# Opportunities to earn industry certifications in high school: Implementation of Florida's Career and Professional Education Act

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## Background

Industry-recognized certifications are increasingly important credentials for graduates to bring to the job market. Florida introduced an innovative program to increase the number and variety of certifications earned by high school students. Florida's Career and Professional Education (CAPE) Act creates opportunities for high school students to earn industry certifications. Certifications on the approved CAPE list must

- be linked to key Florida industries,
- be attainable in secondary school, and
- require at least 150 course hours.

## Data

- 2018 survey of Florida traditional and vocational high schools
  - 1 survey per school, completed by the CTE lead or principal
- Florida Department of Education's Education Data Warehouse
  - Student, teacher, and course data
- National Center for Education Statistics Common Core of Data
- U.S. News Best High Schools rankings

## Method

We used Florida's Education Data Warehouse to identify students attempting to earn or earning certifications and linked those records to a school-based survey to identify implementation practices, including leadership, teacher support, inclusive recruitment, and promotion strategies.

Multilevel logistic regression models predicted certification examination attempts and certification examination passes.

### School factors

- % CTE teachers in the school
- % CTE courses in the school
- Performance index (proficiency in math and reading tests)
- School poverty level (% students eligible for free or reduced-price lunch)
- School size (total enrollment)
- Charter school (yes/no)

### CAPE implementation strategies

- Strong leadership: School has a CTE coordinator and goals for the numbers of students taking and passing exams.
- Teacher support: School provides professional development (PD) only, common planning time only, or both PD and planning time.
- Inclusive recruitment: School recruits all students or all CTE students to take certification exams.
- Promotion to students: School promotes the CTE program by providing information only, by recognizing or rewarding certification earners only, or by doing both.

