

# A Little Bit of Leaven

The SENCER Work of Lipscomb University



# Twisted Bread: 3 strands

- Integrated Science Courses on Campus
- Introduction of an Associate's Degree at the Tennessee Prison for Women
- Competency-based Education

# Leaven = An Idea to Integrate

- Ben Hutchinson, SENCER Fellow
- Desire to integrate sciences
- Introduction to SENCER in 2007-08
- First integrated science courses led the way to general education reform

# Integrated Science at Lipscomb

- Began with the idea to assist elementary education majors
- Review of state science standards
- Discussion of which sciences to pair up
- Reduced 3-course sequence to 2 courses

# Bubbles in the Mixture

- Learning to team teach
- Support for two full-time faculty
- Evaluation of learning: content and attitudes
- Student feedback to mold future outcomes

# The Courses:

- Biology and Chemistry
- Physics and Nutrition
- Differences in teaching styles
- Differences in grading styles
- Differences in content requirements

# Force, Heat, and Energy





# SENCER as Yeast

- Success of SENCERized courses
- Need for General Education reform
- Result: Integration in 4 Areas, “Explorations”
  - Math/Science
  - Literature
  - History
  - Social Science

# General Ed “Capstone”

- Course called “Engagements”
- Pre-requisites: completion of 60 hours, completion of 2 Explorations areas
- Team taught, but blends a minimum of 3 disciplines
- Required Bible component

# Leaven = An Idea to Introduce

- Richard Goode received a grant to begin the Lipscomb Initiative For Education (LIFE) Program
- Housed at the TN Prison for Women (TPW)
- Associate of Arts degree program using TN Board of Regents Standards

LIFE... here?



