# CAAP Report Spring 2011-12

**Introduction**

The Collegiate Assessment of Academic Proficiency (CAAP) Test was given early spring term 2011-12 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, 185 of the selected 470 (39%) junior students took it. Examining the sample representativeness (Table 1), reveals that it is quite proportional to original sample with good representation of OSB, over representation of FEA, but under representation of small faculties like FAFS and FHS. 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 ≥50$^{th}$ percentile received a Certificate of Achievement.

**Table 1. Representativeness of CAAP Sample Spring 2011-12**

| Total Population | | | CAAP Sample | | | Took CAAP | | |
|---|---|---|---|---|---|---|---|---|
| **College** | **%** | **#** | **College** | **%** | **#** | **College** | **%** | **#** |
| AG | 7 | 114 | AG | 7 | 32 | AG | **3** | 5 |
| AS | 35 | 583 | AS | 35 | 166 | AS | **30** | 55 |
| EA | 30 | 512 | EA | 33 | 156 | EA | **43** | 80 |
| HS | 3 | 56 | HS | 2 | 9 | HS | **1.6** | 3 |
| NU | 2 | 39 | NU | 2 | 9 | NU | **.5** | 1 |
| SB | 23 | 385 | SB | 21 | 98 | SB | **22** | 41 |
| **Total** | **100** | **1689** | **Total** | **100** | **470** | **Total** | **100** | **185** |

**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 CT, R and W. 2010-11 was a year in which students performed exceptionally well and this could possibly explain the lowered scores this year. The CT is within AUB range, but W and R are lower than AUB performance, especially the R as revealed in Table.

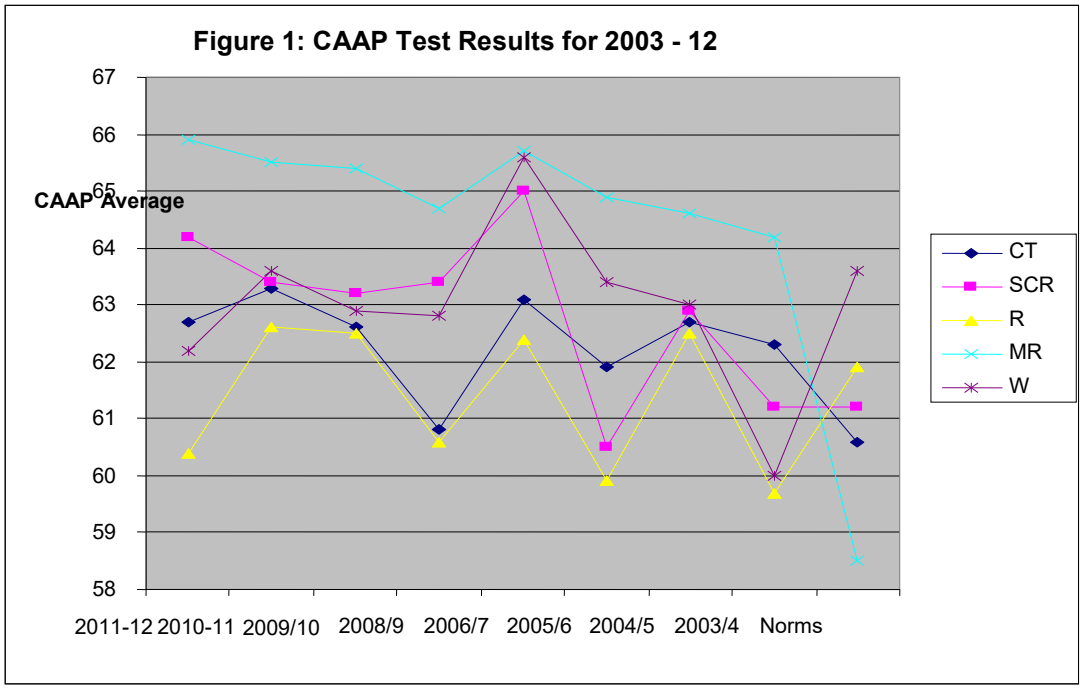
Figure 1 also provides a figural representation of the results. It is clear from the figure that over the years, AUB performance on MR has been highest followed by SCR. CT has

