

CAAP Report Spring 2014-15

Introduction

The Collegiate Assessment of Academic Proficiency (CAAP) Test was given early spring term 2014-15 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 181 of the selected 878 (21%) junior students sat for the CAAP lower than previous years’ participation . Examining the sample representativeness (Table 1), reveals that it is quite proportional to original sample with over representation of FHS and FAS and under representation of OSB and 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 2014-15

| Total Population | | | CAAP Sample | | | Took CAAP | | |
|------------------|-------|-----|-------------|-------|-----|-----------|-------|-----|
| Faculty | Count | % | Faculty | Count | % | Faculty | Count | % |
| AG | 135 | 7 | AG | 72 | 8 | AG | 14 | 8 |
| AS | 696 | 37 | AS | 335 | 38 | AS | 71 | 39 |
| EA | 626 | 33 | EA | 268 | 31 | EA | 50 | 28 |
| HS | 59 | 3 | HS | 24 | 3 | HS | 14 | 8 |
| NU | 54 | 3 | NU | 33 | 4 | NU | 6 | 3 |
| SB | 310 | 16 | SB | 146 | 17 | SB | 26 | 14 |
| | 1880 | 100 | | 878 | 100 | | 181 | 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 lower in on all tests

especially on SCR and Reading. With respect to norms, it is higher in CT, MR and SCR, however, lower on Writing and on Reading, which is the usual trend.

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 improved in early years then started fluctuating but is higher than national average. Performance on Reading has been fluctuating between average and slightly below average, while Writing has shown an improvement, though below norms, then started to stabilize and has been also fluctuating in past two years. Type of sample taking CAAP could explain these fluctuations.

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

| Year | N | CT | SCR | R | MR | W |
|--------------|-----|----|-----|----|----|----|
| 2014-15 | 181 | 62 | 62 | 60 | 65 | 61 |
| 2013-14 | 197 | 63 | 65 | 62 | 66 | 62 |
| 2012-13 | 135 | 61 | 64 | 62 | 65 | 61 |
| 2011-12 | 185 | 63 | 64 | 60 | 66 | 62 |
| 2010-11 | 250 | 63 | 63 | 63 | 66 | 64 |
| 2009/10 | 360 | 63 | 63 | 63 | 65 | 63 |
| 2008/9 | 421 | 61 | 63 | 61 | 65 | 63 |
| 2007/8 | 235 | 63 | 65 | 62 | 66 | 66 |
| 2005/6 | 245 | 62 | 61 | 60 | 65 | 63 |
| 2004/5 | 403 | 63 | 63 | 63 | 65 | 63 |
| 2003/4 | 736 | 62 | 61 | 60 | 64 | 60 |
| Norms | | 59 | 61 | 62 | 59 | 63 |

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 lower GPA than last year as 55% of them reported a GPA of ≥ 3.01 , vs. 64% last year, and this is similar to 2013 with 52%. 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 **78.5** (last year **79.1**), while average of those who took it is **80.4** (lower than last year of 81.3) and those who did not take it is 78.0 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.

