Class #14
October 22, 2014
Education

Sonya Christian
President, Bakersfield College

Michele Bresso
Associate Dean of Instruction, BC
Associate Vice Chancellor, KCCD
Revenue Stream

Public Funding (apportionment per FTES)
Tuition (per credit)
Fees
Figure 1. Resident Undergraduate Tuition and Fees at Public Four-Year Institutions, State Averages and WICHE Average, 2013-14

Tuition and Fees

Source: WICHE

May 2014
Figure 3. Resident In-District/County Tuition and Fees at Public Two-Year Institutions, State Averages and WICHE Average, 2013-14

- South Dakota
- Alaska
- Oregon
- Washington
- North Dakota
- Colorado
- WICHE Average*
- Montana
- Northern Marianas
- Utah
- Hawai’i
- Idaho
- Nevada
- Wyoming
- Arizona
- New Mexico
- California

* Regional average excludes California community colleges.
Figure 2. Percent Change in Resident Undergraduate Tuition and Fees at Public Four-Year Institutions, State Averages and WICHE Average, 2012-13 and 2013-14

Source: WICHE
Tuition & Fees in the West 2013-2014
May 2014
Figure 4. Change in Dollars in Resident Undergraduate Tuition and Fees at Public Two-Year Institutions, State Averages and WICHE Average, 2012-13 to 2013-14

Source: WICHE
Tuition & Fees in the West 2013-2014
May 2014

* Regional average excludes California community colleges.
Figure 5. Percent Change in State Support for Higher Education, FY09 to FY14 and FY13 to FY14

Source: WICHE

Tuition & Fees in the West 2013-2014


Notes: American Recovery and Reinvestment Act (ARRA) funds were available for FY09 to FY12. Data not available for the Commonwealth of the Northern Mariana Islands.
Figure 6. Percent Change in Educational Appropriations per FTE Between FY2009 and FY2013

North Dakota
Wyoming
Alaska
California
South Dakota
Montana
WICHE
New Mexico
Utah
Hawai’i
Oregon
Nevada
Washington
Colorado
Arizona
Idaho

Percent Change FY2009 - FY2013

Note: Data not available for the Commonwealth of the Northern Mariana Islands.
Figure 7. Public Institutions’ Revenues from Education Appropriations and Net Tuition and Fees per FTE, FY2013

Note: Data not available for the Commonwealth of the Northern Mariana Islands.
Outcomes-based funding
In California: SSSP and Equity
At Bakersfield College: SSSP and Equity
Demographics and Achievement Gaps
Figure 3. Total Production vs. Diversification of Projected Public High School Graduates by 2020

Source: WICHE, Knocking at the College Door.
Figure 2. Composition of U.S. Public High School Graduates, by Race/Ethnicity, 2008-09 (Actual) and 2009-10 to 2027-28 (Projected)

Source: WICHE, Knocking at the College Door.
Figure 4. Differences in College Attainment (Associate’s and Higher) Between Younger and Older Adults by Race/Ethnicity, 2008-2010

Source: American Community Survey (via National Center for Higher Education Management Systems).
**Figure 5. Percent of Dependent Students Receiving Grants and Average Amount Received by Source of Grant and Income Quartile, 2007-08**

Source: NCES National Postsecondary Student Aid Survey. WICHE calculations.

Source: WICHE. *Demography as Destiny: Policy Considerations in Enrollment Management*. April 2013
Bakersfield College

Data Snippets: Student Success

Proportionality through a College Experience Pipeline -- Ethnicity
Bakersfield College

Data Snippets: Student Success

Proportionality through a College Experience Pipeline -- Hispanic

Pipeline Proportionality Index - Hispanic

- Transfer
- Transfer Prepared
- Degree/Cert
- 30-Unit Milestone
- Persistence
- Remedial Math Progress
- Remedial Engl Progress
- Course Success
- ServArea vs Students

PI Ratio: 0.00 - 2.00
Bakersfield College

What are we doing?

