Postsecondary Pursuits

Pathways Research Agenda

Strand 4

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Research Collaborative

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HERC → Houston Education Research Consortium

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Motivation

- By 2036, an estimated 70% of Texas jobs will require a postsecondary credential, yet current credential attainment lags significantly behind this benchmark
  - Stark disparities persist: only 35% of Black and 24% of Latino adults in Texas hold a postsecondary credential, compared to 50% of the overall population
- High school graduation rates have improved, but too many students **stall out after graduation**—not enrolling, persisting, or completing college.
- The result? **A growing disconnect** between K–12 preparation and postsecondary and workforce demands

We need better ways to identify and support students who are ready but at risk of falling off track

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Policy Landscape

- Over the past decade, Texas has enacted a suite of reforms linking secondary education to postsecondary and workforce outcomes:
  - **Integrated College, Career, and Military Readiness** (CCMR) into the state A–F accountability framework (HB 22), elevating CCR as a formal measure of school performance
  - **Expanded dual credit and CTE pathways** to promote early college access and workforce alignment (HB 5, HB 505, HB 1638)
  - **Introduced outcomes-based funding** for community colleges, rewarding institutions for dual credit completions, credential attainment, and labor market entry (HB 8)
- These reforms reflect a shift toward **performance-based policy**
- **State goals are ambitious:** 60% of Texans aged 25–34 with a postsecondary credential by 2030.

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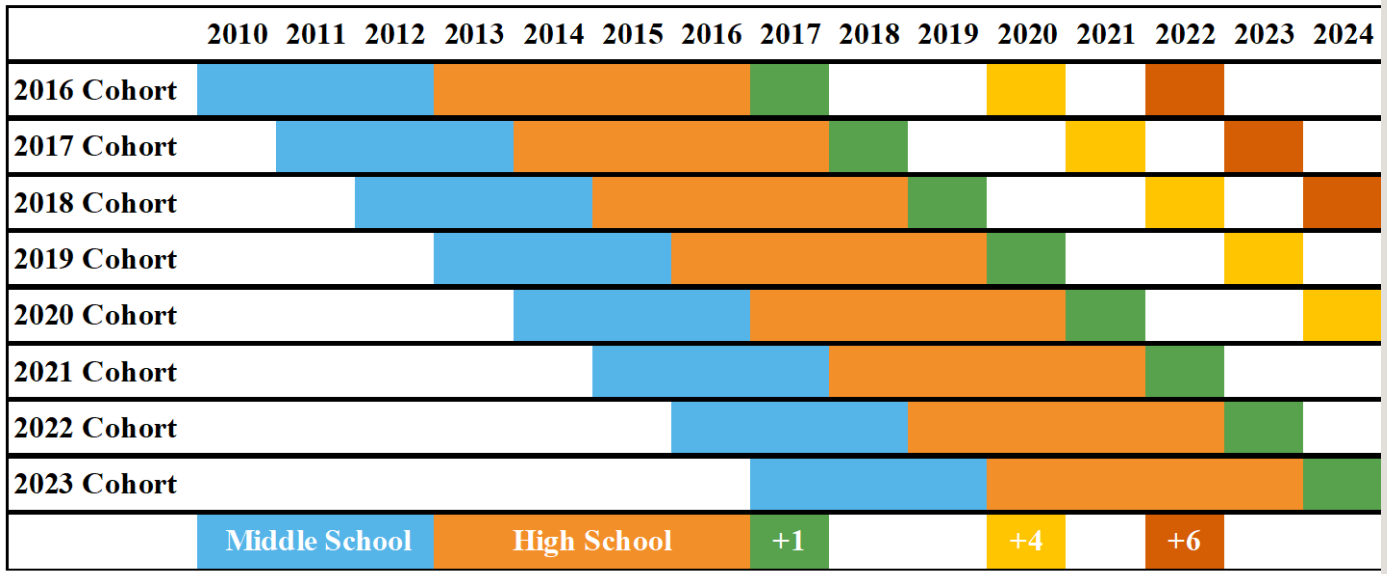
Research Questions

1. To what extent do Texas high school graduates attain CCR accountability standards?
2. What distinct CCR profiles can be identified among Texas high school students based on their academic and career preparation experiences?
3. How well do these readiness profiles predict postsecondary enrollment, persistence, and completion, and do additional readiness indicators further refine our understanding of postsecondary success?
4. Do these relationships vary by key student and school characteristics?

