

# Data Insights for Program Review

ILLINOIS EASTERN COMMUNITY COLLEGES

# About IECC

- ▶ One accredited institution
- ▶ Four separate colleges
- ▶ 11 counties in Southeastern Illinois
- ▶ 3,700 FTE
- ▶ 126 CTE Degrees and Certificates



# About the Presenters

## Kathy Swinson

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- Program Director of Student Learning Assessment  
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# Session Objectives

- ✓ Identify strategies towards becoming data informed for Program Review
- ✓ Articulate what needs to be considered when presenting data for consumption
- ✓ Describe key visualization standards



# The Journey...Year One

FY17 Program Review template change required  
disaggregated data



## Pathways to Results (PTR) Year One Grant

Enrollment in Medical Office/Health Informatics programs had declined at a higher rate than the overall degree-seeking student population

Goal to review enrollment patterns and student outcomes with accurate disaggregated data

Opportunity to illustrate to IECC administration the impact of using PTR during Program Review

# Year One Activities and Results

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Multiple meetings: Chief Academic Officer, four college Deans, IT, Perkins, and Assessment

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Capacity to disaggregate data for one program was time consuming; to do so for all programs under review was not feasible

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Questioned data validity

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IECC did not have the tools and processes in place to extract and disaggregate student data in an efficient method to fulfill the requirements of annual program review and to make data informed decisions about CTE programs.

# FY18 Year Two PTR Implementation Grant



Goal: utilize grant funds to support the addition of a data analysis tool. Create a “dashboard” for student outcome data disaggregation



Design Lab held in October: CAO, three Deans, Director of IT, Director of Student Learning Assessment, Perkins Director, OCCRL staff, and ICCB staff



Multiple meetings...again



Researched products including Tableau, Power BI, and Insight

# Components Identified During Design Lab

- ▶ Identifying Program Cohorts
- ▶ Identifying Specific Variables and Outcomes to Disaggregate
- ▶ Establish the Process for Extracting and Reporting the Data
- ▶ Data Use Planning to Ensure Equitable Student Outcomes in CTE Programs
- ▶ Professional Development on Equity Gaps and Data Use



# FY18 Activities and Progress

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Developed an ARGOS program review report

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Catalog term of entry chosen for cohorts

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Identification of errors; Records staff clean up

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Discussion of building an ARGOS “dashboard”

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Chose Insight, a Campus Labs product, to add to our existing platform

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Purchased Insight at the end of the fiscal year

# FY19 Process to Improve Data Extraction and Analysis



Contracted with Campus Labs to integrate our data into their "core" data structure



Learned to design dashboards



Lack some demographic data

“Visual representations not only make the patterns, trends, and exceptions in numbers visible and understandable, they also extend the capacity of our memory, making available in front of our eyes what we couldn't otherwise hold all at once in our minds.

In simple terms, information visualization helps us think.”

-STEPHEN FEW

*Now You See It*, Analytics Press, 2009

# Marketing/Sales PR 2020 Dashboard

## Views

Program Completion

### Slice by:

Select All

### Pell Grant Status

Not Pell

Pell Eligible

### Sex

Female

Male

notspecified

Does Not Exist

### Cohort Year

2015

2016

2017

2018

2019

### Race

caucasian, white

african american, black

asian

american indian, alaskan native

hawaii or pacific islander

Does Not Exist

### Ethnicity

not hispanic or latino

Present

Edit

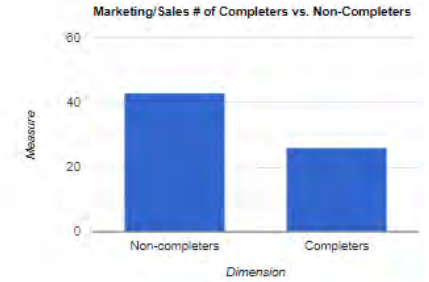
Copy

Export

# Marketing/Sales PR 2020 Dashboard

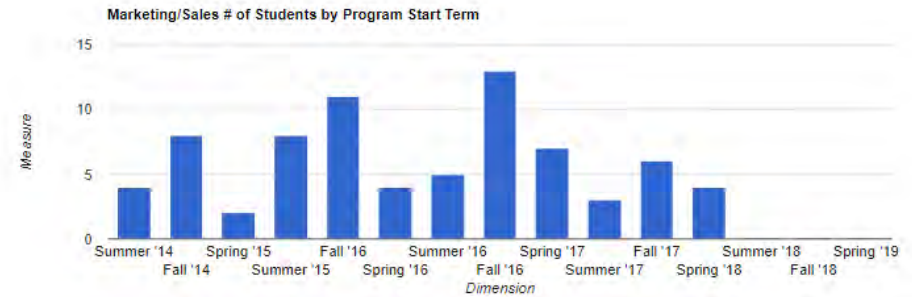
Marketing/Sales Unduplicated Headcount from AY15 through AY19

