



Developing & Designing IET at your School Site

Harbor Occupational Center | DACE | LAUSD

Margaret Chedotte

Carlos Palma

Thomas Hernandez

Sonya Ramirez

Purpose

- ◆ To provide the experiences and outcomes acquired over a ten month period piloting different models of IET with respect to improving math proficiency in various CTE classes.

Engaged Outcomes

- ◆ Participants will be informed on:
 - ◆ Assessment
 - ◆ Curriculum Development
 - ◆ Data Findings
 - ◆ Stakeholder Feedback
 - ◆ Lessons Learned

Inclusion Activity

What stage of the process is your school at with the implementation of IET?

IET | Pilot Cycle 1

- ◆ The Beginnings: Our model of IET
 - ◆ Spring semester 2017
 - ◆ February – June
 - ◆ CTE Instructor Referral to Lab
- ◆ Math Lab
 - ◆ Monday – Friday, 10:15am - 12:15 pm

IET | Cycle 1: ASSESSMENT

- ◆ CASAS Pre- and Post-Tests given
 - ◆ Used as a gauge of progress
- ◆ Instructor Developed Welding Quiz

IET | Cycle 1: CURRICULUM DEVELOPMENT

- ◆ Course Outlines
 - ◆ All had Basic Math/Trade Math
- ◆ Used Math from Welding Textbook and others
- ◆ Dialogue with Instructors
 - ◆ Welding needs Basic Math, Geometry, and Tape Measure Reading
 - ◆ HVAC/R needs Basic Math, Geometry, and Tape Measure Reading
 - ◆ Medical Assistant needs Basic Math with Proportions, Apothecary Math, and Syringe Dosages

IET | Cycle 1: DATA FINDINGS

- ◆ 11 Students Served
 - ◇ 5 significant gains (Gained CASAS level)
- ◆ 9 Welding Students
 - ◇ Welding math pre-test 22% to 62%
 - ◇ Welding math post-test 92% to 98%
- ◆ 1 Medical Assistant Student
 - ◇ Sought help as needed
 - ◇ Apothecary Math and Syringe Dosage Scales
- ◆ 1 HVAC/R student
 - ◇ Tape measure Reading and basic math assistance

IET | Cycle 1: STAKEHOLDER FEEDBACK

- ◆ What were Instructor's takeaways:
 - ◆ Curriculum is on target
 - ◆ Need to serve more students
 - ◆ Need to be independent from Math Lab
 - ◆ Need Teacher-Directed Model more than Lab Model
- ◆ What were student takeaways:
 - ◆ Didn't like leaving their classroom
 - ◆ Liked the extra practice and one-on-one assistance
- ◆ Cycle 1 Summary

IET | Cycle 2

- ◆ Summer semester: June 19 – July 28, 2017
- ◆ All students were informed that math instruction will be integrated in welding class curriculum. (Teacher Directed Model)
- ◆ Cohort 1: Harbor Occupational Center (main campus)
- ◆ Welding 1 class: 10:15am-11:15am Monday-Friday
 - ◆ 23 students served (captured audience)
- ◆ Non-Cohort: Wilmington Skills Center (satellite branch)
- ◆ Welding 1 class 11:30am-12:15pm Monday-Friday
 - ◆ 7 students served (captured audience)

IET | Cycle 2: ASSESSMENT

- ◆ Pre Enrollment Assessment
 - ◆ Reading TABE Test
- ◆ In-Class Assessments
 - ◆ Instructor developed VABE Pre and Post Tests
 - ◆ Instructor developed VABE weekly Quizzes
 - ◆ CASAS Pre Tests administered during first week of class
 - ◆ CASAS Post Test administered last week of class

IET | Cycle 2: CURRICULUM DEVELOPMENT

- ◆ ABE Course Outlines (Math 1-3)
- ◆ Welding Technology Fundamentals Textbook (Chapters 5/6)
- ◆ CTE and ABE instructor input
 - ◆ Introduce and teach industry related math concepts
- ◆ Teacher directed instruction
 - ◆ Use differentiated instruction and resources to engage students

