

2007-08 *MEASURE OF ACADEMIC PROFICIENCY AND PROGRESS (MAPP) GENERAL EDUCATION ASSESSMENT*
A RESEARCH BRIEF

Research Briefs

The dissemination of relevant information is a critical component of the performance improvement process. Research briefs are one mechanism used by St. Petersburg College (SPC) for this purpose. Research Briefs are short publications prepared by the Department of Institutional Research and Effectiveness (IRE) that are intended to provide relevant important information regarding a variety of College-related topics. These topics include, but are not limited to, student achievement, state accountability measures, institutional survey results, student enrollment, and faculty/adjunct compensation.

Introduction

This brief summarizes the results of the *Measure of Academic Proficiency and Progress (MAPP)* assessment. The MAPP integrates general education skills by assessing four core skill areas: critical thinking, reading, writing and mathematics. The MAPP test is statistically equated to the former Academic Profile assessment, so that prior Academic Profile scores may be used to conduct longitudinal or cross-sectional studies. It is intended for use by colleges and universities in assessing the outcomes of their general education programs to improve the quality of instruction and learning. The test focuses on the academic skills developed through general education courses rather than on the knowledge acquired about the subjects taught in these courses. It does this by testing college-level reading, writing, critical thinking, and mathematics in the context of humanities, social sciences, and natural sciences.

Before students take the MAPP, it is assumed that they have completed most or all of the general education, or core curriculum, requirements at their institution. The questions have a broad range of difficulty; some are quite easy, others are more difficult. It is an objective test using a multiple-choice format.

The MAPP yields eight norm-referenced scores on college-level skills:

- Humanities,
- Writing,
- Social Sciences,
- Critical Thinking,
- Natural Sciences,
- Mathematics,
- Reading, and
- Total Score.

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

The MAPP also yields criterion-referenced proficiency levels for three skill areas:

- Reading/Critical Thinking,
- Writing, and
- Mathematics.

Criterion-referenced scores have meaning in and of themselves. Three proficiency levels are reported for each skill area. Such scores are defined in terms of an established level of performance or proficiency, and a student is proficient, marginal, or not proficient in each criterion or proficiency level.

In 2007 as part of an assessment of general education competencies, SPC began administering the MAPP assessment to students who had completed all or the majority of their general education requirements. Students were placed in one of three unique cohorts based on the degree they were pursuing. The three cohorts established were the Associate in Science (AS) cohort, the Associate in Arts (AA) cohort, and the Bachelor of Science/Bachelor of Applied Science (BS/BAS) cohort.

Results

Beginning in April 2007, the proctored version of the MAPP was administered at SPC testing centers on each campus. Since October 2007 when the unproctored MAPP became available, students have been able to take the test from their home computers, or any other location of their choice. Testing was conducted during the Spring, Summer, and Fall terms in 2007, and during the Spring 2008 term. A total of 152 students were tested including 52 AS students, 50 AA students, and 50 BS/BAS students. A summary of results for each cohort and skill category is presented in Table 1.

The mean scores for BS/BAS students exceeded the mean scores obtained by AS and AA students in every skill category as depicted in Table 1. In addition, AA student mean scores exceeded those of AS students in every skill category with the exception of Writing.

Table 1
SPC MAPP Scores by Cohort

Skill Category	Possible Range	AS Students Mean Score (N=52)	AA Students Mean Score (N=50)	BS/BAS Students Mean Score (N=50)
Total Score	400-500	442.50	446.98	449.70
Skills Sub Scores:				
Critical Thinking	100-130	111.19	112.78	112.92
Reading	100-130	118.75	119.26	121.28
Writing	100-130	113.88	113.86	114.38
Mathematics	100-130	112.48	114.18	114.38
Context-Based Sub Scores:				
Humanities	100-130	115.96	116.20	117.94
Social Sciences	100-130	114.08	114.80	115.62
Natural Sciences	100-130	114.63	116.10	116.34

Source: ETS MAPP Summary of Scaled Scores

A MAPP comparison summary of SPC AA and AS student scores to Sophomore student scores from 71 Associate Colleges nationwide for each skill category is presented in Table 2. As depicted, SPC’s AA/AS student scores exceeded Sophomore student scores at Associate Colleges in every skill category.

