Employment and Training Administration Conference

Recovery and Reemployment Research
Linking Education and Employment Data
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CNA
ANALYSIS & SOLUTIONS

Introduction

- Goals of the presentation
  - Describe Florida longitudinal school to work database.
    - Discuss its strengths and weaknesses.
  - Describe analyses of the 1996 9th grade cohort using the database.
    - High school achievement.
    - College enrollment, persistence, credential attainment.
    - Post school earnings.
  - Describe additional studies that could be conducted.
    - Cross-college performance measurement to
      - ➢ Identify exemplary programs
      - ➢ Create benchmarks to track improvement.

The database

- Tracks all 225,000 students attending Florida public high schools in 1996 through high school, into college, and into the workforce 1996-07.

- Information:
  - **High school transcripts** —course name, when taken, grade.
  - **Attendance and enrollment** —days present/absent each year
  - **Demographics** —age, race, sex, and
    low-income (receipt of Free and Reduce Price Lunches (FRLs).
  - **SAT/ACT test scores**.
  - **College transcripts** —course name, grade, when taken, institution.
  - **College credentials** —receipt of certificates and degrees.
    Certificates are awarded for attainment of career-oriented skills such as IT—programming, health—phlebotomist, trades—plumbing.
  - **Wage records** —quarterly earnings from each employer.

Timeline for a typical BA student

- Transition to high school—starting 9th grade in AY96 (fall 1996)
- Transition to college—fall 2000
- Transition to workforce—spring 2004
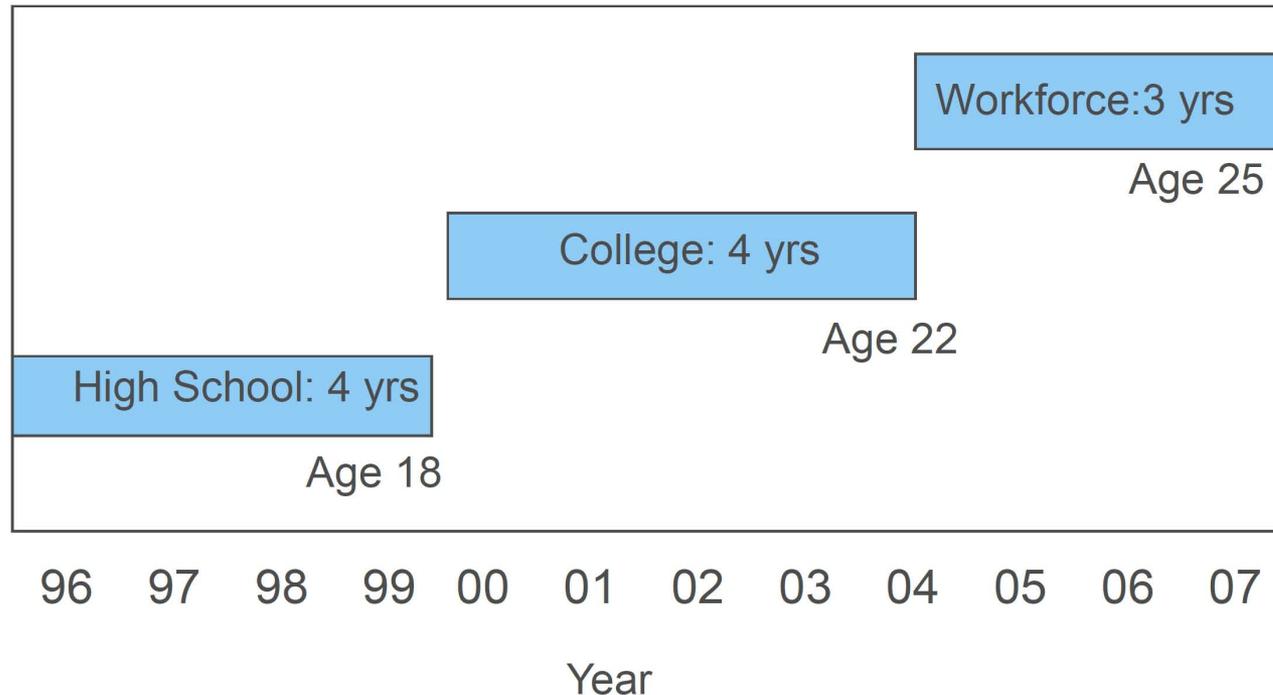
Strengths of the Database

- Covers an 11-year period
  - Sufficient to track students into the workforce.

- Includes an exceptionally large sample.
  - Allows examination of the returns to specific courses in high school and college.
  - Allows examination of individual institutions and separate subgroups.

