clinical certification in speech-language pathology. I want to emphasize again, the fact that information from the Skills Validation Study is only part of the information which will be used by the Standards Council to revise the standards for certification.

The purpose of the Skills Validation Study was to identify and document the clinical activities and knowledge areas judged to be important for the competent performance of newly certified speech-language pathologists. I want to stress here, that the purpose was to identify the knowledge and skills needed for independent practice by newly certified speech-language pathologists, not experienced speech-language pathologists.

Professional standards and legal precedents recommend that a job analysis (which "...refers to a variety of systematic procedures designed to obtain descriptive information about the tasks performed on a job and/or the knowledge, skills and abilities thought necessary to perform those tasks. (Arvey & Faley, 1988; Gael, 1983)" include the participation of various subject-matter experts (Mehrens, 1987).

METHODOLOGY

In this study a multi-method approach was used. The sequence of procedures were as follows:

1. ETS research staff developed a draft performance domain based on review of relevant literature and test specifications of the current exam. (Information from a 1987 job analysis by Greenburg and Smith was used in addition to a review of Preferred Practice Patterns and test specifications for the current NESPA).
 - a. They identified 63 clinical activity statements and organized them into 6 practice dimensions: Screening, Assessment and Diagnosis, Treatment, Evaluation of Treatment, Counseling and Related Professional Activities.

- b. They identified 97 knowledge areas but collapsed Treatment and Evaluation of Treatment for the knowledge areas.
2. The initial draft of the content domain was reviewed and refined by a panel of 7 in-house ASHA content experts. Each member reviewed either clinical activities or subject knowledge areas.
3. The revised draft domain was reviewed by a 12 member Subject Matter Expert Panel. Their purpose was to further refine the domain so that it more accurately reflected the content most important for newly certified speech-language pathologists. Two of these individuals were members of the Standards Council.
- In the Clinical Activities, this group actually changed the original list. Two titles: Assessment/Diagnosis was changed to Assessment; the Evaluation of Treatment Plan was changed to Treatment Evaluation and important content from Counseling was moved to Treatment and dropped as a major category.
- In the Knowledge Areas, this group added one category, Foundations of Practice; approved the other changes previously discussed and combined Screening and Assessment into one dimension.
4. A panel of 42 Practice Setting Experts –THE PILOT TEST GROUP was asked to review the draft performance domain. That is, to review and evaluate the content of the performance domain from the perspectives of its members settings. The Practice Setting Experts were 17 randomly selected educators, practitioners and supervisors and 25 professionals from important constituencies. Their response was that the questionnaire took too long and they indicated that they believed that the response rates would be affected. Therefore it was split into two parts for three of the four respondent groups. It could not be split for the educators because they were the key stakeholders in this process. It was split for the practitioners, clinic directors and CF supervisors.
5. A summary of the approach with the number of items after each step is presented in Tables I and II.

TABLE I. CLINICAL ACTIVITY STATEMENTS

ORIGINAL LIST	REVISED LIST	FINAL LIST (After SME)	
Screening	Screening	Screening	13
Assessment/Diagnosis	Assessment/Diagnosis	Evaluation	32
Treatment	Treatment	Treatment	30
Evaluation of Treatment	Evaluation of Treatment	Treatment Evaluation	8
Counseling	Counseling	Related Prof. Activities	17
Related Prof. Activities	Related Prof. Activities		
Clinical Activities: 63			100

TABLE II. KNOWLEDGE AREAS

ORIGINAL LIST	REVISED LIST	FINAL LIST (After SME)	
97 KNOWLEDGE AREAS	97 KNOWLEDGE AREAS		
Screening	Screening	Foundations of Practice	24
Assessment/Diagnosis	Assessment/Diagnosis	Screening/Assessment	40

Treatment Evaluation of Treatment Counseling Related Prof. Activities	Treatment Counseling Related Prof. Activities	Treatment & Treatment Evaluation Related Prof. Activities	13	45
Knowledge Areas: 97				122

The final revised domain was put into survey format and administered by mail to:

440	Educators (All academic and clinical directors of Speech-Language Pathology programs)
6000	Practicing Speech-Language Pathologists
2000	Clinical Fellow Supervisors
1500	Clinic Directors

(*ETS was aware that clinic directors and CF supervisors are also practicing SLPs.)