Table 2
MAPP Comparison Summary, SPC AA/AS Student Scores to Sophomore Student Scores at Associate Colleges

Skill Category	Possible Range	SPC AA/AS Mean Score students (N=102)	Sophomores Associate Colleges (71) Mean Score (N=22,770)	Difference
Total Score	400-500	444.70	440.67	+4.03*
Skills Sub Scores:				
Critical Thinking	100-130	111.97	110.34	+1.63*
Reading	100-130	119.00	117.55	+1.45*
Writing	100-130	113.87	113.58	+0.29
Mathematics	100-130	113.31	112.47	+0.84
Context-Based Sub Scores:				
Humanities	100-130	116.08	114.04	+2.04*
Social Sciences	100-130	114.43	112.75	+1.68*
Natural Sciences	100-130	115.35	114.32	+1.03

Source: ETS MAPP Summary of Scaled Scores, ETS Comparative data
*Difference statistically significant at alpha = 0.05.

Figure 1 provides a visual MAPP comparison summary of SPC AA and AS student scores to Sophomore student scores from 71 Associate Colleges nationwide in each skill category.

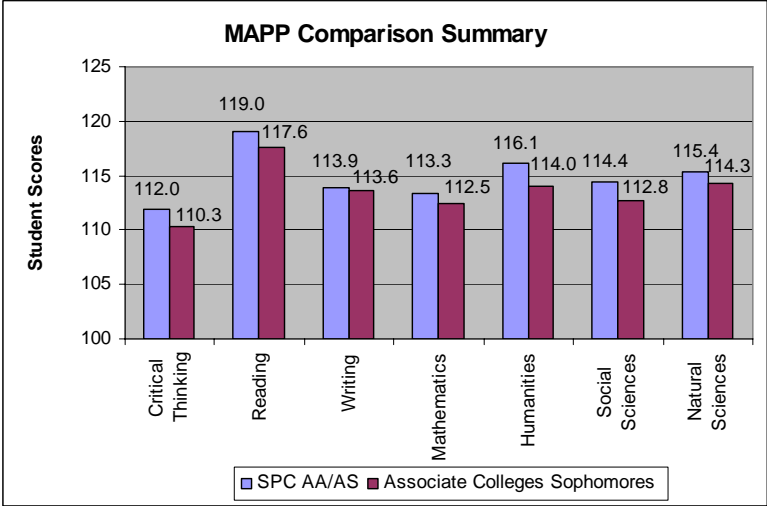


Figure 1: MAPP Comparison Summary

A MAPP comparison summary of SPC BS/BAS student scores to Senior student scores from 36 Associate Colleges nationwide for each skill category is presented in Table 3. As depicted, SPC’s BS/BAS student scores exceeded the senior student scores from Associate Colleges in every skill category.

Table 3
MAPP Comparison Summary, SPC BS/BAS Student Scores to Senior Student Scores from Associate Colleges

Skill Category	Possible Range	SPC BS/BAS Mean Score (N=50)	Seniors Associate Colleges (36) Mean Score (N=4510)	Difference
Total Score	400-500	449.70	445.18	+4.52
Skills Sub Scores:				
Critical Thinking	100-130	112.92	111.72	+1.20
Reading	100-130	121.28	119.09	+2.19*
Writing	100-130	114.38	114.29	+0.09
Mathematics	100-130	114.38	113.46	+0.92
Context-Based Sub Scores:				
Humanities	100-130	117.94	115.30	+2.64*
Social Sciences	100-130	115.62	114.05	+1.57
Natural Sciences	100-130	116.34	115.57	+0.77

Source: ETS MAPP Summary of Scaled Scores, ETS Comparative data
*Difference statistically significant at alpha = 0.05.

Figure 2 provides a visual MAPP comparison summary of SPC BS/BAS student scores to Senior student scores from 36 Associate Colleges nationwide in each skill category.