- Data are highly accurate
  - Transcript data are official records.
  - Wage record data are used to determine payroll tax amount and UI benefit entitlement.
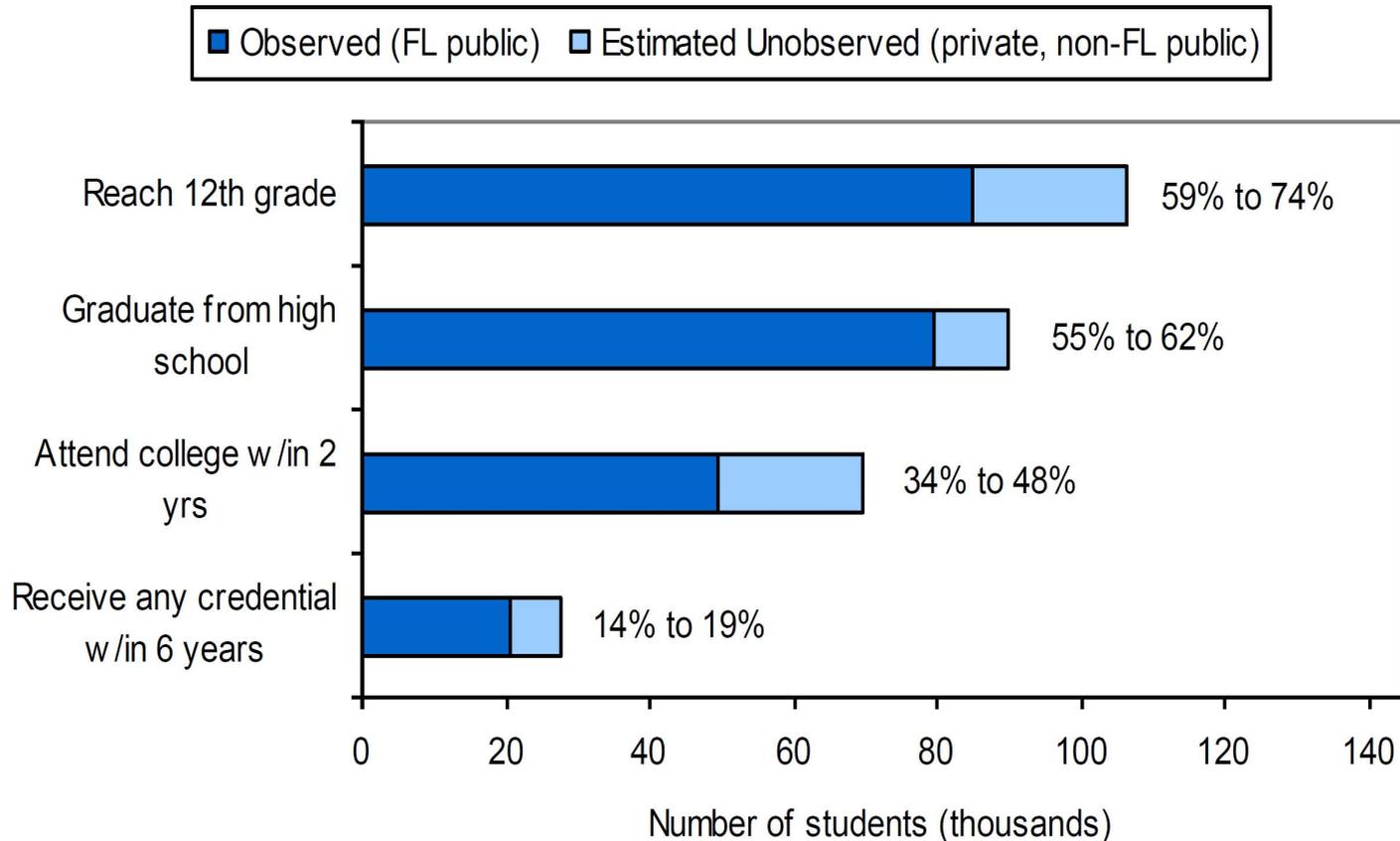
Weaknesses of the Database

- Data on socio-economic status is limited to receipt of Free and Reduced Price Lunch (FRL) in 8th grade.

- High school standardized test scores are not available.

- Does not cover transfer to private or out-of-state schools.
  - National Student Clearing House data could track postsecondary enrollment.

- Initial intent of community college students and major of degree program college students are not known.
  - Program data may provide added information.

