The Role of Industry-Recognized Credentials in High School Completion and Postsecondary Enrollment in the State of Florida

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Jobs that pay livable wages increasingly call for people to have education beyond a high school diploma.
Demand for postsecondary credentials

- Nationally recognized, independently created industry certifications are one path forward.
- Many states are finding ways to promote industry certifications to students.
- In 2017, 39 states had some formal policy associated with industry-recognized credentials (ACTE 2017).
Florida’s Career and Professional Education (CAPE) Act

Established in 2007 to provide rigorous, relevant coursework leading to industry certification and college credits

State approved industry certifications
- Critical to FL employers
- Achievable by secondary students
- Require a minimum of 150 instructional hours

In 2017-18
- 236 specific certifications nested in 12 career areas
- CAPE Industry Certification Funding List

In 2021, Florida will audit all of the certifications and associated courses to see that they are aligned with employment outcomes.
Incentives for earning certifications

Students and families do not
✓ Pay for exam costs
✓ Schedule exams
✓ Arrange transportation to exam site

Students do
✓ Receive relevant school-based instruction
✓ Get the potential for college credit via some certifications

Schools get points in School Report Card
+ Number of students taking exams
+ Number of students passing exams
Dramatic increase in certifications earned by Florida high school students

954 certifications earned in 2007-08

123,829 certifications earned in 2017-18

130% increase

RESEARCH QUESTIONS:

- Do students have equal opportunities to earn certifications?
- Does earning a certification benefit students?
Florida Industry Certification Study

- Exploratory study funded by IES
  - 7/2017 through 6/2021

- Builds upon research conducted for OCTAE to examine the rollout of this program.
  - First cohort of high school students under CAPE Act (Grade 9 in 2007-08)
    - Florida administrative data
    - Interviews with district officials
Study aims

Identify which high school practices are associated with a higher likelihood of passing certification exams

Test whether obtaining a certification is associated with secondary and postsecondary academic success

And to determine whether

- These relationships are the same for different kinds of students
- These relationships are the same for different kinds of certifications
State Context: Certification Policies and Incentives

District Characteristics
- Locale
- Demographics
- Certification offerings

School Characteristics
- Locale
- Demographics
- Curricular focus
- Certification offerings

District Policies and Practices
- Leadership practices
- Staffing practices
- Program practices

School Policies and Practices
- Leadership practices
- Staffing practices
- Program practices

Research Question 1

Student Background

Secondary Academic Outcomes
- Attendance
- Graduation

Postsecondary Academic Outcomes
- Postsecondary enrollment
- Enrollment at distinct levels
- Postsecondary persistence
- Postsecondary completion

Research Question 2

Student Course-taking

Certification Attempt

Certification Attainment

Labor Force Outcomes
- Employment status
- Job field
- Job stability
- Wages
<table>
<thead>
<tr>
<th>Data sources</th>
<th>Description</th>
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<tbody>
<tr>
<td>RTI-developed web-based survey</td>
<td>School and district practices for administering CAPE program</td>
</tr>
<tr>
<td>Florida DoE Education Data Warehouse</td>
<td>Student certification-earning, academic progress in high school and college</td>
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<tr>
<td>Burning Glass data</td>
<td>Labor market demand for certifications</td>
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<tr>
<td>NCES Common Core of Data Public School Universe</td>
<td>School and district context</td>
</tr>
<tr>
<td>National Student Clearinghouse</td>
<td>College enrollment, persistence, degree attainment for those not enrolled in public FL postsecondary institutions</td>
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</table>
Statewide survey on district and high school CAPE implementation

In 2018, we conducted a web-based survey of every district and traditional or vocational high school in Florida.

77% response rate
96% of the schools and all districts offered certifications

KEY TOPICS
- Program administration
- Strategies for promoting certifications
- Teacher qualifications
- Challenges and benefits of program
- Program costs
Florida Education Data Warehouse

We requested data for four cohorts of first-time 9th grade students, following them from grade 8 into postsecondary education.

**Student**
- Demographic data
- Middle school/high school transcript
- Certification attempts and earning
- High school exit/completion
- Postsecondary enrollment (Florida public institutions)
- Postsecondary degree attainment

**Teacher**
- Credentials
- Courses taught
## Expected grades of students in each cohort, each year

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<td>10</td>
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<td>9</td>
<td>10</td>
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<td>12+1</td>
<td>12+2</td>
<td>12+3</td>
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<td>Cohort 4</td>
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<td>11</td>
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Burning Glass data

- One record per job posting (plus file with 1+ certifications per job)
- Identify credentials needed for job
- 1,129,587 unique job postings for January-December 2017:
  - 17% of these job postings required one or more sub-baccalaureate certifications (n = 187,979).
  - These 187,979 jobs require a total of 307,753 sub-baccalaureate certifications (about 1.6 per job). These break down as follows:
    - 62% in Health Science
    - 15% in Business Management and Administration
    - 12% in Information Technology
    - 2% in Hospitality & Tourism
    - 2% in Law, Public Safety & Security
    - The remaining 7% are in smaller categories
Currently creating analytic files

