A conference was held to set standards of admission to graduate study that were consonant with formal requirements and reflected a satisfactory minimum competence to master the content and methods of instruction. The best preparation for such tests is a good broad education. The issue of possible cultural bias in test questions had been raised, but, it is pointed out, attempts to correct for cultural bias are generally circular in logic. An analysis of the learning act is made. In conclusion, the question of the propriety of applying selective admissions criteria within the group of those whose admissions data indicate probability of being able to "pass" in the institution to which they seek admission is raised. (Author/CK)
Selective Admission of Teachers to Graduate Study

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It is reasonable and proper to assume, as the planners of this conference have done, that admission to graduate study in education is done by each training institution fairly and honestly and to the best of its ability, that presently used criteria for admission have evolved out of the experience of each institution in dealing with the practical problem of admitting students it has facilities to teach to programs of training they can master and apply to the teaching of children in our schools. In some instances, formal validity studies of a statistical nature have been made to determine how well currently available admissions criteria predict subsequent success in graduate study. In more instances, informal procedures have been used to evaluate and modify admissions criteria of excellence generally derived from formal certification requirements for teaching. The purpose has been to set standards of admission consonant with formal requirements and reflecting a satisfactory minimum competence to master the content and methods of instruction. Correlations with subsequent achievement in study have been positive, though far from perfect. We take some comfort in the witticism to the effect that "if you are going to teach a dog tricks, you need to know more than the dog." Insofar as the tests measure significant competence, albeit imperfectly some useful selectivity is achieved.

The best preparation for such tests, it is agreed, is a good broad education. For tests involving manipulation of numbers, refresher study will help those who have accepted too readily the elective status of mathematics beyond arithmetic. And most students benefit somewhat from experience with taking tests of the sort used in selection, although the greatest gain from such experience occurs between first and second trials. One learns to pace himself so as not to be caught short of time or, on the other hand, not to rush impetuously through a test only to find time left at the end that might more profitably have been devoted to more even attention to the several exercises presented. Modern tests are generally planned to be "power" tests rather than "speed" tests.
for the great majority of examinees, that is, 80% or more of the examinees have time to finish the test and most of the remainder nearly finish or have already gotten beyond their depth in test exercises arranged in ascending order of difficulty.

The issue of possible cultural bias in test questions has been raised, but attempts to correct for cultural bias are generally circular in logic. Occasionally items are found in tests that may truly be said to give a spurious advantage to individuals from socio-economically favored homes, but more often the advantage is real and directly valuable in the "culture" of higher education to which all applicants aspire. I shall never forget the experience I had some seven years ago when I was invited to present to the registrars and admissions officers of Negro colleges in this region, assembled at South Carolina State College, the results of a study of achievement test results for Negro and white pupils and teachers in Atlanta. The presentation was received in a constructive way, but some questioned whether the tests were fair to Negro children. The speaker who followed me on the program was Dr. Herman Branson, then a professor and dean at Howard University. He stated that, before making his prepared remarks, he would like to make one comment on some of the questions asked of the preceding speaker. "At Howard University," he said, "we are not interested in whether a student can do culture-fair arithmetic; we are interested in whether he can do arithmetic."

I would like, if I may, to use that statement as a kind of "text" for the remainder of my remarks. It served at the time to make the point that certain requirements are inherent in the culture and need to be met however one may have been educated. I would like to use it here for a different purpose, however. I would like to use it as a basis for drawing attention to the question of how well our presently used tests reflect "requirements inherent in the culture that need to be met." This, I take it, was the approach in the Eight-Year Study of the Progressive Education Association, which was so effective in producing new test approaches under the direction of Dr. Ralph Tyler.

In making these comments I shall be drawing upon two bits of recent experience I have found especially instructive. One is the experience of dealing in Pakistan with persons for whom English is a second language, learned as the basis for instruction in secondary school and college. The other is the experience of teaching a bright Korean graduate student who
succeeds despite language difficulties that interfere more in standardized
test performance than in most of his other work, including subject-matter
tests.