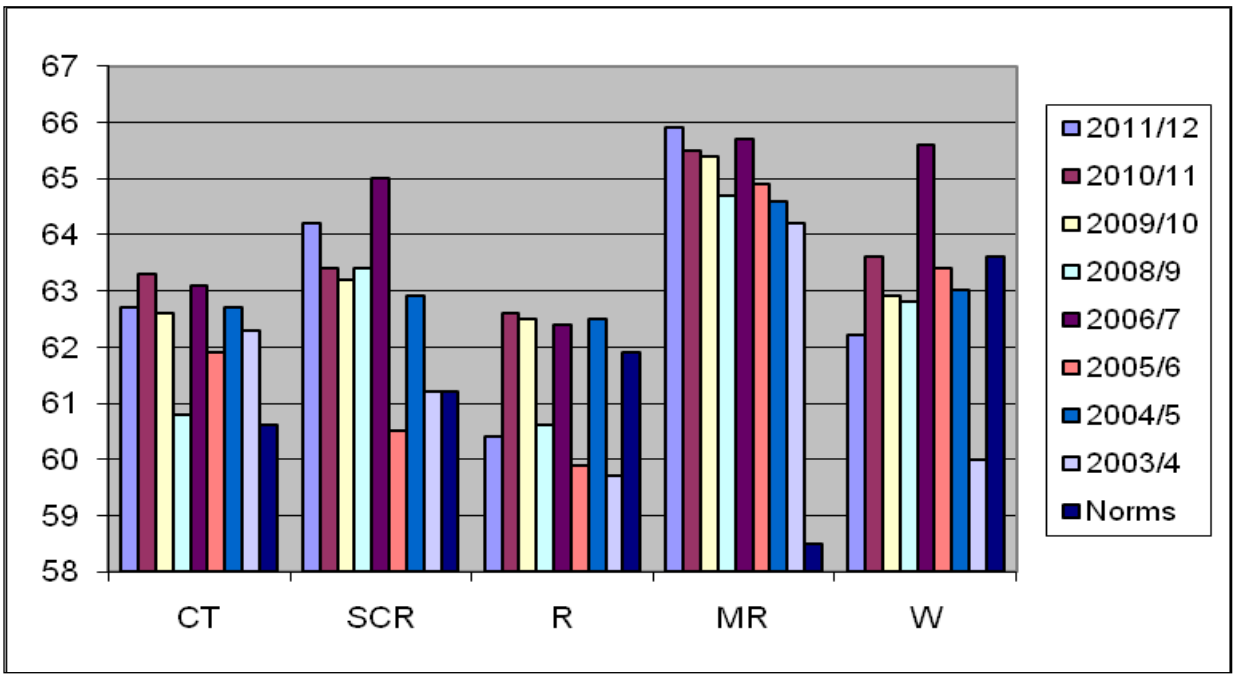
been improving, except for this year, and is now higher than national average Performance on Reading has been fluctuating between average and below average, while Writing has shown an improvement then started to stabilize but still slightly below norms.

**Table2. Comparison of CAAP Results with National Norms and with 2003-12**

| Year | N | CT | SCR | R | MR | W |
|---|---|---|---|---|---|---|
| 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 |
| 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 |
| Norms | | 60.6 | 61.2 | 61.9 | 58.5 | 63.6 |

**Figure 1. CAAP Test Results for 2003-12**






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 higher GPA than last year as 63% of them reported a GPA of ≥ 3.01, vs. 54% last year, also higher than previous years especially with those ≥ 3.51. 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 **78.8** (same as last year), while average of those who took it is **81.5** (higher than last year of **79.7**) and those who did not take it is **77.4** (same as before), so sample is of higher ability but this is usually the case in those who sit for the CAAP. Differences were noted on CAAP test scores by GPA. In general the higher the GPA the higher the CAAP test sore especially for CT, MR and R.