IET | Cycle 2: DATA FINDINGS

- ◆ Total of 30 students were served in 6 week summer term
 - ◆ Average student attendance rate was 91%
 - ◆ Students improved an average of 51% on VABE pre-test to post-test
- ◆ CASAS Benchmarks
 - ◆ 19 significant gains (Gained CASAS level)
 - ◆ 2 had some gain
 - ◆ 2 did not post-test

IET | Cycle 2: STAKEHOLDER FEEDBACK

- ◆ Positive Feedback
 - ◆ Course content was relative to students' needs
 - ◆ CTE instructors were instrumental in advocating for VABE math class
 - ◆ Teacher Directed Instruction was successful
- ◆ Challenges
 - ◆ No Math TABE scores available
 - ◆ Continuous enrollment of new students
 - ◆ CTE classroom logistics
 - ◆ Students with different math skill set
 - ◆ Students overcoming fear of math and/or acknowledging importance of math
- ◆ Teacher support/participation/buy-in (Continuing Cycle 1 Referral System)

IET | Cycle 3

- ◆ HVAC/R class (Cohort 2)
 - ◆ 12:45 – 1:45 Monday through Thursday
 - ◆ October to November
 - ◆ 5 weeks
- ◆ Diesel Class (Cohort 3)
 - ◆ 12:45 – 1:45 Tuesday/Thursday in CTE Room and Monday/Wednesday in Math Lab
 - ◆ November to Mid-December
 - ◆ 4 weeks

IET | Cycle 3: ASSESSMENT

- ◆ Pre-Enrollment Assessment
 - ◆ Reading TABE Test
 - ◆ Math TABE Test for some in HVAC/R and all for Diesel
- ◆ In Class Assessments
 - ◆ CASAS Pre-Test administered during week one
 - ◆ VABE Pre- and Post-Test (Instructor Developed)
 - ◆ VABE Section Quizzes (Instructor Developed)
 - ◆ CASAS Post-Test administered during last week

IET | Cycle 3: CURRICULUM DEVELOPMENT

- ◆ Built on Cycle 1 and Cycle 2 Feedback and Outcomes
 - ◆ Teacher Directed Only
 - ◆ Students obtaining 80% or better on VABE pre-test can opt out of Math
- ◆ HVAC/R Additional Content
 - ◆ Trig. Calculations used in duct work covered
 - ◆ Tape Measure Reading to 1/32 of an inch
- ◆ Diesel Additional Content
 - ◆ Metric Caliper Reading
 - ◆ Metric Conversions

IET | Cycle 3: DATA FINDINGS

- ◆ HVAC/R served 17 students
 - ◆ Improved an average of 46% on VABE Pre- to Post-Test
 - ◆ CASAS Benchmarks
 - ◆ 6 gained benchmark (significant gain)
 - ◆ 11 did not post-test (found employment/work hours changed)
- ◆ Diesel served 18 students
 - ◆ CASAS Benchmarks
 - ◆ 9 gained benchmark
 - ◆ 4 had some gain
 - ◆ 3 did not post-test

IET | Cycle 3: STAKEHOLDER FEEDBACK

◆ HVAC/R

◆ Student surveys positive

- ◆ Want more time
- ◆ Did not like CASAS testing
- ◆ Liked that it is free and they got to refresh math skills

◆ Diesel

◆ Student surveys mostly positive

- ◆ Want more time but at start of training
- ◆ Don't like losing shop time for math
- ◆ Liked the refresh of math skills

Lessons Learned

- ◇ What we have learned
 - ◇ CTE Teachers must buy-in
 - ◆ Include in curriculum development
 - ◆ Ask “What can I help you with?”
 - ◇ It takes a cycle for some CTE instructors to see benefit
 - ◇ Teacher Directed Model works best in CTE classroom
 - ◆ CTE Teacher can chime in with how math applies in their field
- ◇ Challenges
 - ◇ Continuous enrollment
 - ◇ Variety of student skill levels

Q & A

Contact Information

MARGARET CHEDOTTE, ASE/ABE Instructor
mchedott@lausd.net

CARLOS PALMA, Academic Advisor
cep5950@lausd.net

THOMAS HERNANDEZ, Assistant Principal
txh9494@lausd.net

SONYA RAMIREZ, Principal
sramir1@lausd.net



January 22, 2018

HARBOR OCCUPATIONAL CENTER