- Location of employment, occupation, and hours is not known.
- Omits self-employment, out-of-state earnings, and federal government earnings
- Projection needed to determine long-term earnings effects.
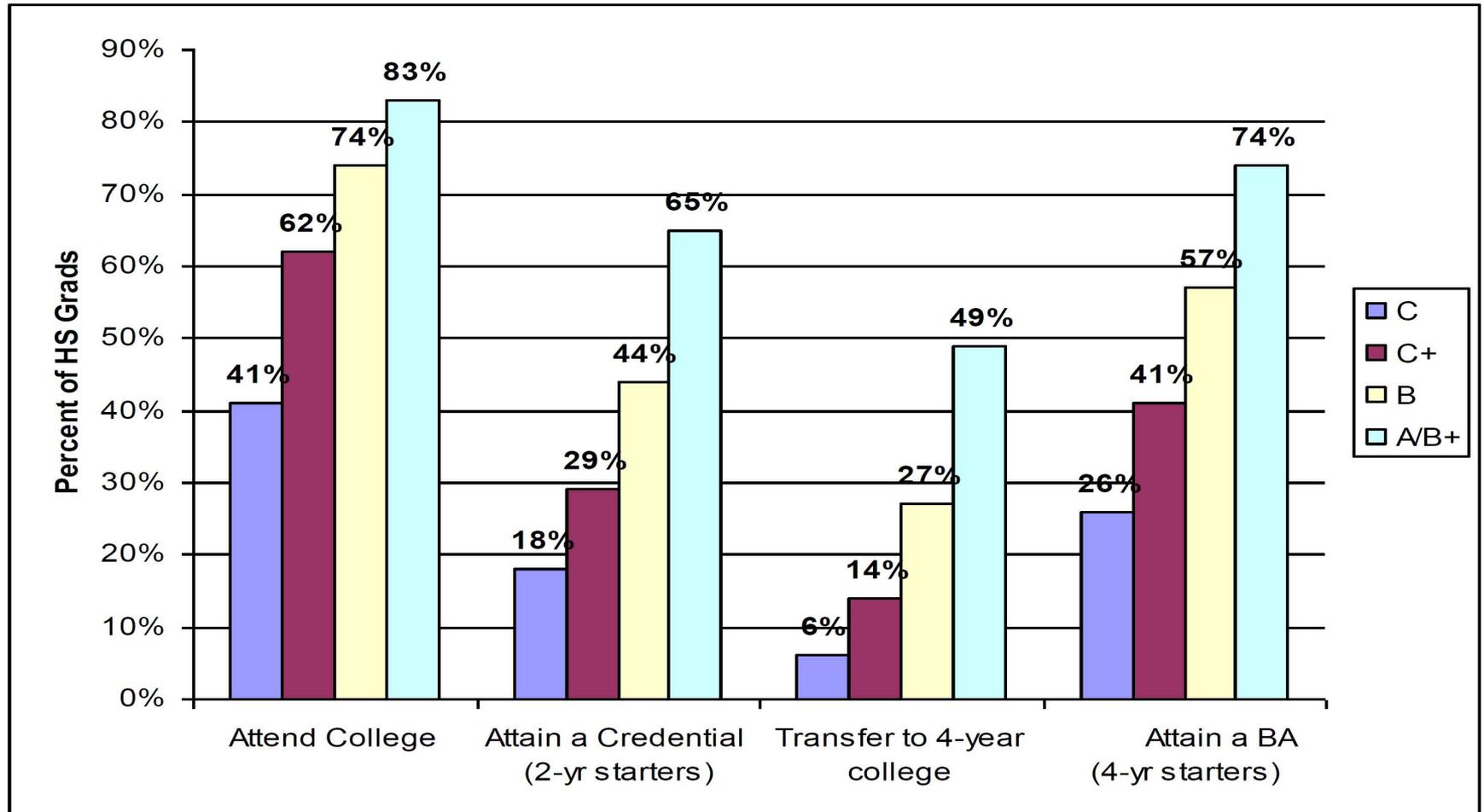
Policy-Related Questions Addressed

- What are the educational pathways to high paying jobs that keep students out of poverty as adults?

- How do these pathways differ for students whose high school performance differs?

