A Proposed STEM-Based Partnership Between UTPB & ECISD

Presented by UTPB College of Education
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Big Concept

UTPB and ECISD working in partnership in a symbiotic relationship to build a seamless K-16 T-STEM pipeline. Through this unique partnership, both sides will benefit from additional resources to improve student learning, anchor instructional philosophies in current literature, and have access to resources and facilities needed to enhance academic achievement of students.

ECISD	UTPB
Facilities/Support Services i.e. Counseling Services, Special Ed.	Facilities i.e. College-Level Labs
Transportation	Dual Credit Accessibility
Bilingual/ESL Education	Human Resources
Sports/Academics UIL	Financial Support 1882
Food and Nutrition Services	Opportunities for Current Practices through Grants

Key Concepts

- Create a seamless K-16 STEM pipeline in ECISD by establishing Falcon High as a T-STEM designated campus.

- Parallel The STEM Academy to build strong instructional foundations at ECISD's IR campuses of Zavala Elementary and Ector Middle School.
  - Zavala ⟶ Ector Middle School ⟶ ECISD 9-12 ⟶ UTPB

- Establish a STEM pipeline from UTPB STEM Academy to and through Falcon High School and UTPB.
  - UTPB STEM Academy ⟶ Falcon High ⟶ UTPB

- Utilize the College of Education as a resource to build teaching capacity, develop lesson cycles with a full repository of focused lessons and assessments, and provide opportunities for advanced degree attainment.

- Partners through SB 1882

Goals and Objectives

- Develop high performing replicable, scalable, and sustainable schools.
  - All STEM Campuses will be "Met Standard" by end of year 2.
  - Meet target required for Index 2 (student progress) and Index 3 (closing performance gaps) for all campuses by end of year 1.
  - STEM model will be replicable by year 2.
  - Fiscally self-sustaining with 3-5 years.

- Increase college readiness- test 100% of students on TSI, enroll 1/3 of 9th graders in Dual Credit courses.

- Increase parent involvement through monthly Town Hall and STEM Family Events.

- Build instruction through extensive professional development and high-quality curriculum.
  - Ongoing PD- PBL training, AVID workshops, Sanford Harmony, Sanford Inspire, and content area support with UTPB students and professors.

ECISD Initiatives

Student Performance	Instruction	"Whole" Child
PBL to increase student involvement, engagement and achievement	In-Depth PBL and AVID summer training for teachers.	Sanford Harmony in grades K-8. Building communities and Social Emotional Learning environments.
Bilingual/ESL/SIOP to improve language development , reading, and writing skills	Instructional coaches experienced in PBL as well as content areas.	Center for Early Childhood Development- focusing on the first 5 years.
Grants focused on research based practices in student achievement.	PLC's focused on PBLs, student data, and best instruction practices.	Communities in Schools
Simulated learning environment in STEM Career fields, on-the-job learning.	UTPB College of Education to build teaching capacity, develop lesson cycles/scope and sequences with a full repository of focused lessons and assessments, and provide opportunities for advanced degree attainment.	

Conceptual Framework

- Based on Texas College and Career Readiness Standards
  - Standards are designed to represent a full range of knowledge and skills that students need to success in entry level college courses as well as in a wide range of majors and careers.
  - According to research 80% of 21st Century jobs will require post-secondary education.
  - The standards consist of a multilevel framework that focus on subject matter but also on the way it is organized and presented in the classroom.
  - CCRS establishes a clear connection with the TEKS that is a crucial component of the system alignment and will result in more students being ready for college.
  - CCRS's research shows students must be able to think critically to have a fundamental knowledge of our culture and the world beyond to perform complex mathematical calculations accurately and to possess a strong knowledge of basic science.

  Source: http://www.thecb.state.tx.us/collegereadiness/CRS.pdf

Conceptual Framework Continued

- T-STEM Blueprint
  - The cornerstone of T-STEM Academy learning is student engagement and exposure to innovation and design in STEM-focused instruction and learning that models real-world contexts.
  - The T-STEM initiative aims to closely align high school curriculum with admission requirements of competitive colleges and the STEM qualifications for 21st century jobs.
  - The Academies use the T-STEM Design Blueprint, Rubric, and Glossary as a guidepost to build and sustain T-STEM schools that address the seven benchmarks:
    - 1) Mission driven leadership
      2) School culture and design
      3) Student outreach, recruitment, and retention 4) Teacher selection, development and retention 5) Curriculum, instruction, and assessment
      6) Strategic alliances
      7) Academy advancement and sustainability

  Source: http://ccrm.southcentralus.cloudapp.azure.com/sites/default/files/T-STEM%20Blueprint%202017-2018.pdf

Characteristics of Instructional Framework

- 20-1 Student to Teacher Ratio
- Coach per grade level elementary
- Coach per cluster junior high/high school
- K-2 Reading Specialist, 3-5 Reading Specialist, 6-8 Reading Specialist
- Advisory/career track junior high/high school
- K-2 Math Specialist, 3-5 Math Specialist, 6-8 Math Specialist, 9-12 Math Specialist
- 1-1 technology
- Online learning platforms, modified flipped classrooms.

