CAAP Report Spring 2013-14

Introduction

The Collegiate Assessment of Academic Proficiency (CAAP) Test was given early spring term 2013-14 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 197 of the selected 669 (29%) 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 FEA and under representation of OSB and FHS, like 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 ≥50th percentile received a Certificate of Achievement.

Table 1. Representativeness of CAAP Sample Spring 2012-13

Total Population			CAAP Sample			Took CAAP		
Faculty	**Count**	**%**	**Faculty**	**Count**	**%**	**Faculty**	**Count**	**%**
AG	143	**8**	**AG**	50	**7**	**AG**	16	**8**
AS	671	**37**	**AS**	254	**38**	**AS**	75	**38**
EA	589	**32**	**EA**	213	**32**	**EA**	68	**35**
HS	54	**3**	**HS**	12	**2**	**HS**	2	**1**
NU	42	**2**	**NU**	15	**2**	**NU**	6	**3**
SB	327	**18**	**SB**	125	**19**	**SB**	30	**15**
Total	**1826**	**100.0**	**Total**	**669**	**100**	**Total**	**197**	**100**

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 last year's performance, AUB students' performance is higher in on all tests except on Reading which the same as last year was. With respect to norms, it is higher in CT, MR and SCR, however, lower on Writing but similar on Reading.

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

Table 2. Comparison of CAAP Results with National Norms and with 2003-14

Year	N	CT	SCR	R	MR	W
2013-14	197	63	65	61.9	65.8	62.4
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	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
2003/4	736	62.3	61.2	59.7	64.2	60
Norms		**59.8**	**61.1**	**61.6**	**58.6**	**63.1**

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 higher GPA than last year as 64% of them reported a GPA of ≥ 3.01, vs. 52% last year, and this is similar to 2012 with 63%. 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 **79.1** (same as last year), while average of those who took it is **81.3** (higher than last year of 79, but similar to previous year of 81.5) and those who did not take it is 78.2 so sample is of higher ability than last year. Differences were noted on CAAP test scores by GPA. In general the higher the GPA the higher the CAAP test sore especially for CT, and MR.