- To what extent do students take advantage of pathways open to them?
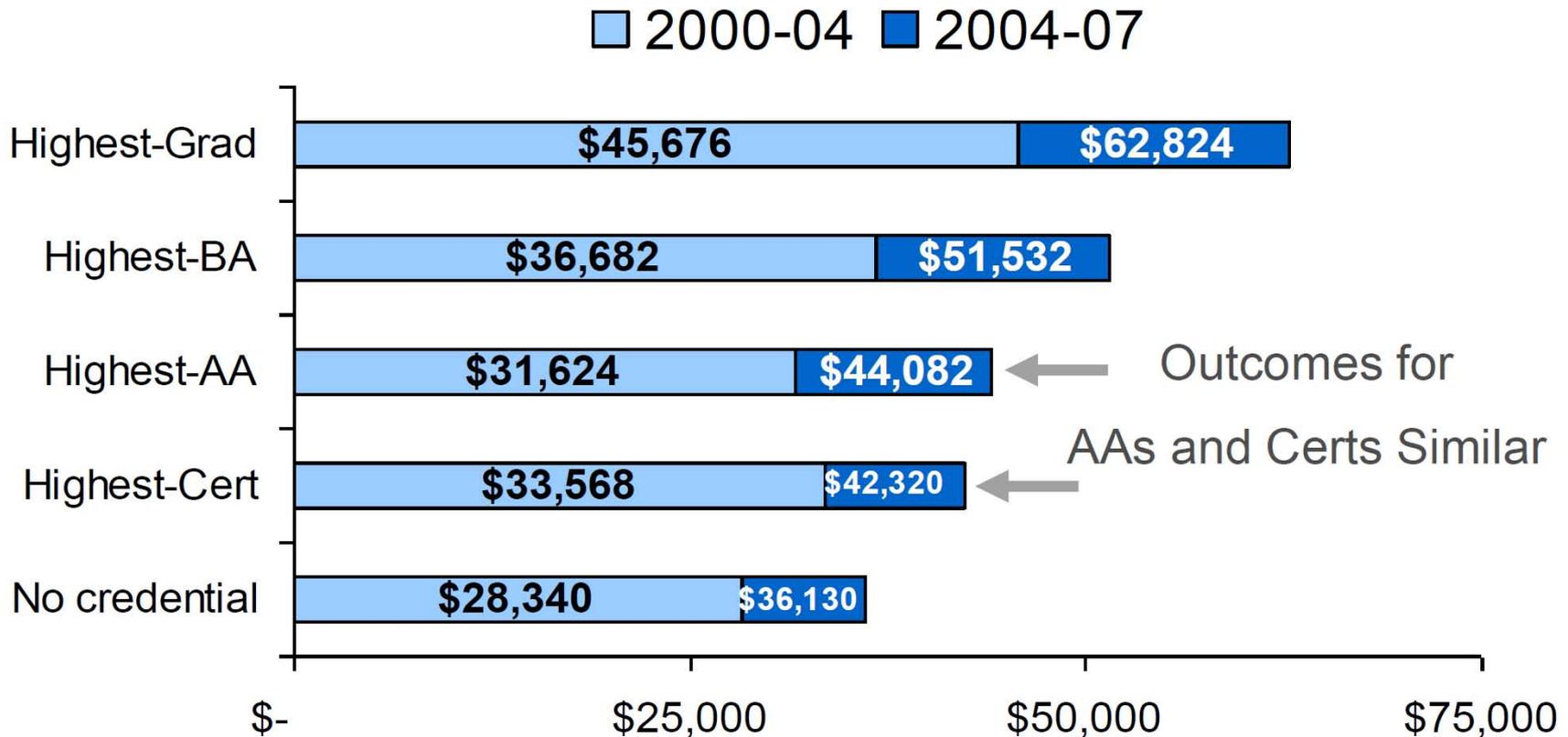
The Education Pipeline

Less than 20% of 9th graders receive a postsecondary credential

Legend: ■ Observed (FL public) □ Estimated Unobserved (private, non-FL public)

Category	Range
Reach 12th grade	59% to 74%
Graduate from high school	55% to 62%
Attend college w/in 2 yrs	34% to 48%
Receive any credential w/in 6 years	14% to 19%

Number of students (thousands)

HS-GPA Strongly Affects College Outcomes

Credentials Boost Earnings

Highest annual earnings for students <u>leaving</u> college
and working full time.