Before they arrive
8th grade rural initiative
Assessment testing
Dual Enrollment
Orientation, ASEP

When they arrive
Multiple Measures
Summer Bridge
Orientation, ASEP
Mentors

When they enroll
Mentors
Classroom Interventions
Acceleration & Compression

College Ready
Two years to associates degree
Bakersfield College
Hispanic Serving Institution (HIS)
Financial Aid and Public Policy
Section II
California Community College
Kern Community College District
California Community Colleges

*Early years:*
- Defined by Educational Master Plan
- Tuition free
- Open access
  - Any student who can benefit from instruction
- Provide academic & vocational instruction
Early years – Evolving Mission:
- Transfer/Degree/Certificate
- Workforce Training
- Basic Skills
- Lifelong Learning
- Educational Enrichment/Self-discovery
California Community Colleges

*Today*

- 112 colleges in 72 districts
- Over 2.1 million students
  - USA’s largest system of higher education
- Undergraduate student comparison:
  - Bakersfield College – 18,296 students
  - CSUB – 7,242 students
California Community Colleges

Today – Narrower Mission
- Degree Attainment/Transfer
- Workforce Training
- Basic Skills Instruction
California Community Colleges

Today – Less Funding Per Student than...
- University of California – $22,428
- California State Universities – $12,506
- K-12 Public Education – $8,365
- Community Colleges – $5,997

- Source: California Community College League Fast Facts 2014
California Community Colleges

Today – Role of CCs

- Community Colleges provide:
  - Trained workers for middle skills jobs
  - Services essential to the welfare of our state and communities
California Community Colleges

*Today – Example*

- 80% of safety personnel are credentialed at Community Colleges
  - Firefighters
  - Law enforcement officers
  - EMTs
California Community Colleges

Today – Example

- Community College transfer students make up 48% of UC’s STEM graduates
Kern Community College District

Our three colleges:

[Logos for Bakersfield College, Cerro Coso Community College, and Porterville College]
Kern Community College District

More than 26,000 students
- Bakersfield College accounts for about 2/3
- Porterville & Cerro Coso combined = 1/3

Almost 25,000 square miles
- Serving parts of 5 counties
Diversity

- Hispanic – 62%
- White – 24%
- African-American – 5%
- Asian – 4%
- Two or more races – 3%
- Native American – 1%

Source: KCCD Internal Scan, June 2014
Gender/Age
- Female – 56%
- Male – 44%
- 24 or younger – 66%
- 25-39 – 25%
- 40 & older – 9%

Source: KCCD Internal Scan, June 2014
Bakersfield College

Career Pathways
- Engineering & Industrial Technology
- Health Services & Child Development
- Agriculture & Natural Resources
- Administration of Justice
- Art, Media & Communication
Bakersfield College

**AAT & CTE**
- Associate Degree for Transfer
  - 19 and counting
- Career & Technical Education
  - Training today’s workforce
- Costly
Bakersfield College

SimMan--$80,000
Challenges

- Mission remains broad while...
  - Low funding
  - Increased expectations for student success/completion
- 81% of students not college ready
  - English 64% below transfer
  - Math 71% below transfer
  - Reading 35% below transfer
- 25% are 3 levels below transfer
Section III
Technology
The significant problems we face today cannot be solved at the same level of thinking we were at when we created them.

Albert Einstein
Adaptive Technologies

Question:

A. I do not know about Adaptive Technologies
B. I have a preliminary understanding about Adaptive Technologies
C. I have a moderate understanding of Adaptive Technologies
D. I have an expert understanding of Adaptive Technologies
Open Educational Resource

Question:

A. I do not know about OERs
B. I have a preliminary understanding about OERs
C. I have a moderate understanding of OERs
D. I have an expert understanding of OERs
Social Media

Question: Do you use social media?

A. I tweet
B. I facebook
C. I blog
D. Other
E. Some of the above
Question:
I primarily get my news from:

A. Digital media
B. TV
C. Newspaper
D. Paper copy of journals
Digital Commerce

**Question:**
I primarily make purchases, pay bills, .....  

A. online  
B. Checks, stores, phone
MOOCs

Question:

A. I do not know about MOOCs
B. I have a preliminary understanding of MOOCs
C. I have a moderate understanding of MOOCs
D. I have an expert understanding of MOOCs
Predictive Analytics

Question:

A. I do not know about Predictive Analytics
B. I have a preliminary understanding of Predictive Analytics
C. I have a moderate understanding of Predictive Analytics
D. I have an expert understanding of Predictive Analytics
College Today

