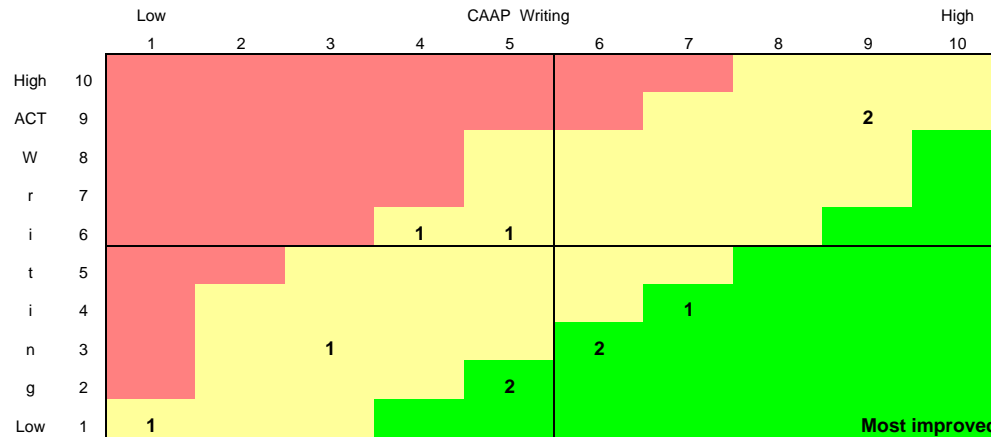


FIGURE 1

Linkage Study of ESU Economics Students following the same criteria used by ACT

Student Progress in Writing



- No economics students in the sample made less than expected progress in writing; whereas nine percent of the reference group was in this category.
- Six economics students in the sample (fifty-five percent) made expected progress in writing; whereas, eighty percent of students in the reference group were in this category.
- Five economics students in the sample (forty-five percent) made higher than expected progress in writing; whereas, eleven percent of students in the reference group were in this category.

The reference group stated above included all students across the United States at four-year institutions taking both the ACT and the CAAP; it is illustrated in the far right column below. The ESU middle column contains a sample of students at ESU; it is possible an individual student to be in more than one sample.

| Writing Progress | ESU Econ | ESU | US |
|----------------------|----------|-----|--------|
| Lower than expected | 0% | 1% | 9% |
| Expected progress | 55% | 82% | 80% |
| Higher than expected | 45% | 17% | 11% |
| n = | 11 | 518 | 77,845 |

Five students took the PPST and although all were above the cutoff score for the Teacher's College, they are not included since the linkage concordance for the ACT and PPST is not available. Fifteen students were exempt for the CAAP or PPST since they demonstrated proficiency by exemplary achievement, typically in course work outside the discipline

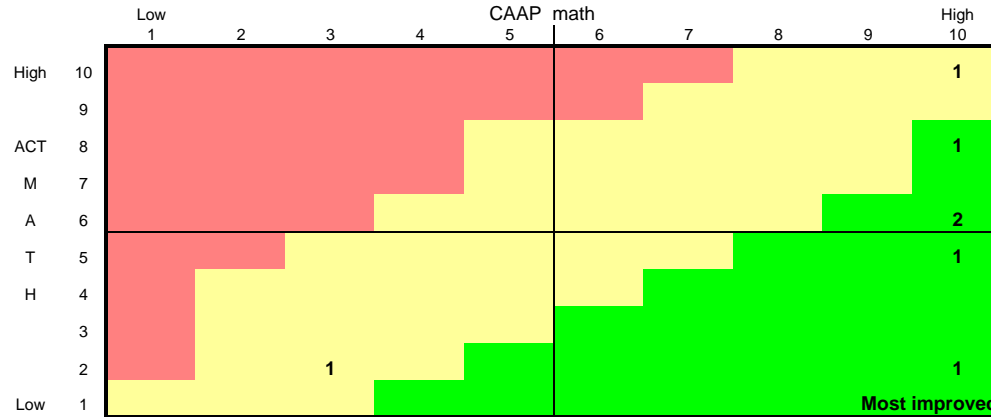
Decile rankings were derived from the Linkage Reports ACT/CAAP and ASSET/CAAP prepared for ESU by ACT for the academic year 2001-2002. These rankings are the closest available to the middle of the time period over which students took these assessments.

