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ABSTRACT

The first step in developing a communication competency assessment instrument is determining whether there is conceptual support for such an instrument. Funding should also be determined, since speaking skills must be assessed as a person speaks, a procedure that requires more time and money to complete than in the case of machine-scored tests. Next, specific skills must be identified. This means a delineation of skills more complete than the generic "speaking," "listening," and "interpersonal" categories. Once this is accomplished, the search for instruments can begin. It must be kept in mind that the purpose of the instrument, if it is to measure skill attainment, must be to elicit skills for subsequent measurement. Following pilot testing, the instrument is ready for refinement, which with the evaluation process must continue until some assurance is obtained that the instrument is valid and reliable. Follow-up procedures are also essential at this stage of development. Test development can become a futile endeavor if careful consideration is not given to all procedural elements throughout the process. Accountability hinges on the assumption, and ultimate proof, of the consistent nature of purpose, concept, and instrument. (HOD)

THE DEVELOPMENT AND REFINEMENT OF A COMMUNICATION COMPETENCY ASSESSMENT INSTRUMENT

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Competency-based education is receiving increased attention in both higher education and public school institutions (see Jaeger & Tittle, 1980). Accompanying this approach is the need to determine the constituent elements of competence and to develop methods of assessing these elements. Some models are available for adoption (see, for example, Bassett et al., 1978; Muchmore & Galvin, 1980). Others (Backlund, et al., 1979) have developed instrument evaluation criteria. These models and test development criteria are extremely helpful when one considers the foreign nature of test development to most speech communication faculty members.

The purpose of this paper is to examine the process of developing a competence assessment instrument in the area of communication skills, to provide insight into issues facing a dest developer, and to provide examples of how issues are dealt with and how test development progresses. Figure 1 outlines the test development process. As indicated in the figure, there are a number of considerations to be made before tests are adopted for use. Financial, conceptual, and feasibility decisions must be made, then tests are examined or developed, and, finally, the instruments are refined.

INITIAL CONSIDERATIONS

The first issue faced in the development process tends to be conceptual in nature—Is there conceptual support for a competence assessment instrument? Do significant individuals believe in competence-

based education? And, if so, is the support official or tentative? The "wait and see" attitude taken by many administrators can, in the long run, become a major obstacle to implementation of any such project. Official support, too, may be designed for the concept of competency-based education, but not for assessment procedures. In the area of communication skills assessment, individuals have cause for alarm. Opinions on the worth of a project are often based on the validity of the instrument (not that validity isn't crucial) instead of on the concept that persons should be able to show that their communication skills are sufficiently developed by a certain point in time to advance in their educational or occupational systems. Professionals not in the communication field often feel that the development of communication skills is innate and thus they do not support the training experiences which must accompany any competence-based program of assessment.

Funding is also essential. The promise of funding is not sufficient grounds for instrument development; the process is too long and the results are too tentative. In the case of communication skills assessment, funding is a major issue since it is important that skills are measured directly--i.e., that a speaking skill be assessed as a person speaks. The ability to speak cannot validly be assessed through multiple-choice or other pencil-paper items. One is then assessing knowledge and not skill (behavior). Thus, assessment procedures naturally require more financial resources since the amount of time to complete the assessment is greater than in the case of machine-scored tests. The purpose of the assessment instrument, though, is an important determination in the funding process.

In the area of speech communication, instruments have a variety of purposes (see Larson et al., 1978). Some tests are used as screens--to assess degree of reticence, knowledge, skill-attainment--so that remedial programs can be established and students can achieve a theoretical level of competence. Others act as barriers, to prohibit students from progressing. Such is the case with aptitude tests and exit exams. Those viewed as screening devices carry the additional burden of extensive support program development--e.g., learning labs, remedial programs, etc.--specifically designed to increase student performance levels. The purpose of the example to be used throughout this paper--the development of a competence instrument to assess demonstration of speaking and listening skills of college sophomores so that they may develop a level of competence to allow successful interaction in future coursework--was that of a screening device. The main purpose of the competence program, though, is often mandated by the institution's attitudes and conceptual orientations.

At this point in the test development process, the specific skills must be identified. This means a delineation of skills more complete than the generic, "speaking," "listening," and "interpersonal" categories often found in this field. For example, should the student be able to express empathy; gesture at appropriate places while speaking, or listen for understanding? If so, will these need to be dissected further into specific behavioral competencies? Or is a holistic approach preferred? In the latter case, increased emphasis must be placed on the method of determining competence so that a reliable measure is utilized.