- Project Based Learning model, real world simulated learning, on-the-job experiences.
- Enrichments/Tutorials
- ESL teachers to mainstream Language Development
- Project Lead the Way (STEM based learning) K-12
- Internships/Externships
- Extracurricular academic activities

Characteristics of Educational Framework

- T-STEM Blueprint as foundational framework for Educational Framework.
- Challenging and authentic learning experiences.
- Project-Based Learning (PBL) grounded in TEKS
- Focused on STEM careers
- Cross-curricular instruction
- Situational learning experiences- Petroleum Engineer, Chemist, Geologist, Biomedical Engineer, Computer Scientist, and Mechanical Engineer.
- Technology based learning- one-to-one technology
- Modified Flipped concept in order to meet the needs of individual campuses.
- 21st Century Learning Skills- Collaboration, Communication, Creativity, Critical Thinking

Characteristics of the Learning Model

Create a STEM pipeline focusing on preparing students to be...
- STEM College Ready
- TSI compliant

Learning labs built into weekly schedules..
- Project Lead the Way (PLTW- Launch, Gateway, Engineering, Biomedical, Computer Science.
- UT Engineering Your World
- Math Labs
- Science Labs
- Maker Space Labs- open lab for students to to design and create prototypes and deliverables that support the projects.
- Art Labs
- Sanford Harmony built into daily instruction to focus on the "whole" child method of learning.

Situational learning modules focused on STEM fields such as...
- Engineering
- Biomedical
- Computer Science
- Energy
- Agriculture
- Petroleum Engineering

Student Support and Opportunities

- Open enrollment charter for students in ECISD.

- Enhanced student success and engagement through PBL.

- Environment that promotes enthusiasm for learning and risk taking.

- Extended day programs to complete flipped learning and extracurricular activities.

- Enrichments built into the instructional day; Robotics, Future City, Destination Imagination, Coding, Gardening, UIL Academics, Mathletes, and Science Olympiads.

- UTPB College of Education pre-service teacher learning opportunities.

- Individual Student Learning Plans

- Student Portfolios highlighting student projects, credentials and accomplishments.

- Community partnerships with STEM career experts.

Teacher Supports and Opportunities

- Professional Development opportunities provided by UTPB College of Education.

- UTPB College of Education faculty provided training; AVID training, Sanford Harmony, Sanford Inspired, and targeted instruction based on data.

- Annual summer PBL and STEM professional development courses.

- UTPB audit services to promote self-efficacy and to determine the individualized PD needed for teachers while growing campus leadership.

- T-TESS evaluation system to support and enhance instruction.

- Opportunity to pursue a Master's Degree or obtain graduate courses to meet instructional needs of campus.

Parent Supports and Opportunities

- Promote opportunities for parents to help their students become college ready.
- Interact with College of Education faculty.
  - Campus visits.
- Monthly Town Hall meetings and STEM Family Events.
  - Topics could include- Student Success, Technology, College Planning, Enrichments, and STEM Careers.
- STEM Orientation- prior to enrollment.
- Newsletters to communicate upcoming projects and events for parents to participate in.
- Monthly "STEM Family Nights"
- Continual and frequent parent/teacher conferences and communication.

Method of Implementation through SB 1882 Partnership

- Implementation includes several steps and opportunities (not necessarily linear but time sensitive):
- Agreement in principle to engage in this process
- Reorganization of schools in question under TEC Chapter 12 Subchapter C as a Campus Charter. See Sec 12.0521
- Negotiate terms of partnership under 1882. (TEA Model Performance Contract)
- Possible increased WADA funding (up to $1500 – per Bruce Marchand)
- Possible grant funding to support partnerships but only for schools designated as priority and/or focus schools (Zavala appears to be the only eligible school of the three under discussion)
- Application for grant funds – responsibility of the district – use of funds subject to negotiation
- Deadline March 1 (per AJ Crabill 11/3 email)
- Grant apps March, 2018 (per Joe Siedlecki, 11/30 email)

Opportunities and Challenges with 1882

Facts about 1882	
Accountability for Campuses still falls to the district. However: Suspension of penalties related to IR status – Attachment 1 at link: https://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=51539619018&libID=51539619019	Abdication of autonomy in decision making around multiple areas including but not limited to: 1) Chief Operating Officer 2) HR related decisions including but not limited to employment and management of the COO, administrators, educators, contractors, and other staff. Also including but not limited to hiring, assignment, evaluation, development, advancement, compensation, and more. For more, see 97.1075 (c) (1) through (9) at link below: https://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=51539619019&libID=51539619020
Access to planning and implementation grants for priority and focus schools Correspondence with Joe Siedlecki District must apply for the grants. Anticipated grant open March 2018	Relative newness of the initiative has compromised reliable and consistent access to clarification and support from TEA
Access to Support and Direction from UTPB's STEM Academy and, by extension, the College of Education that houses the STEM Academy	Non-priority or focus schools participating in partnerships are not eligible for implementation and planning grants. Correspondence with Joe Siedlecki
Potential for additional funding depending on the WADA differential between the ISD and the Charter. See Attachment 1, bottom second and top third page: https://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=51539619018&libID=51539619019	If employees are displaced by managing partner decision, district still has to honor employment commitments. See letter (c) page one of the link below: https://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=51539619018&libID=51539619019
Possible access to support from TEA Consultant Duncan Klussman Correspondence with Joe Siedlecki	Maintain Charter Status for 10 years Per Correspondence with Bruce Marchand and appears to be reinforced by Sec 12.0531

Next Steps

- Discontinue Falcon recruitment process
- Follow-up/clarifying meetings
  - Every other week
  - Stakeholders involved
    - Tom Crowe, ECISD Superintendent
    - Dr. Selina Mireles, Dean of UTPB College of Education
    - Dr. Kevin Badgett, Interim Assistant Superintendent UTPB STEM Academy
    - Dr. Lillian Porter, Director of UTPB Dual Credit
    - Shannon Davidson, UTPB STEM Academy Curriculum Director
- School board meeting
- School restructure and redesign, February 2018