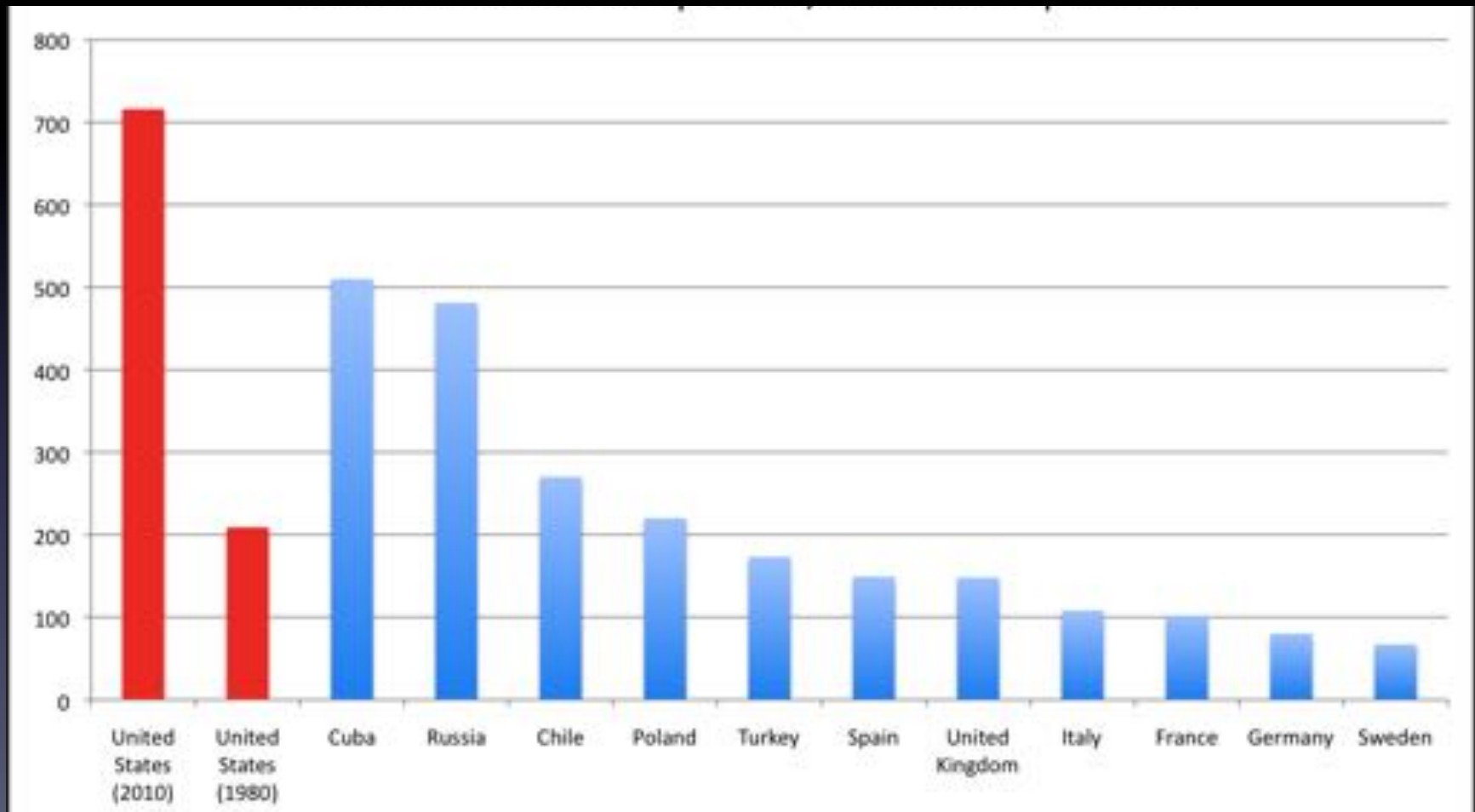
# Perception



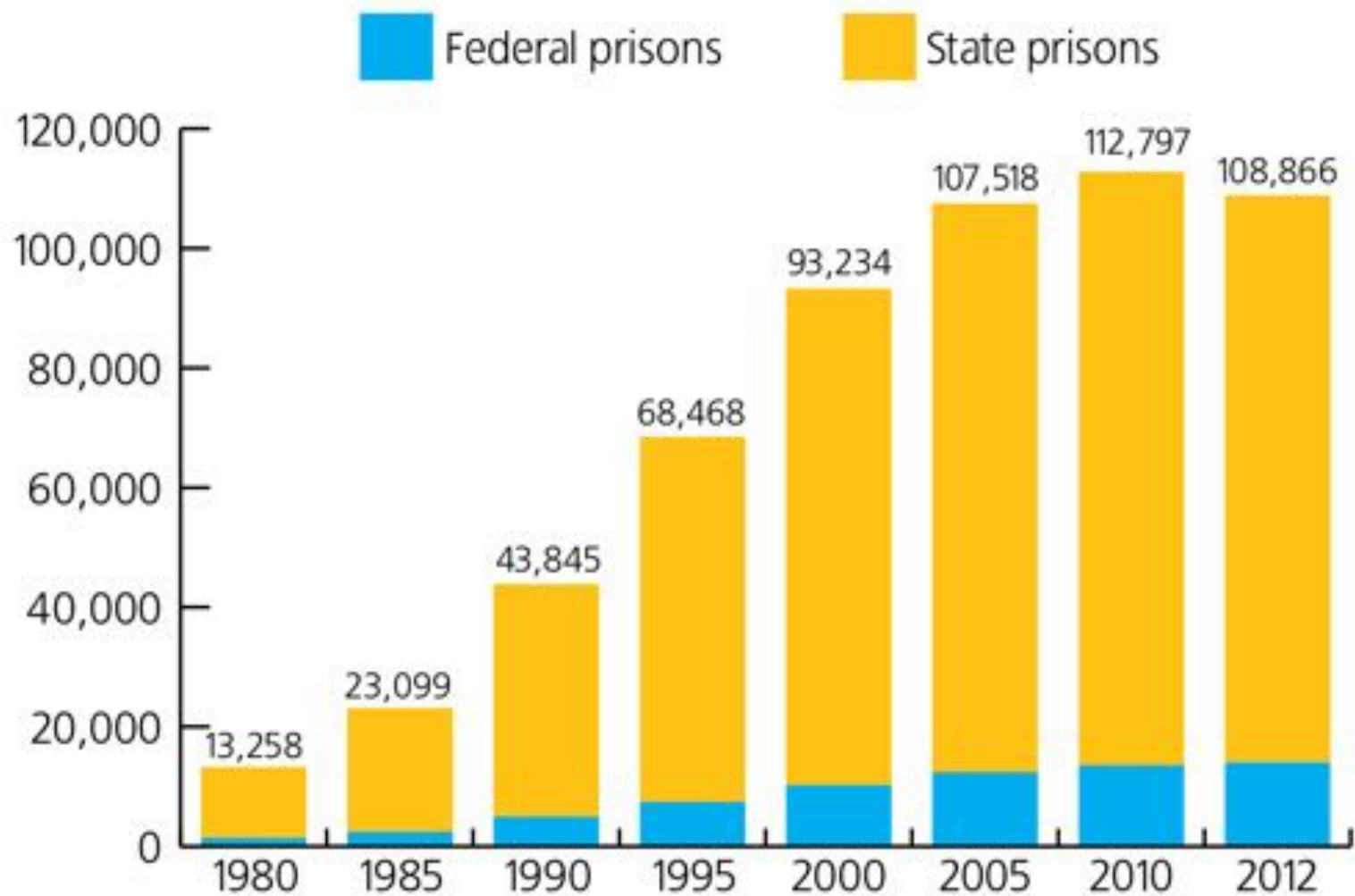
# US Prison Statistics

- US houses 25% of the world's prison population
- 2.3 Million people incarcerated in the US
  - Rate has tripled since 1980
- 95% will leave prison at some time

# Incarceration Rate per 100,000



## Number of Women in State and Federal Prisons, 1980-2012



Source: Carson, E.A., Golinelli, D. (2013). *Prisoners in 2012 - Advance Counts*. Washington, D.C.: Bureau of Justice Statistics



# Impact of Education

- Inmates who earn an associate's degree in prison are **70%** less likely to reenter prison (2009 Natl. Correctional Association report)
- A **1.6 % reduction** in the number of prison inmates in Nevada (2008 to 2009) **saved \$38 million plus \$1.2 billion** in prison construction costs

# Progress... slow but steady

- First cohort included 9 students
- Took 7 years to accomplish the dream, one course per semester
- Needed a physical science, requested SENCERized course
- One student “shipped” 2 months into her final course needed to graduate

# The Power of Science: Big Ideas

- Physics and Nutrition: not-so-strange bedfellows
  - Matter
  - Energy
  - Newton's Laws
  - Electromagnetic Spectrum

# Traditional Physics, Nutrition Twist

- Matter – Food
- Energy – Calories
- Newton – motion of digestion and absorption, physics of cooking
- Electromagnetic Spectrum – visible light shows colors of foods, microwaves cook foods, gamma rays irradiate foods