Once the domain of specific competencies is identified, the search for instruments begins. Examination of the instruments must include

consideration of: (1) the congruence of the theoretical approach to that developed by the institution (i.e., conceptual orientation); (2) the determination that the instrument is assessing the specific competence areas identified as in need of assessment (i.e., content validity); and (3) the conclusion that the testing method is consistent for the purposes and resources of the institution (i.e., practicality).

The examination of these instruments should be an extensive process. Only through actually using the instrument can one determine the instrument's value. Concurrent validity checks can also be employed. For example, an assessment instrument containing a variety of communication skills can be compared to holistic evaluations conducted in classes or by other trained persons. Above all else, the instrument must be feasible, reliable, valid, and free from bias (Mead, 1980). If all pre-determined needs are met, the instrument can be adopted with the intent to gather normative data on students to set specific competence levels and to monitor the instrument for possible refinement of assessment techniques to increase reliability of ratings. If any of these needs--conceptual, validity, practicality--are not met, the instrument should not be adopted. The institution should determine that the more worthwhile procedure would be to develop the instrument to fulfill all existing conditions constituting the original basis for assessing communication competence (see Hambleton & Eignor, 1980, for additional information on test development).

The remainder of this paper, then, will concentrate on the process of developing and refining a specific assessment instrument--the Communication Competency Assessment Instrument (CCAI). The development of this instrument has been detailed elsewhere (R.Rubin, in press; R.Rubin, 1981). What will be emphasized is the process of test development and decisions

test developers must face along the way.

TEST DEVELOPMENT

The development and refinement of a communication competence assessment instrument is a tedious and sometimes frustrating process requiring the ability to stand back from one's efforts and objectively evaluate the product, and the courage to do so. Instrument refinement becomes the key to the creation of a valid instrument that can be used in a reliable manner (for additional information on reliability and validity, see Standards, 1974).

The first, and most crucial area in test development is the identification of the specific competencies to be assessed. Without this stage, the instrument has no internal check procedure and content validity is difficult to determine. In relation to the development of the CCAI, the competencies endorsed by the Speech Communication Association (Bassett, Whittington, & Staton-Spicer, 1978) were used as a framework; these were extended to the specific context of concern (Educational) and new examples were created, providing a sound basis for the question development process. Another available technique is the consensual agreement by a knowledgeable group of individuals as to the specific skills one whould possess for the context of concern; this, by the way, occurred prior to the Speech Communication Association's endorsement of the aforementioned competences and skills. Thus, the broader picture of what constitutes competence must underlie creation of skill areas to be tested.

The method of assessment must then be geared to the skill areas. That is, how best can one assess a particular skill? The indirect measurement of behaviors has been rightly criticized as an improper method

in assessing speaking and human relations skills (Stiggins, 1981). The writing and/or reading process should not, in any way, become a possible intervening variable. That is, one must be certain that when, for example, the ability to summarize messages is assessed, it is only the students' oral summarizing abilities, and not writing abilities, that are of concern. Human relations skills can likewise be demonstrated. The assessment of listening skills is a difficult issue. Direct assessment of listening ability would, by definition, be assessed within the individual's receiving and decoding processes. This is somewhat impractical. Thus, an indirect method, through writing (or preferably, speaking) must be utilized. The doubt, then, that a true assessment is occurring will always exist when understanding is filtered through the writing or speaking process.

In addition, the assessment method should assess only that student's speaking and/or listening ability. Some instruments require one student to describe a geometric figure while the other listens and draws what is "heard." This interaction process confounds the test results. That is, the student who is listening may have a low skill level and cause the student who is describing to receive a lower score on description ability than he/she would have received with a good-listener partner.

In the direct assessment of speaking and listening skills, the use of recording materials is often an issue (A.Rubin, 1981). Does the videotape equipment add undue stress to the situation? How can we record for posterity all students' responses in the event that accountability becomes an issue? Can inter-rater reliability counter the excessive costs of capturing students' responses on tape?

As implied previously, the test mode can viably be mandated by the inavailability of financial resources. This being the case, the test results of indirect measurement instruments must be carefully examined for possible invalidity. A more preferable route would be to obtain funds to sponsor the most viable and valid instrument possible.