Data

- State-wide student-level longitudinal administrative records from the ERC
  - TEA
  - THECB and NSC
  - TWC
- Cohorts that graduated between 2017-2023
  - Capture middle and high school college readiness experiences
  - Track outcomes from 1 to 8 years after high school graduation

Table 1. Proposed Cohort Timeline



Note. The year represents the spring term of a given academic year (e.g., 2010 = 2010-2011 school year). The labels +1, +4, and +6 indicate the years post-high school graduation.

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Methodology

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Phase 1: Descriptive Analysis of CCR Attainment and Disparities

To what extent do Texas high school graduates attain CCR accountability standards?

- Identify CCR and other success indicators
- Assess the distribution of CCR indicators
- Examine disparities across key student sociodemographic characteristics and school characteristics

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Phase 2: Identifying Student Profiles of College Readiness

What distinct CCR profiles can be identified among Texas high school students based on their academic and career preparation experiences? Do these vary by key student and school characteristics?

- Latent Class Analyses to derive profiles of students based on CCR indicators and other relevant predictors
- Identify whether students are more likely to be categorized into a specific profile based on their characteristics

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Phase 3: Evaluating Pathways to Postsecondary Success Using Machine Learning

How well do these readiness profiles predict postsecondary enrollment, persistence, and completion, and do additional readiness indicators further refine our understanding of postsecondary success?

Do these relationships vary by key student and school characteristics?

- Random Forest modeling
- Whether profiles alone are strong predictors of success or whether certain factors within profiles further differentiate student trajectories
- Outcomes will include postsecondary enrollment within one year of high school graduation and degree completion within 6 years
  - 2- and 4-year degrees

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Where We Are Now vs. Our Plan

- **We received ERC access to all the data we need**
- **We made progress on Phase 1 of the study and are about to start work on Phase 2**
  - Identifying and cleaning up all the indicators and metrics we needed took longer than expected
  - We invested time on Phase 1 because lessons from it would benefit us when we move on to Phases 2 and 3

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Timeline, 2025

ACTIVITY	2025							
	5	6	7	8	9	10	11	12
Finalize access to ERC data								
Finalize list of outcomes and measures and identify available data sources								
Data cleaning and file setup								
Finalize data analysis files								
Phase 1 descriptive analysis								
Create data visualizations for Ph 1								
Create summary of insights from Ph 1								
Identify indicators for Ph 2 Latent Class Analyses using descriptive results								
Run Latent Class Analysis models and test alt. specifications for Ph 2								
Finalize Latent Class Analysis models								
Write up insights and prepare data visualizations from Ph 2								
Initial variable selection for Ph 3 Random Forest analysis								

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Timeline, 2026

ACTIVITY	2026									
	1	2	3	4	5	6	7	8	9	10
Share out insights from Ph 1 and 2 with district partners for feedback										
Group variables by stages for Random Forrest analysis										
Feature selection techniques for Random Forest models										
Build Random Forest Models										
Examine variable importance for Random Forest models										
Interpret variable importance in context from Random Forest models										
Gather feedback on insights at LONESTA**RP3** convening										
Write up insights and prepare data visualizations from Phase 3										
Share Ph 3 insights with partners; develop implications, recommendations										
Finalize key findings, implications and recommendations										
Edits to reports/briefs										
Internally review reports/briefs										
Send out reports/briefs to district partners, LONESTA**RP3** for feedback										
Incorporate feedback from district partners, LONESTA**RP3**, and convening										
Design one pagers, executive summaries and other dissemination products										
Products in copy edit and graphic design										
Publish final products										

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Early Insights

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Average Attainment of CCR Indicators Across Cohorts

Attainment of CCR Indicators Across Cohorts

Preview of Findings: Patterns Across Student Groups

- **Consistent patterns across groups:** The same indicators show the largest and most persistent gaps (*AP/IB, TSI, and Dual Credit)* regardless of subgroup
- **Career indicators show progress:** indicators (*certificates and IBCs)* increased for all students, with smaller and sometimes narrowing gaps
- **Temporary programs fluctuate:** *OnRamps participation* rose sharply before 2020 but declined post-pandemic for all groups
- **Similar patterns, different magnitudes:** While the direction of differences is consistent across subgroups, the size of the gaps varies
    - Largest for students with IEPs, slightly smaller for emergent bilingual and economically disadvantaged students.