Uni-directional
Linear
Passive

Assessment
Courses/Path
Gets Direction
The World in 2013

Open, Big data, Learning you
Our student in 2016
In California and at BC

Open:
- OER
- 20 million minds

Big data:
- Predictive analytics in placement
- Data analytics to messaging students

MOOCs:
- Udacity
- Cousera
- Community Colleges

At BC
High Tech
High Touch
Closing the Achievement Gap

http://www.theguardian.com/

http://www.fertilizer.org

http://www.mathmirror.org/blog/entry/reflections-on-grimmway-academy-iii-technology-and-learning/
Section IV
Accountability
Accountability

Accreditation and peer review
College Rating
DOL/DOE

Generally “proxy” was good in the past
Not anymore
## 1911 College Rating System


### Classification of universities and colleges with reference to bachelor’s degrees.

<table>
<thead>
<tr>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
<th>Class IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama, University of.</td>
<td>Alabama, University of.</td>
<td>Amity College.</td>
<td>Atlanta University.</td>
</tr>
<tr>
<td>Albion College.</td>
<td>Alfred University.</td>
<td>Antioch College.</td>
<td>Atlanta Baptist College.</td>
</tr>
<tr>
<td>Arizona, University of (engineering).</td>
<td>*Armour Institute (engineering).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Armour Institute (engineering).</td>
<td>Augustana College (A).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Barnard College. | *Baker University. |             |          |
| Bowdoin College. | Baylor University. | Bellevue College (Omaha). |          |
| | *Boston University. | Blackburn College. |          |
| | Brooklyn Polytechnic Institute. | Bridgewater College. |          |
| | *Bucknell University. |         |          |
| | Buchtel College (science). |         |          |
| | Butler College. |         |          |
Whitehouse College Score Card

Bakersfield College
Bakersfield, CA
Primarily certificate granting
Undergraduate enrollment: 17,344

Costs
What does it typically cost to attend Bakersfield College?
The average net price for undergraduate in-state students is $3,625 per year. Net price is what undergraduate students pay after grants and scholarships (financial aid you don't have to pay back) are subtracted from the institution's cost of attendance. The average net price has increased 7.6% from 2008 to 2010.

Medium
High
Low
$3,625 / yr

Click here to see list of changes in college costs.
Click here to go to the Net Price Calculator for a better estimate of what your costs would be.

Graduation Rate
What percentage of students graduate?
19.7% of full-time students graduated within 150% of the expected time for completion and 10.8% transferred to another institution. Graduation rate data are based on undergraduate students who enrolled full-time and have never enrolled in college before. This may not represent all undergraduates that attend this institution.

Low Medium High
19.7%

Loan Default Rate
Are students able to repay their loans after they graduate?
30% of borrowers defaulted on their Federal student loans within three years of entering repayment.
Rating System This Fall?

Colleges Rattled as Obama Seeks Rating System

By MICHAEL D. SHEAR  MAY 25, 2014

Bakersfield College

The student population and course sections offered described in the tables are based on the 2012-13 academic year. Students represented differ from those included for calculation of Scorecard metrics, which are based on first-time students enrolled in 2007-08.

<table>
<thead>
<tr>
<th>STUDENT INFORMATION</th>
<th>OTHER INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>23,288</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>54.1%</td>
</tr>
<tr>
<td>Male</td>
<td>45.2%</td>
</tr>
<tr>
<td>Unknown</td>
<td>0.7%</td>
</tr>
<tr>
<td>ETHNICITY/RACE</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>6.0%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>0.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>2.6%</td>
</tr>
<tr>
<td>Full Time Equivalent Students</td>
<td>12,515.2</td>
</tr>
<tr>
<td>Credit Sections</td>
<td>3,276</td>
</tr>
<tr>
<td>Non-Credit Sections</td>
<td>29</td>
</tr>
<tr>
<td>Median Credit Section Size</td>
<td>29</td>
</tr>
<tr>
<td>Percentage of Full-Time Faculty</td>
<td>71.8%</td>
</tr>
</tbody>
</table>
B. Assuring Academic Quality and Institutional Effectiveness

*Academic Quality*

1. The institution demonstrates a substantive and collegial dialog about student outcomes, academic quality, institutional effectiveness, and continuous improvement of student learning and achievement. CW IB1