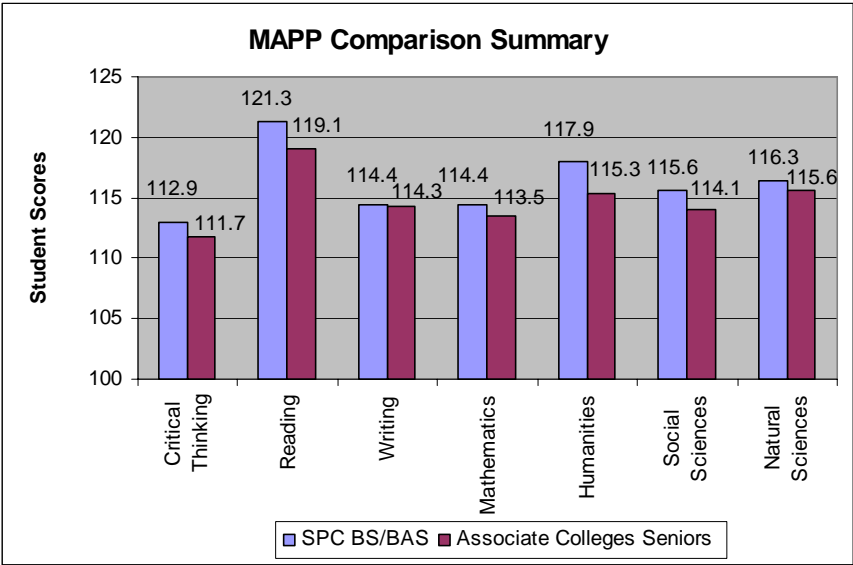


Figure 2: MAPP Comparison Summary

A comparison summary of 2007-08 MAPP scores for SPC AA and AS students to 2005-06 Academic Profile scores for SPC Sophomores for each skill category is presented in Table 4. As depicted, SPC’s AA/AS student MAPP scores exceeded SPC’s Sophomore Academic Profile scores in four skill categories including Reading, Humanities, Social Sciences, and Natural Sciences.

Table 4
Comparison Summary, 2007-08 MAPP scores to 2005-06 Academic Profile scores

Skill Category	Possible Range	2007-08 MAPP Mean Score SPC AA/AS students (N=102)	2005-06 Acad. Profile Mean Score SPC Sophomores (N=43)	Difference
Total Score	400-500	444.70	445.60	-0.90
Skills Sub Scores:				
Critical Thinking	100-130	111.97	112.00	-0.03
Reading	100-130	119.00	118.84	+0.16
Writing	100-130	113.87	114.44	-0.57
Mathematics	100-130	113.31	113.58	-0.27
Context-Based Sub Scores:				
Humanities	100-130	116.08	115.81	+0.27
Social Sciences	100-130	114.43	113.88	+0.55
Natural Sciences	100-130	115.35	115.15	+0.20

Sources: ETS MAPP Summary of Scaled Scores, ETS Academic Profile Results

A comparison summary of 2007-08 MAPP scores for SPC BS/BAS students to 2005-06 Academic Profile scores for SPC Seniors for each skill category is presented in Table 5. SPC’s BS/BAS student MAPP scores exceeded SPC’s Senior Academic Profile scores in all skill categories with the exception of Writing.

Table 5
Comparison Summary, 2007-08 MAPP scores to 2005-06 Academic Profile scores

Skill Category	Possible Range	2007-08 MAPP Mean Score SPC BS/BAS students (N=50)	2005-06 Acad. Profile Mean Score SPC Seniors (N=74)	Difference
Total Score	400-500	449.70	444.93	+4.77
Skills Sub Scores:				
Critical Thinking	100-130	112.92	110.53	+2.39
Reading	100-130	121.28	119.42	+1.86
Writing	100-130	114.38	115.24	-0.86
Mathematics	100-130	114.38	112.74	+1.64
Context-Based Sub Scores:				
Humanities	100-130	117.94	114.16	+3.78
Social Sciences	100-130	115.62	113.68	+1.94
Natural Sciences	100-130	116.34	115.70	+0.64

Sources: ETS MAPP Summary of Scaled Scores, ETS Academic Profile Results

Data are also provided on criterion-referenced proficiency levels for the three skill areas:

- Reading/Critical Thinking (Level 1, Level 2, Critical Thinking),
- Writing (Level 1, Level 2, Level 3), and
- Mathematics (Level 1, Level 2, Level 3).

