

# CAAP Report Spring 2008-9

## Introduction

The Collegiate Assessment of Academic Proficiency (CAAP) Test was given early spring term 2008-9 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, 421 of the selected 534 (79%) junior students took it, the highest percentage since CAAP started to be given. Candidates were also provided incentive through distribution of cafeteria lunch vouchers for LL 5,000 each. Examining the sample representativeness (Table 1), reveals that it is quite proportional to original sample with slight over representation of FAFS and OSB and slight under representation of FAS. 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 2008-9**

Total Population			CAAP Sample			Took CAAP		
College	%	#	College	%	#	College	%	#
AG	9	156	AG	9	50	AG	11	45
AS	37	667	AS	39	206	AS	34	144
EA	27	482	EA	27	144	EA	26	111
HS	3	54	HS	3	15	HS	4	15
NU	2	30	NU	1	8	NU	2	8
SB	22	399	SB	21	111	SB	23	98
<b>Total</b>	<b>100</b>	<b>1788</b>	<b>Total</b>	<b>100</b>	<b>534</b>	<b>Total</b>	<b>100</b>	<b>421</b>

## Results

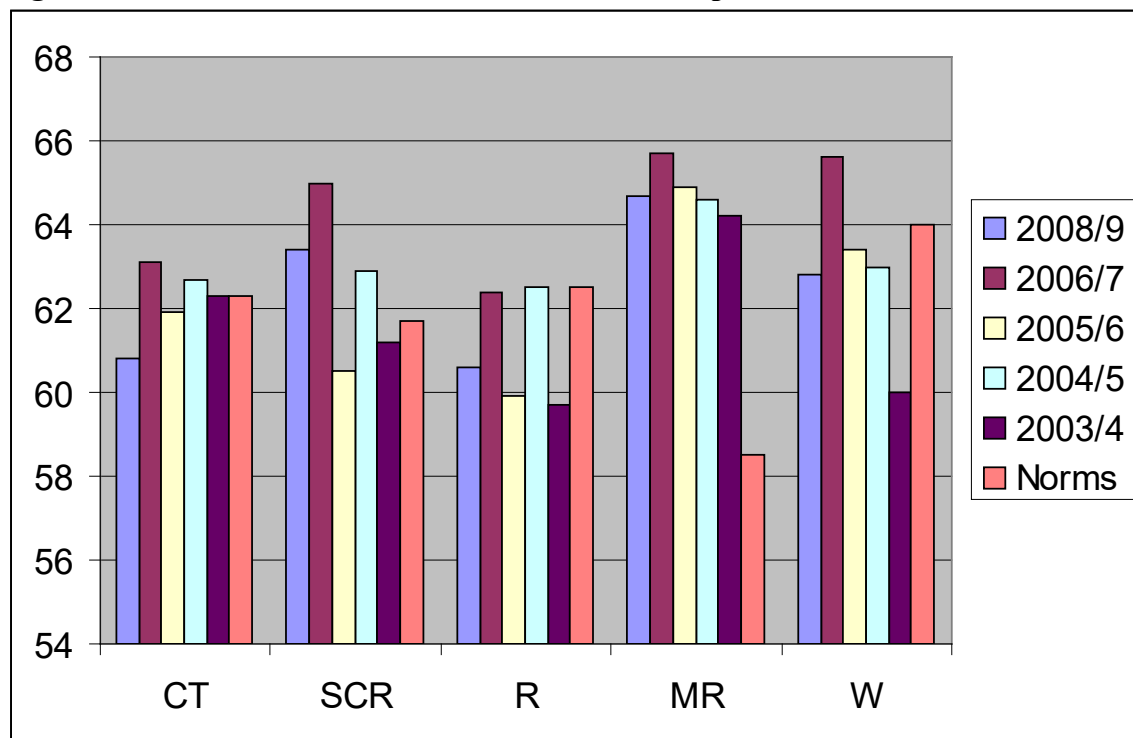
Results of the various CAAP tests for the whole sample are reported in Table 2. Comparison with previous years and with American national norms is also provided. AUB students' best performance is still on MR and SCR followed by Writing, while their lowest performance is on R and CT. Most of the scores have gone down this year with highest drop in CT followed by Reading. The drop between 2009 and 2007 is statistically significant for all subjects, except for Reading. Compared to national norms; AUB performance is significantly higher on MR and SCR only, while it is significantly lower on CT and Reading but difference in Writing is not significant.

