

RESULTS  
OF  
THE ACADEMIC PROFILE  
ASSESSMENT

at

MISSISSIPPI STATE UNIVERSITY

August 2001

prepared by: Office of Planning, Evaluation & Institutional Effectiveness

**Acknowledgements:**

Unless otherwise noted, the information and figures are borrowed or adapted from *The Academic Profile Score Report and Interpretive Guide* (provided by the College Board and Educational Testing Service).

Individual Student Scores and Criterion-Referenced Proficiency Levels are available from the Office of Planning, Evaluation & Institutional Effectiveness.

## **THE ACADEMIC PROFILE**

### Introduction

Over the past several years, higher education has seen an increased concern in assessment of outcomes. National reports indicate problems with American education. These reports have raised questions and concerns with the public, state legislatures, higher education governing boards and individual institutions in determining how well we are accomplishing our missions in higher education.

In 1986, Educational Testing Service (ETS) and the College Board began developing an instrument to assist institutions in their endeavor of assessing the outcomes of their general education programs.

### Purpose and Methodology

The Academic Profile was developed to assist in assessing the outcomes of general education programs to improve the quality of instruction and learning. The focus of the academic profile is on the academic skills developed through general education or core courses, rather than on the knowledge acquired about the subjects taught in the core.

The exam is designed to test college-level reading, college-level writing, critical thinking and mathematics within the context of the humanities, social sciences and natural sciences. Stimulus material is used from these three academic areas, to test the four skills, but students are not expected to bring specific knowledge about the content areas to the questions. It is expected that students who have taken core courses in these areas will be better able to read the materials and answer the accompanying questions than a student who has not taken the courses.

Two forms of the Academic Profile are available, the long form requires two and a half hours to administer. The short form only requires 40 minutes to administer. The short form is constructed by dividing the long form into four parts and using multiple-matrix sampling to assure random fourths of the students take each short form. This samples both students and items and obtains the maximum information while utilizing minimum testing time.

### Scores for the Academic Profile

Scores for the Academic Profile are reported in two ways: as criterion-referenced scores i.e., proficiency levels, and as norm-referenced scores.

Norm-referenced scores derive their meaning only from comparisons with other scores—scores of other students, scores of the same students at different time periods, or scores from other colleges and universities.

Scale-scores as reported on the Institutional Summary and on the student roster are norm-referenced. There are eight norm-referenced scores: Humanities, Social Sciences, Natural Sciences, College-Level Reading, College-Level Writing, Critical Thinking, and Mathematics, plus a total score. All Subsequent forms of the Academic Profile are equated to this scale, which allows score comparisons over time.

Criterion-referenced scores (proficiency levels), unlike norm-referenced scores, have their own meaning. These scores or levels are defined in terms of specific competencies expected of students at each of three levels for: Writing, Mathematics, and Reading/Critical Thinking. The three levels are hierarchical; students who perform at Level 2 have also performed successfully at Level 1; students at Level 3 have also performed successfully at Levels 1 and 2.

Based on the form of the test used - the long or the short form - the following scores were calculated:

#### Long Form

For total group tested:

- \* eight norm-referenced scores
- \* three proficiency level scores

For individual students:

- \* eight norm-referenced scores
- \* three proficiency level scores

#### Short Form

For total group tested:

- \* eight norm-referenced scores
- \* three proficiency level scores

For individual students:

- \* norm-referenced total score

The summary scores in the graph reflect the matrix format of the Academic Profile: three academic area scores (Humanities, Social Sciences, Natural Sciences), four skills scores (College-Level Reading, College-Level Writing, Critical Thinking, Mathematics), and a total score.

These scores are reported as scale scores with the mean shown as the vertical line in the center of the shaded confidence band. The scales for the sub-scores range from 100 - 130 and the scale for the total score ranges from 400 - 500.

Note: while all the sub-scores are on a similar numerical scale, the precise meaning of a score of 115, for example, will differ depending on the difficulty of the items comprising that sub-score.

#### Confidence Bands

All sampling results in some error when estimating a mean score for the total group of students (population) from which the sample was drawn. It is still important for us to know how close the mean score of the sample is to the mean score that would have been obtained had the entire population been tested. The confidence bands indicate the degree of accuracy pertaining to the statements about the performance of the population. The bands were developed using a 95 percent confidence level, which is the commonly accepted research standard when generalizing from a sample to a population. Confidence bands are affected by both the size and variability of the sample. Just as there is a band around the mean reported for an institution, a similar band is also around the score obtained by an individual student.

#### Score Distributions

Long Form: Distributions of the scale scores for the three content areas, four skill areas, and total are provided.  
Short Form: The distribution is for the total scale score only.

