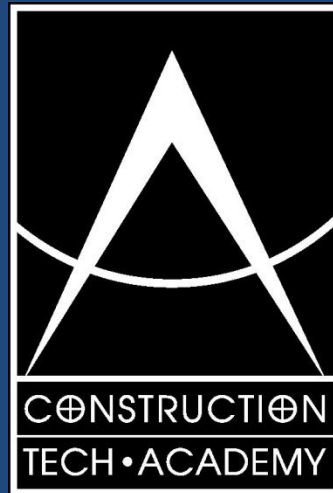


Stanley E. Foster

Construction Tech Academy

*An Autonomous Small School Preparing Students for College and
Careers in Architecture, Construction and Engineering*



Glenn Hillegas

Executive Vice President

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Apprenticeship Training and Trust

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Principal Emeritus, Stanley E. Foster Construction
Tech Academy

Beginnings 1998

- An advisory committee of industry, management, labor (inc. Teachers Union), community college, university and K-12 representatives was formed.
- The school focus was set on engineering, architecture and construction trades.
- \$500,000 was donated by Mrs. Pauline Foster in memory of her late husband Stanley E. Foster.

CTA Vision

"Provide students an opportunity to explore construction related careers through contextual, hands-on and rigorous curriculum that prepares students for direct entry into college, apprenticeship programs, a job or a career."

Beginnings

- Construction began to revitalize one wing at Kearny and turn it into Construction Tech Academy (CTA) .