Subgroups of practicing speech-language pathologists were defined by various biographical variables (e.g., practice setting, years certified, geographic region, etc.). Table III presents the demographic composition of the respondent groups.

TABLE III. DEMOGRAPHICS

	EDUCATORS	PRACTITIONER	CF SUPERVISORS	CLINIC DIRECTORS
% FEMALE	71%	96%	94%	88%
% CAUCASIAN	92%	93%	90%	97%
% CCC-SLP Before 1980 1980- 1989 1990--	73% 21% 7%	20% 29% 52%	23% 42% 35%	40% 42% 17%
GEOGRAPH. DISTRIB. Northeast Midwest South West	17% 36% 32% 15%	2% 44% 20% 34%	11% 38% 20% 31%	15% 43% 25% 17%
EMPLOYMENT (most frequent) College/Univ Elementary Hospital Res Heal Care Mult Sch Fac Neonatal Sch. Clinics	100%	35% 15% 11% 10%	22% 18% 20%	100%

All survey recipients were asked to make three judgments. They were asked to:

1. Rate the importance of clinical activity statements and knowledge areas for newly certified speech-language pathologists.
2. Identify where the clinical activity and knowledge area are

3. primarily learned by newly certified speech-language pathologists. Identify where the clinical activity and knowledge area should be primarily learned by newly certified speech-language pathologists.

RESPONSE RATES

Table IV presents the response rates for the various groups responding to the questionnaire. Educators, practitioners, clinic directors and Clinical Fellow (CF) supervisors had the highest percent returned in that order. The response from the educators which included department chairs and directors of university clinics was remarkably high considering that they were asked to respond to both surveys while the other groups were asked to respond to either the Clinical Activities or the Knowledge Area.

TABLE IV. RESPONSE RATES FOR THE FOUR GROUPS OF PARTICIPANTS

GROUP	NUMBER	NUMBER RETURNED	PERCENT RETURNED
EDUCATORS	440	160	36%
PRACTITIONERS	3,000	1,013	34%
CLINICAL FELLOW SUPERVISOR	1,000	153	15%
CLINIC DIRECTORS	750	17	23%

DATA ANALYSIS

Mean importance ratings were computed for all clinical activities and knowledge areas and used to differentiate more important from less important job content. A mean rating of 3.50 was selected as a conservative indicator of job importance. It was the midpoint between the two scale points of moderately important and important. The data were then analyzed by making frequency counts of zero (0) responses to the Importance Scale for clinical activities (CA) and knowledge areas (KA). A zero response meant it was not performed by newly certified SLP. The CA and KA statements with 51% were rated as not performed or not needed.

Write-in comments by the respondents were also recorded by the investigators. Those which were mentioned at least three (3) times were:

- Time management/caseload management/stress management/ability to work
- Interpersonal communication skills (e.g., conflict resolution, understanding psychology, "people" skills)
- Business sense (e.g., timeliness, work ethic, billing procedures, funding sources, Medicare, Medicaid, insurance reimbursement, writing reports to ensure insurance reimbursement)
- Team participation
- Program development (management, marketing, public relations, contract service establishment)
- Using computer software to monitor treatment programs
- Treatment programs for autistic patients
- Sign language skills
- ESL education and treatment techniques
- Working with trach and ventilator, suctioning, feeding tubes, laryngectomy counseling

Perceived discrepancies were computed between where respondents said clinical activities (CA) and knowledge areas (KA) *were primarily learned (acquired)* and where respondents said that clinical activities and knowledge areas *should be primarily learned (acquired)*. A zero discrepancy score signified that a CA or KA was being learned where respondents said it should be. A non-zero discrepancy score signified that a CA or KA was not being learned where it should be. Both CA and KA statements that more than 25% of the respondents indicated was not being learned where it should be learned were flagged.