2. The institution defines and assesses learning outcomes for all instructional programs and student and learning support services. CW IB intro+, IB, IB2+, IIA2a, IIB, 4

3. The institution publishes institution-set standards for student achievement, appropriate to its mission, and assesses how well it is achieving them in pursuit of continuous improvement. CW IB intro+, IB, IB2+

4. The institution uses assessment data, organizes its institutional processes and allocates and reallocates resources to support student learning and student achievement. CW IB intro+, IB, IB4
**Principle 1:** Content matters  
Learning, Achievement, Perception, Operational

**Principle 2:** Context matters  
Longitudinal and/or comparative

**Principle 3:** The four Es  
Equity  
Achievement of all sub populations. Disproportionate impact.

Exiting data, Embedding data, External Reporting,  
Umbrella framework: State Chancellor’s Scorecard, ACCJC, Financial Aid, Board of Trustees, etc

**Principle 4:** College owned  
Social development; Social engagement
Section V
SB 850
BC’s response
Baccalaureate of Applied Science
Industrial Automation
A MASTER PLAN for
HIGHER EDUCATION IN CALIFORNIA
1960-1975

California
Higher
Education
Master Plan

"...It was the first time in the history of any state in the United States, or any nation in the world, where such a commitment was made -- that a state or a nation would promise there would be a place ready for every high school graduate or person otherwise qualified."

– Clark Kerr 1999
NEWS RELEASE
Sept. 28, 2014

Governor Signs Bill Enabling 15 California Community Colleges to Award Four-Year Degrees

California joins 21 other states that offer community college baccalaureates in workforce and technical fields

Governor Jerry Brown today signed into law a historic measure that for the first time enables a limited number of California community colleges to offer four-year degrees.

Senate Bill (SB) 850, authored by State Senator Marty Block (D-San Diego), drew overwhelming bipartisan and business support because it addresses a growing need for the state to become more competitive in areas of high workforce demand.

The pilot program authorized under SB 850 allows up to 15 different community college districts to offer one baccalaureate degree each in select workforce majors starting on Jan. 1, 2015 and ending on July 1, 2023.

***Senate Bill 850 allows up to 15 different colleges in 15 different community college districts to offer one baccalaureate degree.
## Baccalaureate attainment by counties in California

<table>
<thead>
<tr>
<th>County</th>
<th>Population 25 years and over</th>
<th>Percent bachelor's degree or higher</th>
<th>Rank</th>
<th>County</th>
<th>Population 25 years and over</th>
<th>Percent bachelor's degree or higher</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Diego</td>
<td>2,079,795</td>
<td>34.8%</td>
<td>11</td>
<td>Sutter</td>
<td>59,373</td>
<td>17.7%</td>
<td>31</td>
</tr>
<tr>
<td>San Luis</td>
<td>180,650</td>
<td>33.5%</td>
<td>12</td>
<td>Lake</td>
<td>46,706</td>
<td>17.1%</td>
<td>32</td>
</tr>
<tr>
<td>Obispo</td>
<td>126,734</td>
<td>32.0%</td>
<td>13</td>
<td>Stanislaus</td>
<td>321,347</td>
<td>16.1%</td>
<td>33</td>
</tr>
<tr>
<td>Nevada</td>
<td>73,598</td>
<td>32.4%</td>
<td>14</td>
<td>Yuba</td>
<td>44,292</td>
<td>15.8%</td>
<td>34</td>
</tr>
<tr>
<td>El Dorado</td>
<td>339,841</td>
<td>31.8%</td>
<td>15</td>
<td>Kern</td>
<td>503,688</td>
<td>15.3%</td>
<td>35</td>
</tr>
<tr>
<td>Sonoma</td>
<td>542,924</td>
<td>31.6%</td>
<td>16</td>
<td>Tulare</td>
<td>257,393</td>
<td>14.7%</td>
<td>36</td>
</tr>
<tr>
<td>Ventura</td>
<td>94,818</td>
<td>30.3%</td>
<td>17</td>
<td>Imperial</td>
<td>106,011</td>
<td>13.0%</td>
<td>37</td>
</tr>
<tr>
<td>Napa</td>
<td>266,202</td>
<td>30.2%</td>
<td>18</td>
<td>Merced</td>
<td>149,009</td>
<td>12.8%</td>
<td>38</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>6,525,066</td>
<td>30.0%</td>
<td>19</td>
<td>Madera</td>
<td>93,341</td>
<td>12.5%</td>
<td>39</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>943,594</td>
<td>28.0%</td>
<td>20</td>
<td>Kings</td>
<td>93,536</td>
<td>12.1%</td>
<td>40</td>
</tr>
</tbody>
</table>