Figure 1. CAAP Test Results for 2004-14

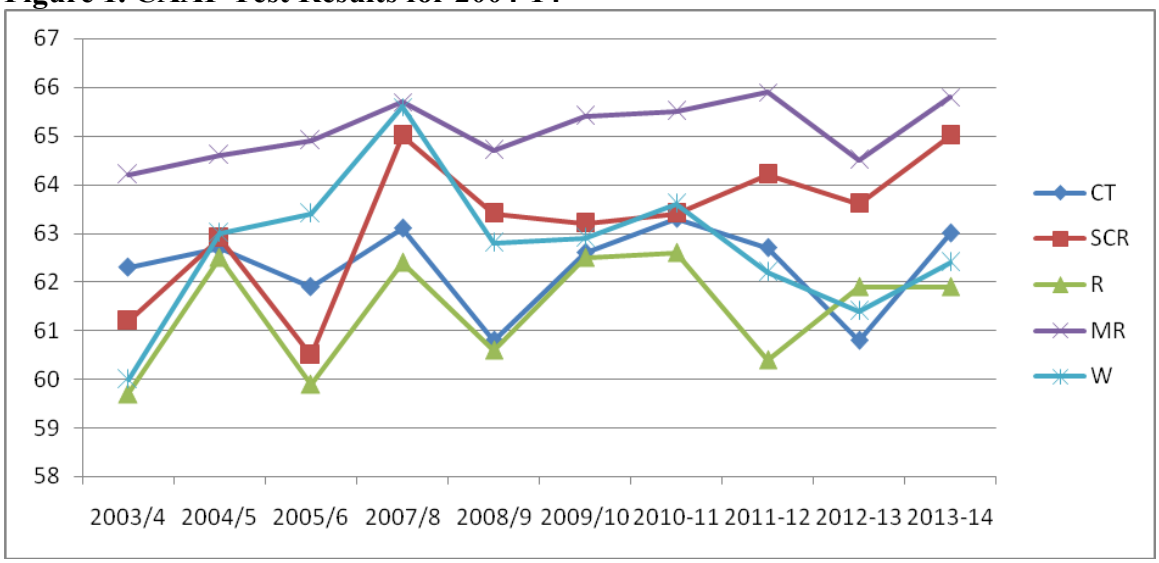


Table 3. Breakdown of CAAP Results by GPA / 2014

GPA	N	%	W		MR		R		CT		SR	
			Freq.	Avg.	Freq.	Avg.	Freq.	Avg.	Freq.	Avg.	Freq.	Avg.
< 2.00	0		0		0		0		0		0	
2.0-2.50	19	10	5	62	8	65	2		19	63	4	
2.51-3.00	47	24	9	61	27	64	1		47	62	9	63
3.01-3.50	73	37	16	63	42	66	4		73	62	10	66
≥ 3.51	53	27	12	63	30	68	3		53	66	8	67
No Response	5	3	0		4		0		5	61	1	

Table 4. Breakdown of CAAP Results by GPA 2012 and 2014

GPA	%	%	%	CT			SC			R			MR			W		
	14	13	12	14	13	12	14	13	12	14	13	12	14	13	12	14	13	12
< 2.00		1	1															
2.0-2.50	10	16	11	63	60	61							65	64	64	62	60	
2.51-3.00	24	25	21	62	59	61	63	65				60	64	64	64	61	60	59
3.01-3.50	37	32	35	62	61	63	66	63	64				66	65	65	63		64
≥ 3.51	27	20	28	66	65	64	67	69	66				68	66	69	63	67	
No Response	3	7	5	61	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 was, in general, higher for this year sample on all tests and quite similar to 2012 group as they are of similar ability level. 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 better for males on all scales. Gender results are also reported graphically in Figure 3.

Figure 2. CAAP Score Differences by GPA

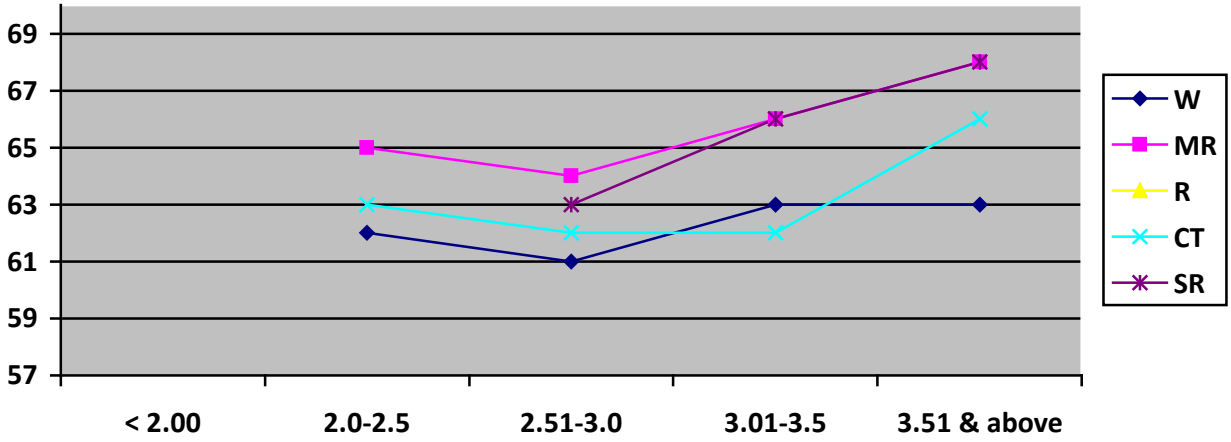
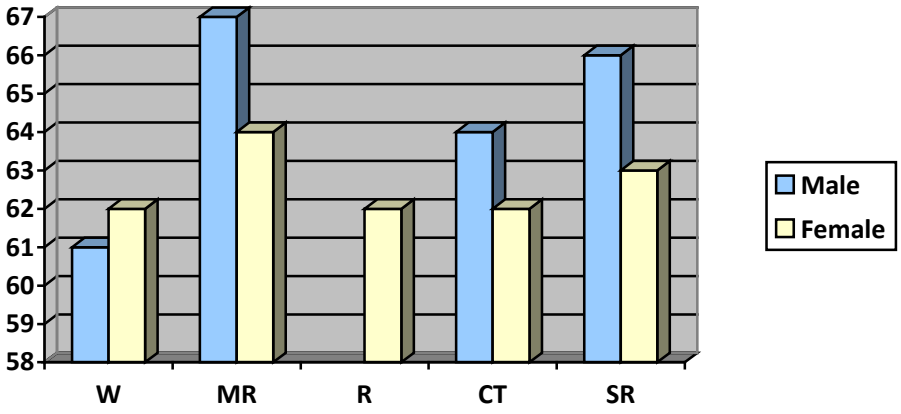


Table 5. CAAP Results by Gender

Gender	N	W	MR	R	CT	SR
Male	106	64	67		64	66
		N=10	N=68	N=2	N=106	N=24
Female	91	62	64	62	62	63
		N=32	N=43	N=8	N=91	N=8

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 no differences as noted in Table 6 on MR and CT. In W, group whose native language is not English scored slightly higher, while in SCR native English speakers scored significantly higher than those whose English language was not first language.