### Percentage of schools using each implementation strategy
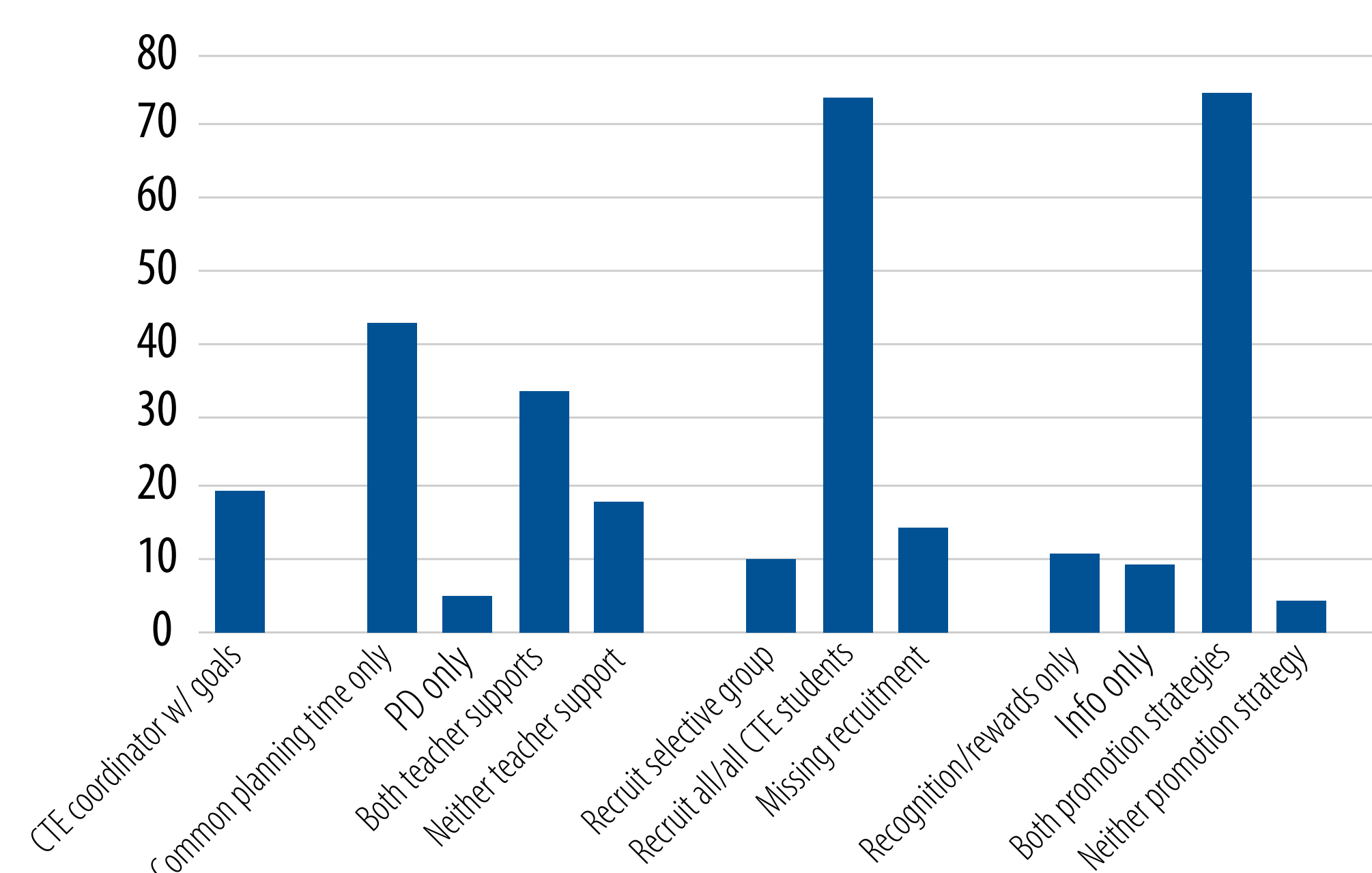


### Leadership attitudes about the CAPE program

- Belief that the program benefits students
- Belief that the program is challenging to manage

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High school students in schools with strong career and technical education (CTE) leadership and inclusive CTE recruitment policies are more likely to earn industry certifications.

Even schools with relatively few CTE teachers and courses can use effective promotional strategies.