The assessment materials in a communication competency assessment instrument, be they questions or statements to which students respond, are then created. Two important points must be kept in mind, in this regard. First, the purpose of the instrument, if it is to measure skill attainment (and not knowledge of concepts or material), must be to elicit skills for subsequent measurement. Second, the context in which the materials are based must be kept relevant to students--i.e., they must have the experience necessary to show the skill.

An example from the CCAI demonstrates both of these principles. The competence area dealt with oral message evaluation. Specifically, the skill was the ability to describe another's point of view when the other disagreed on an issue. The context was identified as a course which the student either liked or disliked very much. Students had no difficulty identifying for themselves such a course. They were then asked to describe the viewpoint of one of their fellow classmates who had the opposite viewpoint. This did not require that they would have necessarily heard others make such descriptions (although that was possible), but merely to describe what an opposing viewpoint would be without contaminating the description with one's own view about the class. The rating of responses (on a 5 point scale) ranged from complete, objective description of the other's viewpoint to complete, subjective description of the student's own view about the class. The level of acceptable "competence" at the

midpoint was marked by a semi-objective description of the other's view with possible inclusion of a brief statement about the areas of contrast; the opposing viewpoint needed to be well-represented in the description. All in all, the item was based on the students' basic skills of describing their experiences.

The creation of the skill levels and rating instrument follows an examination of the assessment materials and their validity. Are the materials, in actuality, assessing what they are supposed to? Consultation with professionals in the area can help determine face validity. A better method might be blind review of materials by these consultants, asking each to either identify or match the materials to the original list of competencies. This provides some assurance that the development of the instrument is progressing in a positive direction.

Methods of assessing competent possession of these skills must then be formulated. It is generally believed that a "competent--not competent" judgment is too restrictive for most skill areas. A wider range of responses is a preferable format (as in the example above). At times this may prove problematic. This was the case, for example, in the CCAI competence of "distinguishing facts from opinions." Students were to indicate if a previously-heard statement was based on facts or on opinions. It would have been much simpler to score the students' responses as either "right" or "wrong" than to create a 5-point range of responses, as was done. The range, though, did prove an adequate method of assessment and inclusion of the range added to the consistence of rating format. In other words, if nothing is lost by maintaining consistency, the range of responses is preferable to a "competent--not competent" judgment.

The rating instrument, then, must be clear enough that it can be used in a uniform manner by all raters. A team of persons similar in composition to those who will use the instrument (e.g., faculty) can be helpful in refining the rating instrument. Inter-rater reliability tests help to determine the sufficiency and depth of description for the skill levels. Refinement of assessment materials and level descriptions can, in actuality, continue for a long period of time, depending on the level of description found in the rating book.

The instrument is then ready for pilot testing. Students may be chosen to participate on the basis of pre-determined skill levels; in this case, raters should be unaware of the students' reputations. Students could also be chosen at random to assure a representative sample of possible responses. This is, perhaps, preferable, especially when assessing the reliability of the instrument. The validity of the test can also be determined by use of concurrent assessments of skills.

REFINEMENT OF THE INSTRUMENT

Instrument refinement, then, takes the form of examining students' responses to the questions as they are used (i.e., do the students understand what is being asked of them?) and the distribution of responses on the rating levels. In the former, raters often indicate if the instructions are clear and if students understand what they are asked to do. In the latter instance, one may find that all students receive the same score on an item. When the CCAI was being developed, one question asked students to use a chronological order to explain all of their activities during the day. Almost all students correctly used this order and the coefficient alpha analysis rejected the item on the grounds that

it was not discriminating among skill levels as well as other items. Coefficient alpha is a measure of internal consistency of a test; that is, a student who scores high on identifying a main point in a lecture should also score high on understanding. Both of these are listening competencies. This measure of internal consistency has purported importance in test development lieterature (Cronbach, 1951), but is somewhat troublesome when one does not view the ability to communicate as a holistic concept. If one assumes, for example, that human relations skills are not necessarily connected to listening skills which are not necessarily connected to nonverbal skills, then the coefficient alpha indication would be meaningless. Thus, a perfect intercorrelation of responses is not ideal. An alpha of .80 is respectable, especially for instruments with less than 30 items (Nunnally, 1978).