Table 6. CAAP Results by Native Language

English	N	W	MR	R	CT	SR
First Language	55	62 N=10	66 N=31	 N=2	63 N=55	67 N=11
Not First Language	141	63 N=32	66 N=80	62 N=8	63 N=141	64 N=20

Differences by major were also noted; students from Engineering got highest score in MR. Biological sciences got highest scores on SCR and 2nd highest on CT. Social Sciences got highest in W 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 2007-13. In CT, all majors show an improvement this year especially social sciences. As for MR, most of the majors maintained their averages, with engineering showing highest performance followed by biological sciences.

Figure 4 CT Scores by Major, Comparison with 2007-2013

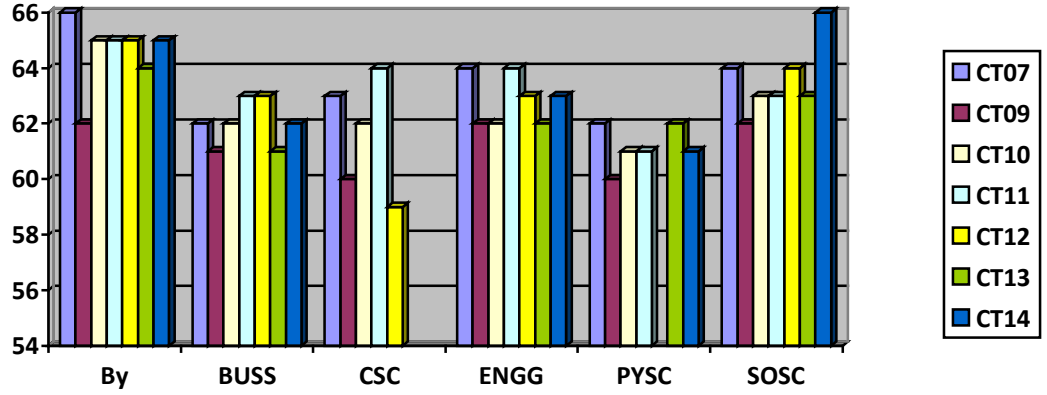
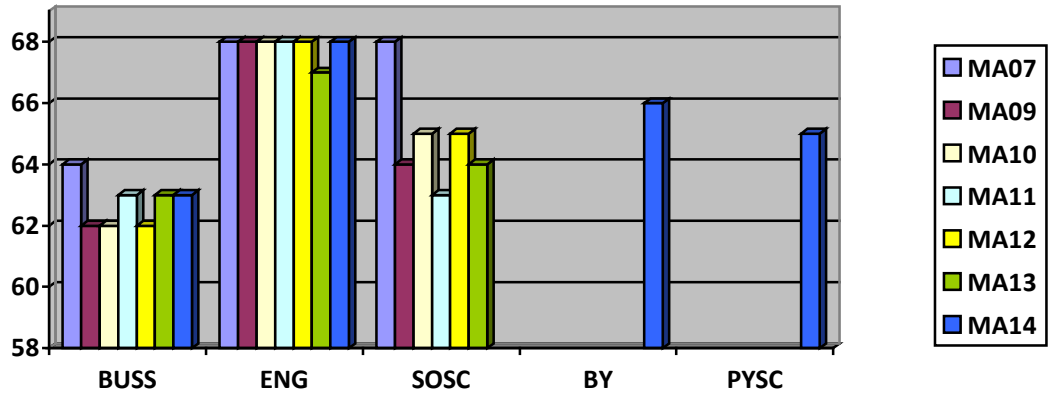


