

# **What Do Programs of Study Look Like? Mandated and Supporting Components of CTE POS Observed in a Mixed-Method Longitudinal Study**

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# The Study: Design and Methods

- *Longitudinal*: following 2008-2009 ninth-graders through high school (and beyond if funded)
- *Experimental*: uses district-run lottery results
  - Also includes quasi-experimental strand with well-matched comparison group
- *Mixed-method*: achievement outcomes are analyzed in the context of our field research at treatment and control/comparison sites
- *Now in its fourth and final funded year*

# Participating Study Districts and Schools

## West District – Three POS high schools:

- **Navy:** new specially designed facility with PBL focus (e.g., pre-engineering, hospitality, culinary)
- **Sky:** former career center with upgraded academics (e.g., construction, graphic design, automotive)
- **Azure:** wall-to-wall tech-focused academies (e.g., computer science, legal studies)

## East District – One POS high school:

- **Blue:** wall-to-wall tech-focused academies (e.g., health sciences, pre-engineering, IT)

# Mandated Components of POS in Perkins IV

- Incorporates secondary education and postsecondary education elements
- Includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary to postsecondary education
- Leads to an industry-recognized credential or certificate at the postsecondary level or an associate or baccalaureate degree
- May include opportunity for secondary education students to gain postsecondary education credits through dual or concurrent enrollment programs or other means

# Secondary-Postsecondary Elements

- Formal and informal relationships at secondary, postsecondary, and industry levels
- Relationships institutionalized as joint technical skills committees (JTSCs) in West District; formal steering committees in East
- Tech prep also supports secondary-postsecondary alignment

# Academic/CTE Content in a Non-Duplicative Progression of Courses

- POS progress in sequences from broad to more intensive courses
- Students required to complete POS sequences
- AP and related courses encouraged
- Sequences start in different grades across schools
- Budget, enrollment numbers leading to fewer capstone/senior-level courses at Blue

# Opportunity to Acquire Postsecondary Credits

**West:** College credit available if students pass with A or a B

- Students apply junior/senior year to receive credit
- Immediately transcribed, transferable to state Uni system

**East:** Get B or better, pass exam at 80% or better

- Noted on HS transcript; must be presented to college
- Must attend CC within 2 years
- State budget crisis impact on opportunities
- Rise of online courses as alternative

# Industry-Recognized Postsecondary Credential, Certificate; AA or BA

- All POS lead to either industry-recognized postsec credential or AA or BA programs
- Many industry certifications earnable in HS
- Time, personnel, and funding cited as problematic
- Students bear many costs
- Districts no longer cover exams



# 10 Supporting Elements of POS\*

- Legislation and Policies
- Partnerships
- Professional Development
- Accountability and Evaluation Systems
- College and Career Readiness Standards
- Course Sequences
- Credit Transfer Agreements
- Guidance Counseling & Academic Advisement
- Teaching and Learning Strategies
- Technical Skill Assessments

\*OVAE Programs of Study Design Framework, <http://bit.ly/tA385f>

# Legislation and Policies

**West District** leads its state in developing POS

- Magnet-style CTE HS as basis for POS
- Tech prep “taken to the next level”
- JTSCs institutionalize partnerships between secondary, postsec, and business and industry

**East District** implements state-mandated POS

- Industry guides CTE curricula in secondary, postsec
- Mandated articulation between sec, postsec courses

# Partnerships

**West:** Integral to POS development, implementation

- Function best when personal relationships become actively maintained institutionalized partnerships
- Some schools fund school-community partnership liaisons

**East:**

- Academy teachers with industry backgrounds promote partnerships
- CC reported scheduling conflicts between HS and CC
- Limited return on investment: HS students receiving CC credits attended universities on scholarships

# Professional Development

## West:

- Statewide POS training workshop
- Support for teachers from business and industry
- Support for guidance counselors
- Training specific to needs of POS schools

## East:

- School-specific PD
- Workshops to improve students' technical literacy
- Trainings on state's career clusters focus

# Accountability and Evaluation Systems

- Both **West** and **East** use data to improve programs
- Interim assessments provide immediate feedback
- East's state uses online comprehensive assessment system
- Increasing use of teacher-led online assessment systems (e.g., Quia)

# College and Career Readiness Standards

All POS schools preparing students to graduate ready for postsecondary without the need for remediation

## West:

- High-level academics and enriched CTE
- POS, PBL help students synthesize academic and technical content knowledge/skills and solve real-world problems
- All HS moving toward POS model

## East:

- New graduation reqs mandate college prep for all students
- Extra resources to help students meet expectations

# Course Sequences

All POS schools offer sequences progressing from broad-based intro courses through more advanced courses to senior-level capstones or culminating experiences

**West:** Most POS start in 10<sup>th</sup> grade

- Students expected to carry college credits into aligned programs at local CC or university

**East:** POS start in 9<sup>th</sup> grade

- POS courses approved by state
- Locals encouraged to develop new courses, seek approval

# Credit Transfer Agreements

## West:

- Articulation agreements established by district for courses eligible for tech prep credit

## East:

- State articulation agreement between CCs, HS
- Local articulations also possible



# Guidance Counseling and Academic Advisement

Guidance counselors do academic, not career-related planning; career advising happens at program level

**West:** POS/CTE faculty do informal and formal advising about postsecondary, careers, professional standards

**East:** Mandated career guidance component in all CTE curricula

- Many POS teachers from industry
- Career coordinators handle career exploration, internships, TSA system, dual enrollment, and often online courses
- Post-recession, most HS share career coordinators

# Teaching and Learning Strategies

## West:

- Curriculum integration desirable but difficult to implement due to staffing, scheduling issues
- Strategies: technology integration, PBL, school-based enterprises, out-of-school WBL/internships

## East: Mandated integration of academics and CTE

- Curriculum integration techniques (i.e., team teaching, joint lesson development) not mandated, difficult to implement

**Both:** CTSOs are popular in both districts

# Technical Skills Assessments

## West:

- Working to develop a TSA system
- State plans to use third-party assessments; budget issues have delayed pilot

## East:

- CTE programs required to assess technical skills using state-developed curriculum-based assessments
- CTE teachers required to embed academic skills and assess hands-on skills

# Conclusions and Next Steps

- POS “upgrade,” amplify CTE compared to control/comparison sites
- Rigorous, engaging academic and technical instruction
- Career exploration, real-world experiences, college credits, community and business connections

## Next Steps:

- Continue analysis of 11<sup>th</sup>-grade data
- Complete site visits; collect and analyze 12<sup>th</sup>-grade data
- Final report writing - Summer 2012
- Secure funding for post-graduation cohort follow-up (e.g., postsecondary education, careers, military)

# Contact Us

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