

**YOUNGSTOWN STATE UNIVERSITY
ACADEMIC PROGRAM ENHANCEMENT AND EFFECTIVENESS INITIATIVE**

**PROGRAM EVALUATION SYSTEM PRESENTATION
GRAY ASSOCIATES**

MARCH 18, 2021 4:00 p.m.

INFORMATION RELATED TO QUESTIONS ASKED, OR PERSPECTIVES RAISED

Topics Addressed:

- Clarifications
- Student Demand
- Employment
- Degree Fit
- CIP Codes
- Program Evaluation
- Other

Clarifications

- There are **four** market views available:
 - Core Market: 100-mile radius around campus
 - Extended Market: 100-mile radius, and all of Ohio
 - State of Ohio
 - National
- The initial Score Cards were standardized and illustrate the 100-mile radius market.
 - The System also allows assessment of markets associated with online opportunities.
- As Provost Smith emphasized, these are “Our Programs, Our Data, Our Process, Our Decisions.” Gray Associates (Gray) does not make recommendations. Gray provides systems, processes, and data for program evaluation to further inform YSU’s analysis of its own program portfolio.
- YSU’s reported CIP codes were provided to Gray prior to the October workshop, both at the track and program level. It was determined that the workshop would focus only on the program level. Gray reviewed the program list of CIP codes, and made recommendations to adjust CIP codes based on both experience and knowledge of the market data to best-match YSU’s programs to market data. The list of recommendations was reviewed and agreed upon by YSU.
 - During this process, it became clear to YSU that Big and Little “Ps” would need to be reconciled from several perspectives (e.g., state and federal reporting).
 - Market information is available for any CIP code
 - Program economics is only available for Departments, Big P programs, and all courses

Student Demand

Google Searches

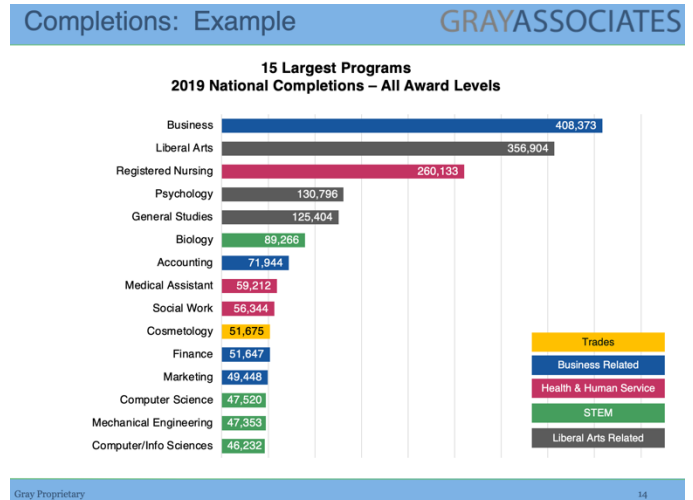
- From Nina Stourman: If YSU students are coming from within 100 mi, what is the justification for "Google search" as a good measure of a program/major interest?
 - Gray provides Google search data, by program, for the 100-mile radius around the campus. We also provide this data for YSU's other market definitions.
 - We have tested Google search volumes and they are highly predictive of program size and potential margin.
- From Lucas Hardy: I google the program I direct about 5 times a day for various reasons. How do you know which searches are specifically from interested students?
 - It cannot be determined who is conducting the Google search. Gray has, however, carefully chosen the 20 to 25 keywords that are tracked per program so that they most reflect searches for academic programs, and not the topic in general. For instance, one of the keywords Gray tracks for Accounting is "Accounting Degree."
 - When interpreting the Google search volume for a program, Gray focuses on search volume for one program relative to 200 others, not just the total number of searches. Specifically, Gray provides the percentile rank for search volume by program. As long as non-student searches are reasonably consistent across programs, they should not affect the percentile rankings.
 - As mentioned above, despite potential issues, Google search is highly predictive of program size.
- From qjjiang: What's the rationale of focusing on google search by students? Students need guidance.
 - Gray uses Google search data because it is a current indicator of student interest and can be updated monthly (IPEDS is only updated once per year, a year in arrears). Gray also tracks student inquiries to capture current demand trends. We have back-tested the data and it is a good indicator of program size. Of course, students also need guidance and may change their program.
- Frank Sole: We know a large percentage of entry level students are not sure of their future direction so search by program is not a good indicator. Also, we also know at least 30% of students that "know" their major at entry change to another very different major in the first year or two. Again, not a good indicator.
 - Students do need guidance and will receive guidance once they are enrolled at an institution. Prior to that, potential students will search for what they believe to be of interest to them at that moment. If an institution has their program of interest, they are more likely to enroll.
 - This is an example of why Gray uses multiple data sources to evaluate student demand for a program. Certain programs may attract students to an institution,