Beginnings

**Industry stepped
up!**

**In-kind and cash
Donations totaled
over \$1,000,000**

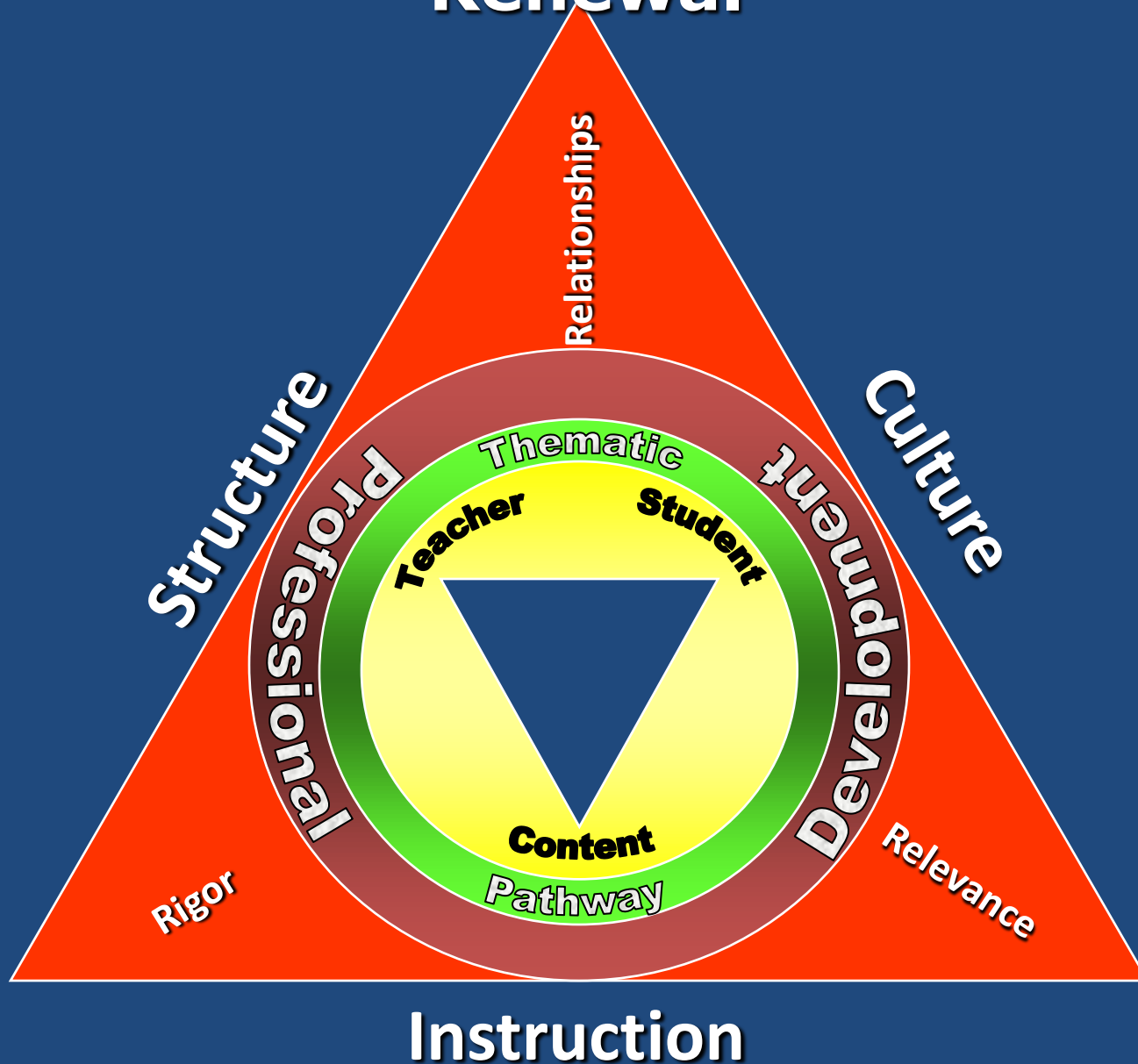


Beginnings

- Design plan was completed using the Stanford Small School Design.
- Six teachers and the director were hired.
- The Construction Tech Academy opened in the fall of 2002 as a school-within-a-school with an initial class of 120 9th grade students.



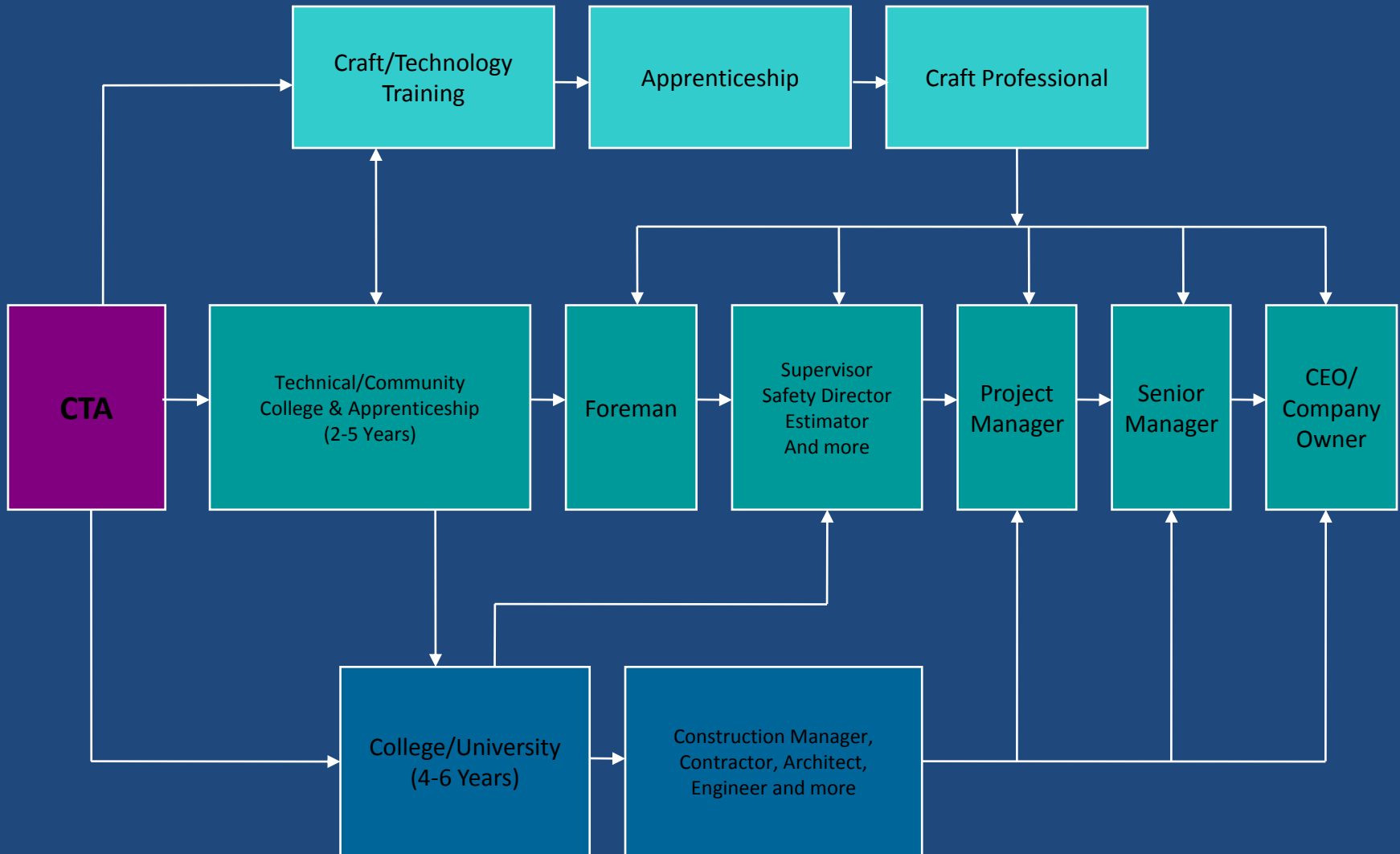
Theory Of Action for High School Renewal



