

# CAAP Report Spring 2012-13

## Introduction

The Collegiate Assessment of Academic Proficiency (CAAP) Test was given early spring term 2012-13 to a representative sample of junior students from all AUB faculties. With the help of the Registrar's Office and the Banner system, suitable times for administration were scheduled for the sample. With continuous reminders and urging, only 135 of the selected 502 (27%) junior students sat for the CAAP. Examining the sample representativeness (Table 1), reveals that it is quite proportional to original sample with over representation of OSB and under representation of FEA, unlike previous years when we had higher interest from FEA students. Each student who took the test was given the Critical Thinking (CT) component of the test and was allowed a test of his/her choice from Mathematics Reasoning (MR), Science Reasoning (SCR), Reading (R), and Writing Skills (W).

The tests were administered following CAAP standardized administration procedures. Completed forms were sent to ACT for scoring and a month later reports were received. There was an institutional report, in addition to individual student reports. Each student received a report detailing his/her performance on tests that were taken, giving score and percentile rank compared to AUB students and also compared to American national norms of comparable 4-year institutions. In addition, students who got  $\geq 50^{\text{th}}$  percentile received a Certificate of Achievement.

**Table 1. Representativeness of CAAP Sample Spring 2012-13**

Total Population			CAAP Sample			Took CAAP		
College	%	#	College	%	#	College	%	#
AG	8	130	AG	9	46	AG	10	13
AS	35	560	AS	34	173	AS	37	50
EA	30	474	EA	34	171	EA	23	31
HS	4	58	HS	1	7	HS	3.5	5
NU	2	36	NU	2	12	NU	1.5	2
SB	20	321	SB	19	93	SB	25	34
<b>Total</b>	<b>100</b>	<b>1579</b>	<b>Total</b>	<b>99</b>	<b>502</b>	<b>Total</b>	<b>100</b>	<b>135</b>

## Results

Results of the various CAAP tests for the whole sample are reported in Table 2. Comparison with previous years and with American national norms is also provided. As compared to norms, AUB students' performance is higher in CT, SCR, and MR as in previous years. However, this year's performance as compared with last year went down in almost all subjects, with exception of Reading where it went up. Highest drop was in CT and it is lowest in ten years.

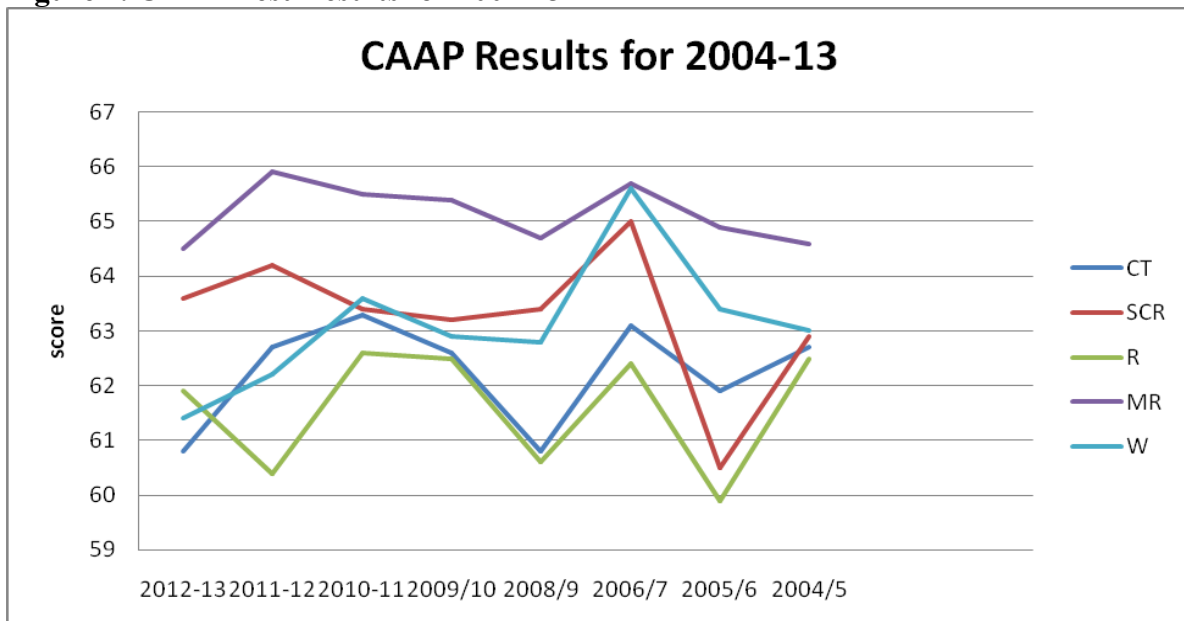
Figure 1 also provides a figural representation of the results. It is clear from the figure that over the years, AUB performance on MR has been highest followed by SCR. CT has