If we look at the learning task of the language-handicapped student,
indeed of any student, we find he learns primarily by listening and by reading.
In response to what is said or written, he does more than absorb, he goes
on - sometimes by specific instruction - to perform exercises or answer ques-
tions based on his listening and/or reading. He does this learning in meaning-
ful contexts: he hears and reads sentences and paragraphs, rather than
isolated words. What is more, he learns in what psychologists call a work-
limit situation, rather than a time-limit situation. Good students, anxious
to learn, still achieve their excellence in part by devoting twice as much
time to their studies as the average student cares to.

To me, this brief analysis of the learning act, as it takes place in
graduate study in education, implies three shifts in emphasis in appraisal
of fitness for such study.

First, listening ability needs to be measured. Like many of you, I
learned early in my school career that if I paid attention in class I could
master most of what the homework was designed to help me acquire. And we
now have the technology for putting lectures on tape so as to standardize
the presentation. Apart from setting separate tests in listening comprehension,
one may readily incorporate a tape recording into a total test of comprehension.
One presents the recording at the beginning of the testing period and tells
the students to take notes or just listen preparatory to answering a set of
questions presented at the head of the test paper distributed at the end of
the recording. Back in 1952 I took a busman's holiday while teaching in a
summer workshop at Michigan State University and sat in on such an examination
in their general education course in Communications. On that occasion a
speech major read the simulated broadcast over the public address system in
an auditorium. She apologized later for reading her ten-minute script in
7 1/2 minutes. Speed of presentation no longer need be a problem with record-
ings. Such an exercise is an integral feature of the Test of English as a
Foreign Language developed and administered worldwide by Educational Testing
Service under a grant from the Carnegie and Ford Foundations. Let us hope
that it will find its way into domestic selection programs.
Second, ability to comprehend written matter needs to be tested directly by exercises requiring the examinee to read substantial passages and answer significant questions about them, including questions requiring the reader to relate what he has read to a background of information about the subject of the reading passage. Such reading passages are widely used, but are commonly supplemented or replaced by vocabulary tests or tests of word relations because the latter types permit more responses per minute of testing time and hence produce more reliable scores. It has been a commonplace to remark in testing circles that vocabulary is the best single indicator of "intelligence" or language facility. Correlations are substantial with criteria of scholastic aptitude and achievement, but one needs to go deeper than that. Scores on "speeded" tests correlate as highly with "power" tests, yet we have come to discover that power tests measure intrinsically more significant outcomes and predict school achievement more effectively. Isolated words in vocabulary tests and word relations tests presume a very considerable background of language, developed most fully by those with backgrounds of frequent conversation in the home and neighborhood. To a foreign student this experience has been denied, as it has also been denied in a measure to children from linguistically meager backgrounds in the poorer neighborhoods. A vocabulary item consisting of a key word and five alternative synonyms is fair game for most children, but presents an artificial exercise to one not familiar with words out of context. The latter individual will make meaning from contextual clues when reading passages of connected discourse.

Personal experiences flock to mind. In studying German in college those of us who had done well in the first course were excused from a second course usually taken by incoming freshmen with two years of high school German. I found myself in a class largely of freshmen with three years of high school German. I was equal to the challenge in reading, but found that they had a tremendous advantage in vocabulary built up in three years of study. In testing a Norwegian girl studying at one of our leading women's colleges, I found she could answer only about half the vocabulary items on the Cooperative Reading Test of that day, yet answered correctly every question on the reading section as far as she could go in the time allowed, including questions on a humorous passage that required her to get the point of a joke. In interpreting achievement of 40 underprivileged fourth grade Atlanta children on the Wechsler
Intelligence Scale for Children (WISC), we found over 30 of them had better scores on the test for comprehension than on the tests of information and vocabulary, while fewer than five had lower scores on the comprehension test. Comprehension may take longer to test than vocabulary, but let us take the time because reading comprehension is the directly applicable skill students use in studying.

This brings us to the third suggestion, which is to remove time limits from tests for disadvantaged persons. The need to do this for foreign students is most obvious, but it is intrinsically sound to do so for all students. We have come a long way from the old assumption that speed denotes power. In the early times, circa 1925, we used to take comfort in the very high correlations between scores on speed tests and power tests, regardless of the fact that in a few individual instances in almost every study the scores did not agree well. More recently in analyzing the old ACE Psychological Examination, a speeded test, Educational Testing Service was able to compare its predictive power in several situations with that of the College Board's Scholastic Aptitude Test and of the early forms of the Selective Service College Qualification Test, both of which were power tests. In every comparison, in some thirty situations, the power test showed a higher correlation with college grade point average than did the speeded test. It is on this basis that further research and development on the ACE Psychological Examination was abandoned in favor of concentration on the School and College Ability Test. Any of you who have used the latter test will have observed that the best students finish long before time is called.