Figure 1 also provides a figural representation of the results. It is clear from the figure that over the years, AUB performance on CT was average except for 2008-9 when it dropped below average. Also, that AUB performance on MR has been consistent and above average, while on SCR it was less consistent but average and above. Performance on Reading has been fluctuating between average and below average, while Writing has shown an upward trend since 2003, except for this year.

**Table2. Comparison of CAAP Results with National Norms and with 2003-9**

Year	N	CT	SCR	R	MR	W
2008/9	421	60.8 N = 421	63.4 N=91	60.6 N=50	64.7 N=237	62.8 N=43
2006/7	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
<b>Norms</b>		<b>62.3</b>	<b>61.7</b>	<b>62.5</b>	<b>58.5</b>	<b>64.0</b>

**Figure 1. CAAP Test Results for 2003-9 and in Comparison with Norms**



This finding needs to be checked against candidates' GPA to check if this group is academically similar or weaker than that of previous years. Examining GPA data (Table 3) reveals that this year's sample has a lower GPA than last year as 43% of them reported a GPA of  $\geq 3.01$  vs. 51%, 44%, and 55% in 2007, 2006, and 2005 respectively. 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 78 (same as last year), while average of those who took it is 78.9 (vs. 80 for last year) and those who did not take it is 75.8 (75), so, sample who took CAAP this year is more representative of ability groups than last years though slightly weaker.

**Table 3. Breakdown of CAAP Results by GPA / 2009**

GPA	N	%	W		MR		R		CT		SR	
			Freq.	Avg.	Freq.	Avg.	Freq.	Avg.	Freq.	Avg.	Freq.	Avg.
< 2.00	8	2	2		4		1		8	62	1	
2.0-2.50	77	18	11	62	35	63	15	59	77	60	16	63
2.51-3.00	132	31	15	62	68	63	16	61	132	61	31	62
3.01-3.50	137	32	12	64	91	66	10	61	137	61	24	65
≥ 3.51	43	10	0		26	68	3		43	62	14	66
No response	24	5	3		13	67	3		24	61	5	62

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. Most noticeable decreases were in lower groups in SC, MR, and Reading, while in CT it was evident in nearly all groups (highlighted in red). The lower performance this year can be partially attributed to lower ability of the group but it needs to be studied over a number of years.