67

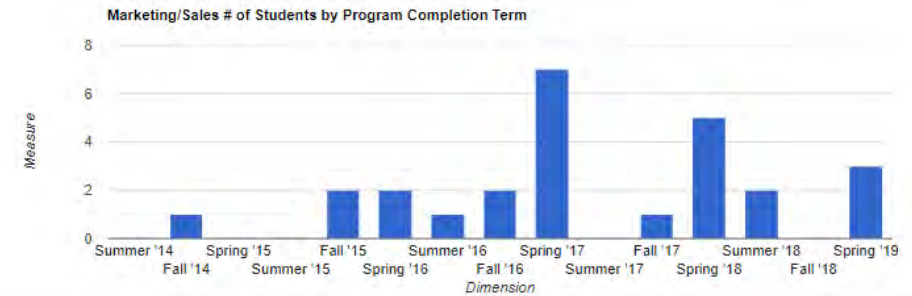
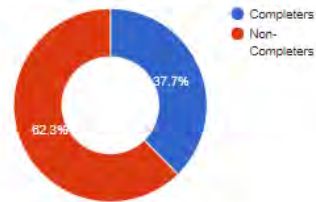


Marketing/Sales Program Completion Rate %

38.81



Marketing/Sales % of Completers vs. Non-Completers



Live Site – PR 2020  
Marketing/Sales Program Review



“Having the means to create graphs with a computer doesn't guarantee that we'll do it effectively any more than having word processing software makes us great writers.”