but they may change majors once enrolled. The IPEDS completions data will capture what program they ultimately land in and complete.

- Not all students search for programs. Some may search by institutional brands, in which case Gray's Google program search data will not capture the student interest in *brand*. The IPEDS data will capture students who completed at the institution, regardless of how they were attracted to the institution.
- From Shelley Blundell: which they get from guidance counselors at high schools, which doesn't appear to be a part of this decision-making metric.
- From Karen Larwin: Good point Shelley. It would seem appropriate to find out who is feeding information to school counselors and parents, and what counselor's perceptions are because their perceptions will influence their recommendations to students/parents.
 - If students are receiving guidance about programs, and then search on Google about these programs, their searches will be captured.
 - Influencing school counselor perspectives is outside the scope of this work but might be a worthwhile conversation amongst the faculty to earn student interest to apply, matriculate, progress, and complete.
 - Our understanding is that counselors are paying an increasing amount of attention to labor market data (e.g., BLS and job postings) which are included in our data.

Completions

- From Marsha Huber: I'm not sure if I understand the program ranking chart (e.g., the numbers on the bar in the chart), and is ours posted somewhere?
 - The example to the right is the volume of completions, for all award levels, in the United States by program (CIP code) in 2019. For example, Registered Nursing, CIP code 51.3801, had 260,133 completions across all award levels in the U.S. in 2019.



- From Nicole Pettitt: Where does Education fit on this graph of top 15 programs?
 - The largest education program in 2019 was Elementary Education and Teaching, CIP code 13.1202, with 39,946 completions at all award levels. This ranks #21.
 - Looking by discipline, or 2-digit CIP code, Education ranks #4 with 306,799 completions in 2019. Health Professions ranks #1 with 965,306 completions.

- Click here to access the most popular academic programs in terms of completions: <https://ysu.edu/institutional-research-and-analytics/campus-facts/degrees-awarded>
- From Sepideh Khavari: How relevant is IPEDS data for decision-making if it is several years behind?
 - IPEDS covers almost all institutions and programs, which is useful. It is a good indicator of overall program size, market share, and long-term trends. It is not the best source for current trends in student interest, so we complement it with inquires and Googles searches, which are much more current. Google is limited to the 200 largest programs.

Employment

- From qjjiang: Is Gray Associates aware industries look for skill sets, not a particular major? We also need to look at the skills in demand and how our programs can deliver such knowledge and skills to students.
 - Yes. Gray's systems include several sources of information on skills necessary for program graduates to be successful in their fields.
 - One source is SkillsEngine Workplace Requirements, which provides an index of which skills, tools, abilities, and knowledges are most relevant for an occupation.
 - Another source is Gray's job posting database, which tracks all skills requested per job posting. The database currently tracks over 19 million postings with hundreds of skills, by market, employer, Standard Occupation code, and job title, all of which we map back to programs.
 - PES crosswalks jobs and skills to Programs (CIP codes) and job employment outcomes for CIP codes that the SuperUsers have access to for academic program curricular decision-making.
- From Marsha Huber: Are you talking about O*NET data? It is an important database.
 - Gray used the O*NET CIP Code (Program) – SOC Code (Occupation) crosswalk as the basis for Gray's refined, proprietary CIP-SOC crosswalk.
- From Priscilla Gitimu: How do you assess the jobs that graduates from a program get from your evaluation? This is because our students get jobs sometimes even before they graduate, but your evaluation shows different.
 - Gray did not evaluate the ability of YSU students to obtain jobs. The market data Gray provides gives an insight into the current job market a YSU student would be entering. There may be cases where YSU is out-performing what Gray's market data would indicate in terms of employment opportunities, and that is why it is important to evaluate the data with the knowledge you have about YSU's programs specifically.
 - From Shelley Blundell: To Priscilla's point and an earlier statement, aren't we then also hiring within a 100-mile radius, based on the geographic assessment?

