Accelerating Basic Skills Acquisition with Contextualized Teaching & Learning

APRIL 21, 2016
http://www.careerladdersproject.org/videos/contextualized-teaching-learning/
Accelerating Basic Skills Acquisition with Contextualized Basic Skills

April 21, 2016

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Create Your Heart

When your heart is dark as iron, steadily polish yourself that the heart may become a mirror, a beautiful shine reflecting from within. Although iron is dark and dismal, polishing clears the darkness away.

- Rumi

Using the materials around you please begin to decorate your heart.
Examples of CTL
Iron Hearts

IRON HEARTS
- Students read poetry about “polishing” their hearts in English class
- Write vignettes about their own transformation in welding
- Create metal hearts in welding
Brian’s Heart

“I could shape it anyway I wanted, nothing was impossible. It was great to work through the entire process of fabricating metal, the fire, the forming, the fusing... the freedom.”
“My journey started with a feeling of intimidation and ended with a feeling of accomplishment... I can do this and I made it mine!”
CAAs Ahead of the Game

Five elements of the CAA Framework:

• Industry responsive technical training
• Contextualized teaching and learning in basic skills
• Student cohorts
• Transition supports
• Intensive student services and case management
What is contextualized teaching and learning?

Instructional strategies designed to link basic skills with academic or occupational content – focusing on concrete applications in a specific career context.

1. Relevant and applicable, based on student interest

2. Concrete – not abstract

3. Deepens understanding of concepts

4. Faculty collaboration is essential
What is contextualized teaching and learning?

Levels of Contextualization - Auto and English

1. Low level CTL – auto vocabulary
2. Mid level – students write a blog explaining auto tech procedures or reviewing parts
3. High level – instructor arranges for local auto employers to read and comment on blogs
4. Transfer level – contextualized transfer level English & Physics
What is contextualized teaching and learning?

Students in contextualized math compared to standard math courses:

- 327% more likely to pass contextual course
- 387% more likely to pass degree applicable coursework in the same semester
- 400% as likely to pass transfer-level course in the same semester
- 167% more likely to pass degree applicable coursework in the subsequent semester

W. C. Wiseley. *Effectiveness of Contextual Approaches to Developmental Math in CCCs*. Univ. of Pacific, May 2009
What is contextualized teaching and learning?

CTL improves:
• Persistence
• Progression
• Motivation
• Engagement


Guiding Framework

- Design
- Implementation

Institutional Supports
Design

- Curriculum
- Pedagogy and Instructional modality
- Integrated supplemental instruction/tutoring
- Integrated student supports
- Employer partnerships
<table>
<thead>
<tr>
<th>Implementation</th>
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<tr>
<td>Targeted student recruitment and screening</td>
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<td>Evaluation and continuous improvement</td>
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<tr>
<td>Faculty recruitment, training, and assignment</td>
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<tr>
<td>Structured cross-discipline collaboration</td>
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<td>Curriculum co-development/co-delivery</td>
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Institutional Supports

- Incentives
- Curricular alignment and credit
- Course scheduling
- Facilities
- Alignment with institutional reform
El Camino College’s Career Advancement Academy
California: The Largest Manufacturing Base in the U.S
CAA El Camino College

- Compton Center
  - Machine Tool Technology
  - Aerospace Fastener
  - Welding

- Torrance campus
  - Welding
  - Air Conditioning Repair and Refrigeration
Support
- Application workshops
- Financial Aid workshops
- Assigned CTE counselor
- Classroom Mentor
- Registration assistance
- Classroom announcements/email lists
- Books/supplies provided

CTE
- Welding
- Machine Tool Technology
- Aerospace Fasteners
- Air Conditioning and Refrigeration

Workshops
- Stackable Certificates
- Contextualized Math Boot Camps

El Camino College’s CAA
4. a. A welder saws a 3.570 piece from this bar. Find, to the nearest hundredth inch, the length of the remaining bar. Allow a cutting loss of 0.1250.

b. From the remaining bar, 2 more cuts are made: 6.450 and 1.360. Loss for each cut is still 0.1250. What length of bar now remains?
Future Plans for Contextualized Math

El Camino College Presents a workshop: Mathematics in Context by Laura Hinckley

Tuesday, March 15th from 9:00-11:00 am at MBA 213.
What questions do you have for us?

What strikes you about what we have shared thus far?
Heart Reflection

- Turn to a neighbor – how did it feel to work on your heart during the presentation?

- How will you integrate CTL into your course or programs?