**Table 4. Breakdown of CAAP Results by GPA**

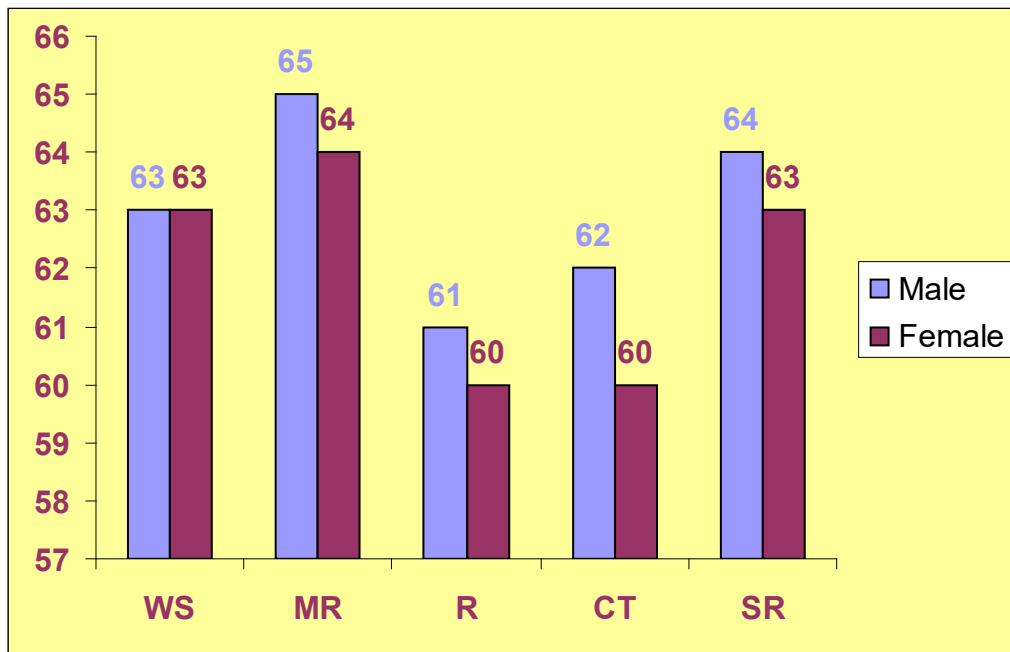
GPA	N	%	CT		SC		R		MR		W	
			09	07	09	07	09	07	09	07	09	07
< 2.00	8	2	62									
2.0-2.50	77	18	<b>60</b>	<b>62</b>	<b>63</b>	<b>66</b>	59	59	<b>63</b>	<b>65</b>	62	
2.51-3.00	132	31	61	61	<b>62</b>	<b>64</b>	<b>61</b>	<b>63</b>	63	64	62	
3.01-3.50	137	32	<b>61</b>	<b>64</b>	65	65	<b>61</b>	<b>64</b>	66	67	64	
≥ 3.51	43	10	<b>62</b>	<b>66</b>	66	67		63	68	68		
No response	24	5	<b>61</b>	<b>63</b>	<b>62</b>	<b>64</b>			67	66		

Performance on CAAP tests was also compared by gender, GPA, 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 almost all scales especially for CT, though in previous years performance was quite similar. Gender results are reported graphically in Figure 2.

**Table 5. CAAP Results by Gender**

Gender	N	WS	MR	R	CT	SR
Male	200	63	65	61	62	64
		(n=14)	(n=141)	(n=16)	(n=200)	(n=29)
Female	219	63	64	60	60	63
		(n=28)	(n=95)	(n=34)	(n=219)	(n=62)

**Figure 2. CAAP Results by Gender**



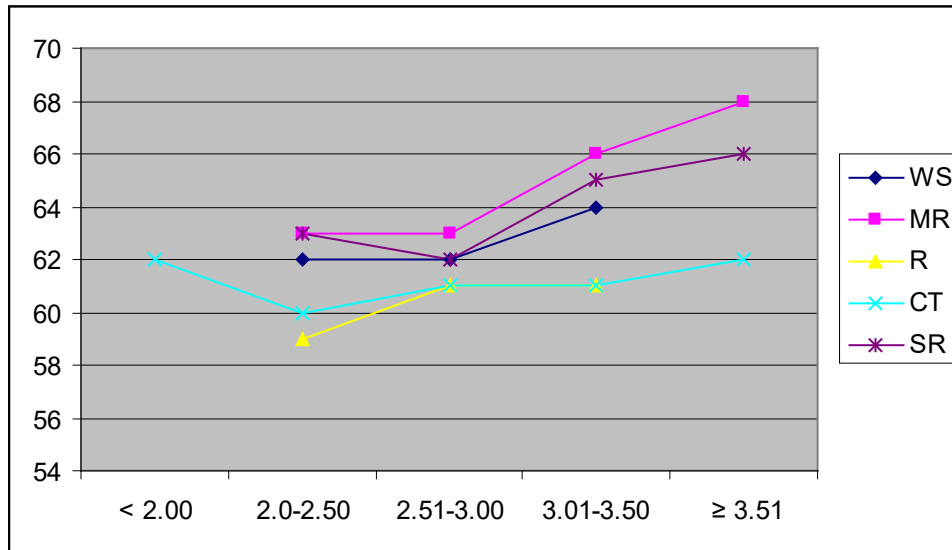
As to age differences on the CAAP tests, all who took the test were juniors and there should not have been large differences in age level nor in results due to age.