been improving, except for this year, but is still higher than national average. Performance on Reading has been fluctuating between average and below average, while Writing has shown an improvement then started to stabilize but still below norms.

**Table2. Comparison of CAAP Results with National Norms and with 2003-13**

Year	N	CT	SCR	R	MR	W
2012-13	135	60.8	63.6	61.9	64.5	61.4
2011-12	185	62.7	64.2	60.4	65.9	62.2
2010-11	250	63.3	63.4	62.6	65.5	63.6
2009/10	360	62.6	63.2	62.5	65.4	62.9
2008/9	421	60.8	63.4	60.6	64.7	62.8
2007/8	235	63.1	65.0	62.4	65.7	65.6
2005/6	245	61.9	60.5	59.9	64.9	63.4
2004/5	403	62.7	62.9	62.5	64.6	63.0
2003/4	736	62.3	61.2	59.7	64.2	60.0
Norms		59.9	61.1	61.7	58.5	63.1

**Figure 1. CAAP Test Results for 2004-13**



These findings need to be checked against candidates' GPA to check if this group is academically similar or weaker than that of previous years. Examining GPA data (Tables 3 and 4) reveals that this year's sample has a lower GPA than last year as 52% of them reported a GPA of  $\geq 3.01$ , vs. 63% last year, similar to previous years (2011, 54%). This is also confirmed when we examine their actual GPA as we find that average of whole sample required to take CAAP this year is **79.2** (same as last year), while average of those who took it is **79** (lower than last year of **81.5**) and those who did not take it is 80, so sample is of lower ability than last year. Differences were noted on CAAP test scores by GPA. In general the higher the GPA the higher the CAAP test score especially for CT, and MR.

**Table 3. Breakdown of CAAP Results by GPA / 2013**

GPA	N	%	W		MR		R		CT		SR	
			Freq.	Avg.	Freq.	Avg.	Freq.	Avg.	Freq.	Avg.	Freq.	Avg.
< 2.00	1	1	0		1		0		1		0	
2.0-2.50	21	15.5	5	60	10	64	2		21	60	3	
2.51-3.00	34	25	7	60	16	64	2		34	59	8	65
3.01-3.50	43	32	4		30	65	2		43	61	7	63
$\geq 3.51$	27	20	6	67	13	66	2		27	65	6	69
No Response	9	6.5	4		2		3		9	58	6	60

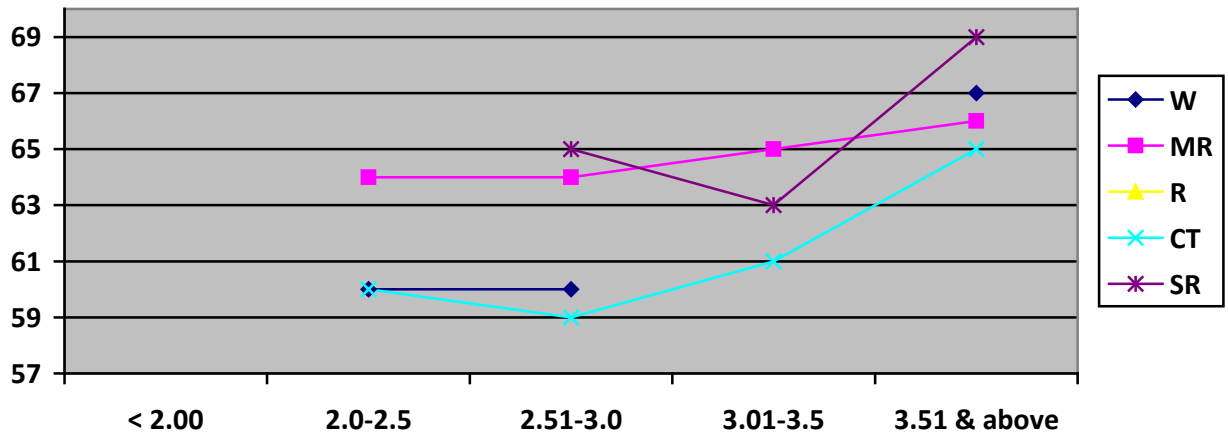
**Table 4. Breakdown of CAAP Results by GPA 2012 and 2013**

