NEWSLETTER

MEASUREMENT AND EVALUATION SERVICE

Vol. 1 Issue 1   Fall, 1979

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The MAES Newsletter will be published on an irregular basis as it becomes important to update information from this office.

This first issue provides fairly complete descriptions and is intended to be used as a reference guide for present and future users of our services.

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IN THIS ISSUE

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SERVICES OFFERED BY MAES

Test Scoring Operation

Our office gives first priority, in terms of turn-around time, to our test scoring operation. Last year we processed approximately 2,800 jobs for 33 departments.

The usual procedure followed is for each faculty member or teaching assistant to bring to the MAES office the answer sheets that need to be scored with a filled out key (on a separate answer sheet) on top of each group. An office form, listing test scoring services, is filled out and the tests are picked up later that day or the following day.

Test Scoring Schedule

For same-day service, jobs must be in by 10:00 a.m.

IN	OUT
before 10:00 a.m.	2:00 p.m. same day
after 10:00 a.m.	8:00 a.m. next morning
after 3:00 p.m.	1:00 p.m. next afternoon

The standard output for a group of answer sheets includes a frequency distribution of the scores, a listing of student scores in social security number order, another listing of scores in alphabetical order, in addition to scores being printed on the back of individual answer sheets.

Other options available include a "while-you-wait" scoring service which prints the number of correct items on the back of each answer sheet. This can normally be returned in a matter of minutes.

A complete item analysis of the test items (explained in detail in an attachment to this newsletter) can be requested at the time answer sheets are brought to the office.

If it is desirable to have two forms of a test combined into one listing, or two sections of a course combined into a single listing, this can be accomplished by indicating this option on the office form.

Weight factors may be assigned to each answer sheet that is scored if desired. For example, if you wish to develop scores on the basis of 100 per cent of a 50 item test, we can weight the scores x 2 to accomplish this purpose. Different parts of a test may be weighted differently if each part to be weighted is located in different parts of the answer sheet. More about this in "Types of Answer Sheets."

A listing of individual student responses is also available if such a list would be useful. Some instructors use such a list to verify how a student's sheet was marked in case of a question at some later time, a situation which may occur when forms are returned to students and collected again.

A service we call our Composite Score Program stores all test scores for each student and prints an accumulated score after each test scored in our office. The service is designed for larger classes with a number of tests throughout the semester. We have found that the service is not time/cost effective for a class with less than 30 students or for less than 4 tests. If your classes meet these qualifications, stop by our office or call us before you submit your first test. This will avoid delays in processing your first test of the semester.

Call the MAES office concerning questions about any of these services.

Teacher Evaluation Form Processing

At the present time, most teacher evaluation processing is handled through the respective departments, each department using a unique set of evaluation items. MAES processed teacher evaluations for 1,457 class sections representing 33,301 students for the spring 79 semester. Department offices collect answer sheets from individual classes and send them over to MAES for processing at the end of the semester. MAES then produces summaries of the evaluation items by class, by instructor, by course level and by department. The summary includes number and per cent of responses per item and mean and standard deviation for each item.

MAES is now making available to individual instructors an additional teacher evaluation service for diagnostic purposes. It is called the Purdue Cafeteria System and is currently being offered on an experimental basis. Essentially, the instructor chooses a group of items from a catalog of about 200 instructional rating items. MAES then prepares a packet which includes an individualized evaluation form and response sheet for each student in the instructor's class. The instructor returns the completed answer sheets for processing and receives the diagnostic report. If this new service sounds interesting to you, call the MAES office for further details.

Internal and External Testing Programs

MAES serves as a testing center for various internal and external testing programs. The Constitution Test, a bugaboo to many graduating ISU seniors, is a state requirement and probably our most well known internal test. ACT, a college aptitude requirement for admittance to many mid-western colleges, is our most well attended external test. A complete listing of our tests and ISU test dates is attached to this first newsletter.

Special Projects and Research

The number of journals devoted to research in testing and other measurement and evaluation processes, testifies to the fact that the field is truly dynamic. In past years this office has been involved in a variety of projects such as 1) using ACT information to predict college success, 2) predicting Pass/Fail CLEP scores, 3) developing and introducing Computer Assisted Test Construction, 4) testing gifted public school chidren, and 5) other individual projects for members of several departments on campus.

Although this work cannot receive top priority in the MAES office, it is of vital interest to us and we plan to continue working in this area.

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This year our office is again willing to assist with research and/or special projects relevant to the activities of our office and within the limits of available time and personnel.

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TYPES OF DATA FORMS

There are two basic types of NCS answer sheets available for test scoring purposes. One is a 5-response answer sheet, form F5396. It has room for answering 160 items with 5 responses per item with an additional 21 items of 10 responses per item. There are four separate sections to the answer sheet: items 1 through 50-part 1; items 51 through 100-part 2; items 101 through 160-part 3 and the remainder part 4.

Differential weighting is accomplished by having students respond to different sections of a test in different sections of the answer sheet.