Figure 1. CAAP Test Results for 2004-15

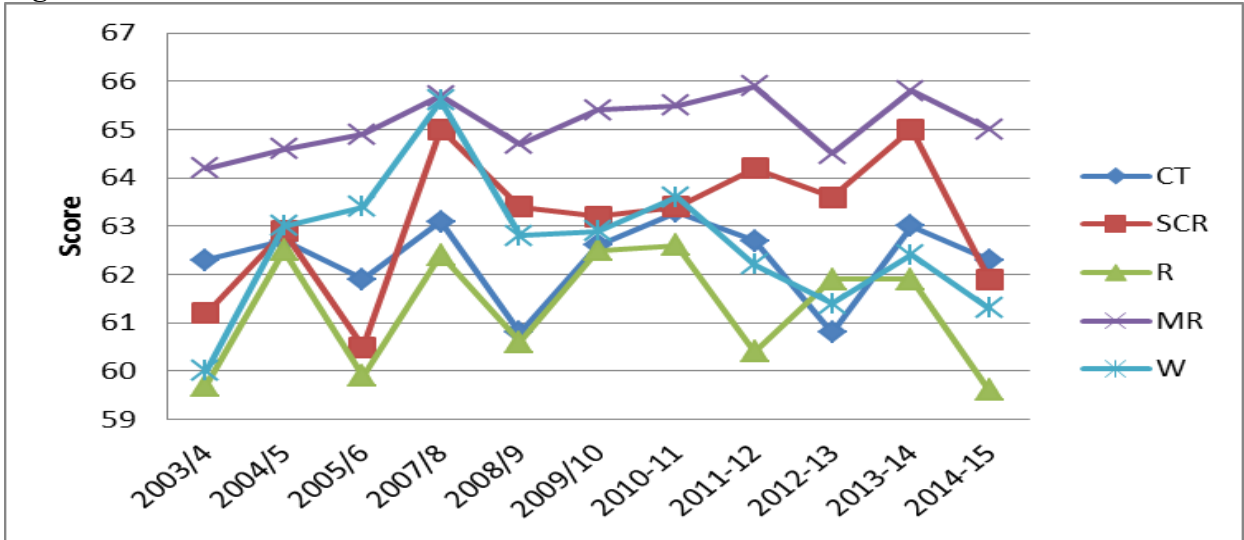


Table 3. Breakdown of CAAP Results by GPA / 2015

| GPA | N | % | W | | MR | | R | | CT | | SR | |
|-------------|----|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| | | | Freq. | Avg. | Freq. | Avg. | Freq. | Avg. | Freq. | Avg. | Freq. | Avg. |
| < 2.00 | 3 | 1.7 | 0 | | 2 | | 1 | | 3 | | 0 | |
| 2.0-2.50 | 26 | 14.4 | 5 | 60 | 16 | 63 | 2 | | 26 | 61 | 3 | |
| 2.51-3.00 | 40 | 22.1 | 5 | 59 | 22 | 63 | 6 | 59 | 40 | 61 | 7 | 61 |
| 3.01-3.50 | 63 | 34.8 | 12 | 62 | 36 | 66 | 5 | 60 | 63 | 62 | 10 | 61 |
| ≥ 3.51 | 37 | 20.4 | 4 | | 23 | 67 | 3 | | 37 | 65 | 7 | 64 |
| No Response | 12 | 6.6 | 2 | | 3 | | 3 | | 11 | 63 | 3 | |

Table 4. Breakdown of CAAP Results by GPA 2012-2015

| GPA | % | % | | | | CT | | | | SC | | | | R | | | | MR | | | | W | | | | |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|--|
| | | 15 | 14 | 13 | 12 | 15 | 14 | 13 | 12 | 15 | 14 | 13 | 12 | 15 | # | # | 12 | 15 | 14 | 13 | 12 | 15 | 14 | 13 | 12 | |
| < 2.00 | 2 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 2.0-2.50 | 14 | 10 | 16 | 11 | 61 | 63 | 60 | 61 | | | | | | | | | | 63 | 65 | 64 | 64 | 60 | 62 | 60 | | |
| 2.51-3.00 | 22 | 24 | 25 | 21 | 61 | 62 | 59 | 61 | 61 | 63 | 65 | | 59 | | | 60 | 63 | 64 | 64 | 64 | 59 | 61 | 60 | 59 | | |
| 3.01-3.50 | 35 | 37 | 32 | 35 | 62 | 62 | 61 | 63 | 61 | 66 | 63 | 64 | 60 | | | | 66 | 66 | 65 | 65 | 62 | 63 | | 64 | | |
| ≥ 3.51 | 20 | 27 | 20 | 28 | 65 | 66 | 65 | 64 | 64 | 67 | 69 | 66 | | | | | 67 | 68 | 66 | 69 | | 63 | 67 | | | |
| No response | 7 | 3 | 7 | 5 | 63 | 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, lower for this year sample on all tests and this also can be explained by higher FAS representation and lower FEA. 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, except for MR where they were equal. Gender results are also reported graphically in Figure 3.