GPA	%		CT		SC		R		MR		W	
	13	12	13	12	13	12	13	12	13	12	13	12
< 2.00	1	1										
2.0-2.50	15.5	11	60	61					64	64	60	
2.51-3.00	25	20.5	59	61	65			<b>60</b>	64	64	60	59
3.01-3.50	32	35	61	63	63	64			65	65		64
$\geq 3.51$	20	27.5	65	64	69	66			66	69	67	
No response	6.5	5	58	61	60					64		

Results were further examined by comparing CAAP scores for students with similar GPA in both years. Table 4 reports breakdown of scores by GPA for both years. Performance on CT was lower for this year sample for the 2.5-3.5 GPA group though their performance on MR is similar to last year. Figure 2 highlights differences graphically.

Performance on CAAP tests was also compared by gender, major and whether English was a first language or not. With respect to gender, examining Table 5 reveals that performance was slightly better for males on all scales, except for W where females were slightly better though sample size is small. Gender results are also reported graphically in Figure 3.

**Figure 2. CAAP Score Differences by GPA**

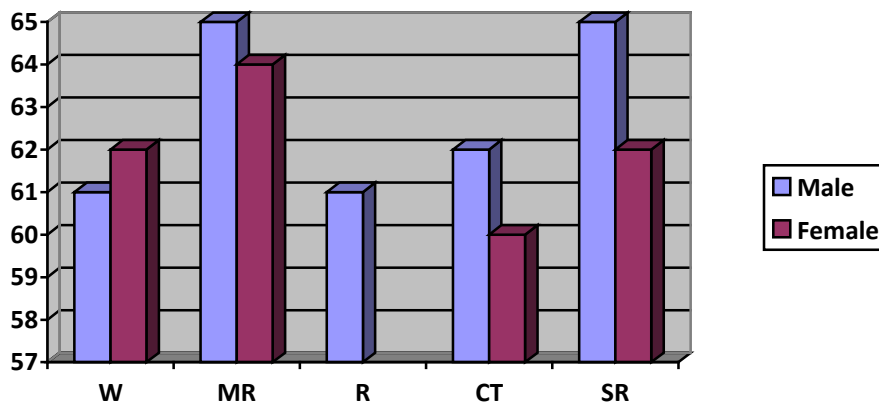


**Table 5. CAAP Results by Gender**

Gender	N	W	MR	R	CT	SR
Male	59	61	65	61	62	65
		N=6	N=36	N=7	N=59	N=16
Female	76	62	64		60	62
		N=20	N=36	N=4	N=76	N=14

As to age differences on the CAAP tests, all who took the test were juniors and there should not have been large differences in age level nor in results due to age.

**Figure 3. CAAP Results by Gender**



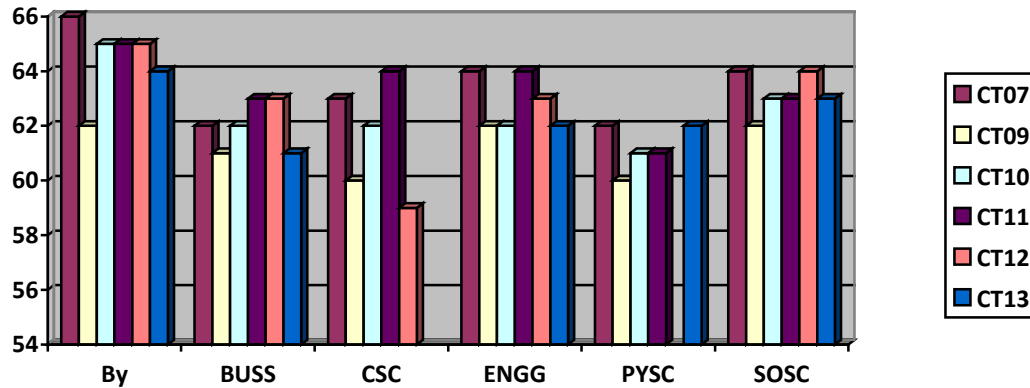
With respect to differences resulting from English being a first language or not, there were slight differences as noted in Table 6 with group whose native language is not English scoring slightly lower on MR, W, and R, similar on CT and slightly better on SCR. Cannot identify significance of these results for lack of sufficient data.