CTA Expansion

- The Academy added another freshman class each year.
- In the 04-05 school year CTA reopened as an autonomous school supported by the Bill and Melinda Gates Foundation.
- The first graduating class was in June 2006
- CTA has 480 students this year

Multiple Pathways



RIGOR / RELEVANCE FRAMEWORK

Evaluation	6	AP C High Rigor Low Context			PLTW D High Rigor High Context	
Synthesis	5					
Analysis	4					
Application	3	General Math A Low Rigor Low Context			Basket Weaving B Low Rigor High Context	
Understanding	2					
Awareness	1					
Bloom's Levels of Learning		1	2	3	4	5
		Knowledge	Apply in discipline	Apply across disciplines	Apply to <i>predictable</i> real-world situations	Apply to <i>unpredictable</i> real-world situations

Adapted from W. Daggett

Application Model

Instruction

- All students are in an UC a-g College-Prep track
- All students are in a Career/Technical Prep. Track
- Curriculum is standards-based
- Courses are accommodated by a 4 x 4 block schedule
- Full spectrum of work-based instruction
- Subject integration/project/problem based learning
- Projects developed with industry

College Culture Cont.

- Any student in good standing can take a free community college course, adjacent to Kearny at the Mesa Community College, to receive college and high school credit in many cases.
- The Associated General Contractors' (AGC) members raised over 5 million dollars to open San Diego's own Construction Management and Engineering Program at SDSU in 2006.

College Culture Cont.

- AGC Members raise funds annually to provide full scholarships for all CTA graduate who desire and who qualifies to be a construction engineer.
- CTA students are given high paying summer internships, with transportation, in construction corporations to provide authentic construction management experiences.

Structure: Personalization

- Teachers and students work in small learning communities, organized by grade level.
- Advisory periods are used to support student needs.
- When possible, teachers meet in common prep-periods to discuss student needs, common assessments and to review data to adjust instruction.
- Teachers use industry mentors to design curriculum, to mentor during projects and to evaluate student projects and presentations.

Culture: Rigor/Relevance: Advisory Committee

- Advisory Committee Members Visit Classes Regularly and Co-Teach
- Advisory Members Help to Create Integrated Curriculum
- Members Meet Every Month to offer Resources...also Cash!
- (About \$100,000 per year)
- Members Provide Mentors, Job Shadows and Internships

Sponsored Projects

- Associations sponsor projects
- Students compete, in class, for thousands in cash scholarships (and they get class credit)
- Industry provides consultants
- Students present, “Apprentice” style, to a large professional panel

Structure/Culture: Governance

- A Board of Directors was formed.
- Half of the Board is union and half is non-union
- The Board acts on recommendations from staff and the advisory committee
- The Board also controls funds raised by industry

Challenges: Stereotypes

- Having the word “Construction” in the school title:
- The “C” word (construction) carries a heavy stereotype. This stereotype, when combined with the tradition of many females not choosing engineering careers leaves CTA with a 25% female population – despite targeted and strategic recruiting.

Challenges: Block Schedule – to Provide Electives

- SDUSD classes are funded at 36 to 1 teacher. Block scheduling raises the ration to 39 to 1 teacher.
- State Standardized Testing occurs once in the Spring . Many classes are completed months before high stakes testing.

Challenges: Curriculum

- Extensive professional development for rigorous standards-based instruction and for instruction integration is needed for the project-based curriculum.
- Extensive professional development for scaffolding English Language Learners is necessary.

Challenges: Resources

- CTA struggles to receive donations to provide authentic projects.
- CTA mentors and supporters receive no tax benefits for their generous HR donations!

Challenges: Values

- CTA curriculum focuses heavily on developing generalized problem solving skills paired with focused and practical career/technical skills. This is critical for the modern work force.
- Standardized tests do not measure these skills – usually they measure de-conceptualized concepts. When will assessments be authentic?

2006-2008 Graduation Survey Results

- 41 % enter 4 year universities
- 43% enter community colleges
- 7% enter apprenticeship programs
- 9% enter military careers

2006-2008 CTA Graduate Career Choices

- 26% construction/construction management
- 16% engineering
- 5% architecture
- 47% other (52% of student are neighborhood and simply choose one of four themed schools)