Figure 2. CAAP Score Differences by GPA

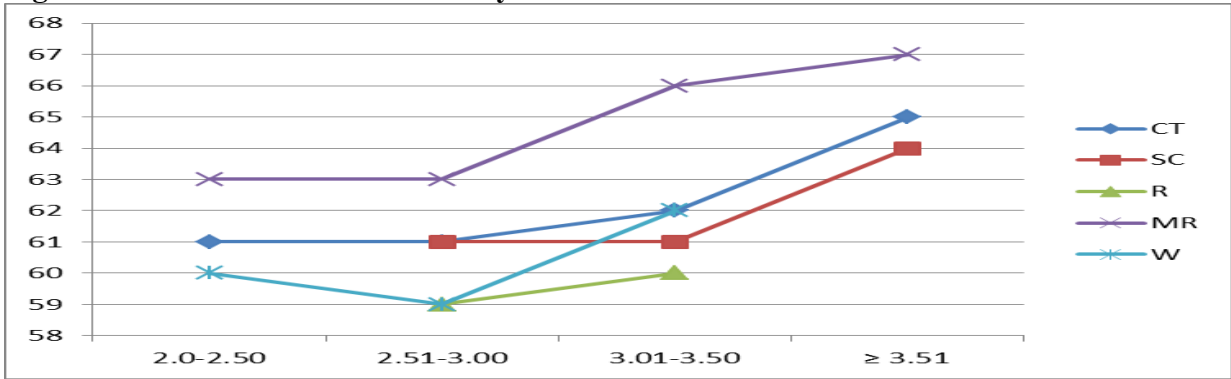
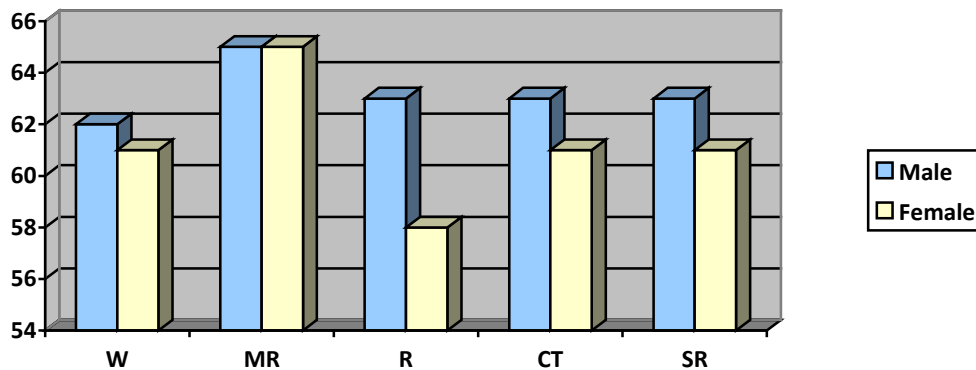


Table 5. CAAP Results by Gender

| Gender | N | W | MR | R | CT | SR |
|--------|----|------|------|------|------|------|
| Male | 93 | 62 | 65 | 63 | 63 | 63 |
| | | N=9 | N=60 | N=8 | N=92 | N=15 |
| Female | 87 | 61 | 65 | 58 | 61 | 61 |
| | | N=19 | N=42 | N=12 | N=87 | 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



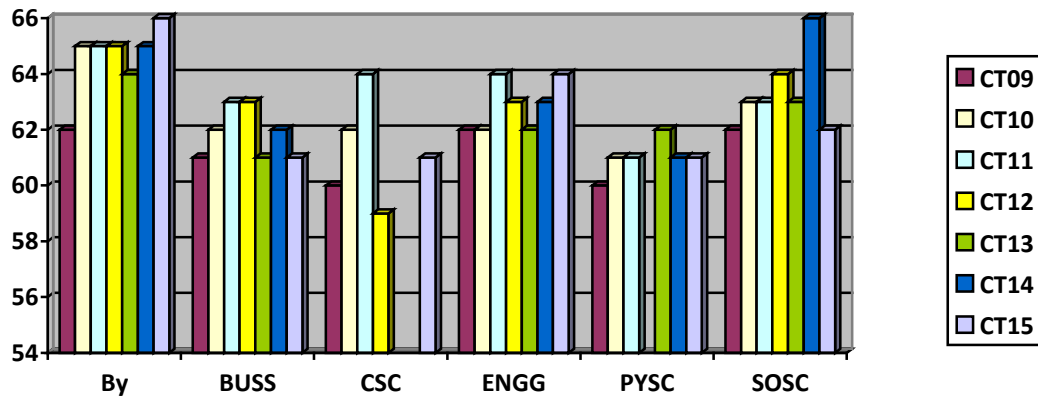
With respect to differences resulting from English being a first language or not, there were differences in W and CT as noted in Table 6 in favor of those whose English was first language. They were also higher in MR but not as much. In previous years, the situation was reversed.