With respect to differences resulting from English being a first language or not, there were practically no differences as noted in Table 6 with group whose native language is not English scoring slightly higher on SC and R and this is because this group is of a higher ability. Differences were noted, however, on CAAP test scores by GPA. In general the higher the GPA the higher the CAAP test score. Table 4 provides summary results by GPA, while figure 3 highlights differences graphically.

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

English	N	WS	MR	R	CT	SR
First Language	110	63	65	60	61	63
		(n=12)	(n=62)	(n=13)	(n=110)	(n=23)
Not First Language	310	63	65	61	61	64
		(n=31)	(n=174)	(n=37)	(n=310)	(n=68)

**Figure 3. CAAP Score Differences by GPA**



Differences by major were also noted, students from Engineering got highest score in MR and did equally as well as biological sciences and social sciences in CT. Biological sciences got highest scores on SCR, CT and 2<sup>nd</sup> highest in MR. Social Sciences got highest in W, R, and CT and third in MR. Table 7 presents CAAP test results by major, while figures 4-5 present differences in CT and MR by major and in comparison with 2006 and 2008. In CT, all majors dropped with biological sciences and computer science showing highest drop. As for MR, most of the majors maintained their positions, though dropping from 2007, with business showing some improvement over 2006.

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 2003-7. In Writing, AUB students consistently do better on usage/mechanics than on rhetorical writing and they have attained national norm level on this skill. In rhetorical writing they are maintaining average and it is slightly lower than national norms. With respect to Reading, they performed quite same on social science readings and on arts/literature, with the later falling below national norms. With respect to math, they do very well on both sections and much higher than the norms.

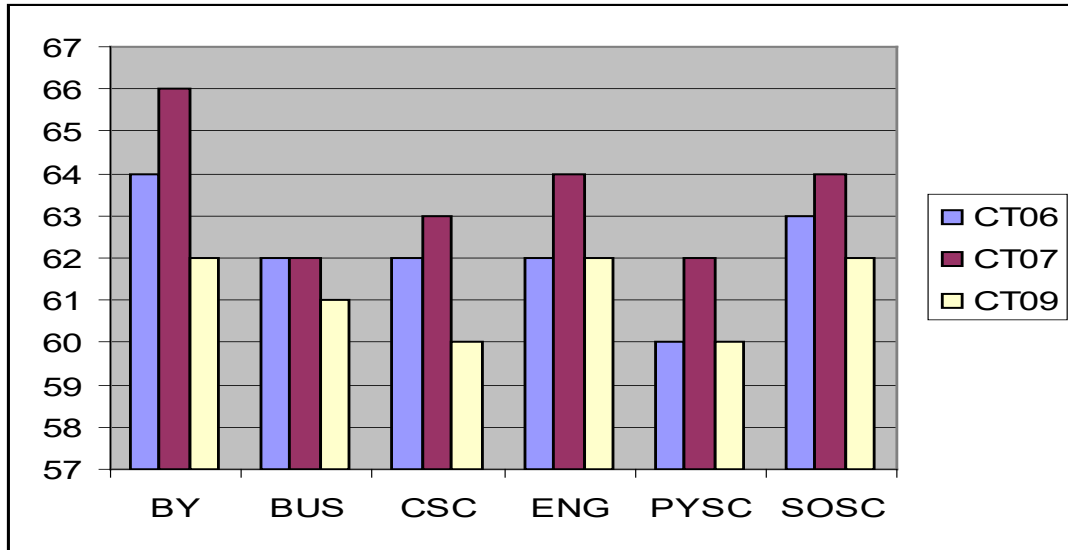
**Table 7. Results by Major**

Major	N	W	MR	R	CT	SR
Agriculture	14		59		58	
Architecture	12				59	59
Biol. Sc.	51		65		62	66
Business	95	63	62	61	61	60
Marketing	5				62	
Community Service	5				58	
Comp. Sc.	18		64		60	
Education	1					
Engineering	101		68		62	
Fine Arts	4					
Foreign Languages	2					
Health Professions	12				60	61
Home Economics	26		63		60	62
Letters	1					
Math	4					
Physical sc.	14				60	63
Social sc.	35	65	64	63	62	
No response	15			61	57	61