There is also a 10-response answer sheet, form T4887. This sheet has 120 items all allowing for 10 responses per item. The 4 parts are broken down as such: 1 through 30-part 1; 30 through 60-part 2, 60 through 90-part 3 and 90 through 120-part 4.

Computer Center staff members have developed a new form which allows research or questionnaire data to be coded on machine readable forms and computer processed, eliminating the usual keypunching step. The $.07 per sheet cost for this service which can be charged to a computer project number, includes the cost of the form and loading the data on tape. Each form is equivalent to two and one half 80-column IBM cards. Although there are exceptions, cost for this service is very often less than comparable keypunching operations. For those who want to use cards instead of tape, it is also possible to get a punched deck as part of this operation. For more specific information call Don Allen (8-2135).

NCS has available many other forms for specialized purposes which can be ordered through our office. It is also possible to design new forms as long as a two month lead time is allowed for delivery.

TABULATION PROGRAM

We can perform tabulations on machine readable forms from this office if the job is classroom related. We do not do tabulating or statistical analysis from punched cards or tape as this is a Computer Center function.

Our tabulation program provides a summary of number and per cent of each response per item, as well as the mean and the standard deviation for each item. No key is necessary since there are no correct answers.

PUNCHED CARDS AND MAGNETIC TAPE

Any data that can be coded on an NCS answer sheet can be transferred to punched cards. The cards can then be used for further analysis via SPSS or other programs. There is a charge for this service, however, since it is not directly related to scoring. A Computer Center project number is needed for this service.

We can also give you a magnetic tape with the same information as the card would contain. Magnetic tape output may also be provided from answer sheets. This has the advantage of being less cumbersome and there is no danger of losing some records. The same conditions prevail for magnetic tape as stated for punched cards.

BILINGUAL TESTING

Bilingual education refers to a program which prepares prospective teachers in this country to teach children whose native language is other than English. These teachers must serve as English speaking models as well as have the ability to communicate with students in their native language. It is necessary, therefore, that they show competency in both languages.

Since there have not yet been enough graduates from these programs to fill classroom needs, the Illinois Office of Education issues a Transitional Bilingual Certificate to certified teachers who are proficient in English and the other required languages. During the past two years our office has operated as a testing center for Spanish certification, testing native Spanish speakers and Americans in the acquired languages. We have tested 54 teachers, approximately half in each language. In addition to taking written tests, candidates are required to pass oral examinations which have been given by the following members of the English, Foreign Languages, and Curriculum and Instruction Departments: George Balls, Jon Blake, Scott Eatherly, Olga Martinez, Luis Clay-Mendez, and George Torres. These faculty members have volunteered a great deal of time to this project and have performed a valuable service to I.O.E. and bilingual education in Illinois. It was determined this summer that this transitional testing program will be continuing at least for another year and our office

will again be depending upon the services of these faculty members.

Since we have acquired a great deal of test data and background information, our office is in the process of analyzing the data in order to provide the state with additional information on testing bilingual teachers for Illinois public schools.

---------------------------------- T E A R   O F F ----------------------------------

We have the facilities and personnel available to offer two-hour instructional sessions on several aspects of the Measurement and Evaluation Service. If sufficient interest is shown, they will be offered at the beginning of the fall semester. In order to facilitate planning, we would like to have information on how many are interested and when they could attend. If you are interested in any of these sessions, please fill out the form below and return it to us by Wednesday, September 5.

If you are in need of specific information before this time, please call our office (438-2135).

NAME	DEPARTMENT

Instructional Sessions (check any or all)

_____ 1. Measurement and Evaluation Services (explanation of
            test scoring and composite score program)

_____ 2. Item Analysis

_____ 3. Diagnostic Teacher Evaluation - CAFETERIA

_____ 4. Test Construction

Available dates (check all that are convenient)

_____ Tuesday, September 18, 2:30 p.m.

_____ Wednesday, September 19, 10:00 a.m.

_____ Tuesday, September 25, 2:30 p.m.

_____ Wednesday, September 26, 10:00 a.m.

When the arrangements are complete, we will let you know the time and place of each session.

DESCRIPTION OF STATISTICS

INCLUDED IN THE ITEM ANALYSIS

The example given below illustrates the format of the output in the standard item analysis provided by Measurement and Evaluation Service.

ITEM NO	1 NO	1 PCT	2 NO	2 PCT	3 NO	3 PCT	4 NO	4 PCT	5 NO	5 PCT	DIFFICULTY	VALIDITY
1	6	23	14*	54	2	8	1	4	3	12	0.54	0.43
2	26*	100	0	0	0	0	0	0	0	0	1.00	0.0

"Item No" refers to the number of the item on the NCS answer sheets

Numbers 1-5 listed across the top of the page refer to alternative responses. The number of alternatives corresponds to the number of alternatives available on the answer sheet for that particular item.

The abreviations "NO" and "PCT" refer to the number of respondents to that particular alternative and the percentage of responses for that alternative.