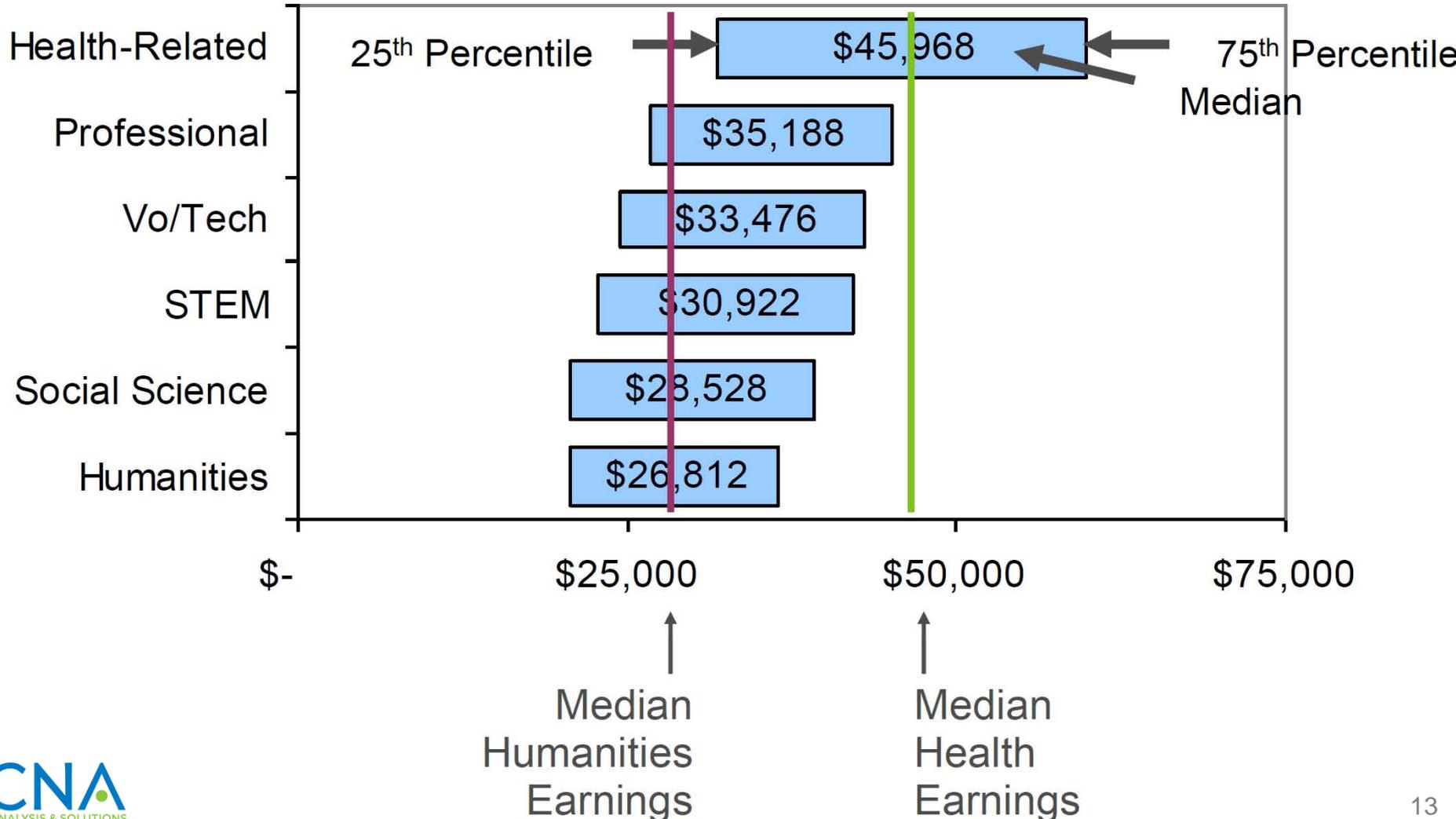# Factors strongly affecting post-schooling earnings

- <u>Prior work experience</u> – raises earnings
  - Certificate students have more work experience than degree students in college the same amount of time.

- <u>Having a high GPA in high school</u>– raises earnings independent of field and # of college courses completed
  - Students with high GPAs would have higher earnings without additional schooling.

- <u>The number of college course completed</u>– raises earnings by
  - $500 per course for certificate students,
  - $0 per course for AAs, and
  - $200 per course for BA and grad students.

Key influence on earnings: Field of Study

- Health Related

- Professional
  - Accounting, Communications, Financial Services, Law, Management, and Marketing

- Vo/Tech – Vocational/Technical
  - Building trades – Carpentry, Electrical, Masonry, etc.
  - Cosmetology/Barbering, Machinery/Automotive repair, Paralegal,