**Table 6. CAAP Results by Native Language**

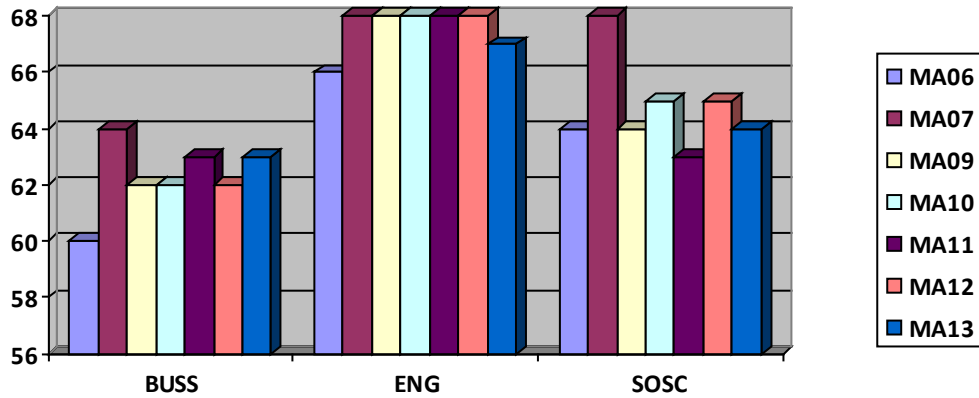
English	N	W	MR	R	CT	SR
<b>First Language</b>	39	62	65	64	61	63
		N=12	N=17	N=5	N=39	N=8
<b>Not First Language</b>	95	61	64	60	61	64
		N=14	N=55	N=6	N=95	N=21

Differences by major were also noted, students from Engineering got highest score in MR. Biological sciences got highest scores on SCR and CT. Social Sciences got highest in W, 2<sup>nd</sup> highest in MR AND CT. Table 7 presents CAAP test results by major, while figures 4-5 present differences in CT and MR by major and in comparison with 2007-12. In CT, all majors show a drop this year with exception of physical sciences with biological sciences leading. As for MR, most of the majors maintained their positions, with engineering showing highest performance though slightly lower than previous years.

**Figure 4 CT Scores by Major, Comparison with 2007-2012**



**Figure 5 Math Reasoning by Major, Comparison with 2006-12**



Results also revealed important information for Writing, Mathematics, and Reading in terms of sub scores. Table 8 provides sub scores for each of these tests, in addition to a comparison with national norms and with 2005-12. In Writing, AUB students consistently do better on usage/mechanics than on rhetorical writing and they are equal to the norms on this skill. In rhetorical writing they are also slightly lower than last year and lower than national norms and need to work on this. With respect to Reading, they performed lower on arts/literature than social science readings, with social science readings equal to the national norms, while former lower. With respect to math; they do very well on both sections and much higher than the norms.

**Table 7. Results by Major**

Major	N	W	MR	R	CT	SR
Agriculture	3					
Biol. Sc.	16				64	68
Business	32	63	63		61	
Marketing	1					
Computer & Info Sciences	3					
Education	4					
Engineering	29		67		62	
Health Professions	3					
Home Economics	11				59	61
Math	1					
Physical sc.	7				62	
Social sc.	12	64	64		63	
No response	6				55	