**Table 3. Breakdown of CAAP Results by GPA / 2012**

| GPA | N | % | W | | MR | | R | | CT | | SR | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Freq. | Avg. | Freq. | Avg. | Freq. | Avg. | Freq. | Avg. | Freq. | Avg. |
| **< 2.00** | 2 | 1 | 0 | | 1 | | 1 | | 2 | | 0 | |
| **2.0-2.50** | 20 | 11 | 2 | | 13 | 64 | 3 | | 20 | 61 | 2 | |
| **2.51-3.00** | 38 | 20.5 | 8 | 59 | 19 | 64 | 7 | 60 | 38 | 61 | 4 | |
| **3.01-3.50** | 65 | 35 | 12 | 64 | 41 | 65 | 2 | | 65 | 63 | 10 | 64 |
| **≥ 3.51** | 51 | 27.5 | 4 | | 36 | 69 | 2 | | 51 | 64 | 9 | 66 |
| **No Response** | 9 | 5 | 2 | | 5 | 64 | 1 | | 9 | 61 | 1 | |

**Table 4. Breakdown of CAAP Results by GPA 2012, 2011 and 2010**

| GPA | % | % | CT | | | SC | | | R | | | MR | | | W | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11 | 12 | 10 | 11 | 12 | 10 | 11 | 12 | 10 | 11 | 12 | 10 | 11 | 12 | 10 | 11 | 12 |
| < 2.00 | 2 | 1 | 59 | | | | | | | | | | | | | | |
| 2.0-2.50 | 15 | 11 | 61 | 61 | 61 | | 61 | | 59 | 59 | | 63 | 63 | 64 | 62 | 64 | |
| 2.51-3.00 | 30 | 20.5 | 62 | 62 | 61 | 63 | 62 | | 63 | 63 | 60 | 64 | 64 | 64 | 63 | 63 | 59 |
| 3.01-3.50 | 37 | 35 | 63 | 64 | 63 | 64 | 64 | 64 | 64 | 64 | | 66 | 66 | 65 | 64 | 64 | 64 |
| ≥ 3.51 | 17 | 27.5 | 66 | 65 | 64 | 64 | 65 | 66 | 64 | 63 | | 69 | 68 | 69 | | | |
| No response | 3 | 5 | 61 | 63 | 61 | | 63 | | | | | 64 | | 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. This year's group performed quite similarly on most of the tests when comparison with GPA is done, except for the 2.5-3.0 GPA category whose low performance on R and W has lowered average of these two subjects. 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 CT where they are similar. Gender results are also reported graphically in Figure 3.