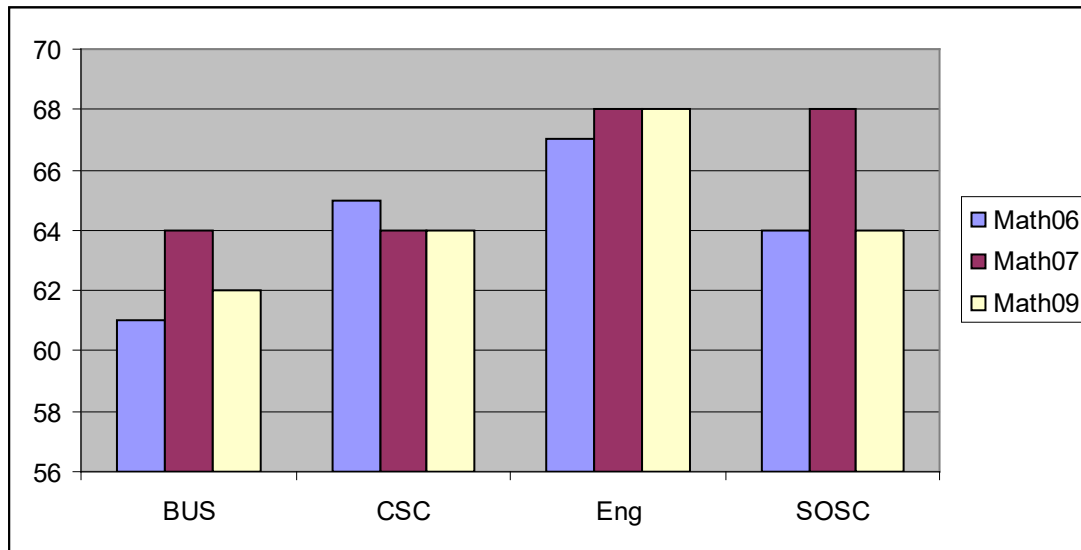
**Table 8. Writing, Reading, and Math Sub score Results, 2003-9**

Test	N	2009	2007	2006	2005	2004	2003	Norms
Writing: Usage/Mechanics	13	17.1	18.1	16.8	17.2	15.6	15.9	17.2
Writing: Rhetorical	13	16.0	17.6	16.6	16.0	14.7	14.9	17.3
Reading: Arts/literature	35	15.6	16.2	14.3	15.5	14.5	14.3	15.7
Reading: Social sciences	35	15.0	15.9	15.5	16.5	15.2	15.0	16.5
Math: Basic algebra	123	18.0	18.3	18.0	17.6	17.8	16.6	15.3
Math: College algebra	123	18.8	19.2	20.2	20.4	20.0	18.2	15.2