Figure 5 Math Reasoning by Major, Comparison with 2007-13



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 2005-13. 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 similar to last year and lower than national norms and need to work on this. With respect to Reading, they performed better on arts/literature than social science readings and higher than norms, while with social science readings their performance went down from last year and was lower than the norms. 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	8				62	
Architecture	3					
Biological Science	32	65	66		65	67
Business	30	61	63		62	
Marketing	1					
Communications	1					
Education	3					
Engineering	64		68		63	
Fine & Applied Arts	1					
Health Professions	1					
Home Economics	10	61			61	
Letters	1					
Math	1					
Physical science	20		65		61	64
Social science	14	67		63	66	
No response	7				60	

Table 8. Writing, Reading, and Math Sub score Results, 2005 - 14

Test	N	2014	2013	2012	2011	2010	2009	2007	2006	2005
Writing: Usage/Mechanics	42	16.8	16.6	16.5	17.3	17.2	17.1	18.1	16.8	17.2
Writing: Rhetorical	42	15.8	15.2	15.9	16.4	15.8	16	17.6	16.6	16
Reading: Arts/literature	10	16.4	14.8	15.4	15.8	15.6	15.6	16.2	14.3	15.5
Reading: Social sciences	10	15.4	16.5	14.7	16.6	16.7	15	15.9	15.5	16.5
Math: Basic algebra	111	18.6	18.4	17.9	18.3	18.2	18	18.3	18	17.6
Math: College algebra	111	19.1	18	21.2	21	20.4	18.8	19.2	20.2	20.4

Certificates of Achievement

Almost all students obtained Certificates of Achievements (91%) indicating that they achieved ≥50th %ile of the normative sample. Table 9 provides the number and percentage of certificates obtained in different subjects and in comparison with 2005-13. Percentages in 2014 were higher than last year in nearly all subjects. This could be because of the higher ability of the group and higher percentage of FEA students. 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 (SCR has dropped in past two years), and that CT and R have been steadily improving, except for last year's drop.

Some students obtained certificates in one subject, others in two. Table 10 details this information in comparison with 2007-13. The percentage of students who obtained two certificates (69% and 62% of total number of students) is among highest for the past ten years. 18 students (9%) 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	% Certificate								
		14	13	12	11	10	9	7	6	5
CT	147	75	62	73	61	55	38	52	49	55
MR	108	97	93	97	98	97	90	100	94	81
SR	22	69	60	69	80	67	62	78	45	72
WS	17	40	39	39	50	38	47	69	55	41
R	6	60	55	50	63	52	32	57	33	52

Figure 5. Number of Certificates by Test

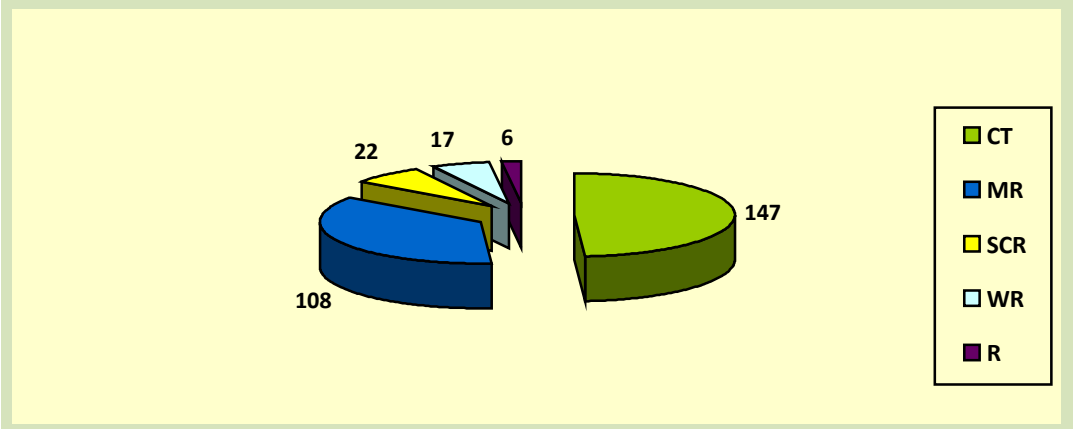


Table 10. Frequency of Number of Distributions, Comparison with 2009 -14

	N	% Certificates						% Total					
	14	14	13	12	11	10	9	14	13	12	11	10	9
# who got certificates in 1 subject	56	31	38	30	38	47	52	28.4	32	27	34	44	38
# who got certificates in 2 subjects	123	69	62	70	62	53	48	62.4	53	63	56	49	35
Total	179	100	100	100	100	100	100	91	85	90	90	93	73