The ideal miniature of the school learning situation is represented in the original USAFI Tests of General Educational Development. In the testing situation prevailing at the end of World War II, there was no time limit imposed because the examinees were soldiers being mustered out of service. Later forms provided a time limit for administrative convenience, but preserved the essentially unspeeded quality of the tests by keeping the content well within the limits of time set. It became my assignment to review these tests for the Third Mental Measurements Yearbook, published in 1949. In keeping with the editor's instructions, I took the tests before embarking upon my analytical review. What did I find? In mathematics, social studies, and English expression, I did well with normal effort, as I had always done in
school. In science, I achieved an equally high score by taking advantage of unlimited time, just as in college I had earned equally high grades in science by devoting the extra time I required to master these subjects. I should add that, despite taking advantage of unlimited time, I could not achieve a top score in the test of Interpretation of Literary Materials. Once again I found myself in the same situation that prevailed in college: I never achieved A in English no matter how much time I spent in studying the literature.

My Korean student, like many others, has benefited from the unlimited time on my course examinations. It has been my practice in examinations in educational measurement and statistics to allow virtually unlimited time so that students who have difficulty with computation may do themselves justice, rather than commit careless errors under time pressure. My Korean student used this generous overall time limit to give extra time to the multiple-choice questions. Under my questioning, he reported that, like many foreign students who are unsure of their English, when necessary he translated whole items into his native tongue before answering. Despite minimum overt participation in class, he made the second highest score on every test. Two of my colleagues reported similar experiences, so we joined in persuading the college to waive the GRE test score requirement and admit this student to candidacy for the doctor's degree despite his low verbal score.

In another context, the problem takes this form. Puerto Rican students seeking admission to college may take a Spanish as well as an English version of the College Entrance Examination Board's Scholastic Aptitude Test. If the college to which he seeks admission uses English as the medium of instruction, the applicant's competence is generally overestimated by his score on the Spanish version, but is equally apt to be underestimated by his score on the English version when taken under standard time limits appropriate for American students. Study of the relative predictive power in American colleges of these scores and a score on the English version with unlimited time is under consideration.

Tests, then, need to be reexamined for their relevance to admission. Among factors now worth appraising and capable of appraising more accurately are (1) listening ability and (2) reading comprehension without regard to time limits. Validity studies, including such measures in conjunction with
other current measures, are in order.

Even so, the best combination of predictors available in the foreseeable future will still fail to accomplish even nearly perfect selection. It is therefore to be recommended that probationary admission of marginally rejected students or students identified by special nominating procedures be tried and studied. Undergraduate admissions on this basis have been tried and proved successful. A common practice at that level has been to allow rejected applicants to show they can carry the regular program by meeting the standards for remaining in good standing during a summer session. If the numbers accorded this privilege in any graduate education program in any summer were limited to a small percent (10%?) of those admitted, this much flexibility in admission could be achieved without any danger of markedly diluting the general caliber of the student body. How much farther and faster such an approach might be carried could be determined by each institution in the light of its own experience. This approach would doubtless need to be supplemented by other approaches to cope with the magnitude of the problem currently envisaged, but it would make a significant contribution.

In conclusion, let me introduce a special comment on the whole issue of selective admissions. Harold Taylor, onetime President of Sarah Lawrence College, has raised in a 1965 issue of the Saturday Review the question of the propriety of applying selective admissions criteria within the group of those whose admissions data indicate probability of being able to "pass" in the institution to which they seek admission. Should we not admit from such applicants a student body we can accommodate, perhaps on a first-come first-serve basis, and beyond this seek expansion of facilities to accommodate the larger number who qualify? This broad issue is mentioned here not with the notion that it can readily be incorporated into the task of this conference, but to put in a broader perspective the issues we are prepared to confront.