After a period of refinement and elimination of inconsistent items, the instrument should again be piloted on a randomly chosen group of students, prototypes of those who will be assessed in the future. This refinement and evaluation process must continue until some assurance that the instrument is valid and reliable is obtained. This also helps in the establishment of norms and determination of competence levels used to identify students in need of remedial instruction. As mentioned previously, either self-paced or classroom instruction must be in place once the instrument is adopted or the purpose of the instrument reverts to that of a barrier to a student's progress. Piloting the instrument on students at a number of institutions increases assurance that one's own population is not distinctly different from the entire population for which the instrument is intended. The bias-free quality of the instrument

is of utmost importance and can be assessed by wide-spread use throughout a large population.

Follow-up procedures are also essential at this stage of development. If an instrument is created, for instance, to assess students' communication skill attainment at the sophomore level to determine the need for instruction before upper-level courses are attempted, both implications must be examined. First, do students taking upper-level courses actually need a higher level of skill achievement? And second, do students who do well in those courses have superior communication skills? What this analysis demonstrates is the interactive nature of concept, purpose, and instrument. Any inconsistency among the three can be an indication of an invalid instrument or testing procedure. Accountability hinges on the assumption, and ultimate proof, of the consistent nature of purpose, concept, and instrument.

The implication throughout this paper that this process of developing and refining a communication competence assessment instrument is open to consternation at multiple points is, indeed, accurate. Test development can become a futile endeavor if careful consideration of all procedural elements is not accomplished throughout the process. And even then, assurance is not guaranteed. State legislatures, governing boards, and even one's own colleagues can create stumbling blocks along the way. Initial attitudes of support can quickly change into that which is so often heard in this profession--that communication skills are innate, they need not be taught. Or perhaps what will emerge is the attitude that students only need listening skills in classrooms; professors speak and students listen. This bias is among us and must be considered above all else.

The future of communication competence assessment, though, is promising. A number of persons at local, state, and national levels are being heard, listened to, and are even persuasive about remedying this past oversight in basic skills education. Instruments being developed must be the best that they can be to increase the credibility and strength of the competency-based approach and the profession at large.

REFERENCES

Backlund, P.M., Brown, K.L., Gurry, J., & Jandt, F.E. Criteria for evaluating instruments and procedures for assessing speaking and listening. In Resources for assessment in communication. Falls Church, Va.: Speech Communication Association, 1979.

Bassett, R.E., Whittington, N., & Staton-Spicer, A. The basics in speaking and listening for high school graduates: What should be assessed? Communication Education, 1978, 27, 293-303.

Cronbach, L.J. Coefficient alpha and the internal structure of tests. Psychometrika, 1951, 16, 297-334.

Hambleton, R.K., & Eignor, D.R. Competency test development, validation, and standard setting. In R.M. Jaeger & C.K. Tittle (Eds.), Minimal competency achievement testing: Motives, models, measures, and consequences. Berkeley: McCutchan, 1980.

Jaeger, R.M., & Tittle, C.K. (Eds.) Minimum competency achievement testing: Motives, models, measures, and consequences. Berkeley: McCutchan, 1980.

Larson, C., Backlund, P., Redmond, M., & Barbour, A. Assessing functional communication. Urbana, Ill.: ERIC, 1978.

Mead, N.A. Assessing speaking skills: Issues of feasibility, reliability, validity and bias. Paper presented at the meeting of the Speech Communication Association, New York City, N.Y., November 1980.

Muchmore, J., & Galvin, K. A report of the task force on minimal oral communication competencies for community college graduates with the A.A.S. degree. Paper presented at the meeting of the Speech Communication Association, New York City, N.Y., November 1980.

Nunnally, J. Psychometric theory. New York: McGraw-Hill, 1978.

Rubin, A.M. Measurement strategies and the use of videotape recording in communication competence assessment. Journal of the Wisconsin Communication Association, 1981, 11(2), 25-31.

Rubin, R.B. Assessment of college level speaking and listening skills. In R.J. Stiggins (Ed.), Perspectives on the assessment of speaking and listening skills for the 1980s. Portland: Clearinghouse for Applied Performance Testing, 1981.

Rubin, R.B. Assessing speaking and listening competence at the college level: The Communication Competency Assessment Instrument. Communication Education, in press.

Standards for educational and psychological tests. Washington, D.C.: American Psychological Association, 1974.

Stiggins, R.J. Potential sources of bias in speaking and listening assessment. In R.J. Stiggins (Ed.), Perspectives on the assessment of speaking and listening skills for the 1980s. Portland: Clearinghouse for Applied Performance Testing, 1981.

FIGURE 1

Flow Chart of Test Development Process