Figure 6. Distribution of Certificates of Achievement by Subject

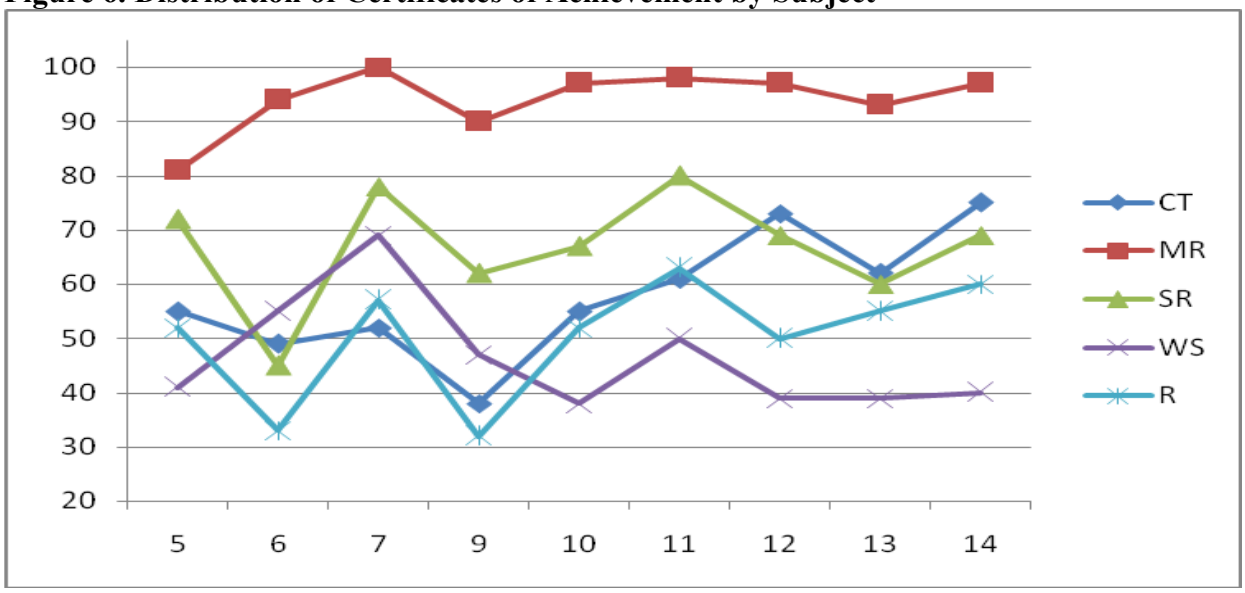
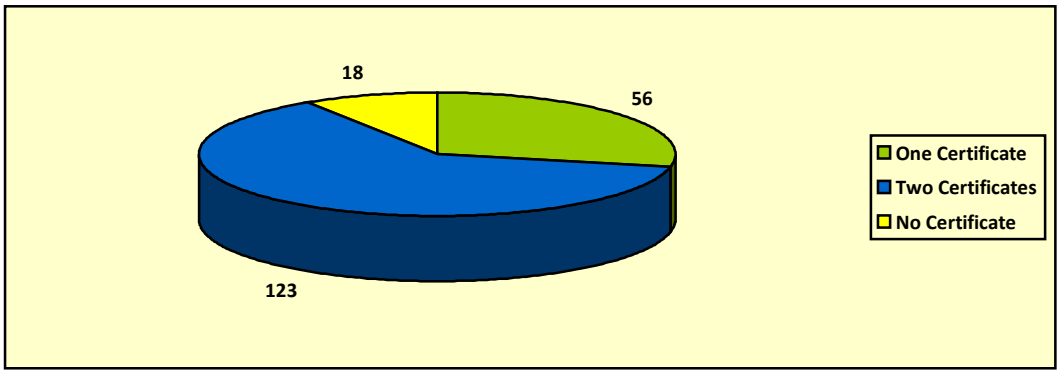


Figure 7. Distribution of Certificates



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 did not have good participation rate this year (30%), 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 better performance on nearly all and this could be attributed to sample that took it as it is of higher ability (higher GPA) and has an over representation of FEA. We need to keep working on improving writing ability, especially rhetorical writing and on improving reading in arts and literature. Performance on math and science reasoning is good, while CT is quite stable.