**Figure 4 CT Scores by Major, Comparison with 2006, 07 & 09**



**Figure 5 Math Reasoning by Major, Comparison with 2006, 07 & 09**



**Certificates of Achievement**

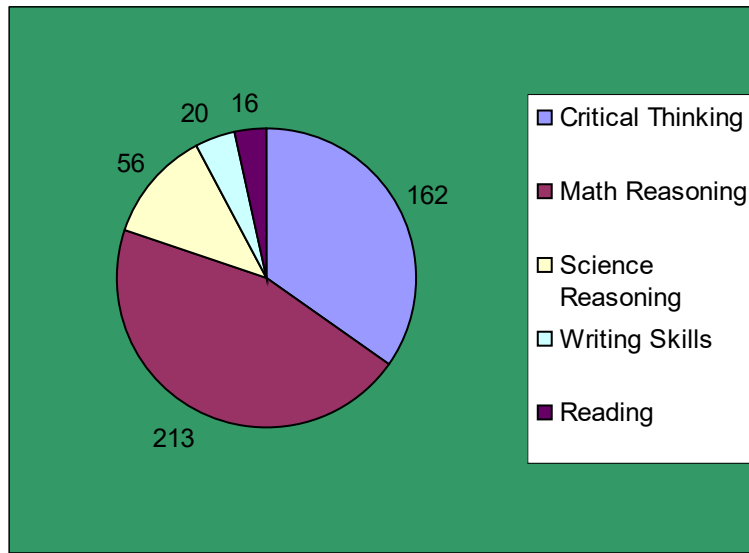
A good number of students (55%) obtained Certificates of Achievements indicating that they achieved  $\geq 50^{\text{th}}$  %ile of the normative sample. Table 9 provides the number and percentage of certificates obtained in different subjects and in comparison with 2004-7. Percentages in 2009 are lower than previous years especially in CT and Reading. They are quite stable in MR and SR and slightly lower in Writing. Figure 6 provides the figures graphically by subject. Some students obtained certificates in one subject, others in two. Table 10 details this information in comparison with 2005-7. The percentage of students who obtained only one certificate (52%) increased in comparison with previous years (46%) at expense of those who obtained two, and the percent of total certificates obtained also went down to 73, as compared to 80s in previous years. The highest percentage of

certificates was obtained, as usual, in Math Reasoning followed by Science Reasoning. Figure 6 provides graphic distribution of certificates.

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

Subject	N	Certificates 09	%Certificates 09	%Certificates 07	%Certificate 06	%Certificate 05	%Certificate 04
Critical Thinking	421	162	38	52	49	55	51
Math Reasoning	237	213	90	100	94	81	88
Science Reasoning	91	56	62	78	45	72	50
Writing Skills	43	20	47	69	55	41	14
Reading	50	16	32	57	33	52	31

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

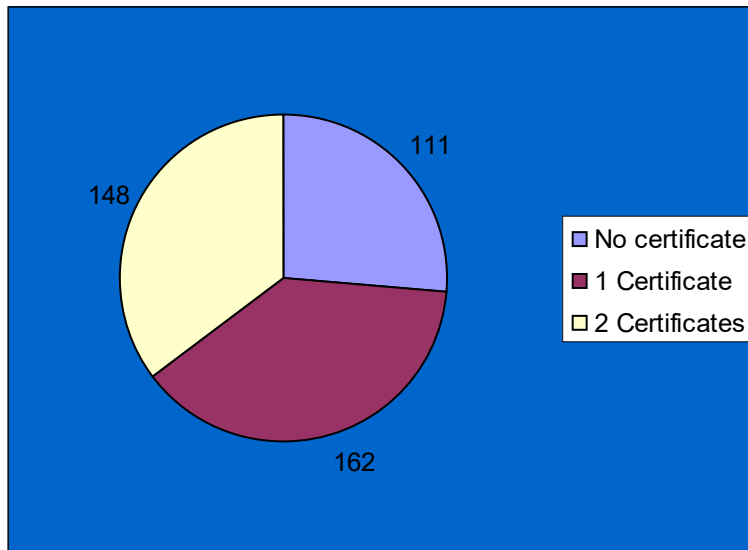


**Table 10. Frequency of Number of Distributions, Comparison with 2005-7**

	N (09)	%Cert 09	%Cert 07	%Cert 06	%Cert 05	% Total 09	% Total 07	% Total 06	% Total 05
# who got certificates in 1 subject	162	52	39	54	45	38	34	44	39
# who got certificates in 2 subjects	148	48	61	46	55	35	52	38	47
<b>Total</b>	<b>310</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>73</b>	<b>86</b>	<b>82</b>	<b>86</b>



**Figure 6. 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 better participation rate this year (80% vs. 60% last year) and better representation, 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 a drop across all subjects and this could be because sample is more representative of ability grouping or due to other factors. We need to wait for more evidence and a trend before we reach a conclusion. However, we can conclude that AUB needs to work on improving CT and Reading scores as they are below national norms, to continue the progress made in Writing and to maintain its excellent performance in MR and SCR.