RESULTS

FREQUENCY ANALYSIS

- No clinical activity statements or knowledge areas were flagged as not being part of the performance domain for newly certified speech-language performances. Therefore, the performance domain defined by the subject matter experts is practice relevant.
- All groups verified the relevance of the clinical activity statements and the knowledge areas for entry-level speech-language pathologists. That is, there was a high level of agreement among all groups in their classification of more important and less important clinical activity and knowledge areas. The percent agreement for the mean importance of clinical activity statements ratings across the respondent groups are presented in Table V. In Table VI, the percent agreement for mean importance of knowledge area statements ratings is presented for the respondent groups. An examination of these data reveals the high level of agreement among all groups. That is, educators, practitioners, CF supervisors and clinic directors all agree about the importance of both clinical activities and knowledge areas.

TABLE V. PERCENT AGREEMENT FOR MEAN IMPORTANCE OF CLINICAL ACTIVITY STATEMENTS RATINGS ACROSS THE RESPONDENT GROUPS

	EDUCATORS	PRACTITIONER	CLINICAL FELLOW SUPERVISOR	CLINIC DIRECTORS
EDUCATORS		87%	88%	97%
PRACTITIONER			96%	90%
CF SUPERVISOR				94%
CLINIC DIRECT.				

TABLE VI. PERCENT AGREEMENT FOR MEAN IMPORTANCE OF KNOWLEDGE AREA RATINGS ACROSS THE RESPONDENT GROUPS

	EDUCATORS	PRACTITIONER	CLINICAL FELLOW SUPERVISOR	CLINIC DIRECTORS
EDUCATORS		89%	96%	97%
PRACTITIONER				
CF SUPERVISOR				
CLINIC DIRECT.				

PRACTITIONER			93%	93%
CF SUPERVISOR				98%
CLINIC DIRECT.				

- Nineteen of the 100 clinical activities (19%) were flagged by the four groups due to a mean importance rating of less than 3.50. The following statements did not make the 3.50 cutoff:

Screening

- *4. Screen for myofunctional impairments
- 10. Screen for written language impairments
- 12. Screen for causal factors and correlates (e.g., physical, cognitive, psychosocial) as appropriate

Assessment

- 29. Assess laryngeal and respiratory function for phonation through instrumental measures
- 30. Assess laryngeal and respiratory function for phonation using live or recorded perceptual measures
- 31. Assess resonance through instrumental measures
- 32. Assess resonance through perceptual measures
- *35. Assess myofunctional patterns for speech and related functions (e.g., thumb sucking, tongue/lip postures, etc.)
- 39. Assess the ability of deaf and hard of hearing clients to perceive speech through audition and speech reading both individually and in combination

Treatment

- *57. Apply procedures that enhance speech and language proficiency and communication effectiveness in the following areas: (a) Accent modification, (b) English as a second language, (c) Improvement of voice for performance and singing

Related Professional Activities

- 68. Establish supervisory procedures, including collaborative procedures, that ensure quality client care.
- *74. Provide coaching and supervision to interpreters regarding their role and responsibilities
- 75. Promote legislation beneficial to individuals who are communicatively impaired and oppose legislation that is detrimental
- 77. Advocate for direct 3rd party payment to credentialed speech-language pathologists
- 79. Plan and implement in-service and pub. education programs concerning prevention, identification, evaluation, and treatment of comm. impaired
- 80. Identifying funding sources for programs and services
- 81. Conduct and/or participate in research that will benefit clients.

- Sixteen of the 122 knowledge areas (13%) were flagged due to a mean importance rating of less than 3.50.
- Twenty-eight additional CA statements and 21 additional KA were flagged in the subgroup analysis.
- Across all respondent groups and subgroups of practitioners, 53 of the 100 clinical activity statements (53%) and 85 of the 122 knowledge areas (70%) were judged to be important.

DISCREPANCY SCORES

Educators did not agree with the other three groups of respondents regarding perceived discrepancies between where clinical activities and knowledge areas are learned (acquired) and where they should be learned (acquired). In Table VII, the percent of CA and KA which are learned where they should be is presented for all groups of respondents.

