Displaying NSICP (Delaware Study) Data

Ronald D. Thompson, Ph.D. *
Associate Institutional Research Analyst

Robert W. Mullen *
Associate Director

Mikael L. Pelz *
Graduate Research Assistant

Mardy T. Eimers, Ph.D.
Director *

* University of Missouri System, Office of Institutional Research & Planning, 721 Lewis Hall, Columbia, Missouri 65211.

National Study of Instructional Costs and Productivity (NSICP, or “Delaware Study”) data from a major Midwestern U.S. public university system for a recent ten-consecutive-year period are summarized using statistical graphs. Considerations underlying the final choice of graphics are discussed.
Outline

- Introduction
  - Project
  - People
- Motivation
- Graphs
- Summary
- Next Steps
- Q & A

Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAIRtalk_20081114_outline
### UM Departments with Historical NSICP Data

<table>
<thead>
<tr>
<th>UM Campus</th>
<th>No. Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MU</td>
<td>51</td>
</tr>
<tr>
<td>UMKC</td>
<td>23</td>
</tr>
<tr>
<td>Missouri S&amp;T</td>
<td>15</td>
</tr>
<tr>
<td>UMSL</td>
<td>24</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>113</strong></td>
</tr>
</tbody>
</table>
Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAirTalk_20081114_DelawareSample
NSICP-Based Metrics

FS Total SCH
----------------------------------
FS Total FTE Instructional Faculty

FY Total Direct Expenditures for Instruction
-----------------------------------------------
AY Total SCH supported by Department’s Instructional Budget

Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAIRTalk_20081114_metrics
[Insert Delaware “Sample Departmental Data” page showing example productivity and cost calculations here.]
Direct Expenditures per SCH and SCH per FTE Comparisons
University of Missouri - XXXX
FY2006 DRAFT 01/07/2008

Source: NSICP
**More NSICP-Based Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Total SCH</td>
<td></td>
</tr>
<tr>
<td>FS Total FTE Instructional Faculty</td>
<td></td>
</tr>
<tr>
<td>FS Total SCH taught by Regular TTE [Instructional] Faculty</td>
<td></td>
</tr>
<tr>
<td>FS Total FTE Regular TTE Instructional Faculty</td>
<td></td>
</tr>
<tr>
<td>FY Total Direct Expenditures for Instruction</td>
<td></td>
</tr>
<tr>
<td>AY Total SCH supported by Department’s Instructional Budget</td>
<td></td>
</tr>
<tr>
<td>FY Total Direct Expend for Separately Budgeted Rsrch &amp; Service</td>
<td></td>
</tr>
<tr>
<td>FS Total FTE Regular TTE Faculty</td>
<td></td>
</tr>
</tbody>
</table>

Displaying NSICP (Delaware Study) Data  
Mid-America Association for Institutional Research (MidAIR)  
28th Annual Conference  
November 12-14, 2008  
MidAIRtalk_20081114_metricsmore
More NSICP-Based Metrics

FS Total SCH

-------------------------------

FS Total FTE Instructional Faculty

Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAIRTalk_20081114_metricsmorefig1
More NSICP-Based Metrics

FY Total Direct Expenditures for Instruction

AY Total SCH supported by Department’s Instructional Budget

Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAirTalk_20081114_metricsmorefig5
More NSICP-Based Metrics

FY Total Direct Expend for Separately Budgeted Rsrch & Service

FS Total FTE Regular TTE Faculty

Fig 6. AY Rel Direct Expend ($/FTE Student, $/FTE Reg TTE Fac, Infl adj)
Campus= Missouri S&T Department= CHEMISTRY

Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAIRTalk_20081114_metricsmorefig6
More NSICP-Based Metrics

Displaying NSICP (Delaware Study) Data
Mid-America Association for Institutional Research (MidAIR)
28th Annual Conference
November 12-14, 2008
MidAIRTalk_20081114_rechnnggraph1
Fig 5. Rel Change (%) between FY2001 and FY2006 3-Yr Ave Productivity and 3-Yr Ave Direct Expenditures (Infl Adj), various UMx Depts

SOURCE: UM IR&P NSICP Submission Files and US Dept of Labor (for CPI)

NOTE: Department names in uppercase indicate lack of data.

Department/School/College
More NSICP-Based Metrics

Fig 6. Rel Change (%) between FY2001 and FY2006 3-Yr Ave Productivity and 3-Yr Ave Direct Expenditures (Infl Adj), UM Chemistry Depts

SOURCES: UM IR&P NSICP Submission Files and US Dept of Labor (for CPI)
NOTE: Department names in uppercase indicate lack of data
Fig 6. Rel Change (%) between FY2001 and FY2006 3-Yr Ave Productivity and 3-Yr Ave Direct Expenditures (Infl Adj), UM Chemistry Depts

SOURCES: UM IR&P NSICP Submission Files and US Dept of Labor (for CPI)

NOTE: Department names in uppercase indicate lack of data
Summary

- **Objective:** Longitudinally summarize Delaware data

- **Key decisions:**
  - Use statistical graphics
  - Use SAS
  - Choose meaningful statistics (etc.)
  - Choose appropriate graphs (etc.)

- **Outcome:** Obtained useful graphs (meant for “30K ft” view)
Next Steps

- Incorporate national norms on time series plots
- Incorporate national norms on relative change bar charts
- Create cost-productivity relative change scatter plots
More NSICP Metrics Relative to Norms

Fig 7. Rel. Percent Difference In Actual vs. Norm ($ Inflation adjusted)
Campus = Missouri S&T Department = CHEMISTRY

Source: UN R&R NSICP Submission Files & NSICP Norms
*** DRAFT 07/11/2008 ***
More NSICP Metrics – Scatterplot

Fig 8. Rel Change (%) between FY2001 and FY2006 3-Yr Ave Productivity and 3-Yr Ave Direct Expenditures for Instruction (Infl Adj), MU Depts

Outliers: (SCH, $)
Nurs (118.16, –31.70)
Marketing (118.39, -15.48)
 Classical Lang (133.18, 12.40)
Displaying NSICP (Delaware Study) Data

[Q & A]