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

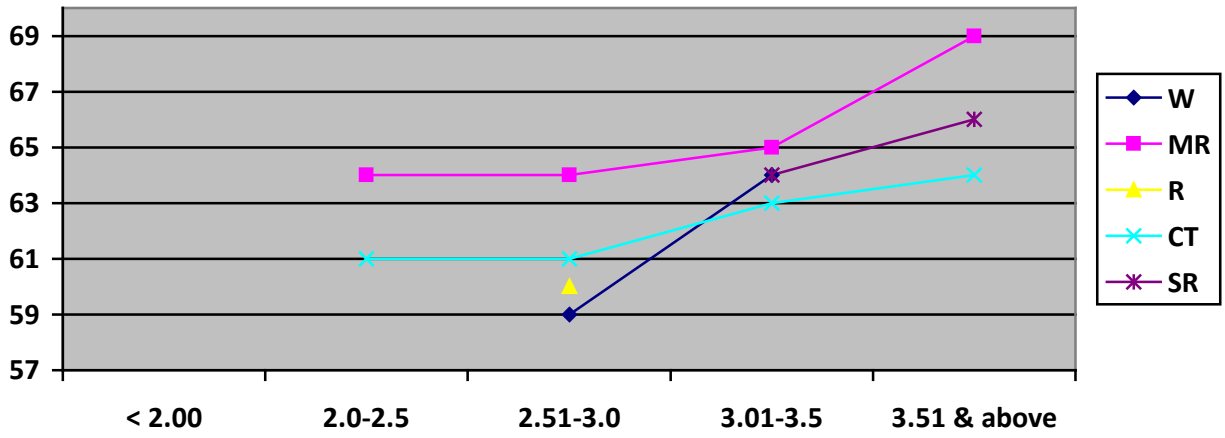
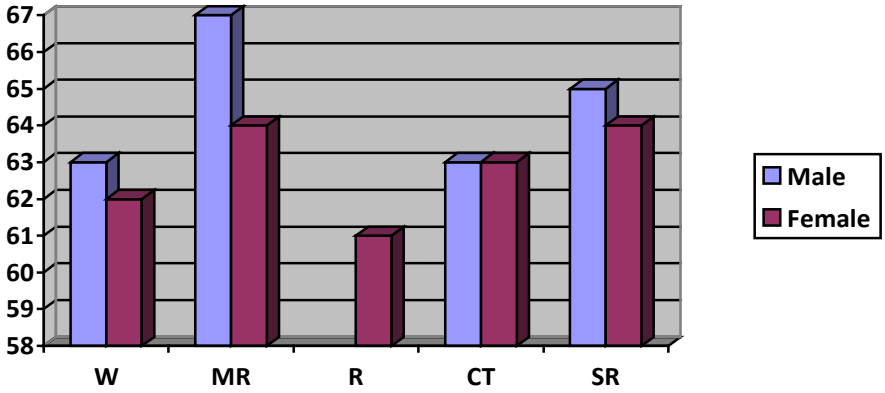


**Table 5. CAAP Results by Gender**

| Gender | N | W | MR | R | CT | SR |
|---|---|---|---|---|---|---|
| **Male** | **96** | **63** | **67** | | **63** | **65** |
| | | **N=6** | **N=73** | **N=3** | **N=96** | **N=14** |
| **Female** | **88** | **62** | **64** | **61** | **63** | **64** |
| | | **N=22** | **N=42** | **N=13** | **N=88** | **N=11** |

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 but higher on CT and W. 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 |
|---|---|---|---|---|---|---|
| **First Language** | 37 | 62 | 67 | | 62 | |
| | | N=10 | N=20 | N=4 | N=37 | N=3 |
| **Not First Language** | 147 | 63 | 66 | 61 | 63 | 64 |
| | | N=18 | N=95 | N=11 | N=147 | N=23 |

Differences by major were also noted, students from Engineering got highest score in MR. Biological sciences got highest scores on SCR and CT, and 2nd highest in MR. Social Sciences got highest in R, 2nd highest in W, while Business got highest in W and 2nd highest in R. Table 7 presents CAAP test results by major, while figures 4-5 present differences in CT and MR by major and in comparison with 2007-11. In CT, all majors

show some stability this year with exception of computer sciences with biological sciences leading. As for MR, most of the majors maintained their positions, with engineering showing highest performance.