An examination of Table VII reveals that all three groups (practitioners, CF supervisors and clinic directors) believe that clinical activities and knowledge areas should be learned (acquired) *earlier* in the educational process. Further, all three groups believed that the vast majority of CA and KA statements they flagged though learned during the CF year or after certification, *should have been learned in graduate school for the clinical activities* and for knowledge areas, the information was *acquired after certification*. These data are presented in Table VIII.

TABLE VII. PERCENT OF CLINICAL ACTIVITIES AND KNOWLEDGE AREAS WHICH ARE LEARNED WHERE THEY SHOULD BE LEARNED FOR EACH GROUP

GROUP	CLINICAL ACTIVITY	KNOWLEDGE AREA
	Percent	Percent
EDUCATORS	95%	95%
PRACTITIONERS	24%	20%
CF SUPERVISORS	20%	28%
CLINIC DIRECTORS	16%	21%

TABLE VIII. PERCENT OF CLINICAL ACTIVITIES AND KNOWLEDGE AREAS THAT RESPONDENTS BELIEVE SHOULD BE LEARNED (ACQUIRED) IN GRADUATE SCHOOL

GROUP	CLINICAL ACTIVITY	KNOWLEDGE AREA
PRACTITIONERS	71%	93%
CF SUPERVISORS	81%	78%
CLINIC DIRECTORS	83%	74%

- Practitioners defined by their years of certification indicated that CA and KA should be learned *earlier* in the educational process.
- Specifically those certified less than 5 yrs and those certified more than 5 yrs believed the majority of clinical activity statements (67% and 75%, respectively) they flagged, though learned either during CF year or after certification, *should be learned in graduate school*.
- With respect to knowledge areas, the results are similar (80% and 95%) for those certified less than 5 yrs and those certified more than five years, respectively.

IMPLICATIONS

A. Modification of Certification Standards

1. The Standards Council should examine CA and KA and use their own evaluation criteria to evaluate the defined performance domain. The Council may wish to develop their own or seek additional input from other groups.
2. The Standards Council should evaluate the discrepancy data to determine if any CA and KA that are reported to be learned (acquired) after certification should be incorporated into school-based experiences or the CF experiences of SLPs.
3. The following examples illustrate how the data may be used to modify certification standards.

Example 1.

CA #37 “assess the potential value of specific augmentative and alternative communication devices” was judged to be acquired after certification by 51% (68%) of practitioners certified less than 5 yrs. (more than 5 yrs.), 60% of CF supervisors and 46% of clinic directors and 31% of educators. This task was rated as being important for entry-level practice by all groups and subgroups.

Example 2.

KA #13 “relationship of communication/swallowing impairments to behavior, emotional adjustment, health status and academic vocational, and social success.” This KA was judged to be acquired after certification by 52/53% of practitioners, 46% CF supervisors, 49% of clinic directors, and by 18% of educators. This knowledge area was judged to be important for entry-level practice by all groups and subgroups.

The Standards Council may wish to consider whether the clinical activities and knowledge areas in the above examples should be taught before speech-language pathologists receive their CCCs. Similar examples for other clinical activities and knowledge areas should be evaluated by the Standards Council prior to the revision of the standards for the CCCs.

B. Accreditation

The uses for accreditation are primarily curriculum related. Practice analysis results also provide a sound basis for curriculum development or redesign. All clinical activities that are performed and judged to be important for entry-level performance, along with the knowledge areas required for competent performance of those activities should be part of the preparation for professional practice. Both educators and practitioners should participate in deciding where the relevant skills and knowledge should be acquired. Specific recommendations for accreditation are as follows:

1. The 53 clinical activities and 85 knowledge areas which were judged to be important for newly certified speech-language pathologists by all respondent groups could be used as a basis for developing a core curriculum appropriate for all practice settings.
2. There is considerable agreement among educators, practitioners, CF supervisors and clinic directors about the clinical activities and knowledge areas judged important for the competent practice of a newly certified speech-language pathologist.