### Marginal predicted means for certification attempts
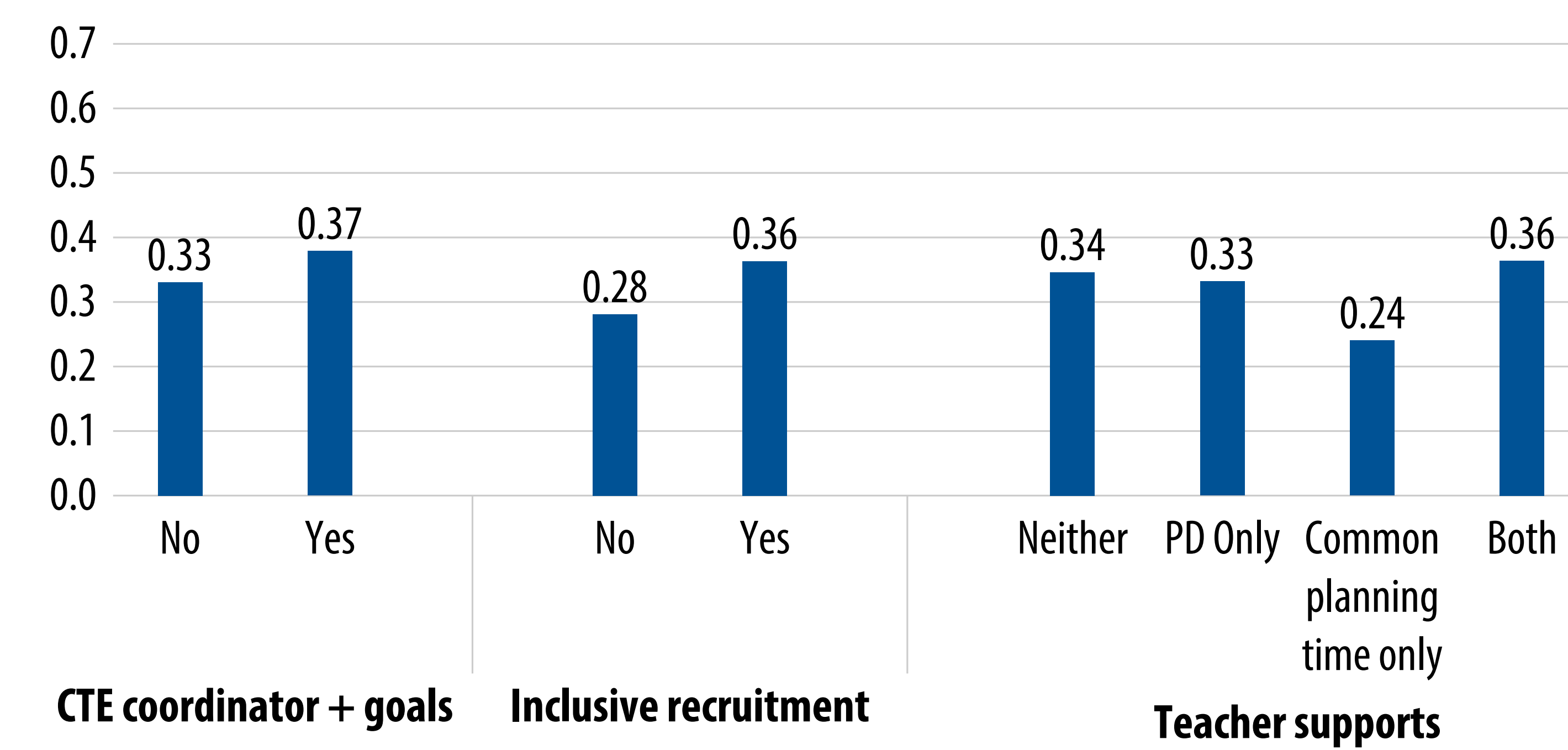


CTE = career and technical education; PD = professional development.
Only significant findings shown ($p < 0.05$).

### Implementation strategies associated with taking and passing certification exams

| Implementation strategies | Certification exam attempt | Certification exam pass | Certification exam pass conditional on attempt |
|---|---|---|---|
| **CTE coordinator + goals** | 1.29* | 1.27 | 0.98 |
| **Teacher support (both = reference)** | | | |
| Neither support | 0.92 | 0.92 | 1.06 |
| Professional development only | 0.84 | 0.92 | 1.15 |
| Common planning time only | 0.50** | 0.59** | 1.25 |
| **Promotion (both = reference)** | | | |
| Neither promotion strategy | 0.90 | 0.79 | 0.78 |
| Information only | 1.03 | 0.98 | 0.90 |
| Recognition/awards only | 0.87 | 0.90 | 1.01 |
| **Recruitment practices (exclusive recruitment = reference)** | | | |
| Inclusive recruitment | 1.59** | 1.52** | 0.96 |
| Recruitment missing | 1.30 | 1.36 | 1.20 |
| **Leadership attitudes** | | | |
| Program benefits students | 0.99 | 1.02 | 1.09 |
| Program is challenging to manage | 1.02 | 1.11 | 1.23 |

\*$p < 0.05$; \*\*$p < 0.01$
CTE = career and technical education.
NOTE: Models account for student characteristics, including sex, race/ethnicity, free or reduced-price lunch status, limited English proficiency status, disability status, gifted status, suspensions, grade point average, attendance, and all school factors.

www.flcertificationstudy.org

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## What school factors influence each key promotion strategy?

Analyses of the influence of school factors on each key promotion strategy found that very few school factors are associated with schools' choices of key implementation strategies (strong leadership, teacher support, inclusive student recruitment).

- Strong leadership: No significant school-level predictors.
- Teacher supports: School economic disadvantage is positively associated with offering PD supports for teachers.
- Inclusive student recruitment: Charter schools are less likely to inclusively recruit students, and higher performance index is associated with decreased likelihood of inclusive recruitment.

### School factors and promotion strategies

| | Strong leadership | Teacher supports (neither support as reference) | | | Inclusive recruitment |
|---|---|---|---|---|---|
| | | PD only | Common planning only | Both | |
| **% CTE courses** | 0.01 | 0.02 | -0.04 | 0.02 | -0.03 |
| **% CTE teachers** | 0.02 | 0.02* | 0.05 | -0.02 | 0.03 |
| **% free lunch eligible** | -0.01 | 0.02 | 0.02 | 0.03* | -0.01 |
| **School size** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Urban** | 0.02 | 0.46 | 0.35 | 0.72 | -0.50 |
| **Suburban** | 0.13 | 0.35 | 0.99 | 0.08 | -0.33 |
| **Charter** | -0.36 | 0.90 | 0.57 | -0.23 | -1.38* |
| **Performance index** | 0.01 | 0.02 | 0.01 | 0.01 | -0.02* |

\* $p < 0.05$
CTE = career and technical education; PD = professional development.

## Conclusion

Having higher percentages of CTE teachers and courses and higher performance index scores are positively associated with the likelihood that students will try and succeed in earning certifications.

Even so, students in schools with higher rates of economically disadvantaged students are more likely to try and succeed in earning certifications.

Beyond a school's resources, implementation strategies can influence the likelihood that students will earn certifications. Strong leadership and inclusive recruitment practices are associated with overall certification attempts and successes.

When limiting the sample to students who attempt a certification, we found that leadership belief that the program is challenging to manage is positively associated with certification success. These leaders may perceive greater challenges because their school invests more in ensuring student success.

Having a higher percentage of CTE offerings is associated with certification earning, but it does not influence implementation strategies. Even schools with a relatively small CTE component can use effective promotion strategies.