The asterisk (*) by the number of responses underneath a particular alternative indicates the correct response for that item.

Difficulty refers to the proportion of the total number of students who answer the item correctly. In the example, 14 out of 26, or 54 percent, answered the item correctly. If all students answer the item correctly as in the second example, the difficulty is 1.00.

Students taking the test are divided into three groups on the basis of test performance. The 27 percent of this group which obtained the highest test scores are considered the upper group; the next 46 percent are considered the middle group; the bottom 27 percent are considered the lower group. In the first example above, out of the 26 students, 7 are in the upper group, 7 in the lower group and 12 in the middle group.

Validity is calculated by obtaining the difference between the proportion of students in the upper group and the proportion of students in the lower group who answered the item correctly. In the first example, this works out to be 43 percent a very respectable validity. Any validity figure over 20 percent is generally acceptable. If all students answer the item correctly, as in the second example, or if all students answer the item incorrectly, the validity will be zero. If validity is approaching zero, the question should be looked at. If the validity is less than zero or negative there is probably a problem with the question. Test items for which the validity is negative** should be carefully scrutinized for misleading statements. The rationale is based on the notion that the

**Negative validity indices may also indicate incorrect keying.

total test score is a better indicator of a student's knowledge than is any single test item. Thus, if the index is negative this indicates that the proportion of correct responses was greater for that group of students which actually knew less about the subject. Where test scores are used to assign marks to students based on their relative standing within the reference group, such items tend to make those rankings less reliable.

INTERNAL AND EXTERNAL TEST DATES
1979-80

ACT: American College Testing (admittance test for entering freshmen)

October 20*	April 12*
December 8	June 14*
February 16	

ACT Residual: ACT test for incoming I.S.U. students only.

September 19*	May 21*
November 28*	July 23*
January 23*	August 20*

AHPAT: Allied Health Professions Admission Test (for undergraduate and graduate students)

November 17 (tentative at ISU)
March 8*

CLEP Institutional: College Level Examination Program (for ISU students only-see description below)

January 10*
April 19*
August 23*

CLEP Open: College Level Examination Program (for ISU students and general public)

September 12*	January 16*	May 14*
October 17*	February 13*	June 18*
November 14*	March 19*	July 16*
December 12*	April 16*	August 13*

College Level Examination program is designed to allow students to demonstrate proficiency by University Study requirements and in a number of subjects. ISU grants up to 18 hours of credit toward University Studies in Natural Sciences, Humanities, and Social Sciences and for a number of ISU courses. "CLEP OPEN" refers to the test administration which is open to ISU students as well as to the general public.

Constitution: (a state requirement for graduation)

September 7*	February 1*	July 11*
October 5*	March 7*	August 1*
November 2*	April 4*	
December 7*	April 25*	

English Usage Test: (an English written expression exam sometimes required of doctoral candidates)

Given by appointment only.

GMAT: Graduate Management Admissions Test (for admission to graduate
       studies in business areas)

       October 27*   March 15*
       January 26*   July 12*

GRE: Graduate Record Examination (required for admission to graduate
       studies by many departments at ISU and other universities)

       October 20*   February 23
       December 8*   April 26*
       January 12*   June 14*

Miller's Analogies Test: (a scholastic aptitude test for graduate
       students)
Doppelt: (a mathematical reasoning test for graduate students)

       Both Millers Analogies test and Doppelt test are given on the
       dates listed below

       September 5*   January 9*   May 7*
       October 3*   February 6*   June 4*
       November 7*   March 5*   July 2*
       December 5*   April 2*   August 6*

LSAT: Law School Admission Test

       October 13*   February 2
       December 1   April 19*

MCAT: Medical College Admission Test (NOT given at ISU)

       April, 1980 (exact dates are not available
                        at this time)
       September, 1980

NTE: National Teacher's Examination

       November 10   February 16*   July 19

TOEFL: Test of English as a Foreign Language

       August 11   January 19
       October 6   March 22*
       November 17*   May 17

Student Information

LAST NAME: NAME
FIRST NAME: JOE
MI: E

COURSE: CORRECTLY CODED
SECTION: KEY SHEET
SIDE 1

INSTRUCTOR: _____
STUDENT SIGNATURE: USE #2 PENCIL

Handwritten labels in grid columns:
- DEPARTMENT NUMBER
- COURSE NUMBER
- SECTION NUMBER
- TEST NO.
- COMPOSITE SCORE PROGRAM

DATE: MO. _ DAY 45 YR. 6

SOCIAL SECURITY NUMBER: 1 0 1 0 3 0 1 0 6

SPECIAL CODES: A B C D E F

GRADE: Fr, So, Jr, Sr, Gr, Un

SEX: MALE / FEMALE

Answer Section (Items 1–50)

Column headings: T/A F/B C D E, options 1 2 3 4 5

1–10, 11–20, 21–30, 31–40, 41–50

Answer Section (Items 51–100)

51–60, 61–70, 71–80, 81–90, 91–100