- No. The 100-mile radius is the core market from which YSU students currently originate, but there are three broader market definitions available for evaluation in YSU's PES. Inherently, if you are looking at a scorecard for a program within the 100-mile market, you are looking at employment opportunities within that market, but YSU is not limited to only looking this market view.
- From Dr. Cryshanna Jackson Leftwich: How does this data apply to programs that send students to graduate schools and not the job market?
 - There are many ways to use the system to evaluate opportunities for students who attend graduate school and do not immediately enter the job market.
 - National American Community Survey (ACS): Provides data on what Bachelor's-degree holders go on to do with their degree, including what percent go on to earn a higher degree, and mean wages at ages under 30 and 30-60.
 - ACS unemployment rates will not penalize bachelor's graduates that go on to graduate school, if they have not entered the labor market.
 - It is also possible to evaluate a program at multiple degree levels within the system.
 - At some point, the students will enter the labor market. It may be important to look at the employment opportunities for multiple programs, if a bachelor's program can lead to graduate studies in multiple fields.

Competition

- From Timothy Francisco: With the "online competition" category —the "Giants" to which you refer—do these include For Profits?
 - Competitor data will include any institution that receives Title IV funds, including for-profits. The Giants are schools like Western Governors' University, SNHU, and the University of Phoenix that have over 100,000 students enrolled

Degree Fit

- From qjjiang: For some programs, a BS/BA degree is sufficient, but for many liberal arts fields, a MA/MS degree is minimum for competitive leadership jobs. This could be where the investment should target.
 - There are many programs that are offered at the bachelor's level but have degree-level barriers to entry into the occupation. The section of Degree Fit data on National BLS Workforce Educational Attainment by level would indicate if a certain degree level is necessary to work in the field. If the program exists at both degree levels at YSU, current bachelor's students would be an important source for recruiting into the higher degree level program.
 - This might be an important enrollment strategy to consider.

- From Timothy Francisco: But you said we were looking at appropriate level of education for our market—this seems to suggest a rather local focus? Our students do want a degree of mobility and portability no? Is the implication we are equipping our students to work here? What about mobility, portability, ultimately broader national/international impact of our students and programs?
 - The Degree Fit sections provides data on the share of completions at all degree levels, both within the local market and the national market, as well as National BLS Workforce Educational Attainment by level. Gray is not suggesting an appropriate level of education for a specific market but providing data on what level students complete a program, and what degrees are held by the workforce. The data is meant to provide insight into whether there is student interest in the program at a certain level, and what level of education may be required to work in related fields.
 - What YSU does know about student mobility, as the literature indicates, is that the largest proportion of students attending regional public universities tend to remain employed in, or return to, the region.

CIP Codes

- From eacongdon: I teach in history. I have never heard of CIP codes before. What do they do for us? How do they affect me?
 - CIP stands for Classification of Instructional Programs and are the codes by which institutions report their program data to the government. Each program YSU offers must be associated with a specific 6-digit CIP code. They do not usually have an effect on the day-to-day functioning of a program. There are a few exceptions, where CIP codes have an effect on YSU:
 - Certain CIP codes, such as STEM-related programs, may receive more federal and state aid per student.
 - College Scorecard uses CIP codes to determine if an institution offers a program. For example, if a student is interested in Accounting, but YSU does not report to the Accounting CIP code, it will appear as though YSU does not offer an Accounting program on College Scorecard.
 - CIP codes are used by the government to link programs to relevant occupations, and thus potential student outcomes. This crosswalk is provided by O*NET. Gray uses an enhanced, proprietary crosswalk based on the O*NET crosswalk.
 - There are CIP codes available to YSU as determined via the State considering the classification of YSU; this indicates that not every CIP code is necessarily available without consideration by the Ohio Department of Higher Education.
 - From eacongdon: Is there a CIP code for "Medieval Studies"?
 - Yes: 30.1301, Medieval and Renaissance Studies.