- STEM – Science, Technology, Engineering, and Math
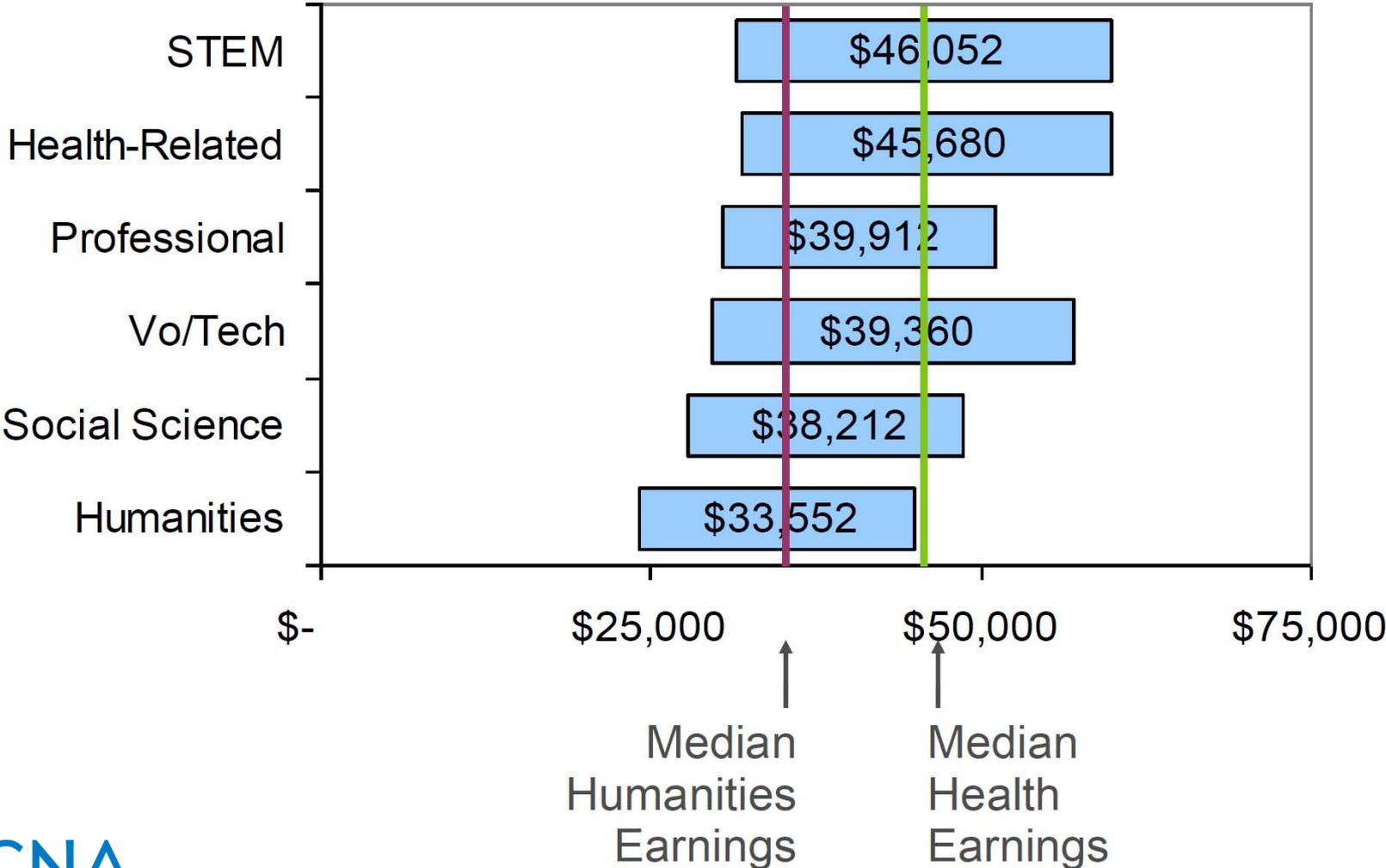
- Social Sciences

- Humanities

Certificate and AA field of study strongly affects earnings

Post-College Earnings Certificates & AAs

BA field of study modestly affects earnings

Post-College Earnings for BAs

Field	Earnings
STEM	$46,052
Health-Related	$45,680
Professional	$39,912
Vo/Tech	$39,360
Social Science	$38,212
Humanities	$33,552