Figure 2

Linkage Study of ESU Economics Students using criteria established by ACT

| Math CAAP | Math Act | | N |
|-----------|----------|-----------|-------|
| 64.7 | 19.9 | Mean Econ | 7 |
| 57.7 | 20.0 | Mean ESU | 551 |
| 58.3 | 21.0 | Mean US | 74704 |

Student Progress in Math



- No economics students in the sample made less than expected progress in math; whereas seven percent of the reference group were in this category.
- Two economics students in the sample (twenty-nine percent) made expected progress in math; whereas, eighty-two percent of students in the reference were in this category.
- Five economics students in the sample (seventy-one percent) made higher than expected progress in math; whereas, eleven percent of students in the reference group were in this category.

The reference group stated above included students across the United States at four-year institutions who took both the ACT and the CAAP; it is illustrated in the far right column below. The ESU middle column contains a sample of students at ESU; it is possible an individual student to be in more than one sample.

| Progress in Math | ESU Econ | ESU | US |
|----------------------|----------|-----|-----|
| Lower than expected | 0% | 5% | 7% |
| Expected progress | 29% | 84% | 82% |
| Higher than expected | 71% | 11% | 11% |

Five economics students took the PPST and although all were above cutoff scores for the Teacher's College, they are not included since the linkage concordance for the ACT and PPST is not available. The Minimum "passing" (i.e., Cutoff Score) is 172 and their scores were 178, 181, 182, 187, and 187

Nineteen economics students were exempt for the CAAP or PPST since they demonstrated proficiency by a C or higher in calculus.

The decile rankings were calculated using the ACT high school profile for the graduating class of 2005. The CAAP rankings were calculated from the Institutional Summary Report provided to ESU in 2005 by ACT.

Table 1

| | First Matriculation | Math Courses | Degree |
|-------|---------------------|--------------------|--------|
| 19955 | 0 | BS | |
| 19961 | 1 | BS | |
| 19961 | 1 | BS | |
| 19965 | 0 | BS | |
| 19965 | 1 | BS | |
| 19971 | 1 | BS | |
| 19975 | 0 | BS | |
| 19975 | 1 | BS | |
| 19975 | 0 | BS | |
| 19981 | 0 | BS | |
| 19981 | 0 | BS | |
| 19985 | 1 | BS | |
| 19985 | 1 | BS | |
| 19991 | 3 | BS | |
| 19991 | 4 | BS | |
| 19993 | 0 | BS | |
| 20001 | 0 | BS | |
| 20001 | 5 | BS | |
| 20005 | 0 | BS | |
| 20005 | 1 | BS | |
| 20013 | 3 | BS | |
| 20013 | 0 | Dropped out senior | |
| 20015 | 1 | BS | |
| 20021 | 1 | BS | |
| 20021 | 1 | BS | |
| 20025 | 2 | BS | |
| 20025 | 1 | BS / CalcII | |
| 20025 | 4 | BS | |
| 20031 | 2 | BS | |
| 20031 | 1 | BS | |
| 20031 | 0 | BS | |
| 20031 | 1 | BS | |
| 20045 | 1 | BS | |
| 20041 | 5 | BS | |
| 20033 | 6 | BS | |
| 20035 | 2 | BS | |
| 20045 | 2 | Soph | |
| 20013 | 0 | Junior | |
| 20015 | 1 | Senior | |
| 20021 | 4 | Senior | |
| 20021 | 12 | Senior | |
| 20023 | 1 | Senior | |
| 20031 | 2 | Senior | |
| 20031 | 0 | Senior | |
| 20031 | 9 | Senior | |
| 20041 | 3 | Senior | |
| 20045 | 7 | Senior | |

All except two of the current econ students have had calculus and most have had more.

Only one student in the last three years graduated without taking calculus or beyond; whereas in previous years it was common.

(T+A20the students with six or more math classes beyond MA 110 were math majors (or have a major in both math and econ).