## ACADEMIC PROFILE USE AT MISSISSIPPI STATE UNIVERSITY

Following is a brief history and summary of results, in tables, of how the Academic Profile examination has been administered at MSU.

The College of Education and the College of Engineering have administered the long-form questionnaire since Fall 1998. During the Fall 2000 semester, the short-form questionnaire was administered to a broader range of students to assess the University Core. The instrument will be administered each fall semester to continue this assessment.

Individual student scores are available to faculty administering the instrument. Please contact the Office of Planning, Evaluation and Institutional Effectiveness.

The following summaries indicate MSU scores and comparative scores for the profiles.

**Figure 1. Administration of the Academic Profile at MSU**

College	Fall 98	Spring 99	Fall 99	Spring 00	Sum 00	Fall 00
Education	✓		✓		✓	✓
Engineering			✓	✓		✓
Agriculture						✓
Arts & Sciences						✓
Business & Industry						✓

**Summary - College of Education - College of Engineering - Total Scores**

The following chart (Figure 2.) indicates the scores for the academic areas and skills scores for the fall 1998, fall 1999, spring 2000, summer 2000 and fall 2000 semesters.

**Figure 2. Academic Area Subscores and Skills Dimension Subscores for College of Education - College of Engineering - and Total University Group Assessed**

Academic Area Subscores	College of Education				College of Engineering		Total Group
	Fall 98 n=234	Fall 99 n=215	Sum 00 n=163	Fall 00 n=101	Fall 99 n=135	Spr 00 n=139	Fall 00 n=842
Humanities	115	110.2	111.0	111.2	117	118.9	115.2
Social Sciences	113	109.5	110.3	110.6	116	118.7	114.5
Natural Sciences	115	110.9	111.8	112.3	119	121.2	117.4
<b>Skills Dimension Subscores</b>							
College-Level Reading	117	111.3	112.2	112.9	120	123.5	118.7
College-Level Writing	116	111.6	112.8	112.9	118	118.9	116.5
Critical Thinking	111	107.7	108.0	108.4	115	116.3	112.0
Using Mathematics	115	110.2	110.9	111.3	121	121.7	115.8
<b>TOTAL SCORE</b>	<b>445</b>	<b>429.3</b>	<b>432.1</b>	<b>433.4</b>	<b>458</b>	<b>461.3</b>	<b>447.4</b>

The following table compares the mean scores for five subgroups. As with the total group score, the scores for the subgroups are based on a scale of 400-500. Numbers in parentheses indicate the number of students within each subgroup category (female, African American, etc.) When available, Research/Doctoral Means (RDU) are included.

**Figure 3. Mean Scores for Sub-groups - College of Education - College of Engineering - and Total Group Assessed**

	College of Education			College of Engineering		Total University Group
	Fall 99	Sum 00	Fall 00	Fall 99	Spr 00	Fall 00
<b>Class Level</b>						
Freshmen	--	--	--	--	--	440.8 (n=16)
Sophomore	427.8 (n=38)	430.2 (n=23)	426.6 (n=25)	455.0 (n=15)	461.2 (n=13)	445.2 (n=173) <b>RDU Mean 445.7</b>
Junior	430.2 (n=110)	432.0 (n=92)	434.1 (n=44)	458.0 (n=68)	459.0 (n=60)	446.8 (n=408)
Senior	430.0 (n=58)	433.0 (n=44)	439.1 (n=30)	458.0 (n=52)	463.4 (n=66)	452.2 (n=197) <b>RDU Mean 449.7</b>
<b>Gender</b>						
Male	430.5 (n=68)	433.3 (n=46)	430.2 (n=25)	458.0 (n=110)	460.8 (n=120)	447.7 (n=406)
Female	429.0 (n=145)	431.7 (n=117)	434.2 (n=75)	458.0 (n=24)	465.4 (n=18)	447.0 (n=406)
<b>Ethnicity</b>						
African American	420.3 (n=35)	419.8 (n=29)	426.5 (n=26)	440.0 (n=12)	450.1 (n=14)	434.1 (n=97)
Asian/Pacific Am	--	--	--	449.0 (n=10)	451.9 (n=11)	437.5 (n=11)
White	430.8 (n=177)	434.4 (n=132)	436.0 (n=73)	462.0 (n=106)	463.5 (n=111)	449.7 (n=687)
<b>Transfer Status</b>						
Not A Transfer	430.2 (n=79)	433.9 (n=60)	435.1 (n=44)	462.0 (n=76)	467.2 (n=57)	452.2 (n=348)
1-15 hours trans.	428.4 (n=14)	---	432.5 (n=10)	--	462.0 (n=14)	449.2 (n=51)
16-30 hours trans.	432.8 (n=24)	425.3 (n=11)	431.2 (n=13)	--	460.6 (n=11)	440.8 (n=62)
30 or more trans.	427.9 (n=96)	432.3 (n=87)	432.4 (n=34)	451.0 (n=45)	455.3 (n=57)	443.8 (n=358)
<b>Completion of General Ed Requirements</b>						
None completed	--	--	--	--	--	440.0 (n=11)
50% completed	425.1 (n=29)	422.1 (n=17)	427.2 (n=14)	455.0 (n=16)	447.8 (n=19)	441.4 (n=165)
75 % completed	425.8 (n=85)	429.1 (n=73)	426.7 (n=39)	458.0 (n=51)	463.0 (n=62)	447.7 (n=347)
Completed	433.6 (n=89)	438.8 (n=66)	444.3 (n=37)	458.0 (n=62)	464.3 (n=53)	452.7 (n=242)
<b>TOTAL GROUP MEAN SCORE</b>	<b>429.3</b>	<b>432.1</b>	<b>433.4</b>	<b>458.0</b>	<b>461.3</b>	<b>447.4</b>