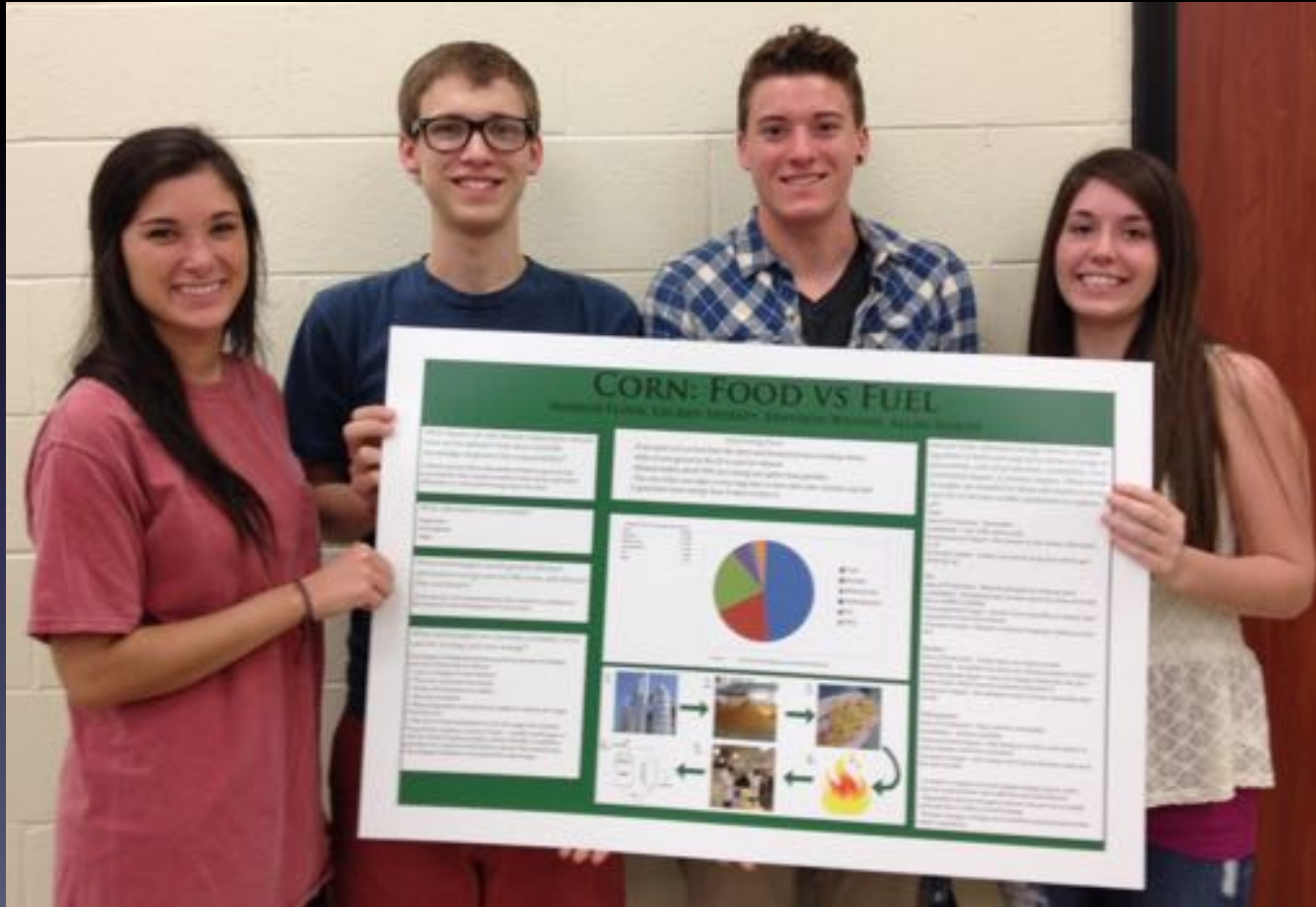
# Similar Approaches

- What do you know; what do you WANT to know?
- On-campus class geared toward PRAXIS exam
- TPW course did not require PRAXIS focus
- What are the elements of physics and nutrition?  
“HONC”
- All physics and nutrition = energy and matter

# Different Executions

- On Campus:
  - Follow PRAXIS guidelines
  - Access to internet
  - Electronic research capability, excellent library resources
  - Group projects and presentations
- At TPW:
  - No PRAXIS in the future
  - No access to internet
  - Extremely limited research capability – library extremely lacking in science resources
  - Small class size, so the whole class was the group