**Table 8. Writing, Reading, and Math Sub score Results, 2005 - 13**

Test	N	2013	2012	2011	2010	2009	2007	2006	2005	Norms
Writing: Usage/Mechanics	26	16.6	16.5	17.3	17.2	17.1	18.1	16.8	17.2	16.6
Writing: Rhetorical	26	15.2	15.9	16.4	15.8	16.0	17.6	16.6	16.0	16.6
Reading: Arts/literature	11	14.8	15.4	15.8	15.6	15.6	16.2	14.3	15.5	15.2
Reading: Social sciences	11	16.5	14.7	16.6	16.7	15.0	15.9	15.5	16.5	16.2
Math: Basic algebra	72	18.4	17.9	18.3	18.2	18.0	18.3	18.0	17.6	15.5
Math: College algebra	72	18.0	21.2	21.0	20.4	18.8	19.2	20.2	20.4	15.4

### Certificates of Achievement

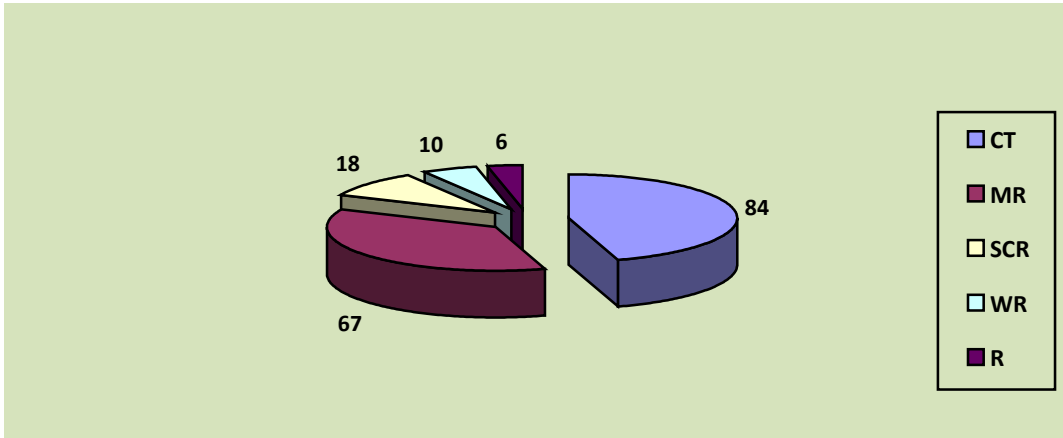
A good number of students obtained Certificates of Achievements (84%) indicating that they achieved  $\geq 50^{\text{th}}$  %ile of the normative sample. Table 9 provides the number and percentage of certificates obtained in different subjects and in comparison with 2005-12. Percentages in 2013 were lower than last year in CT, MR, and SCR but higher in R. this could be because of the distribution of the group with lower percentage of FEA. Figure 5 provides the figures graphically by subject, while Figure 6 shows development over years. Examining trend over years shows that Certificates in MR and SCR have always been the highest, and that CT and R have been steadily improving, except for R this year.

Some students obtained certificates in one subject, others in two. Table 10 details this information in comparison with 2007-12. The percentage of students who obtained two certificates (62% and 53% of total number of students) is lower than last year but similar to average over the last four years (58%, 51% respectively). 21 students (16%) did not obtain any certificate. The highest percentage of certificates was obtained, as usual, in Math Reasoning followed by CT then Science Reasoning. Figure 7 provides graphic distribution of certificates

**Table 9. Distribution of Certificates of Achievement by Subject**

Subject	N	%Certif. 13	%Certif. 12	%Certif. 11	%Certif. 10	%Certif. 09	%Certif. 07	%Certif. 06	%Certif. 05
CT	84	62	73	61	55	38	52	49	55
MR	67	93	97	98	97	90	100	94	81
SR	18	60	69	80	67	62	78	45	72
WS	10	39	39	50	38	47	69	55	41
R	6	55	50	63	52	32	57	33	52