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

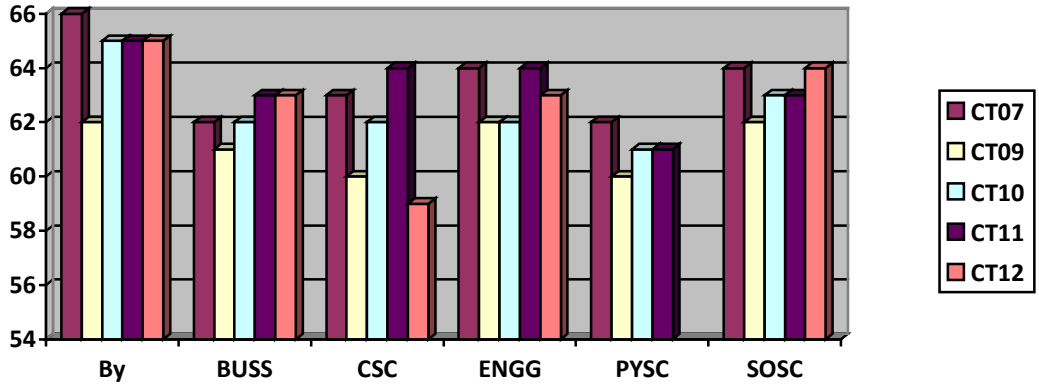
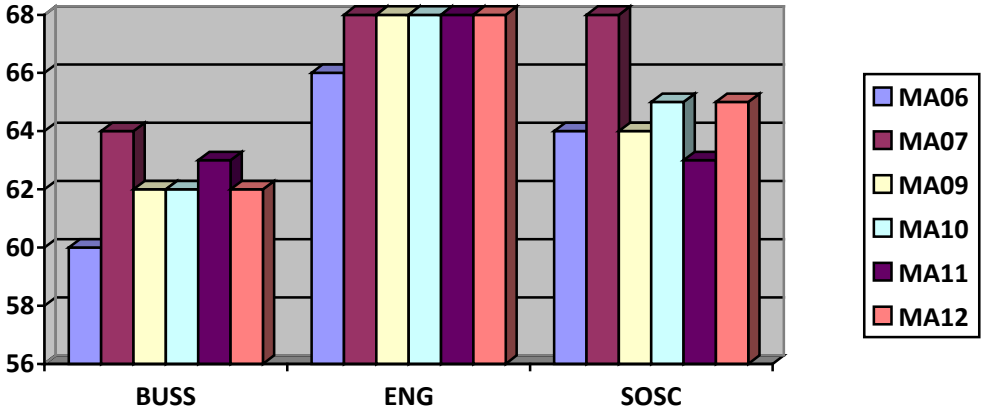



**Figure 5 Math Reasoning by Major, Comparison with 2006-12**




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 2004-11. In Writing, AUB students consistently do better on usage/mechanics than on rhetorical writing but they have scored lower than norms and than last year on this skill. In fact this year's performance is lowest in five years. 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 slightly better, though unusually, on arts/literature than social science readings, with social science readings lower than national norms With respect to math; they do very well on both sections and much higher than the norms though with higher performance on college algebra than basic algebra.

**Table 7. Results by Major**

| Major | N | W | MR | R | CT | SR |
|---|---|---|---|---|---|---|
| Agriculture | 2 | | | | | |
| Biol. Sc. | 23 | 63 | | | 65 | 65 |
| Business | 37 | 63 | 62 | 60 | 63 | |
| Marketing | 2 | | | | | |
| Computer & Info Sciences | 6 | | | | 59 | |
| Education | 3 | | | | | |
| Engineering | 73 | | 68 | | 63 | |
| Health Professions | 2 | | | | | |
| Home Economics | 3 | | | | | |
| Math | 2 | | | | | |
| Physical sc. | 1 | | | | | |
| Social sc. | 21 | | 65 | 63 | 64 | |
| No response | 9 | | 66 | | 59 | |

**Table 8. Writing, Reading, and Math Sub score Results, 2004 - 12**

| Test | N | 2012 | 2011 | 2010 | 2009 | 2007 | 2006 | 2005 | 2004 | Norms |
|---|---|---|---|---|---|---|---|---|---|---|
| Writing: Usage/Mechanics | 28 | 16.5 | 17.3 | 17.2 | 17.1 | 18.1 | 16.8 | 17.2 | 15.6 | 16.8 |
| Writing: Rhetorical | 28 | 15.9 | 16.4 | 15.8 | 16.0 | 17.6 | 16.6 | 16.0 | 14.7 | 16.8 |
| Reading: Arts/literature | 16 | 15.4 | 15.8 | 15.6 | 15.6 | 16.2 | 14.3 | 15.5 | 14.5 | 15.3 |
| Reading: Social sciences | 16 | 14.7 | 16.6 | 16.7 | 15.0 | 15.9 | 15.5 | 16.5 | 15.2 | 16.3 |
| Math: Basic algebra | 115 | 17.9 | 18.3 | 18.2 | 18.0 | 18.3 | 18.0 | 17.6 | 17.8 | 15.5 |
| Math: College algebra | 115 | 21.2 | 21.0 | 20.4 | 18.8 | 19.2 | 20.2 | 20.4 | 20.0 | 15.5 |