$- $25,000 $50,000 $75,000

Median Humanities Earnings

Median Health Earnings
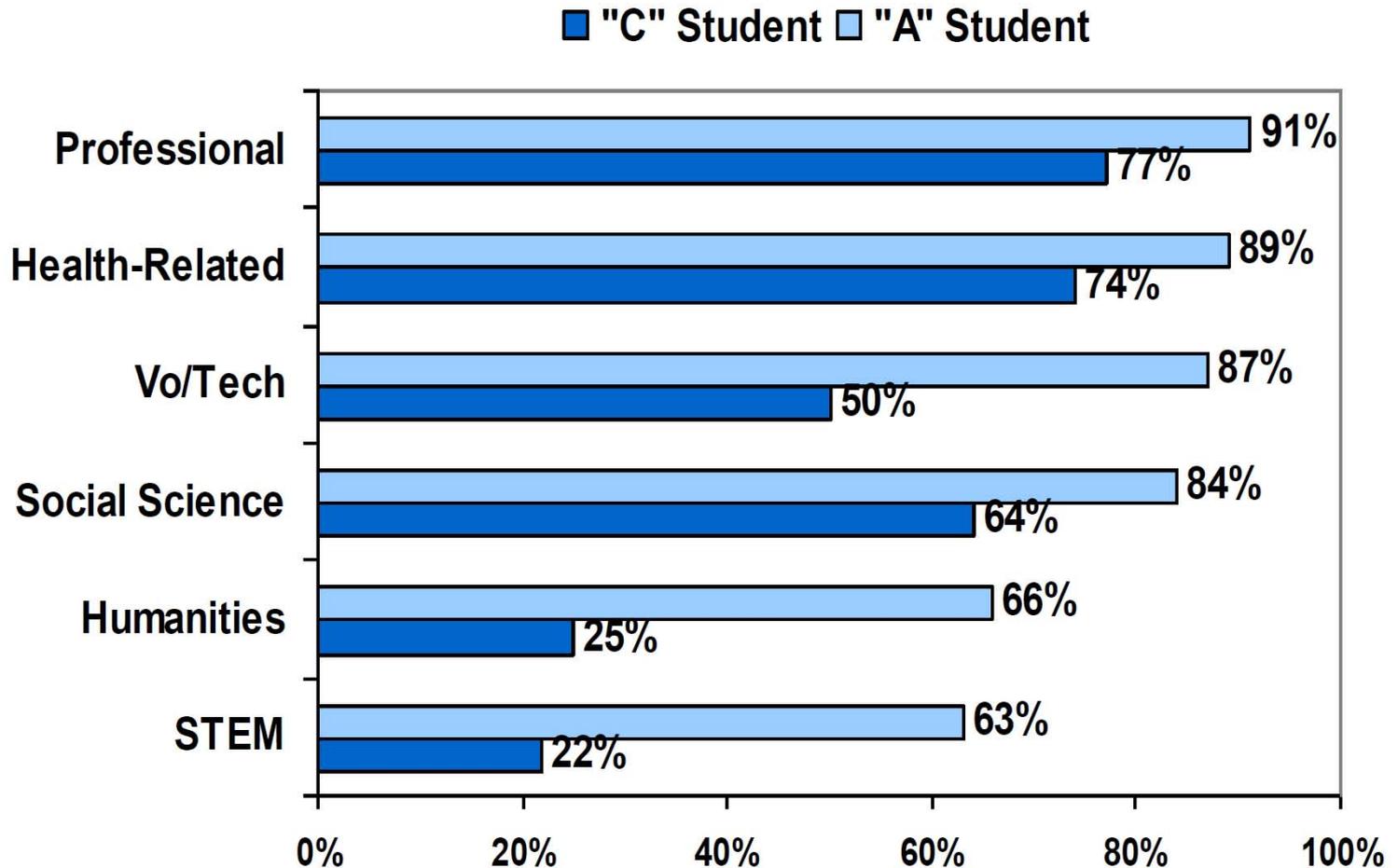
Returns increase with education attainment,