# Student Research



# Hands-on Molecules at TPW





# Prison Limitations

- Must clear all materials to be brought in
- Metal not allowed, except for a laptop for demonstrations
- No “risky” substances
- No leaving the classroom
- No internet access in classroom

# Impact of a SENCERized Course

- Primary Research Question:
  - How did the performance of **LIFE students** at TPW compare with that of the **Lipscomb students** in the same course in a traditional setting?
    - Content
    - Attitudes

# Content Comparison: Grades

## On Lipscomb University Campus

- 52 students in Spring 2013
- Average grade **86.95** (B)

## In LIFE Program at TPW

- 10 students in Fall 2013:
- Average grade **91.78** (low A)  $\frac{1}{2}$  grade higher

# Attitude Comparison

- Both students on campus and students at the prison indicated improved response to:
  - Discussing science
  - Reading about science
  - Understanding how science helps address real world issues
  - Comfort level in working with complex ideas
  - Applying science learning to other classes

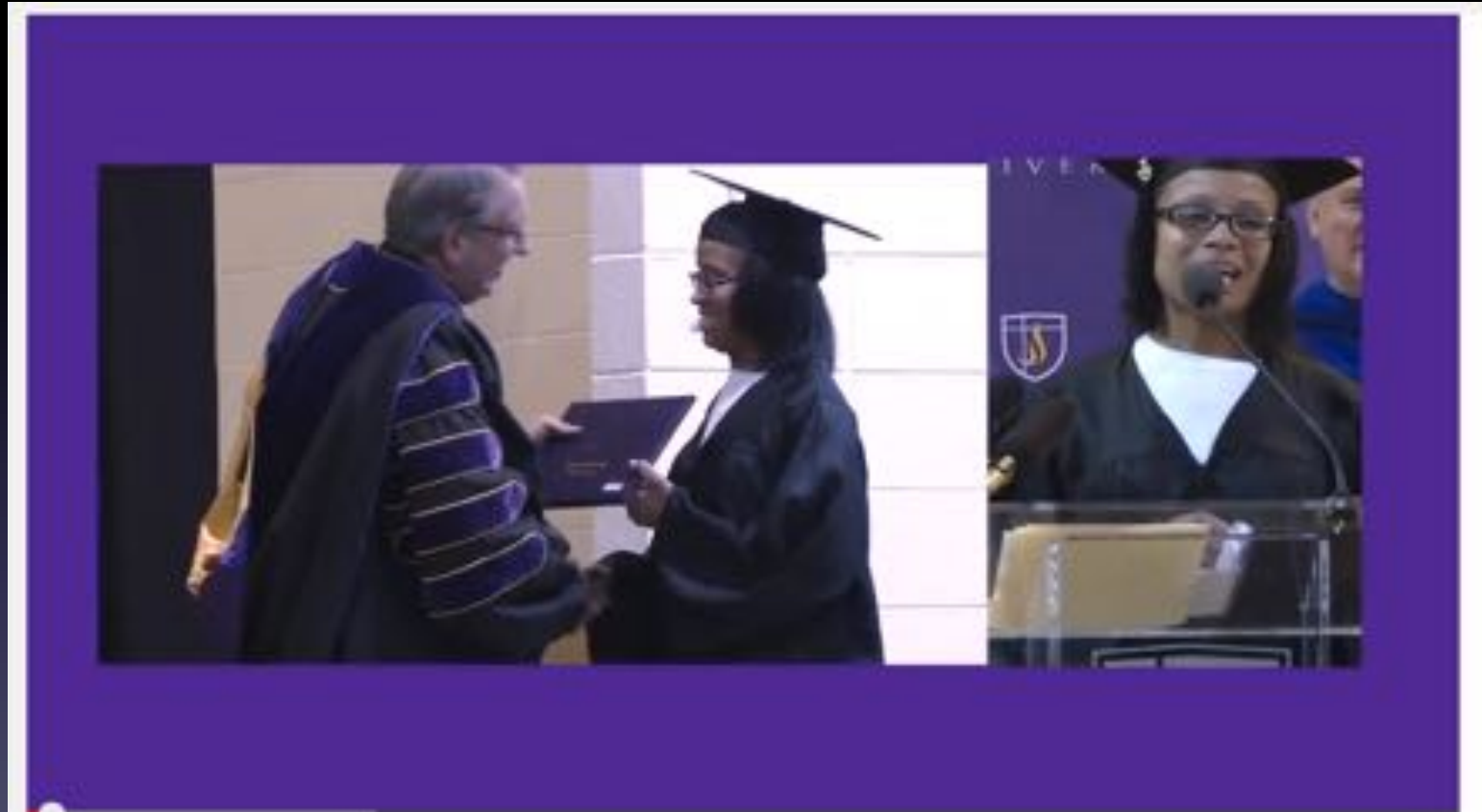
# Happy Endings/Beginnings



TV Coverage of Graduation:

<http://www.youtube.com/watch?v=u8yhwOkjAeA>

# Reflections



Lipscomb Video Collage:

[https://www.youtube.com/watch?v=oZL\\_T4Pzr5g](https://www.youtube.com/watch?v=oZL_T4Pzr5g)

# Diving Deeper: The Dark Side

- Resentment on the part of prison staff
- Pell Grant Pilot vs. the Higher Education Act
  - <http://www.tennessean.com/story/news/education/2015/07/31/new-federal-program-give-inmates-money-college/30854633/>
- It is, after all, the Department of CORRECTION
- Can imprisonment/clemency come in different forms?
  - [http://www.huffingtonpost.com/lee-c-camp/you-teleconferenced-me-in\\_b\\_7341472.html](http://www.huffingtonpost.com/lee-c-camp/you-teleconferenced-me-in_b_7341472.html)

# Next Steps

- Collaboration on “Enduring Understandings” project
- Attempt to collect data on LIFE students after release
- Efforts to include career guidance