**Certificates of Achievement**

A good number of students obtained Certificates of Achievements (90%) indicating that they achieved ≥50$^{th}$ %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 2012 were similar to previous years (around 90%) but lower than last year in SR W, and R and higher than previous years in CT. 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 (70% and 63% of total number of students) increased and is highest, and the percent of total certificates obtained was 90, as only 10% of students who took CAAP (N=19) did not obtain any certificate. The highest percentage of certificates was obtained, as usual, in Math Reasoning followed by CT for the first time then Science Reasoning. Figure 7 provides graphic distribution of certificates

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

| Subject | N | Certif. 12 | %Certif. 12 | %Certif. 11 | %Certif. 10 | %Certif. 09 | %Certif. 07 | %Certif. 06 | %Certif. 05 |
|---|---|---|---|---|---|---|---|---|---|
| **CT** | 185 | 135 | **73** | 61 | 55 | 38 | 52 | 49 | 55 |
| **MR** | 115 | 111 | **97** | 98 | 97 | 90 | 100 | 94 | 81 |
| **SR** | 26 | 18 | **69** | 80 | 67 | 62 | 78 | 45 | 72 |
| **WS** | 28 | 11 | **39** | 50 | 38 | 47 | 69 | 55 | 41 |
| **R** | 16 | 8 | **50** | 63 | 52 | 32 | 57 | 33 | 52 |

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

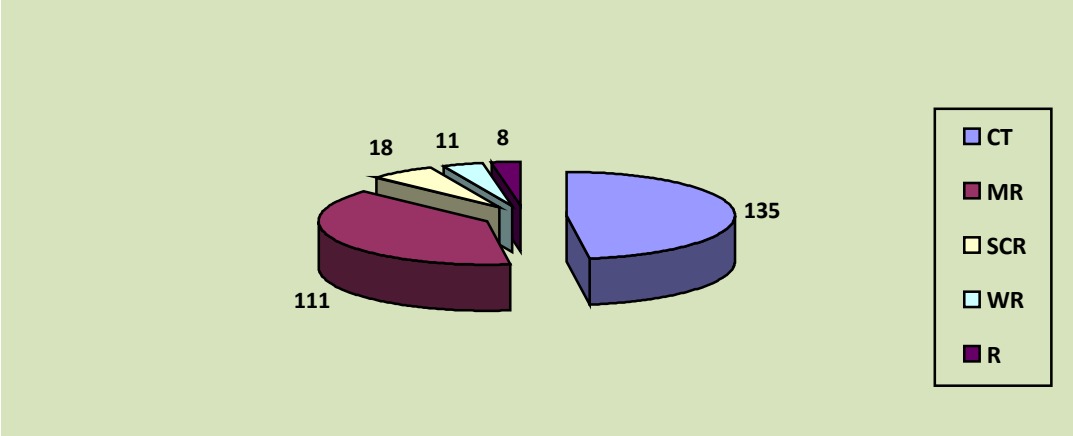



**Table 10. Frequency of Number of Distributions, Comparison with 2007 -12**

| | N (12) | % Cert 12 | % Cert 11 | % Cert 10 | %Cert 09 | %Cert 07 | % Total 12 | % Total 11 | % Total 10 | % Total 09 | % Total 07 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **# who got certificates in 1 subject** | 50 | **30** | 38 | 47 | 52 | 39 | 27 | 34 | 44 | 38 | 34 |
| **# who got certificates in 2 subjects** | 116 | **70** | 62 | 53 | 48 | 61 | 63 | 56 | 49 | 35 | 52 |
| **Total** | **166** | | **100** | **100** | **100** | **100** | **90** | **90** | **93** | **73** | **86** |

