Stackable Credentials in Career Education at California Community Colleges

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Sarah Bohn and Shannon McConville

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The state is investing in career education programs

- Career education pathways allow students to acquire skills for advanced jobs and higher earnings
  - Especially important for students who do not get four-year degrees
- Community colleges are primary providers of career education
  - Wide range of students
- Since 2014, the state has invested more than $1 billion
  - Career Pathways Trust and CTE incentive grants
  - Strong Workforce program provides ongoing support
Stackable credentials are especially important for students who start with short-term credentials

- Multiple, related credentials allow students to build skills over time
  - Sequences often start with short-term certificates
  - Multiple exit and entry points, clear mapping
- Opportunities for career advancement and increased earnings
- Connected to other initiatives within the community college system
  - Guided pathways, new online college
We need comprehensive evidence on pathways and students who stack credentials

▪ Previous findings on stackable credentials in health were promising
  – Significant returns to stacking credentials
  – Few pathways exist
▪ We expanded our focus across several other major disciplines
  – Identified stackable pathway features
  – Examined which groups of students obtain related credentials
▪ We also connected pathway designs to student outcomes
Outline

- Overview of career education students
- Stackable credential pathways at community colleges
- Pathway features that foster student success
- Key takeaways
First-time students are increasingly likely to earn career education credentials.

- Total career education credentials
- Associate
- Short-term certificate
- Long-term certificate
Stackable sequences most often start with short-term certificates

- Short-term credentials can be earned relatively quickly
- But research suggests earnings return is lower
- 40% of community college students start with short-term awards
  - Nearly half are age 30 or older, 80% have no more than a high school education
- To improve long-term employment opportunities and earnings, students could benefit from completing additional credentials
Most short-term certificate earners return to college but fewer than one in four earn another credential.

Three-year trajectories for students who initially earn a short-term certificate:

- 35% Stop after 1st credential
- 33% Return, no additional credential
- 23% Complete multiple credentials
- 9% Transfer to four-year college
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Identifying stackable credential programs

- Scanned community college websites and course catalogs
  - Identified programs that offer related coursework and credentials

- Developed criteria to identify features of two types of pathways
  - Progressive pathways offer a sequence of awards that lead to higher-level credentials
  - Lattice pathways offer clusters of interconnected credentials that start from core set of course(s)
Progressive pathways are the most common type…

A progressive information technology (IT) pathway at Consumnes Rivers Community College

- Application Specialist Certificate (11 units)
- Application Expert Certificate (22 units)
- Application Master Certificate (40 units)
...but few are explicitly identified

- Any upgrade potential: 80%
- Certificate-only paths: 47%
- Explicit path sequence: 12%
Lattice pathways are less common...

An energy technology pathway at Los Angeles Trade Tech Community College

- Energy Tech Fundamentals Certificate
- Energy Efficiency Certificate
- Solar PV Installation Certificate
- Solar Thermal Installation Certificate
- General Ed (GE) requirements
- Add’l renewable energy courses
- Associate of Science Energy Efficiency
  OR
  Associate of Science Solar PV
  OR
  Associate of Science Solar Thermal
...and most lattice sequences are not well-defined
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Connecting program design to student success

- Link pathway features to student-level data
- Control for multiple program, student, and college factors
- Examine whether students in programs with well-defined stackable pathways are more likely to stack credentials
Small differences in stacking across demographic groups

Notes: Estimates are regression adjusted for several student characteristics including demographics, markers of disadvantage, and measures of ability.
Well-defined pathways increase the odds of stacking

- Programs with explicit stackable pathways compared to:
  - Programs with stackable features (but not explicit)
  - Programs with minimal stackable features
  - Programs with no stackable feature

Change in likelihood of stacking (percentage point)

Notes: Estimates from fixed effects models that control for student characteristics, program characteristics, and colleges. All results shown are statistically significant.
Explicit pathways could help narrow achievement gaps

Notes: Estimates from separate fixed effects models for each group that control for additional student characteristics, program characteristics, and college. All results shown are statistically significant.
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Key takeaways

- Large share of career education students who earn short-term certificates return to community colleges for additional training
- Colleges can strengthen career pathways for these students by designing career education programs with explicit credential sequences
- It is important to ensure that additional credentials expand career opportunities and improve labor market outcomes
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These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

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Thank you for your interest in this work.