- From Priscilla Gitimu: What if an incorrect CIP code was used to assess a program? What implication would that have on the assessment conducted by Gray?
 - Gray provides information, but YSU does all program evaluations. If a program is best evaluated using a different CIP code than the one used to produce the program scorecard, please contact your Chair; if appropriate, the SuperUser for the College will generate a new scorecard.
 - If the CIP code used to generate a program scorecard is not reflective of the program taught by YSU, then a new scorecard with a corrected CIP code should be used to evaluate the program's market potential. Note that a reported CIP code does not always best reflect the market data for that program. Your Superuser has access to reports on all CIP codes (not just those offered by YSU), so they can easily pull data for you on other CIPs.

- From Michelle Nelson: Our department's CIP codes were a mess, so all data based on our department evaluations are lacking worth. Have you tried to find a solution to the fact that your data is bad, based on the fact that the CIP codes weren't really giving you a realistic impression?
 - Jenn Pintar: Michelle, we are always looking to make sure the data are clean but what evidence do you have to say their "data is bad"? Do you really mean your CIP codes the department has been using is incorrect? We can work with that.
 - First, Gray data is not "bad" based upon CIP codes. If the data is "bad", YSU did not select the optimal CIP codes initially. Note, however, that CIP codes are ever-evolving and changes are made over time as to what CIP codes are available and which CIP codes are retired. This is determined at the federal level.
 - Gray reviewed all of YSU CIP codes and provided recommendations to adjust a total of 8 program CIP codes. Otherwise, the CIP code YSU reports to IPEDS was used. There may be instances where a track's content differs considerably from the program, but the CIP codes used were meant to evaluate at the *program* level.

Program Evaluation

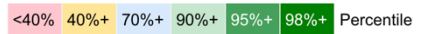
- From Rick Rogers: When this was presented in our department, the relative ranking of programs that we saw was largely tied to student numbers (majors, course enrollment, etc.). Are there any examples of YSU programs getting high scores under this methodology but the program did not have large student numbers? If not, why don't we just look at student numbers?
 - Currently, YSU's scoring rubric is weighted with 40% on Employment, 35% on Student Demand, and 25% on Competitive Intensity. As a result, high job volumes and wages will be the most important driver of the ranking, followed by student demand. For example, low-wage programs with high student demand will generally get lower scores than smaller programs with good wages.

- Of course, if the ranking correlates to the number of YSU students enrolled in the program, then it suggests that Gray's measures of Student Demand align with what is occurring at YSU.
- From qjjiang: We don't have a clear picture of ranking of the programs, and on what basis the ranking was made. We basically have no idea of our program ranking in the college or in the University.
 - The program rank Gray provides is based on the market data for each program and compares the overall score of each of 1,400+ CIP codes to determine the percentile value of the program's overall score. It is not a comparison of YSU's programs within YSU.
 - The ranking is determined by the scoring rubric within PES, that was drafted by YSU leadership and agreed upon by all participants in October's workshop to evaluate YSU's programs.
 - Your Superuser has access to the scoring rubric and may share it with you.
 - This approach is not ranking programs vs. programs; rather, the programs relative to markets and competition.
- From Tomi Ovaska: What does a composite score of 50 mean?
 - At face value, nothing. What does have meaning is the percentile rank associated with an overall score of 50. If a score of 50 ranks a program in the 90th percentile, then that program scores in the top 10% of programs out of 1,400 within the selected market.
- From Dr. Mark Vopat: How do we examine a program that doesn't fit your four categories? Example: Philosophy isn't a major most high school students consider, they don't do a Google search, and employers may not advertise for a philosophy major, but mid-career salaries are pretty good for philosophy majors. By your data though, wouldn't philosophy rate fairly low as a priority?
 - In an example like this, the Student Demand section of the scorecard would largely be informed by the number of completions, if in fact students are not using Google or inquiries to find out more about Philosophy. Completions would indicate that regardless of how a student found the program, they did the work to complete their degree.
 - Employment data shows above-average salaries for Philosophy majors, and a significant increase from beginning-of-career to mid-career salaries, most likely due to the large number of Philosophy majors that go on to become lawyers.
 - Across the four markets in YSU's PES, Philosophy at the Undergraduate level ranks in the 90th percentile in the 100-mile market, and above average to average in the other markets:

Program x Market Matrix

CIP	Q	100-Mile Radius	National	Ohio	Radius and all Ohio
38.0101 Philosophy		12	0	1	4

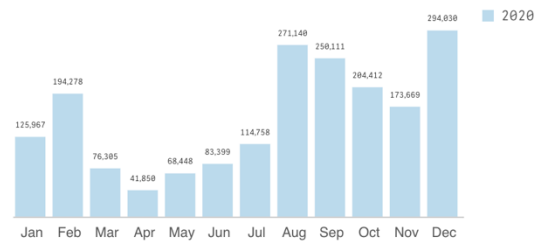
- Color-code key for overall score percentile rank:



Other

- From Timothy Francisco: In your blog post here (<https://www.grayassociates.com/gray-associates-resources/featured-content>), you say students search for programs but not courses—what else do they look for? Cost, amenities, athletics?
 - There is a wide variety of attributes that students are interested in when exploring an institution to attend, but that do not have to do with academic program evaluation. We do not currently track non-programmatic factors.
 - Gray data reflects the factors that influence what and how students search for opportunities
- From Tomi Ovaska: Covid-19 and data accuracy. There is no precedent in history...
 - From Zara Rowlands: Has Pandemic effect on industries/fields been analyzed to project how this will shape interest of potential students?
 - While the data we collect has been visibly affected by COVID-19, such as a considerable dip in job postings, there is no reason to believe that this data is “invalid” – it is just unprecedented.
 - Gray’s most current datasets (job postings, Google searches, and inquiries) are updated monthly and include the effects of COVID; in the medium term, we expect program preferences to return to their Pre-COVID levels, with some exceptions (e.g., Public Health). Of course, we cannot be sure.
- From Shelley Blundell: What investment are the "markets" asking for these skills making in this reimagining of program offerings? NSSE data tells us many students leave because of a lack of money. This seems like a rational way to support student learning—direct corporate investment in higher ed. is this factored into this assessment?
 - The relationship between the fund sources of students at YSU and their degree progress and success is not APEEI; rather, these are separate issues. Consider the YSU Retention, Completion, and Persistence Plan.
- From TS19949: There is no account of Chemistry. Does it mean we are going to sending those students to other institutions?
 - If there is a Chemistry major, it is considered in PES. Please have your questions addressed by the department chair.
- From Timothy Francisco: How close are our evaluative criteria to your other Ohio clients? For example, U of Akron, Wright State?
 - Gray does not compare clients to clients with such specific identifiers; that is within the arena of each institutions’ marketing and communications strategy.

Jobs by Month



- As so many other institutions are within such a close distance, this suggests that YSU needs to uniquely distinguish its academic programs from local, regional, and national perspectives by considering the various markets from which students might be interested in a YSU educational experience.
- From Karen Larwin: What is your meta-evaluation process?
 - The meta-evaluation process is the aggregate of the millions of data points that represent the datasets used by the Program Evaluation System.
- From Tomi Ovaska: What's under business? Accounting, finance and marketing were outside?
 - Not possible to respond to this question; please direct this to your chairperson.
- From Birsen Karpak: You have accounting, finance, marketing. Have you looked at Supply Chain Management?
 - Please consult your department chair, as Supply Chain Management is an opportunity. The chair and dean have discussed this opportunity from various perspectives.
- From Carl Johnston: Is evaluation ever beyond academics? Admin, Athletics?
 - From Gabriel Palmer-Fernandez: If not, why not? Will they be scrutinized in a similar way?
 - From Dave: Are admin and athletics considered in the evaluation of their effect on margins?
 - From Gabriel Palmer-Fernandez to Everyone: I am going to assume, unless informed otherwise, that Athletics will be examined just as carefully as academics. It does, after all, take up some 3-4% of our general budget, some \$8M/yr.
 - Gray is involved in the Academic Program Enhancement and Evaluation Initiative and is unaware of any initiatives assessing other programs. Note that the "A" in APEEI is for Academics.
- From Lucas Hardy: What do you mean by "knowledge"? Is there a recognition of different economies of knowledge and different ways in which knowledge is valued?
 - This is not within the Gray Associates' framework to address.