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

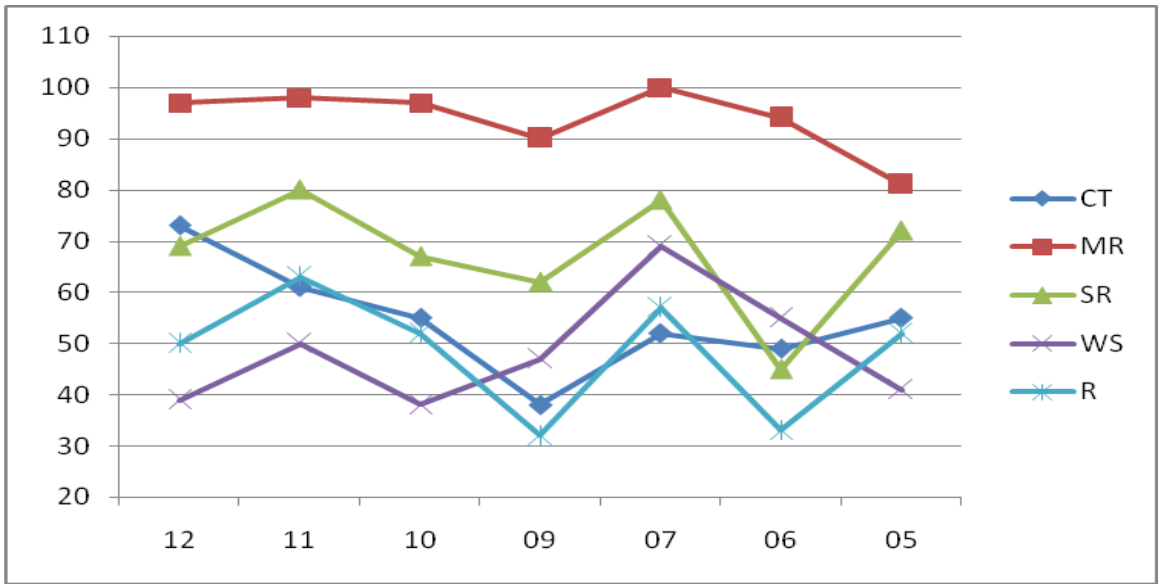
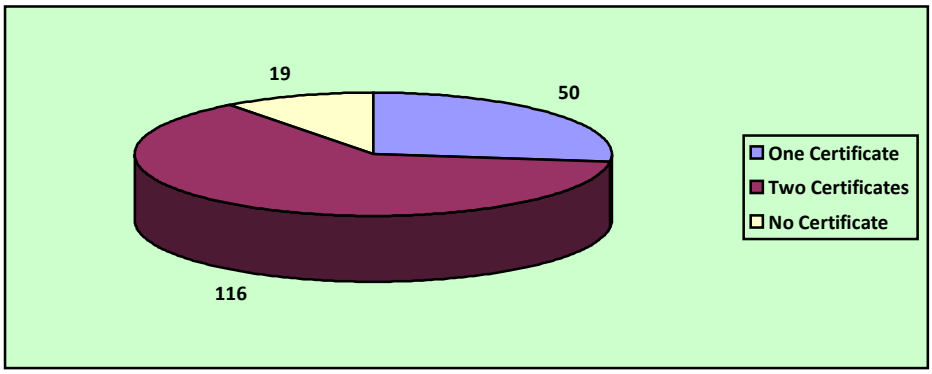



**Figure 7. Distribution of Certificates**




## 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 stability in performance on MR,

CT, and W, though slightly lower than last year on the last two. Performance on R went down while it showed an improvement in SR. This year's sample was of higher ability level than previous years so results need to be scrutinized with care and followed up to see if the above trend persists. Need to work on improving Writing skills especially the rhetoric skills and the Reading in social sciences.