Note: Because of reliability concerns when groups are very small, scores are not reported when fewer than ten students marked a response choice.

**Figure 4. Mean Scores by Academic Major - Fall 1999 and Fall 2000**

	<b>Fall 99</b>	<b>Fall 00</b>
<b>ACADEMIC MAJOR</b>	<b>MEAN</b>	<b>MEAN</b>
Computer & Info. Science	459	447.6 (n=19)
Engineering & Eng. Tech.	458	460.8 (n=171)
Allied Health/Nursing	--	441.5 (n=12)
Biological Sciences	--	449.5 (n=46)
Business	--	439.1 (n=63)
Education	426.6	445.0 (n=171)
English & Humanities	--	447.3 (n=13)
Fine & Applied Arts	--	447.0 (n=12)
Social Sciences	--	440.9 (n=49)
Other Majors	--	446.6 (n=185)

The following table represents the Academic Area Sub-Scores and Skills Dimension Sub-Scores for Mississippi State University and the comparisons with Research/Doctorate Universities and All Participants in the Academic Profile.

**Figure 5. Academic Area Subscores and Skills Dimension Subscores - Fall 2000 - MSU Core - Comparisons with Research/Doctoral Universities and All Academic Profile Participants**

<b>ACADEMIC AREA SUBSCORES</b>	<b>Mississippi State University Mean Scores n=842</b>	<b>Research/Doctorate Universities Mean Scores n=17,540</b>	<b>All Academic Profile Participants n=86,933</b>
Humanities	115.2	117.5	116.3
Social Sciences	114.5	116.3	115.4
Natural Sciences	117.4	118.7	117.8
<b>SKILLS DIMENSION SUB-SCORES</b>			
College Level Reading	118.7	121.0	120.2
College Level Writing	116.5	118.0	116.9
Critical Thinking	112.0	113.7	112.7
Using Mathematical Data	115.8	117.3	115.4
<b>TOTAL SCORE</b>	<b>447.4</b>	<b>454.6</b>	<b>449.7</b>

## COMPARISONS WITH OTHER UNIVERSITIES

Each Academic Profile Exam score report comes with a Comparative Data Guide that contains a variety of mean scores for other U.S. universities who administered the exam between 1995 and 1999. To facilitate comparison, ETS combines the standard Carnegie Classifications to produce five reference groups; the group applicable to MSU is “Research/Doctorate Universities” (a combination of “Research I and II” and “Doctorate Granting I and II” - here abbreviated RDU). The following table indicates the fourteen universities that comprise the RDU reference group.

**Figure 6. Research / Doctoral Universities - Comparisons**

<b>RESEARCH/DOCTORATE UNIVERSITY</b>	<b>CLASS LEVEL TESTED</b>
Auburn University, Montgomery, AL	Upperclassmen only
Michigan Technological University, MI	Upperclassmen only
Old Dominion University, VA	All Levels
University of Akron, OH	Freshmen only
University of Arizona, AZ	Freshmen only
University of Louisville, KY	All levels
University of Mississippi, MS	Upperclassmen and sophomores
University of Missouri, Kansas City, MO	Upperclassmen and sophomores
University of Missouri - Rolla, MO	Upperclassmen and sophomores
University of Missouri - St. Louis, MO	All levels
University of South Dakota, DS	Upperclassmen and sophomores
University of South Florida, FL	Upperclassmen only
University of Tennessee-Knoxville, TN	Upperclassmen only
University of Texas-Arlington, TX	Upperclassmen only