-STEPHEN FEW

*Show Me the Numbers, Second Edition*, Analytics Press, 2012

# What can we do to improve our process and use of data dashboards?



## Learn

Learn best practices in data visualization



## Engage

Engage our PR Data Consumers to learn their needs



## Create

Display the data to better inform PR Data Consumers

# Analytics Overview



DESCRIPTIVE



DIAGNOSTIC



PREDICTIVE



PRESCRIPTIVE



# Lagging vs. Leading Indicators



## Lagging Indicators

"Output" oriented

Easy to measure

Hard to improve or influence

Descriptive



## Leading Indicators

"Input" oriented

Hard to measure

Easy to influence

Predictive

# Best Practice in Data Visualizations



Leverage pre-attentive  
attributes

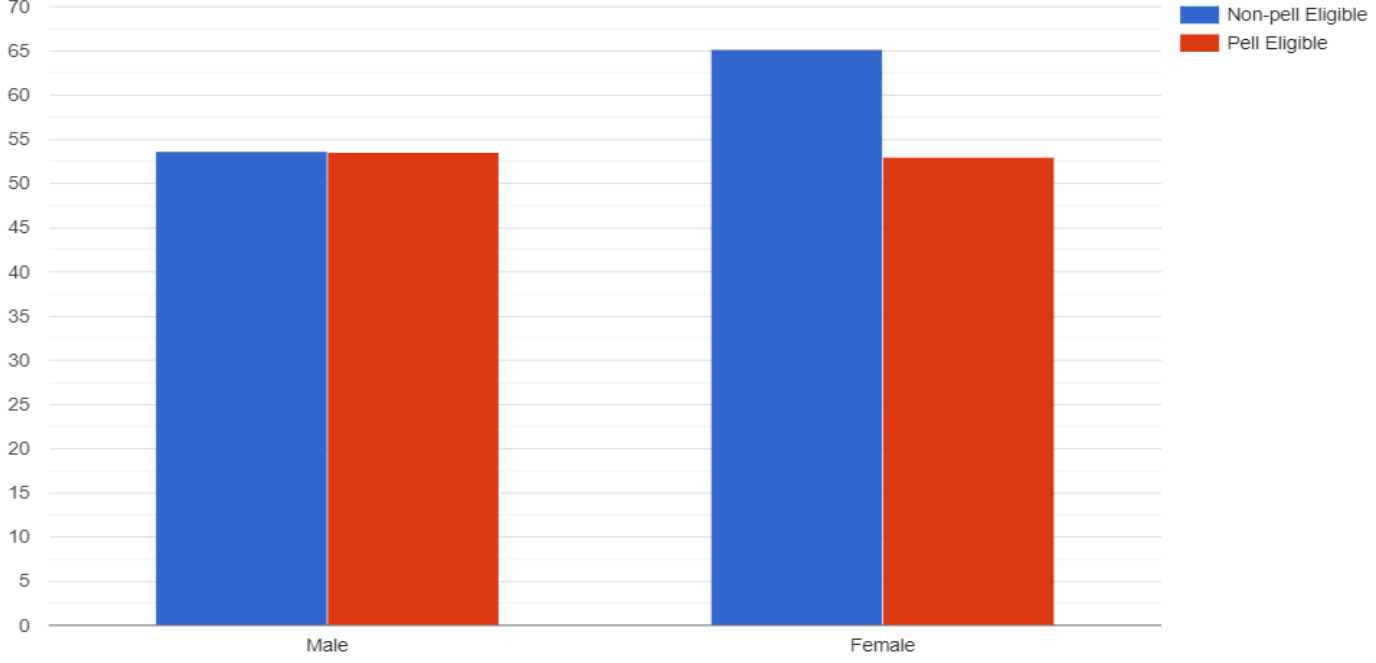


Reduce processing demands  
for working memory



# Addressing Equity Gaps in Programs

**NON-PELL ELIGIBLE FEMALE Students successfully complete Program X at a greater rate than PELL ELIGIBLE FEMALE Students and BOTH, Pell Eligible & Non-Pell Eligible, MALE students**



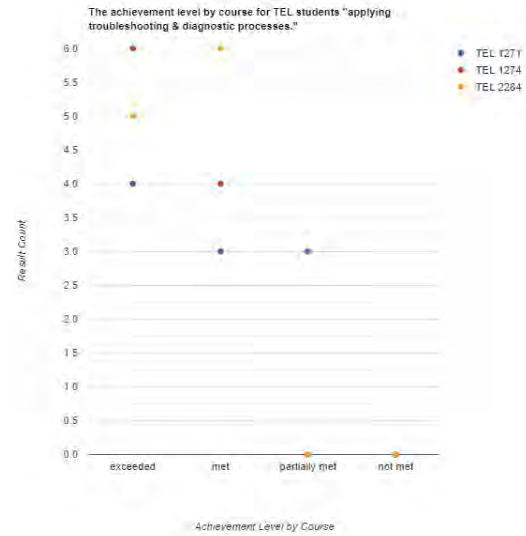
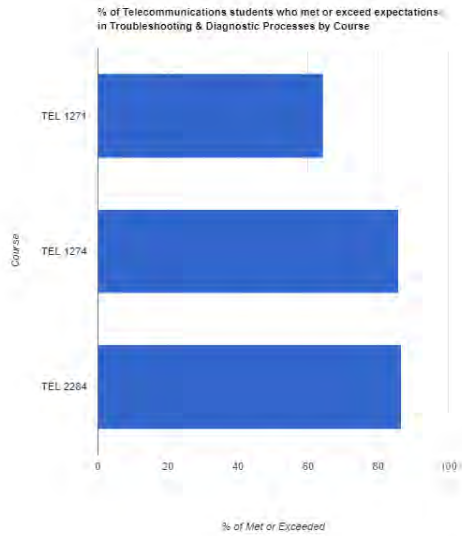
Sex by Pell Grant Status

% of Students who Successfully Completed Program

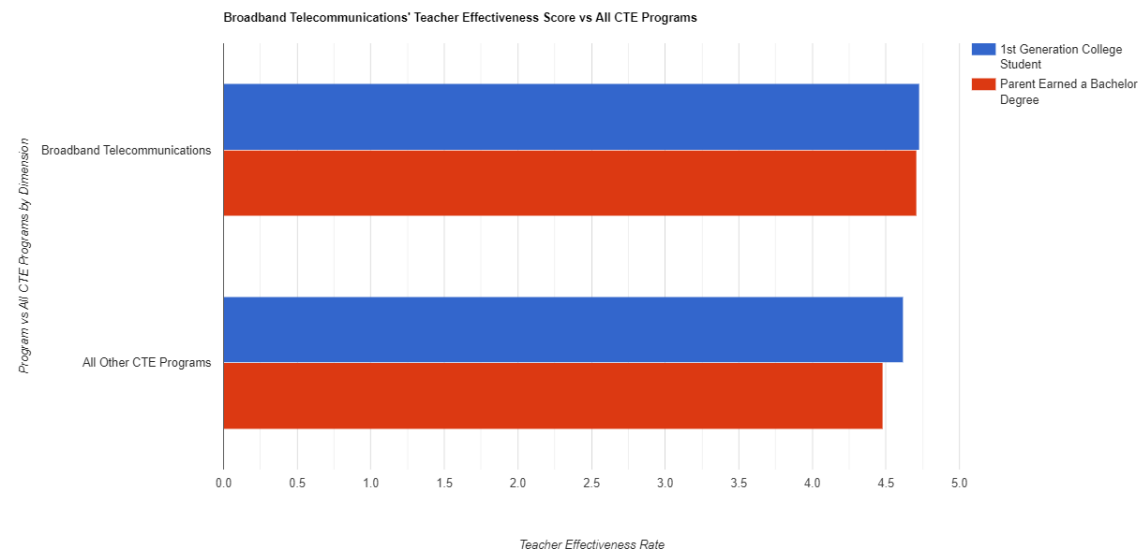
“Coming up with a good title is deceptively tricky because it requires you to know your point, to have figured out what you are trying to say. And that can be half of the work of solid data analysis and communication right there. But in the end, it’s a very small change to the graph that will take you the farthest.”