- Link the survey data to the FL administrative data for analyses of factors influencing certifications
- Map credentials in Burning Glass data to those on the CAPE Funding List.
- Create student analytic file from various FL datasets
- Propensity score matching to identify comparison group
  - Certification earners to non-earners
  - Earners in a particular certification area to certification-earners in other certification areas.
INITIAL FINDINGS
64% of schools emphasize particular career areas

- Information Technology: 66%
- Health Science: 55%
- Arts, AV Technology, & Communication: 50%
- Engineering & Technology Education: 45%
- Business Management & Administration: 44%
- Agriculture: 34%
- Hospitality & Tourism: 34%
- Architecture & Construction: 22%
- Law, Public Safety, & Security: 10%
- Transportation & Distribution: 10%
- Manufacturing: 8%
- Human Services: 4%

Note: Because respondents could choose more than one area, percentages do not total 100%.
Do schools set goals for certifications?

- We do not set goals: 11%
- For both taking and passing: 68%
- For passing exams: 14%
- For taking exams: 4%

Note: Because of rounding, percentages do not total 100%.
### How do schools promote certifications?

<table>
<thead>
<tr>
<th>Promotion Strategy</th>
<th>Percent of Schools</th>
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<tbody>
<tr>
<td>Recognizing students</td>
<td>82%</td>
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<tr>
<td>Advertising on school’s website</td>
<td>67%</td>
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<tr>
<td>Announcing at school events</td>
<td>67%</td>
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<tr>
<td>Sending information to students' home</td>
<td>43%</td>
</tr>
<tr>
<td>Providing incentive or reward program</td>
<td>35%</td>
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<tr>
<td>Advertising on social media</td>
<td>3%</td>
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*Note: Because respondents could choose more than one promotion strategy, percentages do not total 100%.*
Which students do schools encourage to take these exams?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percent of Schools</th>
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<tbody>
<tr>
<td>All students</td>
<td>30</td>
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<tr>
<td>All CTE students</td>
<td>66</td>
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<tr>
<td>Teacher recommendations</td>
<td>21</td>
</tr>
<tr>
<td>Grades in prerequisite courses</td>
<td>21</td>
</tr>
<tr>
<td>Non-academic criteria (attendance)</td>
<td>8</td>
</tr>
<tr>
<td>Academic proficiency - all subjects</td>
<td>12</td>
</tr>
</tbody>
</table>

Note: Because respondents could choose more than one set of students, percentages do not total 100%.
What logistical challenges do schools and districts face?

- Challenges in scheduling exams: 65% (District), 51% (School)
- Lack of tech/equipment: 17% (District), 28% (School)
- Insufficient staff time to manage it: 38% (District), 23% (School)

Note: Because respondents could choose more than one challenge, percentages do not total 100%.
What staffing challenges do schools and districts face?

Note: Because respondents could choose more than one challenge, percentages do not total 100%.
What cultural challenges do schools and districts face?

- Difficulty matching students and exams: District 7, School 15
- Shifts resources from other programs: District 11, School 16
- Meets resistance from teachers: District 39, School 24
- Lack of student interest: District 38, School 56

Note: Because respondents could choose more than one challenge, percentages do not total 100%.
INFORMATION FROM ADMINISTRATIVE DATA
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<td>13,898</td>
<td>17,600</td>
<td>174</td>
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<td>13,237</td>
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<td>12,152</td>
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Number of students earning certifications each year, by cohort
Cohort-level certification rate

Of 9th grade students in 2013-14

22% earned a certification within 4 years.

<table>
<thead>
<tr>
<th>School classification</th>
<th>Definition</th>
<th># Schools 2016-17 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low certification</td>
<td>Less than 10%</td>
<td>96 (25%)</td>
</tr>
<tr>
<td>Middle certification</td>
<td>10 – 25%</td>
<td>181 (48%)</td>
</tr>
<tr>
<td>High certification</td>
<td>More than 25%</td>
<td>104 (27%)</td>
</tr>
</tbody>
</table>
In 2017, we wrote a report for OCTAE about the first cohort of students going through this program.
High school graduation: initial cohort, certification earners vs. non-earners
2-year college outcomes: initial cohort, certification earners vs. non-earners

- Enrolled at 2 yr college: Certification earners 60, Matched non-earners 54
- Persisted 2-year college: Certification earners 84, Matched non-earners 80
- Attained a degree: Certification earners 28, Matched non-earners 25
4-year college outcomes: initial cohort, certification earners vs. non-earners

- Enrolled at 4-year college:
  - Certification earners: 30
  - Matched non-earners: 29

- Persisted in 4-year college:
  - Certification earners: 89
  - Matched non-earners: 91

- Bachelors degree within 4 years:
  - Certification earners: 25
  - Matched non-earners: 30
COMING SOON!

Practitioner-oriented website featuring issue briefs