# Leaven = An Idea to Expand

- Competency Based Education
  - What is it?
    - CORE (Customized, Outcome-based, Relevant Evaluation)
    - Provides an opportunity for attributes such as life and professional experiences, as well as personal and behavioral skills, to be evaluated for performance goals, programs and outcomes (and college credit)

# Who is offering CBE?

- Public Universities
  - University of Wisconsin
- Private Universities
  - Southern New Hampshire University
- Online Universities
  - Western Governors University

# Who is using CBE?

- Students who never finished college
- Students who wish to save tuition dollars  
(about \$500 per credit earned)
- Mid-career students
- Local employers

# What do they earn?

- **“CORE is as easy as ABCD”**
  - **Assess**
    - A = **Assess** on 15 relevant competencies
  - **Badges**
    - B = Award e-credential **badges** (eventual college credit)
  - **Customized**
    - C = **Customized** plan for identified competency gap
  - **Develop**
    - D = **Develop** targeted competencies

# Lipscomb's Statistics

- Using the *Polaris Competency Model* to evaluate students' competencies
- Average credit earned by non-incarcerated students:  
15 to 18 credit hours (one semester of credit)
- Average credit earned by incarcerated (LIFE) students:  
30 credit hours (two semesters of credit)

# Competency Utilized

- Skills of LIFE students are being applied to a new bachelor's degree program offered by Lipscomb's College of Professional Studies
- Credits may be used toward a Bachelor of Professional Studies in Organizational Leadership
- Credits may also be used toward ANY Adult Degree Program at Lipscomb

# Delicious Results



# Where do we go from here?

- Goals for integrated science courses on campus
- Goals for integrated science course at TPW
- Goals for CBE at TPW



# Closing Thoughts

- Those who aim at nothing achieve their mark with incredible accuracy. (Pardon my paraphrasing Zig Ziglar.)
- Hitch your wagon to a star!