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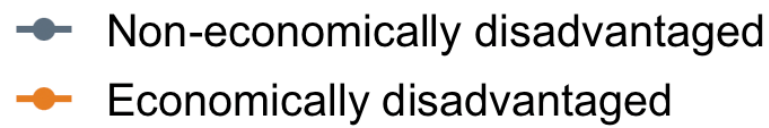
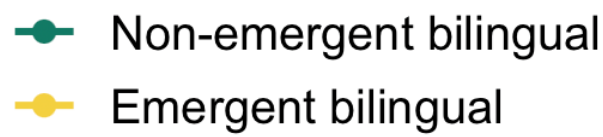
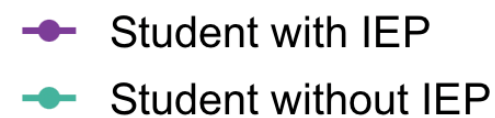
Average Attainment of CCR Indicators, by Economic Disadvantage Status


Non-economically disadvantaged
Economically disadvantaged

Average Attainment of CCR Indicators, by Emergent Bilingual Status


Non-emergent bilingual
Emergent bilingual

Average Attainment of CCR Indicators, by IEP Status


Student with IEP
Student without IEP

Average Difference in CCR Attainment Between Subgroups and Comparison Groups

Indicator	Eco Dis vs. not Eco Dis	EB vs. not EB	IEP vs. no IEP
College-Readiness Indicators			
AP/IB Coursetaking	-0.184	-0.182	-0.333
Met TSI Criteria	-0.147	-0.116	-0.186
Dual Credit	-0.098	-0.144	-0.188
Earn Associate Degree	0.006	-0.009	-0.016
Complete OnRamps Course	-0.008	-0.014	-0.020
Career-Readiness Indicators			
Earn Level I or II Certificate	0.004	0.002	-0.002
Earn IBC Aligned with POS	0.004	-0.001	-0.014

Partner Influence in Action

In Development:

- Partners refined research questions to focus on readiness indicators most relevant to districts.
- Helped identify and prioritize indicators (e.g., dual credit, IBC alignment).

In Analysis:

- Provided context for subgroup disparities and local program differences.
- Informed our decision to explore variation by race/ethnicity and school characteristics.

Going forward: Will help interpret findings and co-develop recommendations.

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Engaging community partners

Collaboration with school and district partners

- Refined and tailored readiness indicators to reflect local priorities.
- Helped interpret findings and identify policy-relevant insights.
- Planning district share-outs and feedback sessions in early 2026.

Localized analysis of bright spots

- Statewide analyses account for regional variation.
- Identify local “bright spots” and actionable lessons for improvement.

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Collaboration Check-In

Crowdsourcing possible indicators and metrics: Through LONESTARP3, district partners, other colleagues

Taking advantage of the teams' knowledge of ERC data: Experience cleaning data and creating metrics

Challenges

- Overcoming unavailability of some CCR metrics
- Are we including the most important factors?
- Accounting for a changing accountability system while including enough cohorts to see longer-term outcomes
- Making sense of our early phase analyses to provide insights on next phases

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Looking Ahead: Research and Analysis

Phase 2: Latent Class Analysis

- Identify distinct readiness profiles based on CCR indicators.
- Test multiple model specifications to ensure stability and interpretability.
- Discuss findings as a team to determine which profiles are most meaningful.

Phase 3: Random Forest Analysis

- Use insights from LCA to identify key predictors of postsecondary outcomes.
- Execute model and evaluate variable importance to refine readiness metrics.

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Looking Ahead: Collaboration and Engagement

Continued collaboration

- Ongoing team check-ins to review progress and interpret emerging findings.
- Maintain alignment with partner priorities through consistent communication.

Partner engagement

- In-person team meeting in Feb 2026 to synthesize findings and next steps.
- Plan district share-outs and collaborative discussions on actionable insights.

Project momentum

- Coordinate analysis and dissemination timelines across TTU & HERC teams.
- Prepare early drafts of products for partner feedback by mid-2026.

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Discussion and Q&A

- What reactions or reflections do you have to the findings we shared?
- Do these patterns align with what you're seeing in your own districts or work?
- Are there additional factors we should consider as we interpret these results?
- How might we communicate these findings most effectively to practitioners and policymakers?

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Thank You

Our next update will be May 21, 2026.

See LONESTA**RP3** Events Page to register.

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