Table 6. CAAP Results by Native Language

| English | N | W | MR | R | CT | SR |
|---------------------------|------------|-----------|-----------|-----------|-----------|-----------|
| First Language | 39 | 64 | 66 | | 64 | 62 |
| | | N=6 | N=22 | N=4 | N=39 | N=7 |
| Not First Language | 139 | 61 | 65 | 59 | 62 | 62 |
| | | N=22 | N=80 | N=14 | N=138 | N=22 |

Differences by major were also noted; students from Engineering and Math got highest score in MR. Biological sciences got highest scores on SCR and on CT. Social Sciences got 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 2009-14. In CT, BY and ENGG show an improvement this year, while other majors are either same or went down especially social sciences. As for MR, most of the majors maintained their averages, slight drop by PYSC and ENGG.

Figure 4. CT Scores by Major, Comparison with 2009-2015



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 2006-14. 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 have done equally well on both arts/literature and social science readings though they are lower than

norms on both. In arts/literature 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, have improved on college algebra, and they perform much higher than the norms.

Figure 5. Math Reasoning by Major, Comparison with 2009-15

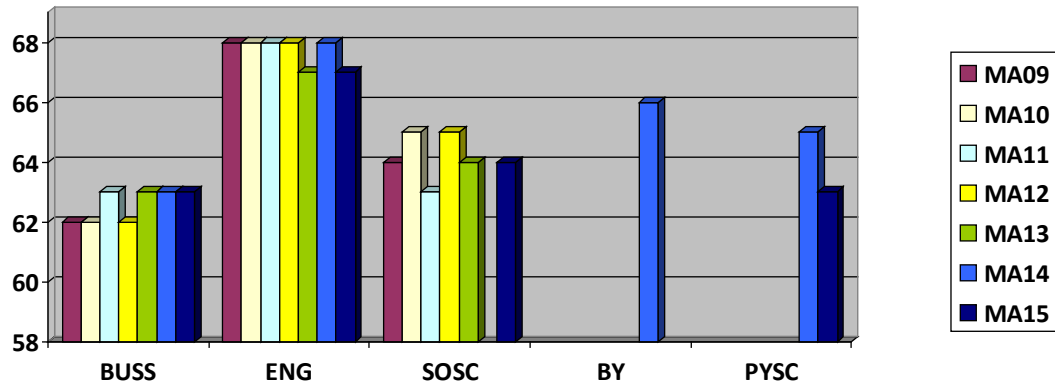


Table 7. Results by Major

| Major | N | W | MR | R | CT | SR |
|--------------------------|----|----|----|----|----|----|
| Agriculture | 5 | | | | 65 | |
| Architecture | 3 | | | | | |
| Biological Science | 14 | | | | 66 | 63 |
| Business | 26 | | 63 | | 61 | |
| Communications | 4 | | | | | |
| Computer & Info Sciences | 7 | | 64 | | 61 | |
| Education | 5 | | | | 58 | |
| Engineering | 47 | | 67 | | 64 | |
| Fine & Applied Arts | 2 | | | | | |
| Health Professions | 11 | | | | 60 | 61 |
| Home Economics | 15 | | | 60 | 62 | |
| Letters | 3 | | | | | |
| Math | 5 | | 66 | | 58 | |
| Physical science | 14 | | 63 | | 61 | 61 |
| Social science | 15 | 61 | 64 | 62 | 62 | |
| No response | 3 | | | | | |

