Summer 2019

Create Interactive Data Visualizations

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Summer Scholarship, Creative Art and Research Program Project Abstract

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Name of Project: Create Interactive Data Visualizations

Description of Project

Project Overview:

This project put data in the hands of the decision makers in a timely, secure manner. We focused on course and attrition analysis. Tableau (the business intelligence / data visualization tool) was used to create the visualizations.

Significance to the Institution:

This project supported the goal of the Institutional Research (IR) Department to provide clear, timely, reliable data information and analytical services. We looked to expand online data visualizations to answer commonly asked questions in a secure, online environment while allowing the user to customize the question to their particular need (a data drill-down). We focused on admissions, enrollment, course and attrition analysis.

Here is an example.

1. What are enrollment trends for Elizabethtown College and peer Institutions?
2. Where are students from that enroll at the college compared to peer Institutions?
3. How many courses were taught in a particular year and term?
4. How many of those courses satisfied core requirements?
5. How what level were those courses?
6. How many student credit hours were generated at what level?
7. How many of those student credit hours were for a particular department?
8. How many were generated by a particular faculty member?
9. How many student credit hours were generated by a particular faculty member?
10. What are the trends across terms?
11. Etc.

Answers to these questions help the Institution utilize resources wisely.

Accomplishments:

Publication of Tableau workbooks:

- Course Analysis
- Peer Comparison: IPEDS Admissions Information
- Peer Comparison: IPEDS Enrollment Information
- Peer Comparison: IPEDS Programs Offered
- Cohort Analysis – Retention/Graduation
- Accepted Students Who Enrolled Elsewhere
- End of Semester Declaration Trends

Learned:

Developed skills in utilizing Tableau as a visualization tool by applying different techniques and filters. This understanding of the application will allow for future use of Tableau throughout the semester. Gained knowledge in the data sources used for the workbooks including IPEDS and NSC, as well as the SQL coding for pulling the large amount of data. Worked through analyzing and critically accessing visualizations to improve their effectiveness in conveying the information.

Future goals:

The visualizations created over the summer project will continue to be expanded upon during the coming semesters, providing more data and methods for analysis. More IPEDS and Institutional data can be pulled to be imported into Tableau for accessibility to a variety of statistics. As requests for particular information come in, Tableau can be used to create interactive reports.