



WRIGHT STATE UNIVERSITY

Academic Efficiency and Effectiveness

Quantitative Data Summary Document

2023

October 27, 2023

Academic Efficiency and Effectiveness Quantitative Data Summary Document

Overview

The Academic Efficiency and Effectiveness Quantitative Data Summary Document provides an overview of the quantitative data compiled to assist with Wright State University's 2023 academic efficiency and effectiveness review.

Academic Efficiency and Effectiveness

Charge

The Office of the Provost was charged with thoroughly evaluating the university's academic programs to identify their relative efficiency and effectiveness with the goal of supporting more strategic resource allocation.

Purpose

The purpose of the academic efficiency and effectiveness review process is to collect and examine data about Wright State's academic programs, considering four key questions by topic area as outlined in Table 1.

Table 1. *Key Questions by Topic Area*

Topic area	Key question
Margin	Is the program fiscally efficient?
Market	Is there a demand for the program?
Mission	Is the program critical to the university's mission?
Outcome	Is the program of sufficient quality?

Definition of an Academic Program

For the purposes of academic efficiency and effectiveness review, an academic program (herein referred to as a program) was defined as a major and degree combination (e.g., Bachelor of Arts in Psychology). Pre-majors and intending majors were not included. Nor were enrollments in pre- or intending majors considered when identifying program enrollments, including first term enrolled in a program. In addition, minors and program concentrations were not included, as well as off-ramp programs and the Doctor of Medicine program. In total, quantitative data were prepared for 198 programs. See Table 2 for a count of programs by college and award level (e.g., bachelor's, master's, etc.).

Table 2. *Count of Programs by College and Award Level*

College	Associate's	Bachelor's	Master's	Doctoral	Total
CECS		13	11	3	27
CHEH		14	20	3	37
COLA		36	7		43
COSM		17	16	4	37
GRD5			2		2
LAKE	17	12			29
RSCB		12	6		18
SOMD		2	3		5
Total	17	106	65	10	198

Note. CECS = College of Engineering and Computer Science; CHEH = College of Health, Education, and Human Services; COLA = College of Liberal Arts; COSM = College of Science and Mathematics; GRD5 = College of Graduate Programs and Honors Studies; LAKE = Lake Campus; RSCB = Raj Soin College of Business; SOMD = Boonshoft School of Medicine.

Efficiency and Effectiveness Indices

Eleven efficiency and effectiveness indices were derived using data from internal and external sources. Values for each index ranged from 0.00 to 1.00. See Table 3 for a list of indices by topic area.

Table 3. *List of Indices by Topic Area*

Topic area	Index	Index Description
Margin	Profit-to-cost index	A measure of a program's financial sustainability based on the profit (net tuition revenue minus direct cost of instruction) for each course taken by recent graduates (past five-years) from the program.
Market	Enrollment index	A measure based on the five-year average headcount enrollments of all students (first and second majors) who were enrolled in a program and registered for classes as of the fall census.
Market	High school prospects index	A measure based on the proportion of Ohio high school students (2024-2028 graduating classes) who expressed interest in the program's field.
Market	Competitive factors index	A measure related to the availability of the program at other (competing) institutions.
Market	Economic factors index	A measure related to the projected future demand for the program.

(continued)

Topic area	Index	Index Description
Market	Graduate prospects index	A measure related to employment opportunities for graduates from a program.
Mission	Institutional fit index	A measure related to the program's impact on the Ohio workforce.
Outcome	Retention (any program) index	A measure based on the five-year average retention rates of all students (new and continuing; first and second majors) who enrolled in a program for a fall semester (minus those who graduated prior to the next fall semester) who again enrolled at Wright State University in any program in next fall semester.
Outcome	Retention (same program) index	A measure based on the five-year average retention rates of students (new and continuing; first and second majors) who enrolled in a program for a fall semester (minus those who graduated from the same program prior to the next fall semester) who again enrolled at Wright State University in the same program in next fall semester.
Outcome	Degrees awarded index	A measure based on the five-year average of the number of degrees awarded in a program.
Outcome	Time to degree index	A measure based on the five-year average of the time elapsed (in years) between a student's initial enrollment in a program and subsequent degree attainment.

Weighted Scoring

Index Weights

Two topic areas, "Market" and "Outcome," had multiple indices. As a result, weights were assigned to indices within those topic areas to establish composite scores. Index weights within each topic area sum to 1.00.

In addition, alternative weights were applied to indices within those same topic areas when data were missing.

Table 4 displays the weights assigned to the indices within the "Market" and "Outcome" topic areas.

Table 4. *Index Weights*

Topic area	Index	Weight	Alternative weight*
Market	Enrollment index	0.20	0.50
Market	High school prospects index	0.20	0.50
Market	Competitive factors index	0.20	n/a (missing data)
Market	Economic factors index	0.20	n/a (missing data)
Market	Graduate prospects index	0.20	n/a (missing data)
Outcome	Retention (any program) index	0.25	0.50
Outcome	Retention (same program) index	0.25	0.50
Outcome	Degrees awarded index	0.25	n/a (missing data)
Outcome	Time to degree index	0.25	n/a (missing data)

Note. *Alternative weights were used when indices within a topic area were missing data.

Topic Area Weights and Final Composite Index

Composite scores for each topic area were also weighted to create a final composite index for each program. Topic areas were weighted to align with the goal of the academic efficiency and effectiveness review process, to support “more strategic resource allocation.”

Similarly, alternative weights were applied to composite scores for topic areas when data were missing. Table 5 displays the weights assigned to composite scores for topic areas.

Note, the profit-to-cost index and institutional fit index served as composite scores for topic areas, “Margin” and “Mission,” respectively, as they were the only indices for each area.

Table 5. *Topic Area Weights*

Topic area	Weight	Alternative weight*
Margin	0.70	n/a (missing data)
Market	0.10	0.33
Mission	0.05	0.33
Outcome	0.15	0.33

Note. *Alternative weights were used when topic areas were missing data.

Summary

Quantitative data were intended to aid reviewers in making strategic, data-driven decisions about allocating resources to Wright State University’s academic programs. A final composite index was derived for every program included in the academic efficiency and effectiveness review process.