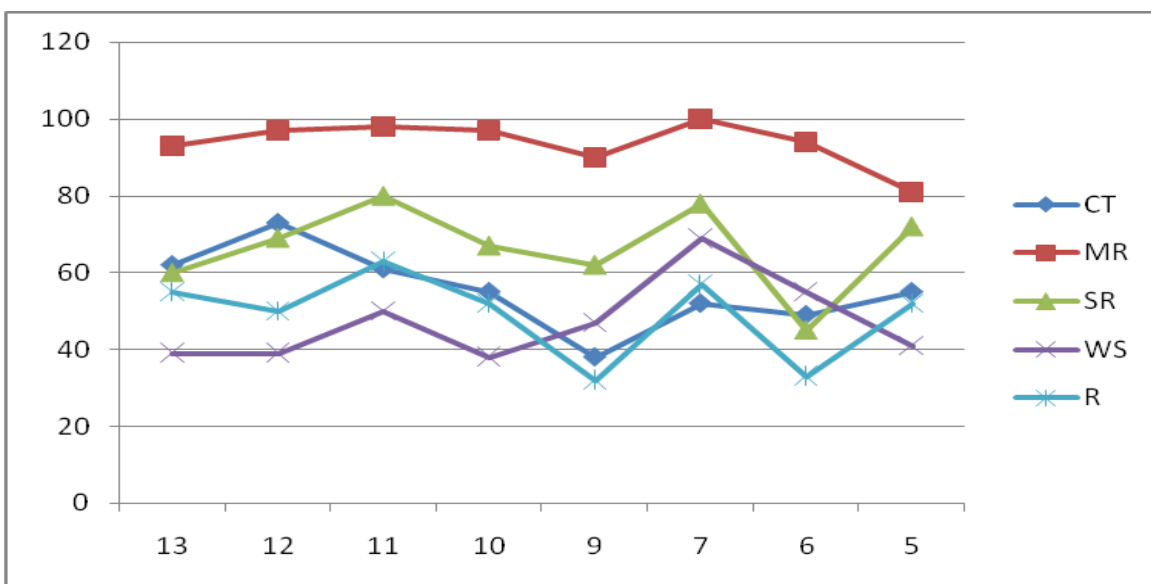
**Figure 5. Number of Certificates by Test**



**Table 10. Frequency of Number of Distributions, Comparison with 2009 -13**

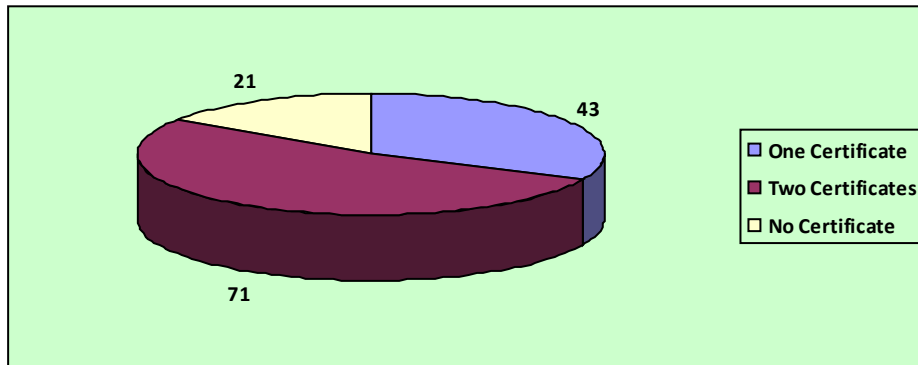
	N (13)	% Cert 13	% Cert 12	% Cert 11	% Cert 10	% Cert 09	% Total 13	% Total 12	% Total 11	% Total 10	% Total 09
# who got certificates in 1 subject	43	38	30	38	47	52	32	27	34	44	38
# who got certificates in 2 subjects	71	62	70	62	53	48	53	63	56	49	35
<b>Total</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>85</b>	<b>90</b>	<b>90</b>	<b>93</b>	<b>73</b>

**Figure 6. Distribution of Certificates of Achievement by Subject**





**Figure 7. Distribution of Certificates**



**Conclusion**

Administering the CAAP is very useful as it provides AUB with an indicator of the level of its students in basic general education skills and competencies that include thinking critically, reasoning and written communication. The information provides us with information regarding skills needing improvement and the changes over time. It is a very important and serious outcome that needs to be maintained and even encouraged.

Although we had a lower participation rate this year, yet sample was somehow representative. We still have problems with students taking the CAAP. We need to work more on this side by finding ways to motivate all juniors to take the tests and to put their best effort while doing so. This year's results showed slightly lower performance on nearly all and this could be attributed to sample that took it as it underrepresented FEA and were of lower academic ability as revealed by GPA. We need to keep working on improving writing ability, especially rhetorical writing and on improving reading in social sciences. Performance on math and science reasoning is good, while CT is quite stable.