There is much less agreement between educators and all other groups where these clinical activities and knowledge areas should be learned. Educators appear to be comfortable with where things are learned. That is, with 95% agreement of where the clinical activities and knowledge areas are learned, they should be comfortable because they played a primary role in deciding where they would be learned. However, all of the other groups disagreed; they all showed a consistent pattern that more of the CA and KA should be learned in school.

3. There was high agreement between practitioners who have been certified for 5 years and those certified for more than 5 years that more of the CA and KA should be learned in school. Since there were some minor differences, e.g., those certified for more than 5 years identified more clinical activities and knowledge areas, it is recommended that most attention is paid to the where learned ratings of those certified less than 5 years.
4. It is important to remember that this report describes the PERCEPTIONS of various groups of respondents. If perceptions differ, it doesn't necessarily mean that one is correct and the others are incorrect. In a consumer service model it appears that the providers (educators) are satisfied and the consumers (practitioners and CF supervisors) appear to be having some difficulty with it. Perhaps these data may be used to start a dialogue among various consistencies within the profession about the changes that are desired in professional education and training.

5. Recall that the cutoff point for the “where primarily learned” analyses was set at 26% for each of the 4 groups and 2 subgroups of practitioners. That is, a clinical activity or knowledge statement could be flagged with 74% of the respondents in that group indicating that it was learned in the appropriate place. Twenty-six percent was selected because it represented a meaningful proportion of respondents and that their perceptions should be noted when consideration is given to modifying the curriculum.

6. We must apply sound professional judgment for the appropriate use of these findings. For example, practitioners indicated that they wanted to learn more about supervisory and administrative activities in school. It might be more reasonable to have specific issues related to supervisory and administrative activities left to the individual employer. However, there could be some general areas of supervisory knowledge that could be learned in school that would facilitate learning on the job.

7. More job-based communication between relevant stakeholders should help improve the preparation and competence of newly certified speech-language pathologists. The major focus of discussion should be on the clinical activity and knowledge area rated as being important for a newly certified speech-language pathologist and judged to be learned after certification by a sizeable percentage of practitioners. It may be that the disagreement is a matter of either which aspects of a given knowledge area they would like to see taught or to the level of skill they would like to see newly certified practitioners possess.

We believe that these discussions should encompass the entire educational process. The results obtained in this study indicate that CF supervisors expect graduates of academic programs to be able to perform more clinical activities and to know more content areas before the start of the clinical fellowship. To the extent possible there should be a well-articulated transition from one stage of education and training to the next. It seems reasonable to expect that a newly certified speech-language pathologist be competent to engage in independent practice. After that, competence should be maintained and knowledge updated through continuing education programs.

C. The Design of Certification Examinations

The Standards for Educational and Psychological Testing (American Psychological Association, 1985) emphasizes the importance of job analyses as a basis for demonstrating the validity of a licensure or certification examination. Job analysis results can be used to provide a rationale for including certain content on examinations and in documenting why that content is job-related. Using the results of this study, we can demonstrate the following:

1. The results indicate that these CA statements and the KA provide a sound basis for use in setting test specifications.
2. Because certification examinations cannot measure everything, the pool of important clinical activities statements and knowledge areas (greater than 3.50 cutoff point) should be considered as the primary pool from which to build test specifications. Building test specifications requires sound professional judgment. If you don't use these data, a compelling written justification should be provided.
3. Test questions and formats need to be developed to measure each part of the test specifications. Questions written to those specifications need to be linked back to the specifications by the question writer as well as an independent group of practitioners. Linkages from test questions to test specifications, and from test specifications to the job analysis, provide a strong network for use in documenting the validity of certification examinations.

CONCLUSION

What we have tried to accomplish this afternoon is to provide you with a brief and oversimplified summary of the procedures we are using to review the standards for the CCCs in speech pathology. We realize that the information will be useful to all of us as we ponder curricular changes for the next 5-10 years. Similar to the comparable study used by the Standards Council in revising the standards in

audiology, this information is only part of the total data that we will use in developing our revised standards. Also, I am sure that ASHA will make the entire study available to the membership after we have completed our task.

Thank you for your input and again, I encourage you to continue to allow us to use your expertise as we develop standards in speech-language pathology for the next ten years.

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