* The US Census website did not have data to report for 18 of the 58 counties in California. Inyo and Mono are among the 18 with no data.
## Baccalaureate Attainment by Ethnicity

### USA-CA-Kern

<table>
<thead>
<tr>
<th>Baccalaureate Attainment by Ethnicity</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>17.9%</td>
<td>18.4%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>49.9%</td>
<td>50.0%</td>
<td>50.5%</td>
</tr>
<tr>
<td>Hispanic/ Latino</td>
<td>13.0%</td>
<td>13.2%</td>
<td>13.8%</td>
</tr>
<tr>
<td>White</td>
<td>31.4%</td>
<td>31.9%</td>
<td>32.5%</td>
</tr>
</tbody>
</table>
## Baccalaureate Attainment by Ethnicity

**USA-CA-Kern**

<table>
<thead>
<tr>
<th>Baccalaureate Attainment by Ethnicity</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>21.7%</td>
<td>22.2%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>48.1%</td>
<td>48.7%</td>
<td>49.0%</td>
</tr>
<tr>
<td>Hispanic/ Latino</td>
<td>10.5%</td>
<td>10.5%</td>
<td>11.0%</td>
</tr>
<tr>
<td>White</td>
<td>38.9%</td>
<td>39.4%</td>
<td>40.3%</td>
</tr>
</tbody>
</table>
## Baccalaureate attainment by ethnicity

**USA-CA-Kern**

<table>
<thead>
<tr>
<th>Baccalaureate Attainment by Ethnicity</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kern County</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>8.1%</td>
<td>17.5%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>38.1%</td>
<td>37.7%</td>
<td>37.9%</td>
</tr>
<tr>
<td>Hispanic/ Latino</td>
<td>5.2%</td>
<td>5.5%</td>
<td>5.1%</td>
</tr>
<tr>
<td>White</td>
<td>22.1%</td>
<td>20.5%</td>
<td>22.6%</td>
</tr>
</tbody>
</table>
What is happening in other states?
BC’s response to SB 850

- Senate Bill (SB)/State Chancellor’s Office

Tentative Timeline

- February 2015--projected call for applications
  March 2015--projected month applications are due
- Unknown--15 colleges selected
- Up to summer 2017--ramp up BC program
- Fall 2017--launch program at BC


Economic Workforce Analysis Example

Local Need

*High-technology (HT) manufacturing industries:*

- Spend a large proportion of revenues on R&D and make products that contain or embody technologies developed from R&D.

- These include aircraft; communications (including semiconductors); computers and office machinery; pharmaceuticals; and testing, *measuring*, and *control instruments*.

- Employed 2 million workers and produced 2% of GDP in 2012.

- There is a greater concentration of workers in Science & Engineering occupations in HT manufacturing industries.

- Pay substantially higher wages than the private-sector average.

*HTTP://WWW.NSF.GOV/STATISTICS/2015/Nsf15300/?WT.mc_id=USNSF_178*
Educational Pathways to Meet Workforce Need

Certificates for Electronics Technician Training

A.S. Degree in Industrial Technology, Electronics Option

Automation

A.S. Degree in Engineering Technology

Baccalaureate
Curriculum Design Example
Industrial Automation
Curricular Scope

Existing Lower Division Curriculum

- Electricity/Electronics
- Visual Communications/CAD
- Industrial Graphics
- Mechanical Systems
- Programmable Logic Controllers
  - Motors
- Lower Division GE, including physics, chemistry, math

Proposed Upper Division Curriculum

- Distributed Control Systems
- Industrial Safety Management & Systems
- PLC Applications
- Programmable Automation Controllers
  - Process Control
- Project Management & Budgeting
- Fluid Mechanics
- Systems Integration
- Quality Assurance
- Leadership Seminar
- Upper Division GE, including technical writing
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https://www.bakersfieldcollege.edu/president

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