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

| Test | N | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2007 | 2006 | Norms |
|---------------------------------|-----|------|------|------|------|------|------|------|------|------|-------|
| Writing: Usage/Mechanics | 28 | 16.4 | 16.8 | 16.6 | 16.5 | 17.3 | 17.2 | 17.1 | 18.1 | 16.8 | 16.5 |
| Writing: Rhetorical | 28 | 15.1 | 15.8 | 15.2 | 15.9 | 16.4 | 15.8 | 16 | 17.6 | 16.6 | 16.5 |
| Math: Basic algebra | 102 | 18 | 18.6 | 18.4 | 17.9 | 18.3 | 18.2 | 18 | 18.3 | 18 | 15.6 |
| Math: College algebra | 102 | 21 | 19.1 | 18 | 21.2 | 21 | 20.4 | 18.8 | 19.2 | 20.2 | 15.5 |
| Reading: Arts/literature | 20 | 14.6 | 16.4 | 14.8 | 15.4 | 15.8 | 15.6 | 15.6 | 16.2 | 14.3 | 15.1 |
| Reading: Social sciences | 20 | 15 | 15.4 | 16.5 | 14.7 | 16.6 | 16.7 | 15 | 15.9 | 15.5 | 16.2 |

Certificates of Achievement

Almost all students obtained Certificates of Achievements (88%) 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 2005-14. Percentages in 2014 were slightly lower than last year in nearly all subjects, but were significantly lower than previous years in Reading and SCR. This could be because of the lower ability of the group and lower 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 CT have always been the highest followed by SCR. Certificates in R have significantly dropped this year.

Some students obtained certificates in one subject, others in two. Table 10 details this information in comparison with 2009-14. The percentage of students who obtained two certificates (67% and 59% of total number of students) is among highest for the past ten years. 22 students (12%) 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 | | | | | | | | | |
|-----------|-----|---------------|----|----|----|----|----|----|-----|----|----|
| | | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 7 | 6 | 5 |
| CT | 130 | 72 | 75 | 62 | 73 | 61 | 55 | 38 | 52 | 49 | 55 |
| MR | 97 | 95 | 97 | 93 | 97 | 98 | 97 | 90 | 100 | 94 | 81 |
| SR | 19 | 63 | 69 | 60 | 69 | 80 | 67 | 62 | 78 | 45 | 72 |
| WS | 11 | 39 | 40 | 39 | 39 | 50 | 38 | 47 | 69 | 55 | 41 |
| R | 9 | 45 | 60 | 55 | 50 | 63 | 52 | 32 | 57 | 33 | 52 |

Figure 5. Number of Certificates by Test

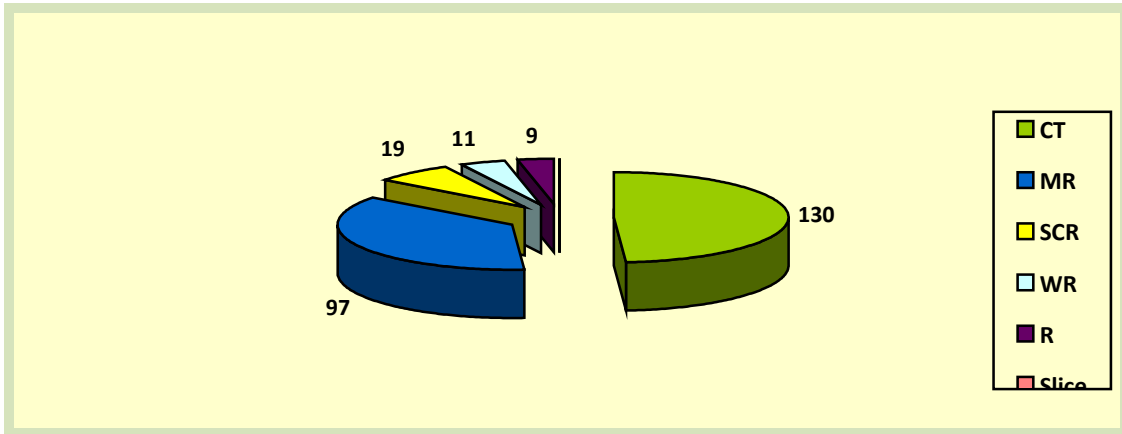


Table 10. Frequency of Number of Distributions, Comparison with 2009 -15

| | N | % Certificates | | | | | | | % Total | | | | | | |
|--------------------------------------|------------|----------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 15 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 15 | 14 | 13 | 12 | 11 | 10 |
| # who got certificates in 1 subject | 52 | 33 | 31 | 38 | 30 | 38 | 47 | 52 | 29 | 28 | 32 | 27 | 34 | 44 | 38 |
| # who got certificates in 2 subjects | 107 | 67 | 69 | 62 | 70 | 62 | 53 | 48 | 59 | 62 | 53 | 63 | 56 | 49 | 35 |
| Total | 159 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 88 | 91 | 85 | 90 | 90 | 93 | 73 |