A MAPP summary of Proficiency Classifications comparing SPC AA and AS students to Sophomores at 71 Associate Colleges in each skill dimension is presented in Table 6. ETS defines each proficiency level using a set of specific competencies required of students. The percentages of students classified as proficient, marginal and not proficient are displayed for each of the nine skill dimensions. Proportionally, SPC’s AA/AS students identified as proficient in Reading levels 1, 2, and Critical Thinking exceeded the percentage of Sophomores in Associate Colleges classified as proficient by a margin of 2%, 13%, and 4%, respectively. Proficiency levels in Writing and Math skills showed minimal variance among the two groups with 58% of SPC AA/AS students classified as proficient in Writing level 1, and 51% of SPC AA/AS students classified as proficient in Math level 1.

Table 6
MAPP Comparison Summary of Proficiency Classifications

Skill Dimension	SPC AA/AS Students (N=102)			Sophomores Associate Colleges (N=22, 770)		
	Proficient	Marginal	Not Proficient	Proficient	Marginal	Not Proficient
Reading, Level 1	64%	19%	18%	62%	22%	16%
Reading, Level 2	42%	16%	42%	29%	22%	49%
Critical Thinking	7%	19%	75%	3%	12%	85%
Writing, Level 1	58%	28%	14%	61%	27%	12%
Writing, Level 2	15%	33%	52%	14%	37%	49%
Writing, Level 3	6%	19%	75%	6%	24%	71%
Math, Level 1	51%	23%	26%	47%	31%	22%
Math, Level 2	20%	33%	47%	20%	28%	52%
Math, Level 3	6%	10%	84%	4%	12%	84%

Source: ETS Summary of Proficiency Classifications for SPC AA/AS students, ETS Summary of Proficiency Classifications for Sophomore Students at Associate Colleges

A MAPP comparison summary of Proficiency Classifications comparing SPC BS/BAS students to Senior students in 36 Associate Colleges in each skill dimension is presented in Table 7. ETS defines each proficiency level using a set of specific competencies required of students. The percentages of students classified as proficient, marginal and not proficient are displayed for each of the nine skill dimensions. Proportionally, SPC’s BS/BAS students identified as proficient in Reading levels 1, 2, and Critical Thinking exceeded the percentage of Seniors in Associate Colleges classified as proficient by a margin of 11%, 11%, and 7%, respectively. Proficiency levels for Writing skills showed minimal variance among the two groups with 62% of BS/BAS students identified as proficient in Writing level 1. SPC’s BS/BAS students identified as proficient in Math levels 1 and 2, exceeded the percentage of Seniors in Associate Colleges classified as proficient by a margin of 3% and 9%, respectively. Conversely, the percentage of SPC’s BS/BAS students identified as proficient in Math level 3 was slightly lower than that of Seniors in Associate Colleges classified as proficient by a margin of 4%.

Table 7
MAPP Comparison Summary of Proficiency Classifications

Skill Dimension	SPC BS/BAS Students (N=50)			Seniors Associate Colleges (N=4,510)		
	Proficient	Marginal	Not Proficient	Proficient	Marginal	Not Proficient
Reading, Level 1	80%	8%	12%	69%	18%	13%
Reading, Level 2	48%	24%	28%	37%	22%	41%
Critical Thinking	12%	20%	68%	5%	17%	78%
Writing, Level 1	62%	34%	4%	65%	23%	12%
Writing, Level 2	22%	36%	42%	17%	39%	44%
Writing, Level 3	6%	16%	78%	7%	27%	66%
Math, Level 1	56%	28%	16%	53%	28%	19%
Math, Level 2	36%	20%	44%	27%	27%	46%
Math, Level 3	4%	16%	80%	8%	15%	76%

Source: ETS Summary of Proficiency Classifications for SPC BS/BAS students, ETS Summary of Proficiency Classifications for Senior Students at Associate Colleges

Summary

SPC’s performance on the 2007-08 administration of the MAPP assessment exceeded the performance of students at Associate Colleges nationwide in every skill category. SPC’s AA/AS student MAPP scores exceeded SPC’s Sophomore Academic Profile scores in four of the seven skill categories, and SPC’s BS/BAS student MAPP scores exceeded SPC’s Senior Academic Profile scores in all skill categories with the exception of Writing. Finally, SPC students identified as proficient in Reading levels 1, 2, and Critical Thinking exceeded the percentage of students classified as

proficient in Associate Colleges; while proficiency levels in Writing and Math skills showed minimal variance between SPC students and students in Associate Colleges.