but except for certificate and grad students, many students leave college without high-value workplace skills
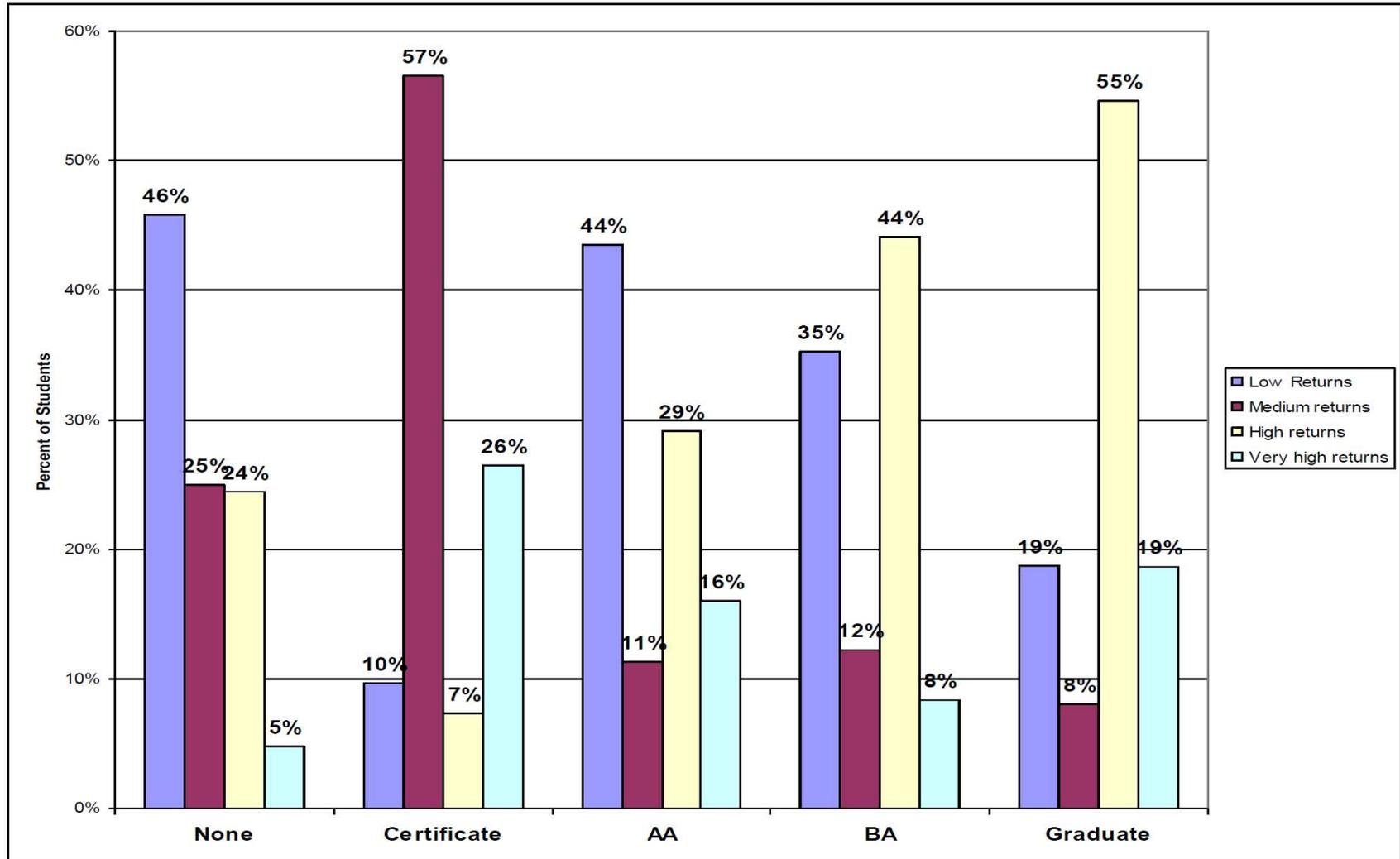
Field of Study Affects Credential Attainment - Especially for "C" Students

Likelihood of completing a credential by field for students with 24+ credits

Ways to Boost Earnings

- Avoid being in a low-income family.
 (Not an action item unless reincarnation is possible.)

Follow the advice your mother gave you:

- Perform well in high school.

- Progress as far as possible in college.

- Select high-return college courses.

Low-Income Background Reduces Attainment/Earnings

- Non-FRLs are 1.6 times more likely to attend college.
  - 39% of non-FRLs attend versus 25% of FRLs.

- Non-FRLs are 2.2 times more likely to receive a credential.
  - 20% of non-FRLs receive a credential versus 9% of FRLs.

- Non-FRLs are 1.4 times more likely to receive a credential given they attend college.
  - 51% of non-FRLs attending receive a credential versus 36% of FRLs.

Policy Implications: **Identify ways to boost earning**

- **Improve high school performance.**

- <u>For low performing students:</u>
  - **Increase AAs and certificates in <u>high return fields.</u>**
  - **Increase transfer rate of AA students.**

- <u>For high performing students:</u>
  - **Increase BAs and Grad degrees in <u>any field.</u>**

Gates II Study

1. **Investigate the effect of work experience on course selection and persistence.**

2. **Develop performance measures in collaboration with Florida community college officials.**

3. **Use those measures to identify high performing colleges.**

4. **Investigate source of performance differences to see if there are transferable lessons to be learned.**

5. **Determine which measures college officials would like to put in place to gauge rates of improvement.**

Additional Extensions

Assess impediments and means to overcome them.

1. **Survey students entering community college to determine:**
   - Reason for attending college.
   - Expectations with respect to persistence, credentials, and earnings.
   - Rigor of planning process.
   - Knowledge of sources of financial aid and support.
   - Sources of assistance and support used.
   - Gaps in support.

2. **Provide realistic assessment of outcomes to students**:
   – Compare expectations to projections based on our analysis.
   – Describe options more likely to meet goals.
   – Provide referrals to get additional help.
3. **Assess impact of new information on course selection, persistence, credential attainment, and earnings.**
4. **Determine impediments encountered during first semester.**
5. **Determine effect of providing supportive services.**
6. **Examine the extent to which completion of CTE courses requires special aptitudes.**
7. **Assess the extent to which vocational aptitude tests would help students make better choices.**
8. **Conduct similar studies to determine:**
   – Why <u>high school seniors</u> do not attend college.
   – Why <u>AA students</u> don't transfer to 4-year colleges.