Figure 6. Distribution of Certificates of Achievement by Subject

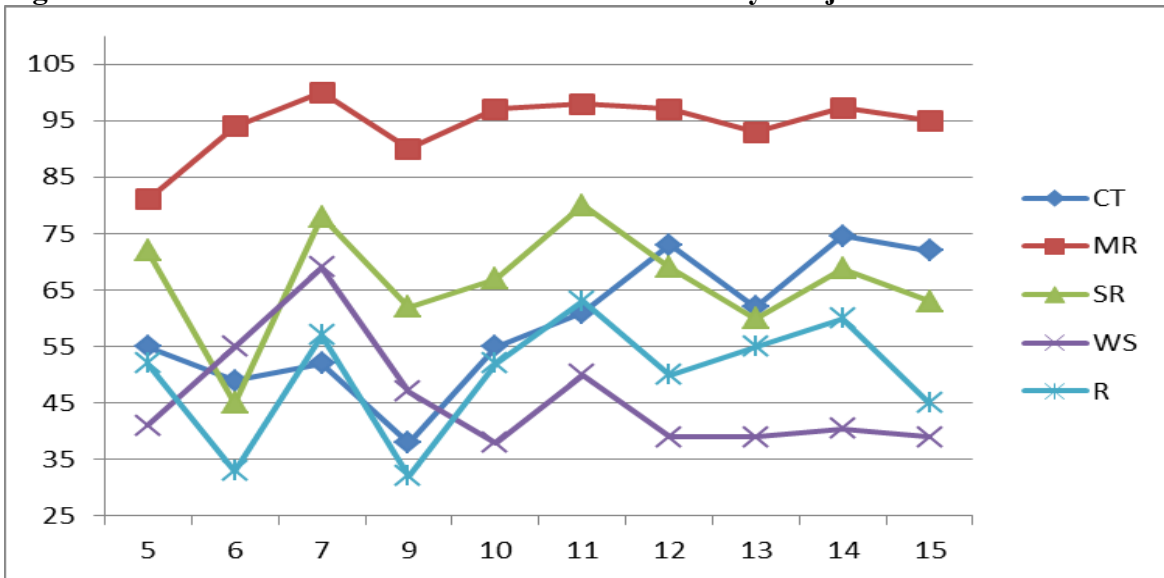
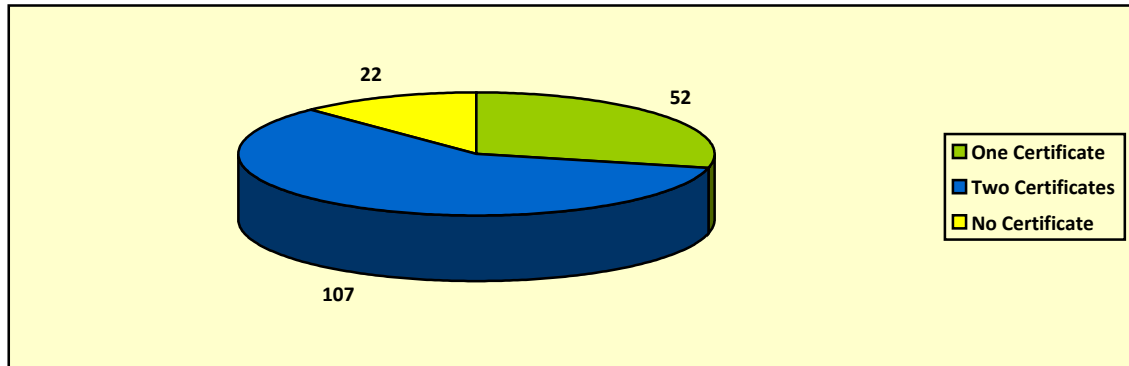


Figure 7. Distribution of Certificates



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 (21%), 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 lower performance on nearly all and this could be attributed to sample that took it as it is of lower ability (lower GPA) and has an under 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.