Improving Measurement in Career and Technical Education to Support Rigorous Research

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Paper goals

1. Document how CTE has been measured over the last 20 years of quantitative research:
   • understand how this measurement inform our understanding of CTE’s impacts
   • Dearth of causal studies => focus on ways in which the characterization of CTE has been recorded

2. Highlight the limitations of how CTE has been measured in past research and make recommendations about what elements of the CTE experience should be measured in future research and why.
How has CTE been measured in the past?

- Course taking
  - Total courses
  - Total credits
  - Focus areas (not clusters) (e.g., Business, computers versus trades)
- Concentrator status (3+ credits in same content area)
- Whole school
  - Career academies
  - Selective admissions/oversubscribed schools
- Linked learning
Where to go from here?

- Need to capture all elements of experience so that we can define the appropriate counterfactual on all dimensions
  - How much?
  - Where?
  - Including what components?
  - Using what outcomes?
  - Heterogeneity & equity
Measuring exposure

- Total credits
- CTE participant – at least 1 CTE course
- CTE concentrator – 2+ course in PoS
- Concentrator by cluster/PoS
- Multiple concentrator indicator
- Program completer – complete all courses in PoS
Accounting for delivery model

- Comprehensive high schools (FT)
- Technical high schools (FT)
- Area/regional technical centers (PT)
- Career academies (FT)
Programmatic components

- Work-based learning
- Professional certification/credentials
- Dual credit/concurrent enrollment
- CTSOs
Outcomes to use

- Engagement (e.g. – attendance)
- Learning (e.g. – GPA, test scores)
- Credentials/certificates (attainment & scores)
- HS graduation
- College:
  - Enrollment
  - Persistence
  - Completion
- Earnings/employment
Heterogeneity & equity

- Eye on history of tracking
- Maintaining aspirant goal of upward mobility
  - Socioeconomic status
  - Race/ethnicity
  - Gender
  - Disability
  - First language
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CTHSS Update

1. Paper under review at Journal of Political Economy – top 5 economics journal
2. Industry sorting paper
3. Peer effects paper
4. Differentials in spending/cost paper
5. IES extension grant awarded (+5 years)
   1. More data from the state
   2. Data collection on program components in 2021-22