-Stephanie Evergreen

<https://stephanieevergreen.com/strong-titles/>

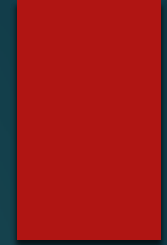


# Student Learning Assessment Results



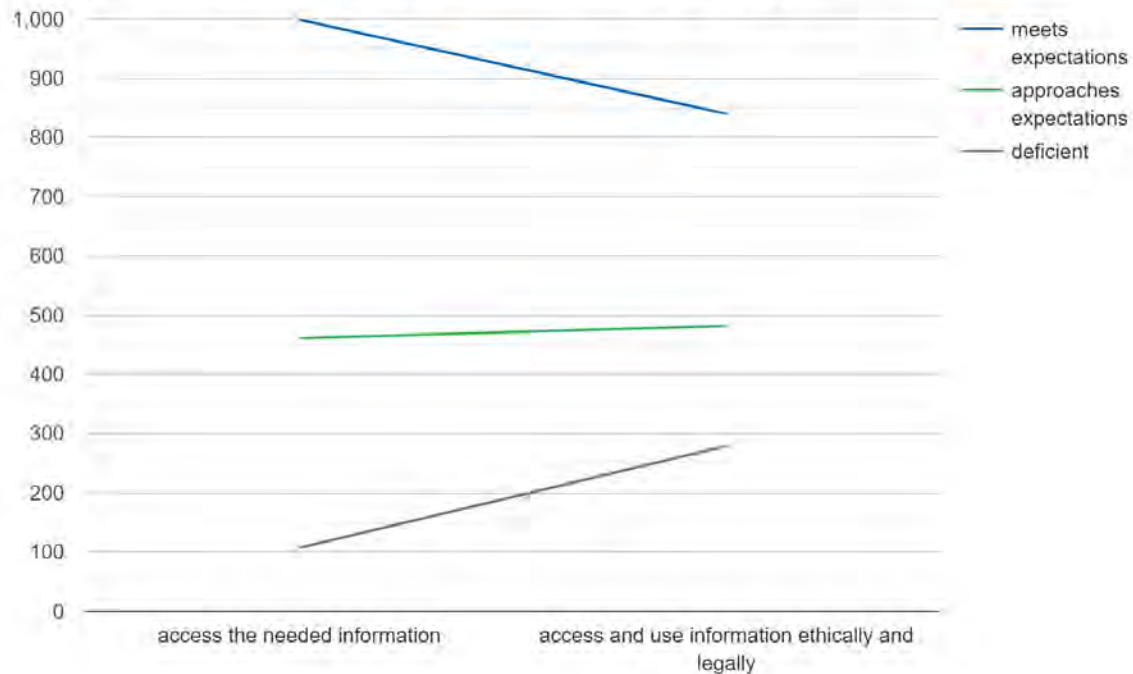
# Course Survey Data

# What other stories are we telling?



Rubric Entry Detail Rubric Entry Detail: ID Count

Students met the expectation of accessing needed information with greater frequency than meeting the expectation of using information ethically and legally.

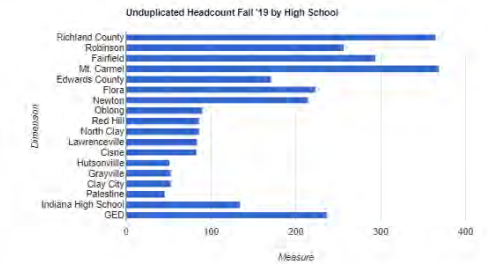
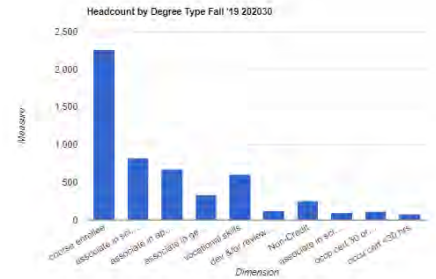
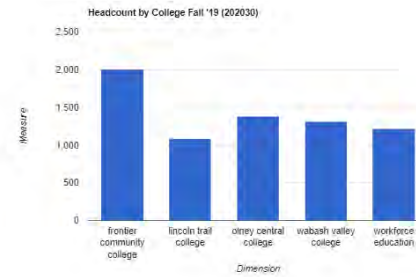


Rubric Entry Detail: Dimension by Rubric Entry Detail: Achievement

## Enrollment Fall '19 (202030) Dashboard

Unduplicated Headcount Fall '19 (202030)

6,030



# Questions

